

# CITY OF BOERNE

## Mobility Master Plan



2023



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# Acknowledgments

## Advisory Committee

- » Tim Bannwolf
- » Bryce Boddie
- » Ben Eldredge
- » Jonah Evans
- » Rich Sena

## City Staff

- » Jeffrey Carroll
- » Rebecca Pacini
- » Cheryl Rogers

## Kimley Horn

- » Amy Avery
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- » Isaac Golf
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## City Council

- » Bryce Boddie
- » Joseph Macaluso
- » Quinten Scott
- » Ty Wolosin
- » Nina Woolard

## Planning and Zoning Commission

- » Tim Bannwolf
- » Bill Bird
- » Bob Cates
- » Patrick Cohoon
- » Susan Friar
- » Lucas Hiler
- » Terry Lemoine

- » *The Advisory Committee is a subset of the Kendall County Boerne Fair Oaks Transportation Committee (KCBFOTC).*

# Introduction



# CHAPTER 1

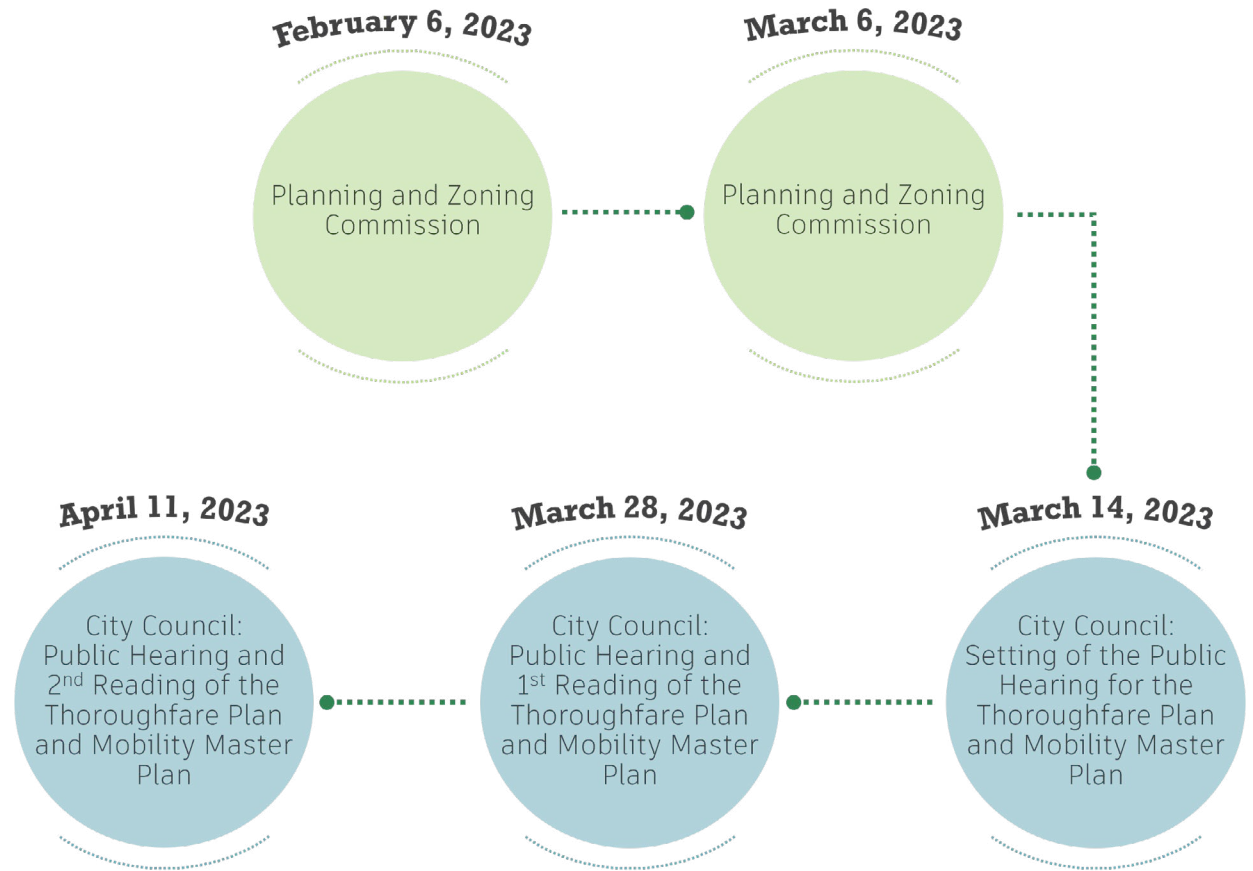
The Mobility Master Plan (MMP) is a long-range plan that seeks to create a safer, more accessible, and more efficient transportation network that improves the quality of life for Boerne residents. This plan includes the collaboration of a variety of jurisdictions and organizations as well as an extensive public involvement process used to identify transportation goals, future projects, and policies as the City of Boerne continues to grow. The MMP process used alternative scenarios to plan for capital projects to be implemented within the next 10-15 years in Boerne. This MMP report documents the development process, outlines the goals and projects identified as a result, details recommended policies as well as serves as an implementation plan for future development.



### **Thoroughfare Plan**

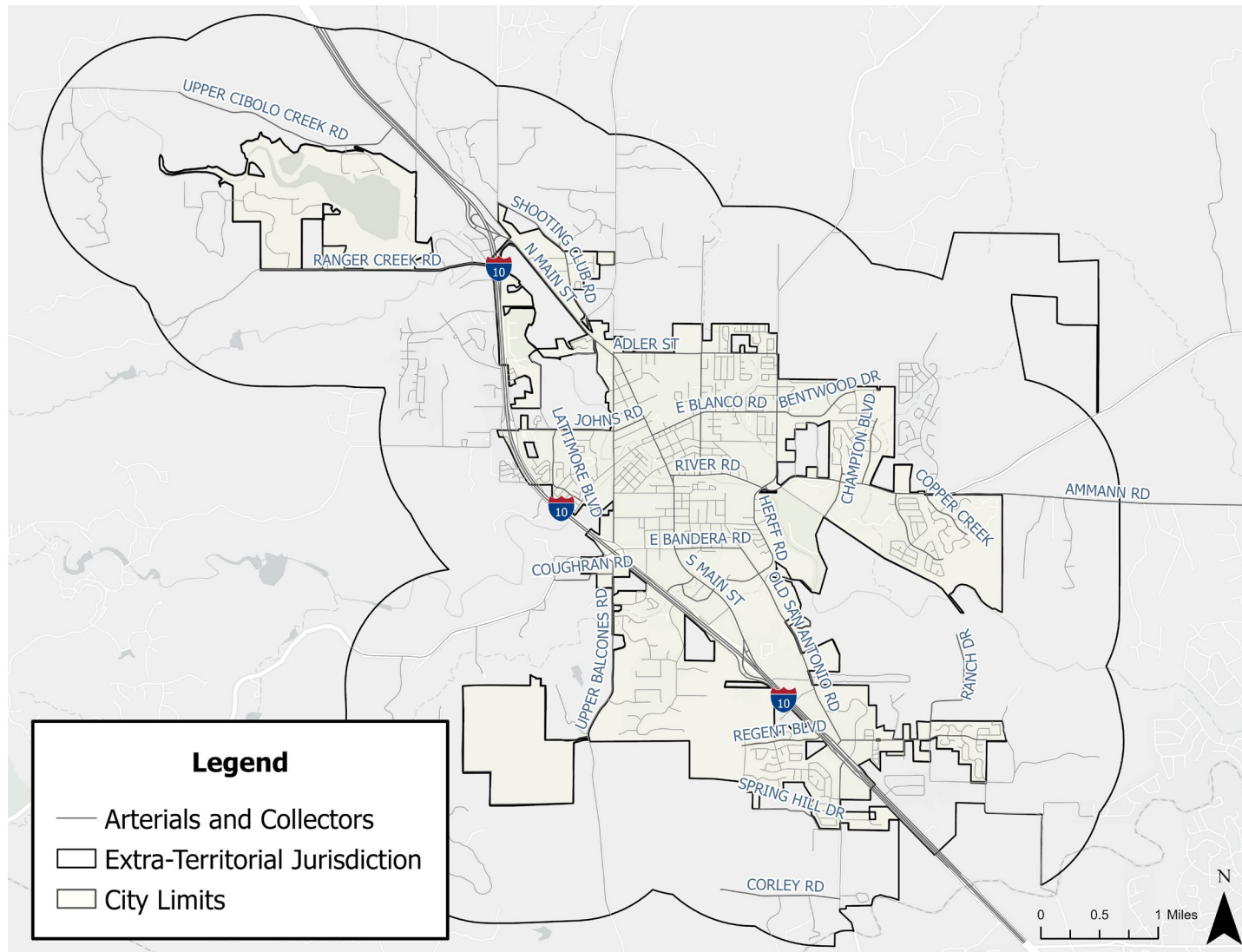
The MMP process also evaluated and made recommendations to update the City's Thoroughfare Plan, which is a tool to maintain connectivity for roads and trails as development occurs. More information on this process how the Thoroughfare Plan is used in Boerne is in Chapter 5 beginning on Page 40.

# Adoption Process: Planning and Zoning, Public Hearing, and City Council



# Study Limits

Exhibit 1 illustrates the City of Boerne and its Extra-Territorial Jurisdiction (ETJ) within Kendall County. The study area for the Mobility Master Plan (MMP) covered both the City Limits and ETJ for the City of Boerne as this plan is intended to be a local plan serving the Boerne community. While the MMP affects all those who live, work, shop, and ride within the study area, primary consideration was given toward how the plan will affect residents of the City of Boerne throughout the process.



» Exhibit 1: Existing Peak Hour Intersection Performance

# Plan Goals and Objectives



## CHAPTER 2

# The Development of Goals

Goals were established to guide the MMP development with the help of the Advisory Committee, the public involvement process, and the City of Boerne Master Plan (2018). These goals informed the recommendations of the plan and are to be used as a guide for future decision-making related to mobility within Boerne.

## Plan Goals and Objectives

The following goals and specific, measurable objectives were established through this collaborative process to serve as guidance on future mobility investments, policies, and decisions in Boerne.



Ensure  
Implementable  
Projects

**GOAL 1** - Ensure future infrastructure improvements are able to be completed on time and within budget.

**Objective 1.1** Complete at least 80% of annual mobility projects programmed in the annual CIP within the allotted budget.

**Objective 1.2** Complete at least 80% of annual mobility projects programmed in the annual budget within the budget year assigned.

**Objective 1.3** Perform feasibility assessments of mobility projects prior to inclusion in the annual budget as a precursor to project design commencement.



Prioritize Local  
Mobility

**GOAL 2** - Focus on improvements that benefit the local community first, rather than regional or pass through travelers.

**Objective 2.1** Reduce average intersection delay within the City Limits by 10% within 5 years.

**Objective 2.2** Prioritize spending on Local streets, Collector streets, and off-street trails.

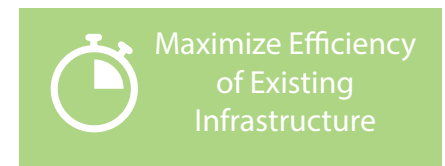
**Objective 2.3** Explore opportunities to create designated truck routes in order to minimize their impacts on local streets, while including provisions where deliveries are required.



Enhance  
Connectivity

**GOAL 3** - Enhance access and connectivity across Boerne and to key destinations along corridors.

**Objective 3.1** Complete a revised thoroughfare plan including new connections within two years of MMP plan adoption.



Maximize Efficiency  
of Existing  
Infrastructure

**GOAL 4** - Focus on improvements that increase the efficiency of the existing transportation network.

**Objective 4.1** Allocate at least half of the mobility budget on enhancing existing roadways, trails, and intersections.

# Plan Goals and Objectives (Continued)



Enhance User Safety

**GOAL 5** - Prioritize a safe transportation system for all users and transport methods.

**Objective 5.1** Adopt a Vision Zero policy commitment.

**Objective 5.2** Appoint a committee or commission to oversee implementation of the Safety Action Plan.

**Objective 5.2** Implement the Safety Action Plan included in the MMP, earmarking at least 25% of mobility budget on safety improvements.

**Objective 5.3** Prioritize the systemic implementation of safe crossings on arterials and improving lighting along City streets.



Consider Maintenance Implications

**GOAL 6** - Consider future maintenance costs of infrastructure improvements

**Objective 6.1** Maintain a PCI average rating of 70 or higher on the existing transportation network within City Limits.

**Objective 6.2** Prioritize projects that improve existing roadways with poor pavement conditions.



Preserve Rural Character

**GOAL 7** - Maintain Boerne's rural, small-town lifestyle and appeal.

**Objective 7.1** Design streets to match the context of surrounding land uses.

**Objective 7.2** Incorporate sustainable and environmentally-friendly design elements in environmentally-sensitive areas such as permeable shared use paths and water quality treatment solutions within the right-of-way.



Minimize Environmental Impact

**GOAL 8** - Reduce negative impact to the environment by conserving natural resources and promoting a resilient ecosystem.

**Objective 8.1** Include trees and landscaping where feasible in the design of streets.

**Objective 8.2** Minimize impervious cover inside the right-of-way in environmentally sensitive areas.

**Objective 8.3** Minimize potential interactions of wildlife and vehicles in Boerne.



Increase Mobility Options

**GOAL 9** - Increase traveler's ability to use multiple modes of transportation including driving, walking, and biking.

**Objective 9.1** Allocate at least 25% of the mobility budget on pedestrian and bike projects identified within this MMP.

**Objective 9.2** Prioritize improvements to walking and biking infrastructure to create safe routes to schools.

# State of Boerne's Transportation



## CHAPTER 3

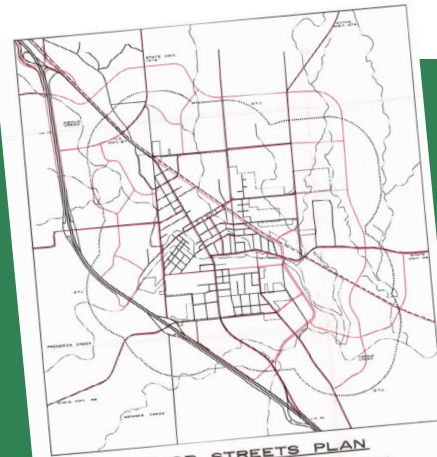
The State of Boerne's Transportation documents existing conditions on mobility within the City of Boerne. The purpose of this chapter is to provide a baseline to better understand demographics, safety challenges, connectivity gaps, current roadway and intersection performance, and historical planning efforts within the City of Boerne.



# History of Transportation Planning in Boerne

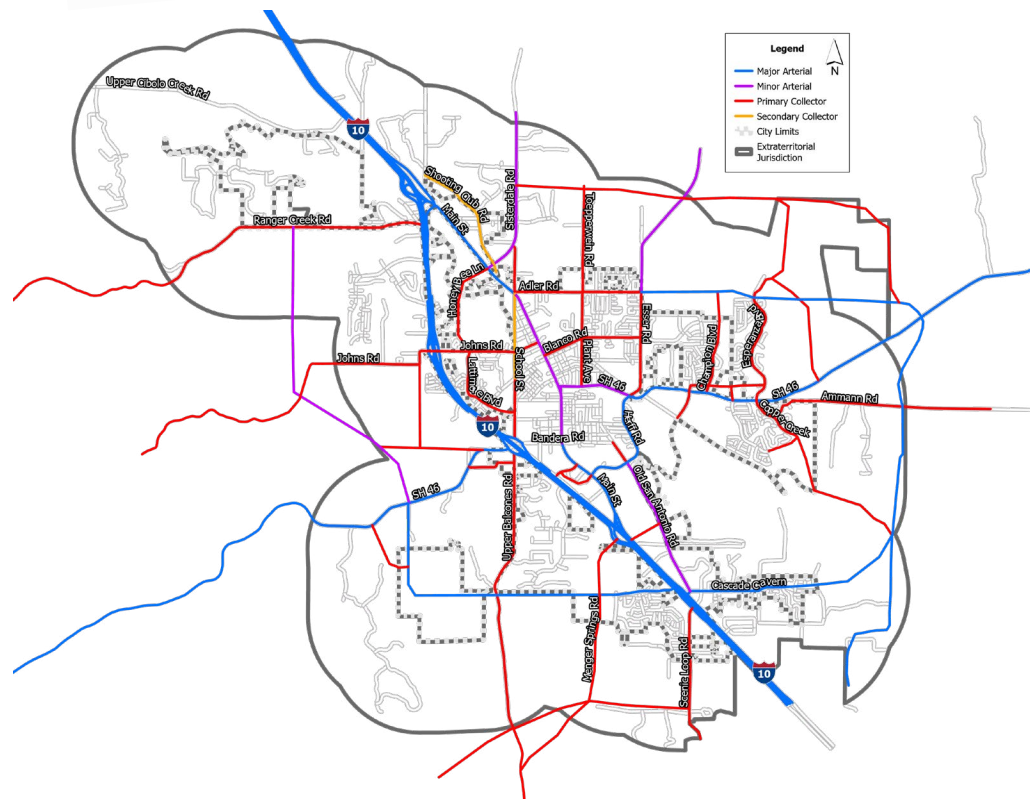
Thoroughfare or major streets planning by the City of Boerne dates back to 1974, when the original “Major Streets Plan” shown in **Exhibit 2** was adopted as part of the City’s master plan. The plan delineated where future roadways and connections were needed in Boerne. By understanding past and current planning efforts, we can better understand how the City’s mobility networks have evolved and plan for the future with the knowledge of avenues previously explored.

The original plan for the City, as shown in **Exhibit 2**, laid out a nice street grid which can still be seen today in the current thoroughfare plan, which was last updated in 2019 (**Exhibit 3**). Observing how these plans have changed highlights the fact that thoroughfare planning in Boerne is not a new effort, but one that has been happening for some time. Throughout this time, the footprint of the City and ETJ has grown substantially necessitating periodic updates to the thoroughfare plan.



The original plan for the City, as shown in **Exhibit 2**, laid out a nice street grid which can still be seen today in the current thoroughfare plan, which was last updated in 2019 and is depicted in **Exhibit 3**. Observing how these plans have changed highlights the fact that thoroughfare planning in Boerne is not a new effort, but one that has been happening for some time.

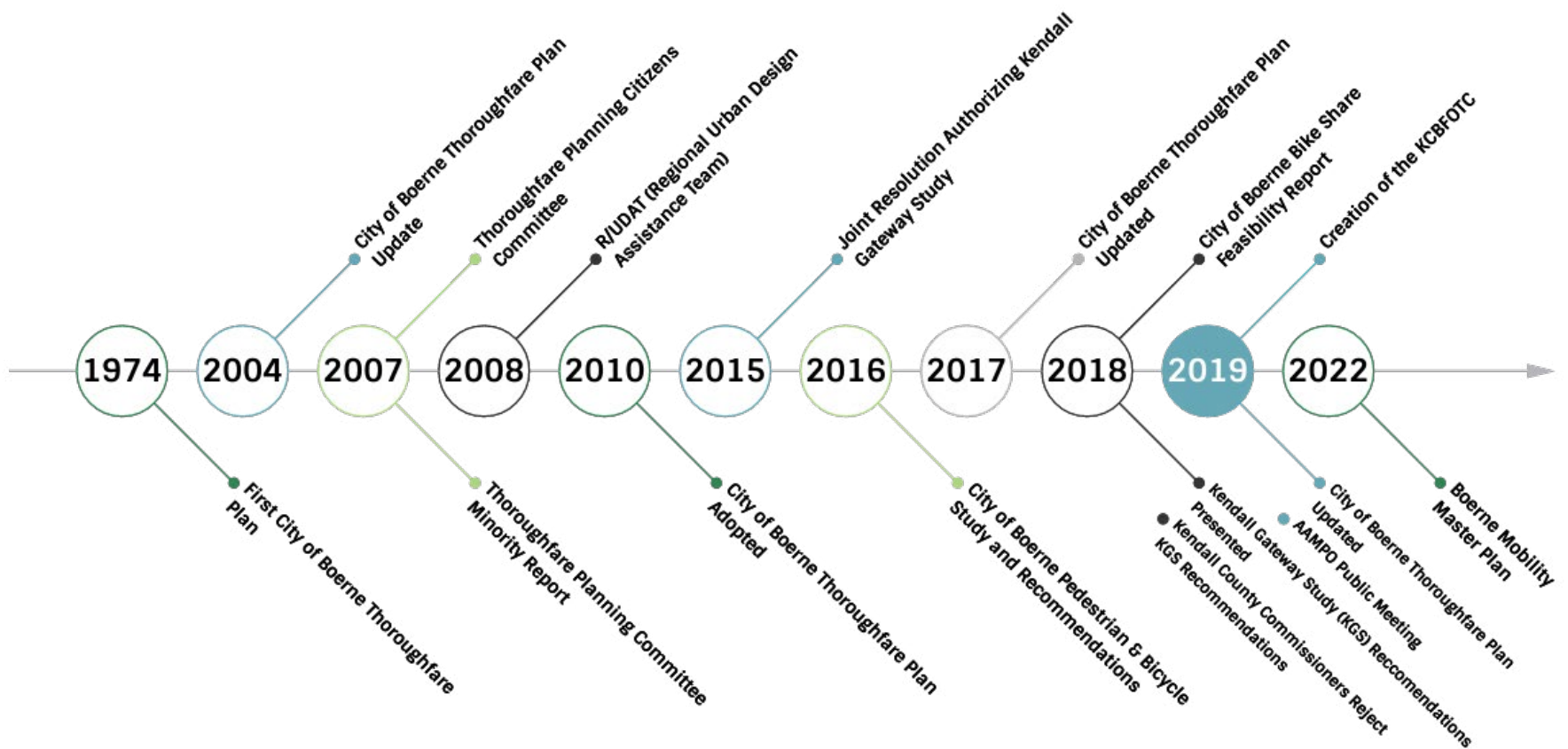
» *Exhibit 2: 1974 Major Streets Plan*



» *Exhibit 3: Current Thoroughfare Plan*

# Timeline of Transportation Planning Efforts

Exhibit 4 shows a timeline of thoroughfare and transportation planning within the City of Boerne as well as the formation of the Kendall County, Boerne, and Fair Oaks Transportation Committee (KCBFOTC). While this timeline does not include every effort towards transportation planning in Boerne, it does highlight some of the major documents, organizations, and efforts made since the first thoroughfare plan was enacted in 1974. In particular, it is necessary to note the efforts made by both the KCBFOTC and Alamo Area Metropolitan Planning Organization (AAMPO) that have preceded this Mobility Master Plan as these efforts will be evaluated, considered, and incorporated in the development of this plan.



» Exhibit 4: Timeline of Transportation Planning in the City of Boerne

# Boerne Master Plan (2018)

The Boerne Master Plan, adopted in 2018, was reviewed to understand the objectives and goals established by the City in relation to transportation. Objectives from the adopted plan are shown in Exhibit 5.



## Objective 3.1

Partner with federal, state, Kendall County, and other local partners to enhance regional mobility options in the Boerne area.

Action 3.1.1: Prepare an update to the City’s Thoroughfare Master Plan

Action 3.1.2: Continue to actively participate in regional transportation planning efforts to promote funding and infrastructure improvements which benefit Boerne

Action 3.1.3: Continue to work in partnership with TxDOT, Kendall County, and other area partners to find solutions regarding regional transportation issues

Action 3.1.4: Consider acquiring the rights-of-way of Main Street/Highway 87 from TxDOT

Action 3.1.5: Consider available opportunities to establish a new truck route ordinance to reroute truck traffic away from Main Street

Action 3.1.6: Support longer-term efforts to establish a transit station in Boerne by 2032

## Objective 3.2

Identify funding and evaluate opportunities to increase the multi-modal transportation options within Boerne.

Action 3.2.1: Consider the adoption of a Complete Streets policy to promote safer mobility for all users.

Action 3.2.2: Obtain cost estimates and establish a long-term plan to implement the high-priority on-street bicycle lane projects as set out in the Boerne Pedestrian & Bicycle Recommendations Study (AAMPO) (e.g., East Blanco Road/West San Antonio Ave.; Herff Road from Oak Park Drive to Old San Antonio Road; West Highland Drive; South Plant Street; and the secondary streets of Turner Avenue, West Hosack Street, Live Oak Street, and Rosewood Avenue).

Action 3.2.3: Obtain cost estimates and establish a long-term plan to implement the high priority pedestrian sidewalk projects as set out in the Boerne Pedestrian & Bicycle Recommendations Study (AAMPO) (e.g., West San Antonio Avenue to Lattimore Boulevard; Rosewood Avenue to downtown Boerne; North right-of-way of River Road; East Bandera Road; Schweppe Street; Herff Road to Old San Antonio Road; West Bandera Road from I-10 frontage road to past Norris Lane).

Action 3.2.4: Continue to work with TxDOT to establish additional pedestrian crosswalks with median refuges at additional locations on Main Street and River Road.

Action 3.2.5: Consider the recommended improvements to key intersections to improve the safety of pedestrian crossings (e.g., Herff Road/Esser Road/River Road; Bandera Road/ Main Street, and the South Main Street/Crosspoint intersections).

Action 3.2.6: Consider the recommended shared use path improvements to improve pedestrian and bicycle connections throughout the City (e.g., along Esser Road and Johns Road, Champion Boulevard, and a connection between Johns Road and North Main Street).

Action 3.2.7: Consider partnering with the Alamo Area MPO and other jurisdictions to create consistent bicycle and pedestrian educational and promotional materials beneficial to the Boerne community.

Action 3.2.8: Expand efforts to increase enforcement actions related to bicycle and pedestrian safety in Boerne.

» *Exhibit 5: Transportation Objectives from the Boerne 2018 Master Plan*

## Recent Engineering and Policy Updates

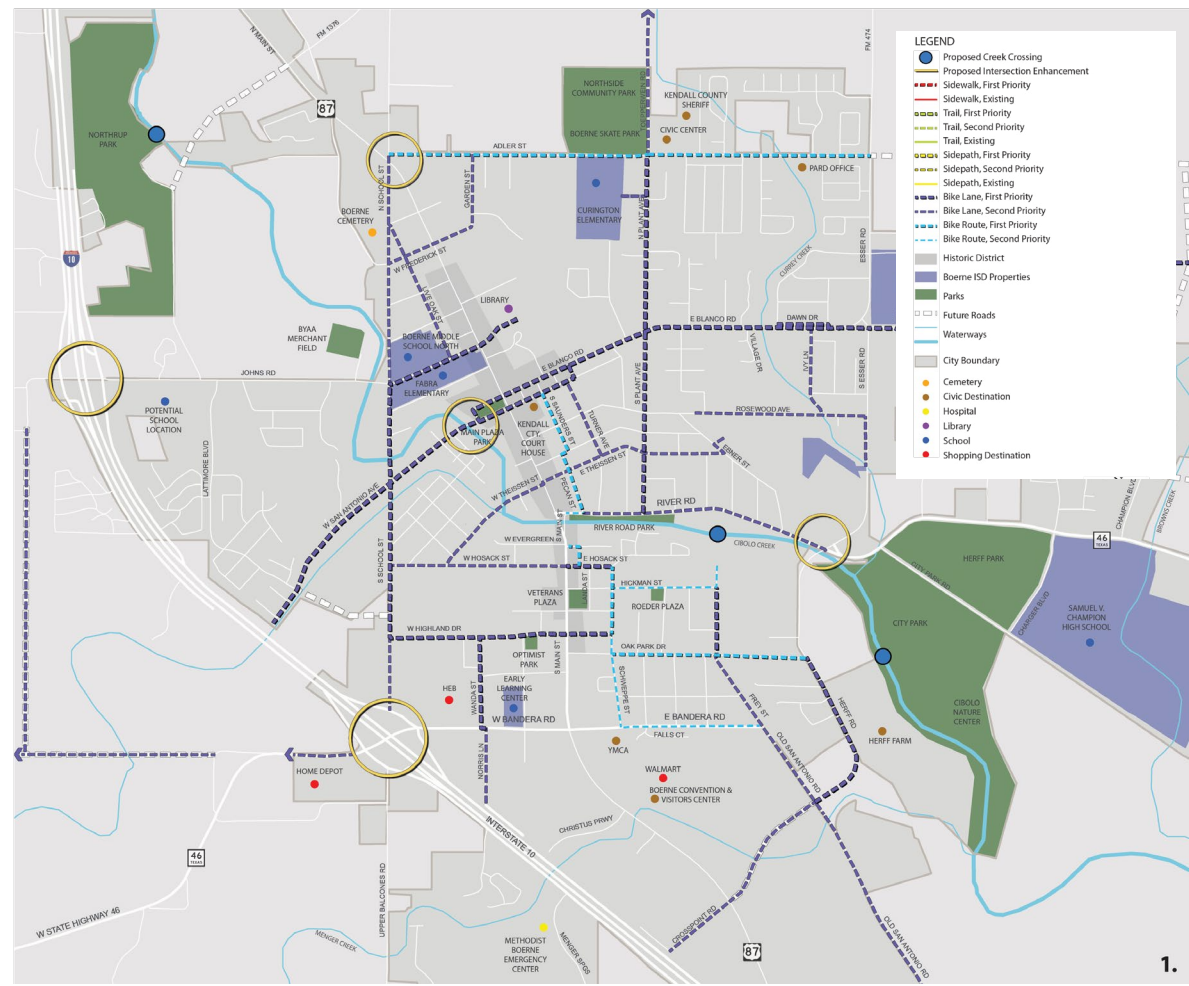
Recent engineering and policy updates that affect transportation planning in Boerne:

- ◇ Traffic Impact Analysis (TIA) Ordinance Adopted August 2017
- ◇ Rough Proportionality Policy Adopted February 2019
- ◇ Border Street Policy Adopted February 2019
- ◇ Unified Development Code (UDC) Update Adopted July 2021
- ◇ Engineering Design Manual Adopted July 2021

These updates reflect only the most recent policy changes and are not a comprehensive list of updates within the City.

# Alamo Area Metropolitan Planning Organization (AAMPO) Pedestrian and Bicycle Study (2016)

Exhibit 6 depicts recommendations proposed by AAMPO in the 2016 Pedestrian and Bicycle Study for the City of Boerne.

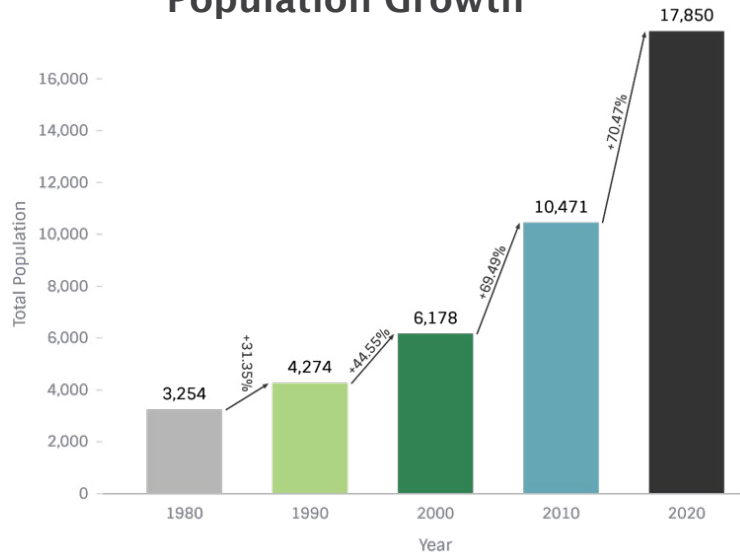


» Exhibit 6: AAMPO Recommendations from the 2016 Pedestrian and Bicycle Study

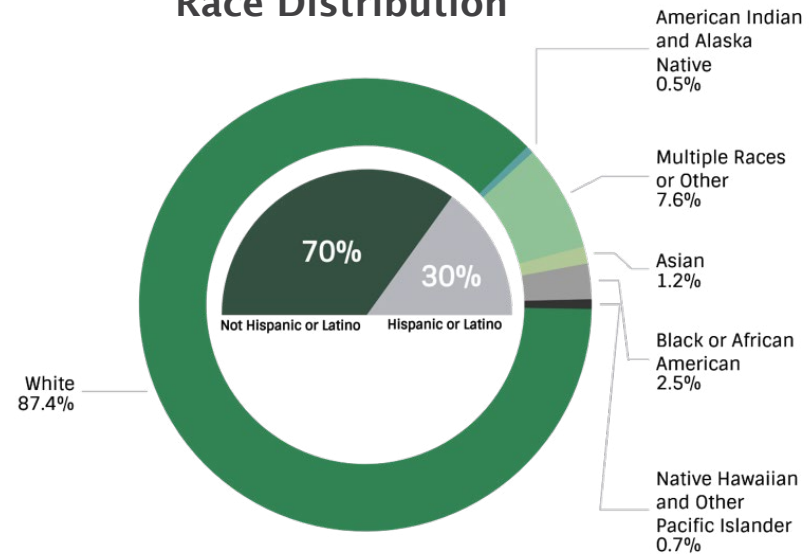
# Demographics

Demographic information depicted below reflects residents within the City limits of the City of Boerne and was obtained through the U.S. Census Bureau and American Community Survey (ACS).

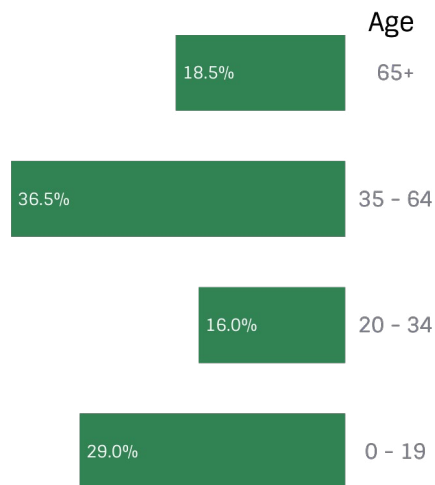
## Population Growth



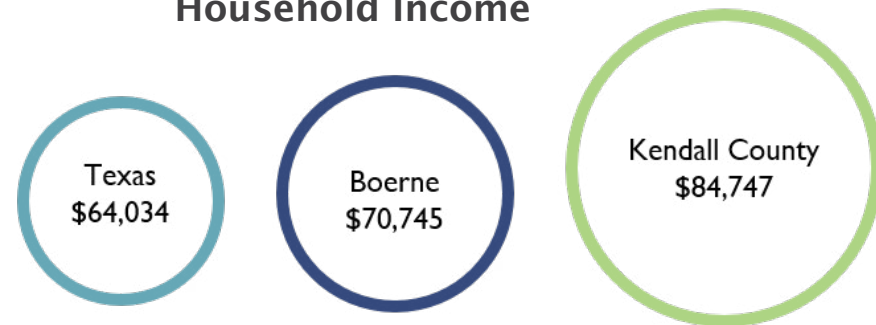
## Race Distribution



## Age Distribution



## Household Income



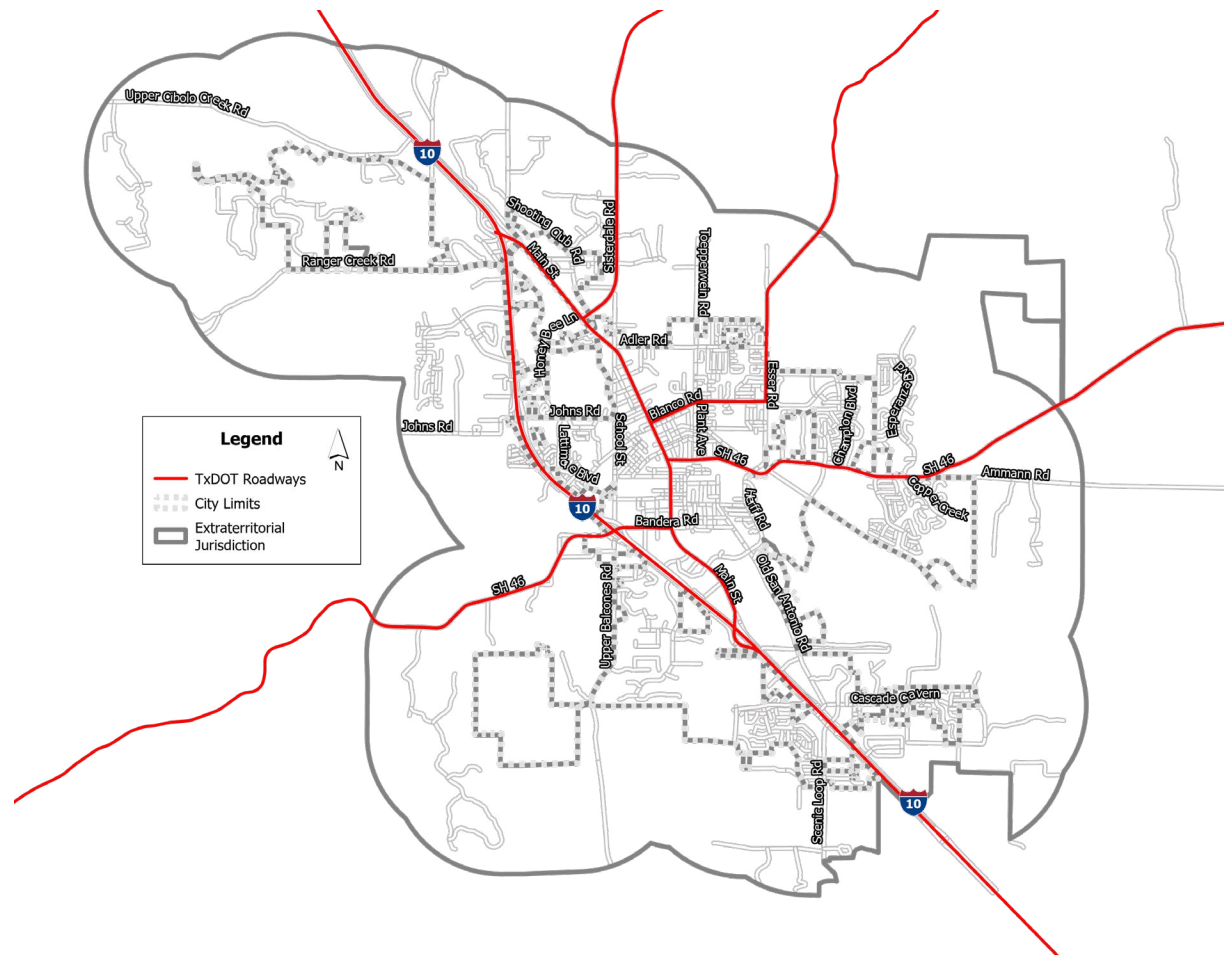
## Educational Attainment





# TxDOT Roadway System

Exhibit 8 depicts roadways within the City of Boerne that are owned and maintained by the Texas Department of Transportation (TxDOT). Proposed improvements and construction along TxDOT maintained facilities require collaboration with TxDOT and may be subject to additional regulations.



» Exhibit 8: TxDOT Roadway System in the City of Boerne

## TxDOT Roadway Designations

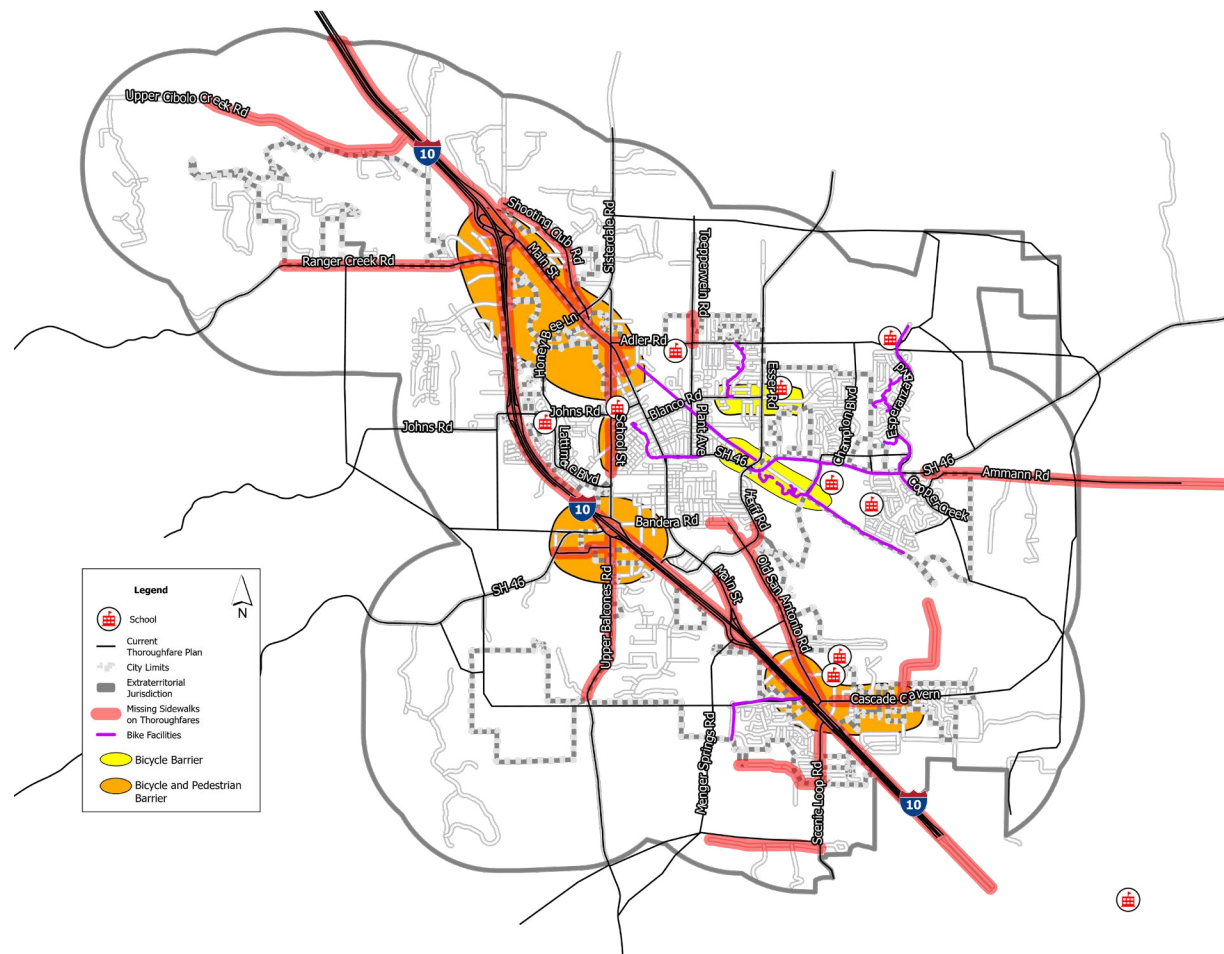
- ◇ Interstate Highway (IH)
- ◇ U.S. Highway (US)
- ◇ State Highway (SH)
- ◇ Ranch to Market Roads (RM)
- ◇ Farm to Market Roads (FM)

## TxDOT Roadways in City of Boerne

- ◇ IH-10
- ◇ US 87 (Main Street)
- ◇ SH 46 (River Road)
- ◇ RM 474 (Blanco Road)
- ◇ RM 1376
- ◇ FM 3351

# Pedestrian and Bicycle Barriers

Exhibit 9 shows the top bicycle and pedestrian barriers identified within the City of Boerne. These barriers are outlined as general areas that are missing one or more key bicycle or pedestrian connections. Those areas that are defined as having a bicycle barrier were specifically identified based on gaps in existing built trail infrastructure between schools, parks, downtown, or commercial areas within the City. Those areas marked as having both pedestrian and bicycle barriers had a lack of sidewalks on thoroughfares.



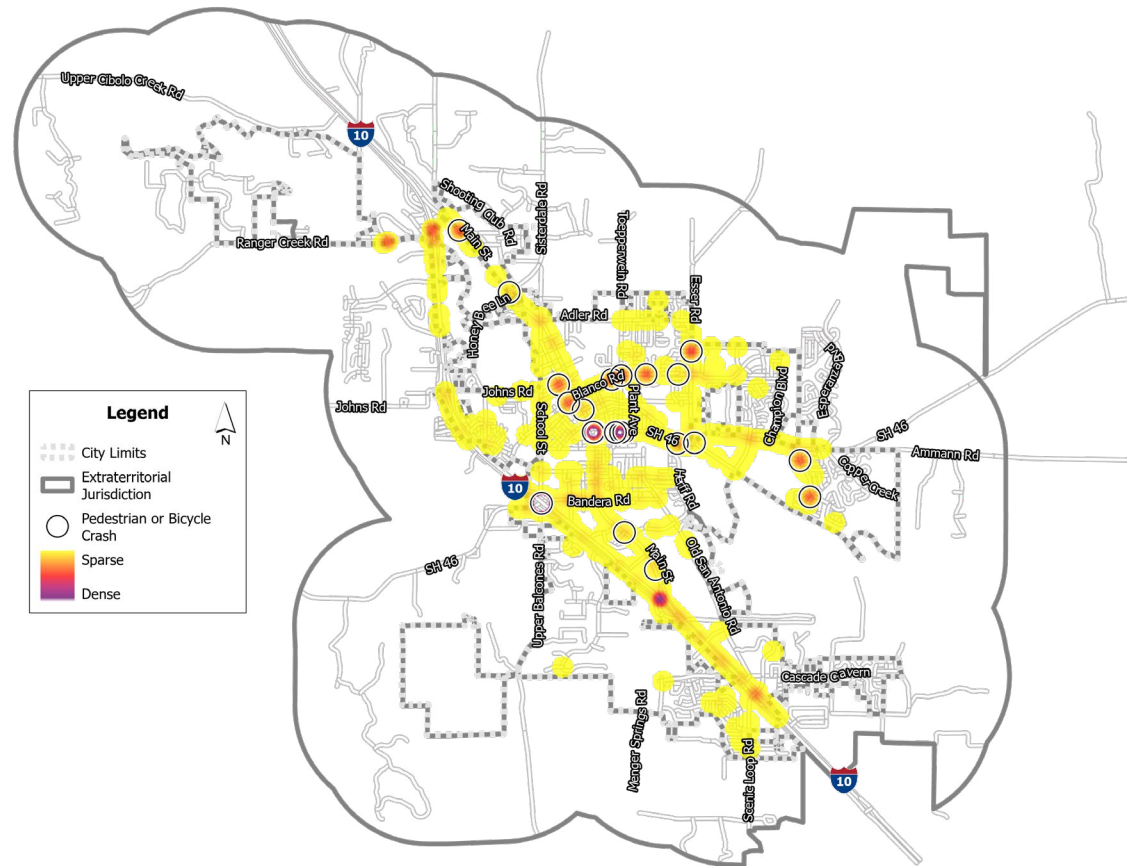
Notable bicycle barriers include the gap in the Old Number 9 Greenway along City Park Road, the adjoining gap in the Cibolo Creek Trail from the east entrance to the intersection of SH 46 (River Road) and Herff Road, and the gap from the Currey Creek Trail to Boerne High School. Notable bicycle and pedestrian gaps are more common throughout the City with the largest barrier being a lack of connectivity between downtown, adjacent neighborhoods, and the Boerne City Lake Park. Other bicycle and pedestrian gaps include School Street from W Hosack Street to Lohmann Street and near the intersection of Interstate 10 and SH 46. This area is missing key bicycle and pedestrian connections along W Bandera Road, Upper Balcones Road, and Coughran Road. The last major bicycle and pedestrian barrier present is located near Boerne Middle School South due to a lack of connections along Old San Antonio Road and Cascade Caverns.

» Exhibit 9: Existing Pedestrian and Bicycle Barriers in the City of Boerne

# Safety Overview

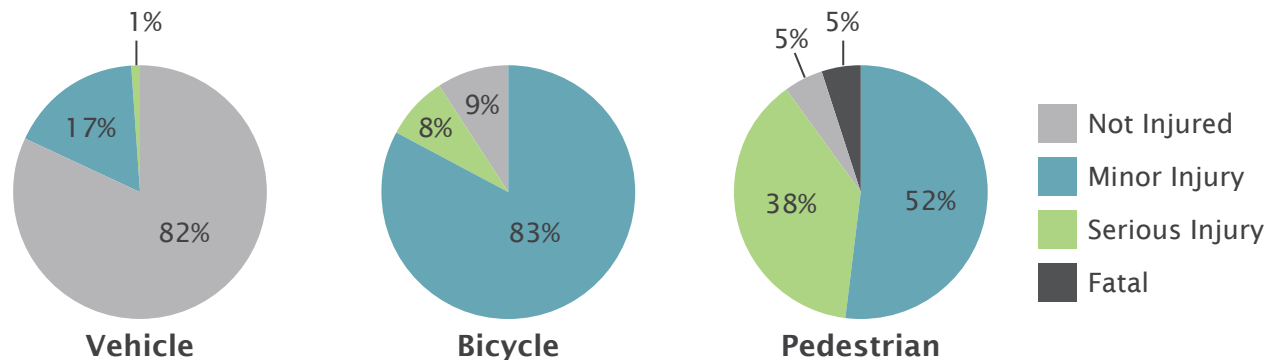
During the evaluation of current conditions, it is important to understand and weigh not only operational performance needs, but also needs related to historical safety challenges. While there has been substantial construction on Interstate 10 in the years preceding this study and a significant number of crashes, the remainder of the City has experienced a high frequency of crashes as well, totaling nearly 500 crashes per year over the past five years. Special attention must be given to the locations where a total of 33 crashes since 2017 have involved pedestrians or bicyclists. The majority of collisions whether driving, walking, or bicycling, have occurred on TxDOT roadways within Boerne. City streets that have experienced a higher frequency of crashes include:

- ◇ Johns Road between Main & School
- ◇ School Street
- ◇ Ranger Creek Road (near Oak Acres Lane)
- ◇ Adler Road (east of Toepperwein Road)
- ◇ Herff Ranch Boulevard (south of SH 46)

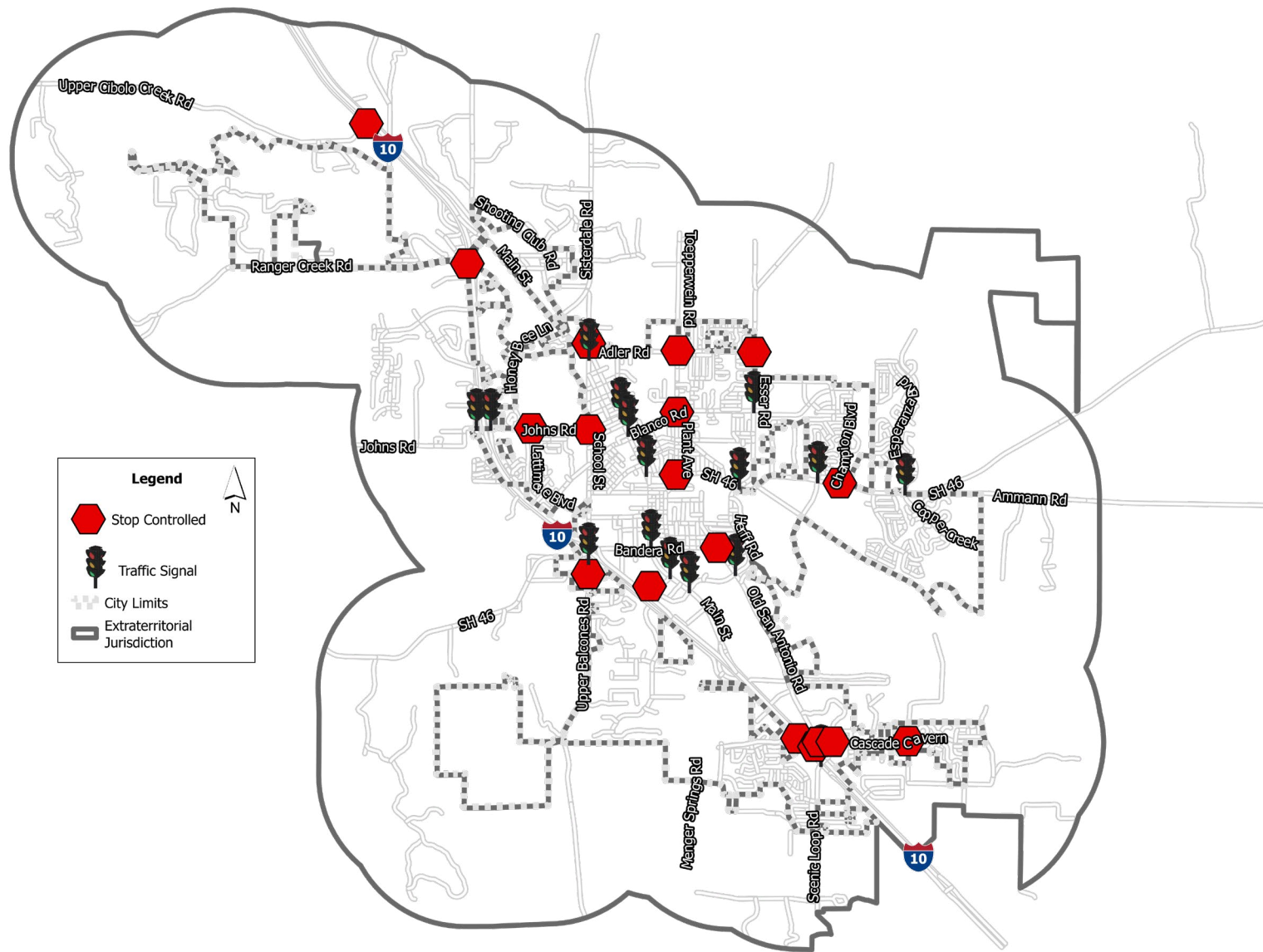


» Exhibit 10: Crash Severity and Density within the City of Boerne

## Crash Severity By Mode



# Existing Intersection Control

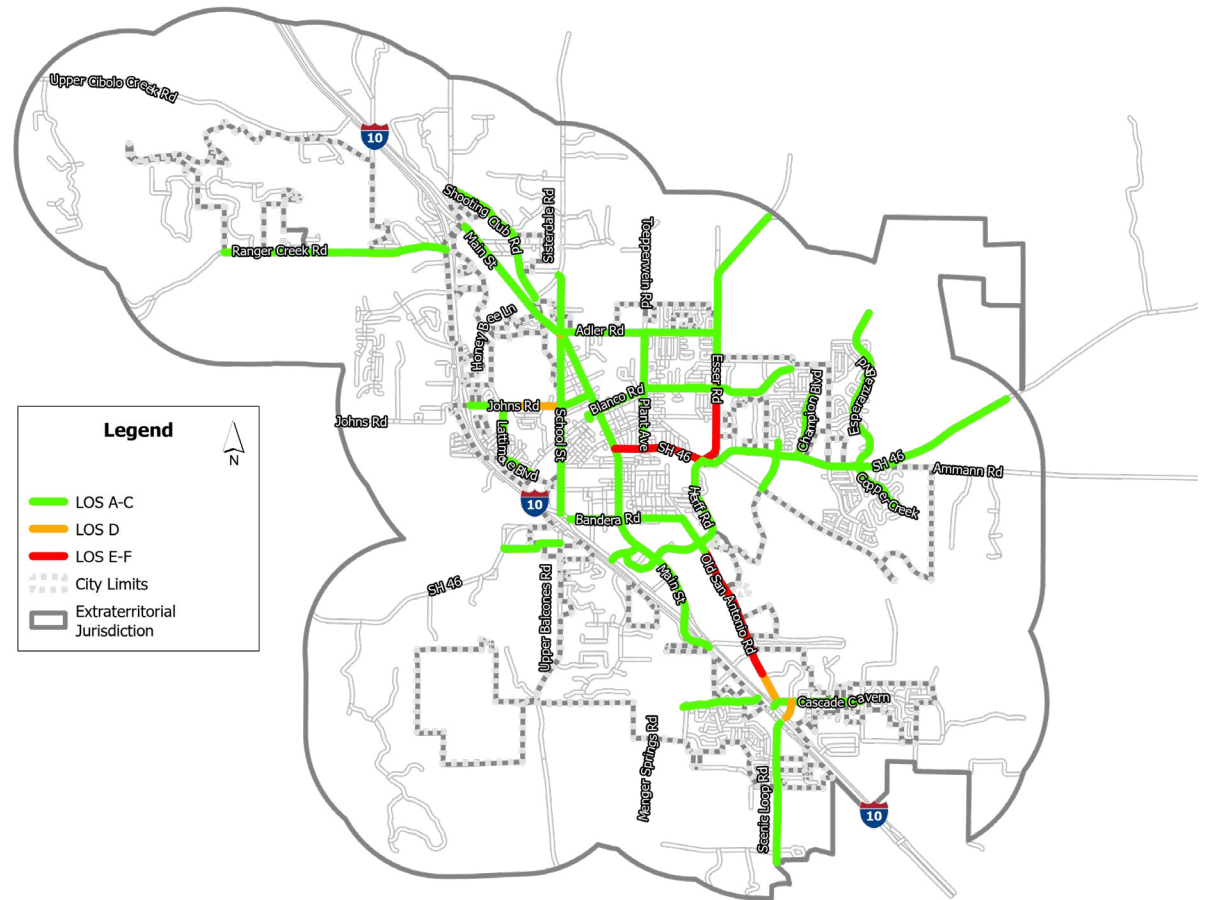


» Exhibit 11: Existing Intersection Control at Arterials and Collectors within the City of Boerne

# Existing Daily Roadway Performance

Exhibit 12 illustrates the existing performance of roadway segments throughout the City based on a daily volume to capacity ratio. The capacity of a roadway varies based on geometric characteristics such as number of lanes, lane width, speed limit, and more. To qualitatively indicate roadway performance, volume to capacity measures are converted to Level of Service (LOS) grades ranging from A to F. Based on the data shown, several roadways throughout the City currently operate at a LOS D or worse based on daily volume to capacity ratios such as:

- ◇ Johns Road from Cibolo Branch Drive to N School Street
- ◇ River Road from Turner Street to Herff Road
- ◇ S Esser Road from River Road to Rosewood Avenue
- ◇ Old San Antonio Road from Cascade Caverns Road to Herff Road
- ◇ Scenic Loop Road from IH-10 to Cascade Caverns

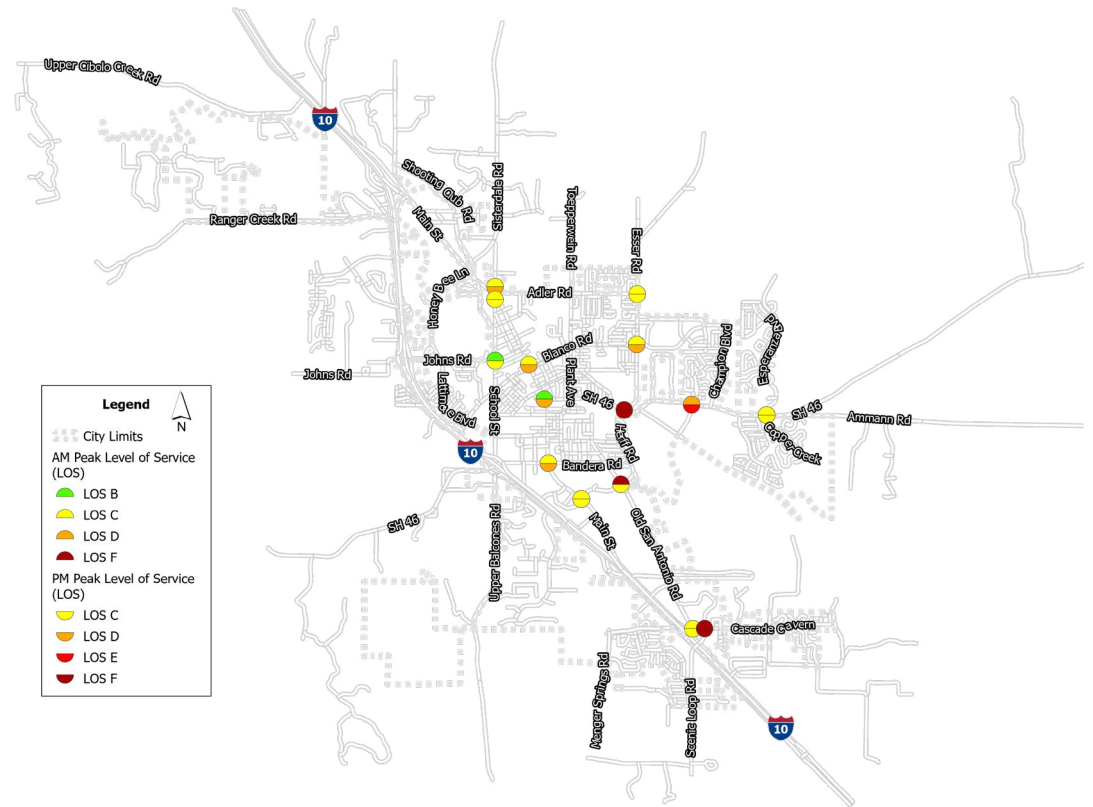


» *Exhibit 12:  
Existing Daily  
Roadway  
Performance*

Level of Service (LOS)	Volume to Capacity Ratio
A-C	<0.65
D	0.65-0.80
E-F	>0.80

# Existing Peak Hour Intersection Performance

Sixteen existing intersections within the City of Boerne were analyzed to establish existing intersection performance. These locations were analyzed during the AM and PM peak hours based on traffic data collected on Tuesday, February 1, 2022. Intersections were evaluated based on intersection delay and corresponding level of service (LOS) grade. Typically, a LOS D or better is considered acceptable during peak hours. Based on this evaluation, nine of the sixteen study intersections are operating at or below an acceptable LOS during one or more peak hours in existing conditions as shown in Exhibit 13.



» Exhibit 13: Existing Peak Hour Intersection Performance

Level of Service (LOS)	Signalized Delay (SEC)	Unsignalized Delay (SEC)
A	<10	<10
B	>10 and ≤ 20	>10 and ≤ 15
C	>20 and ≤ 35	>15 and ≤ 25
D	>35 and ≤ 55	>25 and ≤ 35
E	>55 and ≤ 80	>35 and ≤ 50
F	>80	>50

# Public Involvement Process



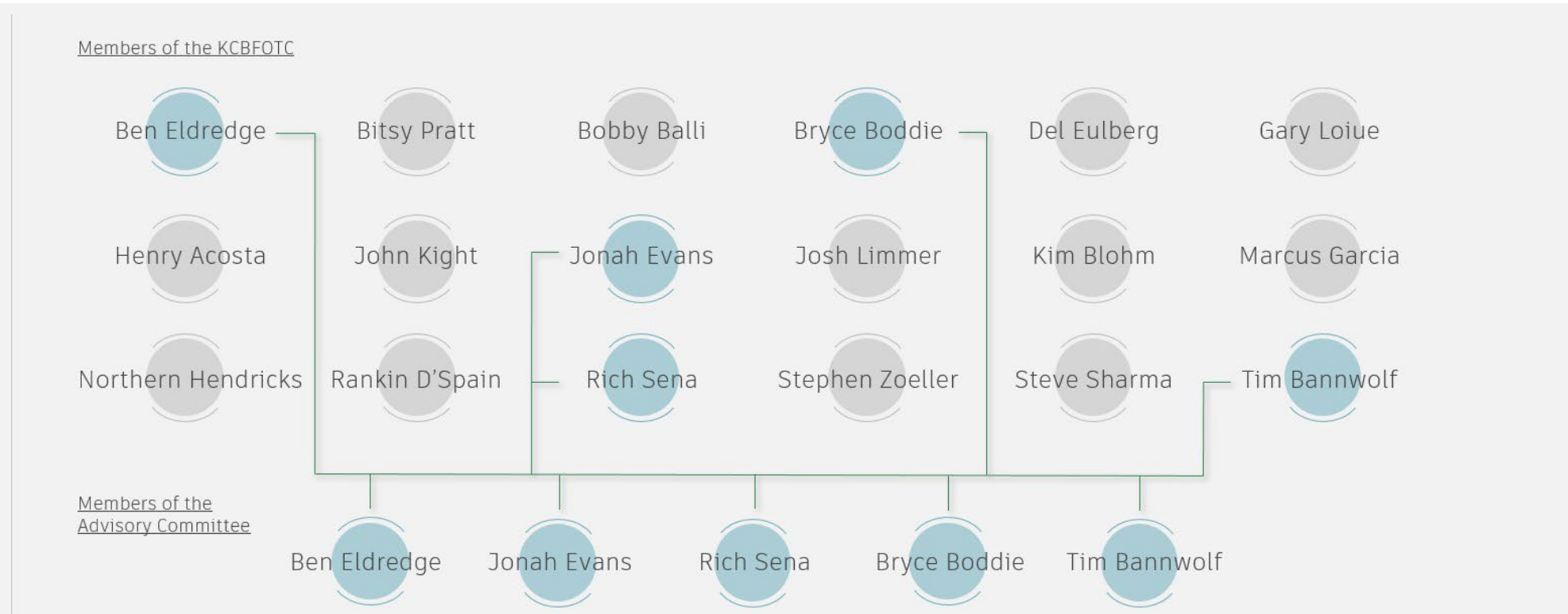
# CHAPTER 4

The Mobility Master Plan was developed through a continuous process with public input to ensure the needs of the community are understood and addressed. A combination of in-person engagement methods and virtual engagement via the project website were used to solicit community input throughout the process. In addition to public outreach, an advisory committee was established with representatives throughout the community, including representatives of the Kendall County Boerne Fair Oaks Transportation Committee (KBOFTC). This section outlines this process and summarizes key findings from public feedback.



# Advisory Committee Overview

**Exhibit 14** depicts the members of the KCBFOTC as well as the MMP Advisory Committee. The MMP Advisory Committee, composed of Rich Sena, Jonah Evans, Ben Eldredge, Bryce Boddie, and Tim Bannwolf, was tasked with providing input and essential feedback on proposed mobility project recommendations, thoroughfare planning, and transportation policies during the course of multiple meetings held throughout the Mobility Master Plan development process. The project goals and recommendations contained in the Master Plan were created in consultation with and reviewed by with the MMP Advisory Committee, and while all such goals and recommendations were discussed by the MMP Advisory Committee, not all goals and recommendations received unanimous support among the Advisory Committee members. The MMP Advisory Committee, which focused on local mobility issues within the City of Boerne and its ETJ, was a subset of the larger KCBFOTC. The KCBFOTC contained representatives appointed by the City of Boerne, the City of Fair Oaks, and Kendall County and focused on mobility issues and planning across the entire county, not just within the City of Boerne and its ETJ.



» Exhibit 14: MMP Advisory Committee

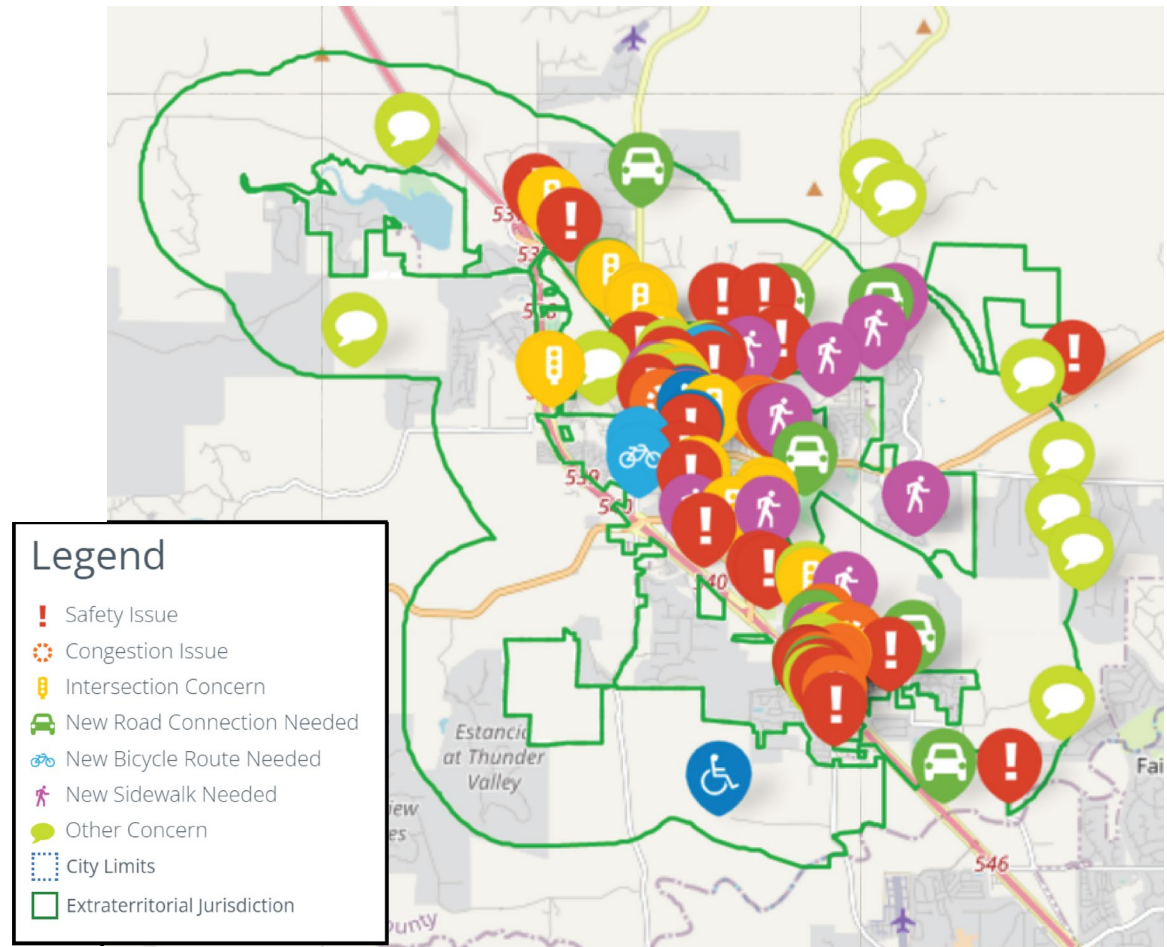
# Public Engagement

The Mobility Master Plan was developed using a hybrid public input approach that used a combination of in person open houses and online interactive tools to inform the plan's goals, projects, and policies.

While in person feedback events allow for an increased level of insight, online feedback methods lend themselves to a wider range of responses and are more provides tangible data to analyze. Both methods were considered essential in this process.

Over the course of the study, a total of four open houses, one business stakeholder meeting, and five Advisory Committee meetings were held in person in addition to the online engagement opportunities.

**Exhibit 15** illustrates an overview of community input received online via the interactive map tool. A total of 120 interactive map comments were received regarding congestion, new road connections, safety, intersections, and pedestrian or bicycle concerns.

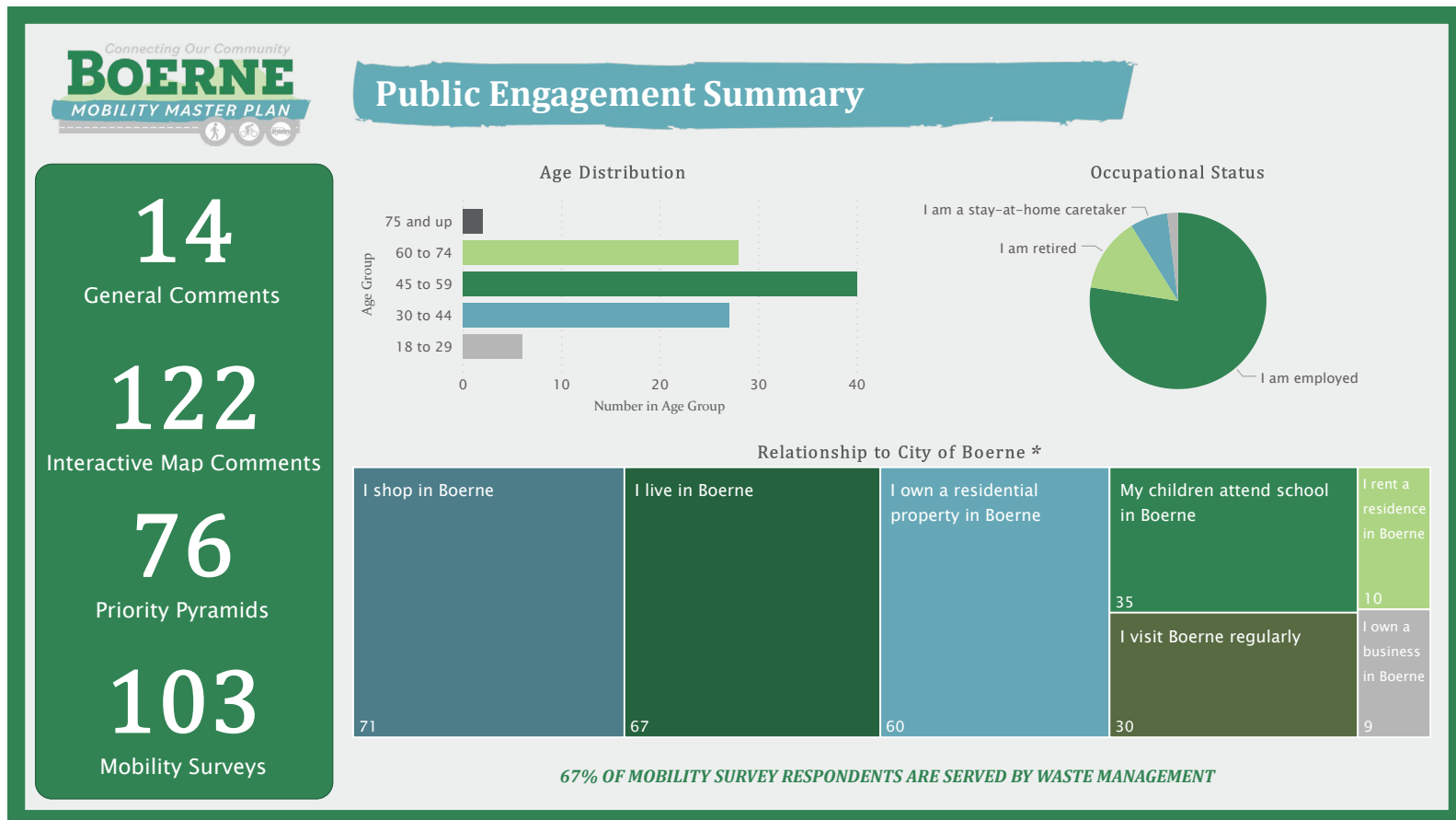


» *Exhibit 15: Interactive Map Feedback*  
*(A complete list of comments is provided in Appendix C)*

# Online Engagement

**Exhibit 16** depicts an overview of public input received from both Open House I and the online engagement tools. While few general comments were received, there was a strong response to the interactive map feature, priority pyramid activity, and the mobility survey available on the project website. Additional information regarding the priority pyramid activity is found in Chapter 5.

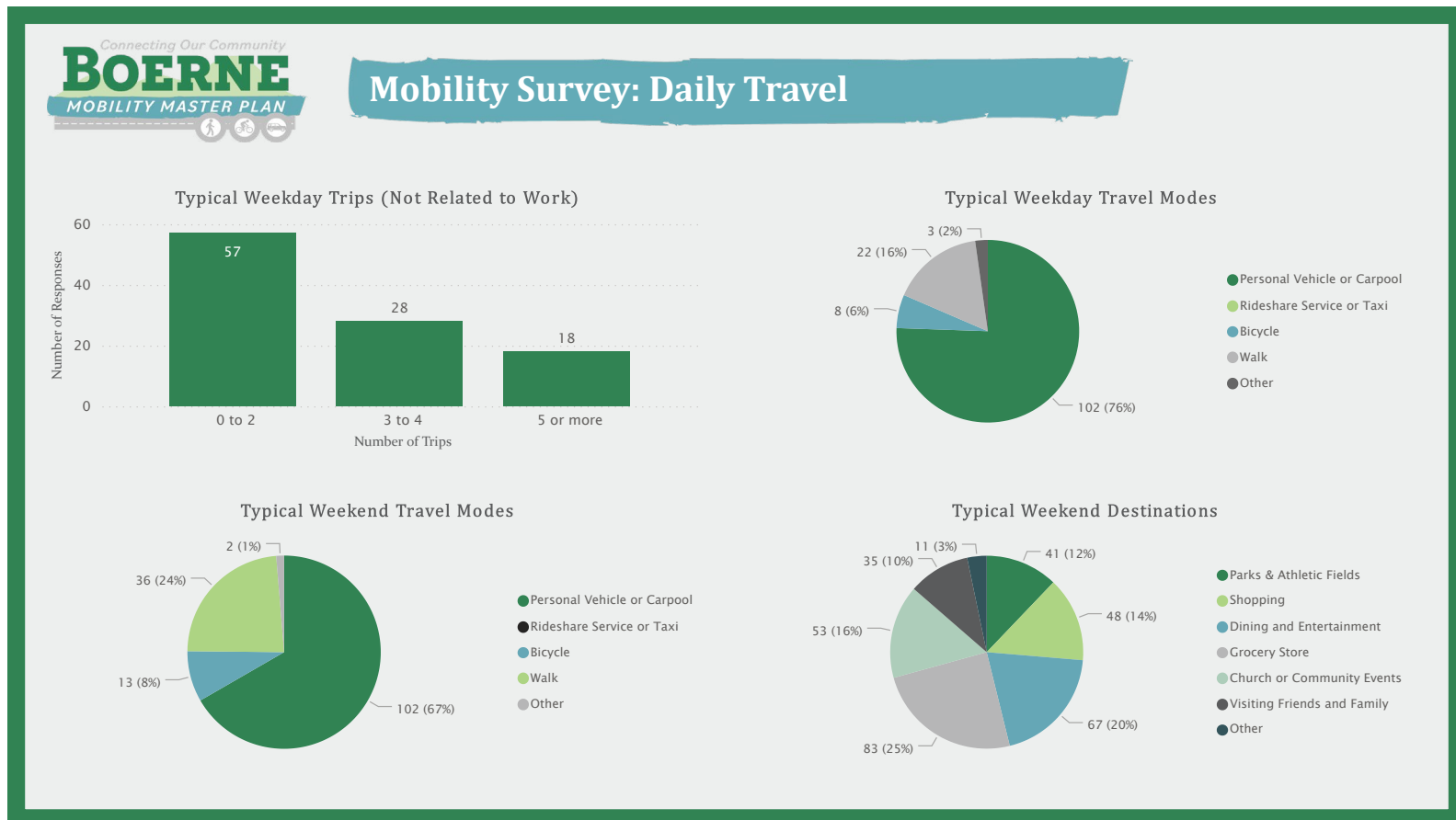
Looking at demographic characteristics of respondents, most are between 45 and 59 years with additional high percentages of 30 to 44 years, and 60 to 74 years. Additionally, most respondents indicated that they were either employed or retired. When looking at activities conducted in Boerne, the majority of respondents indicated they shop in Boerne, live in Boerne, and/or own a residential property in Boerne.



» *Exhibit 16: Summary of Public Engagement (Note: Respondents were able to select more than one response)*

# Mobility Survey Feedback

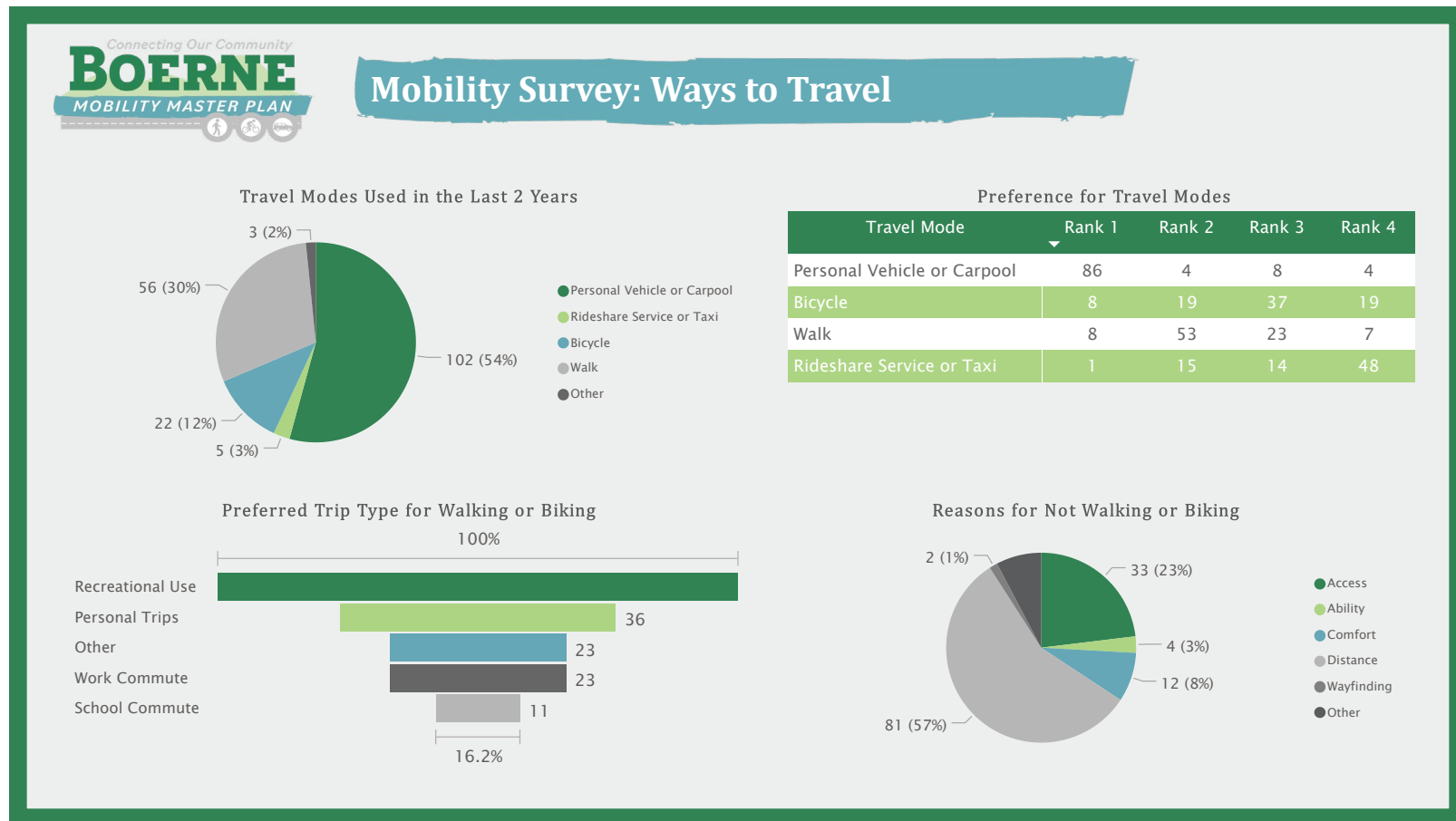
Exhibit 17 shows a breakdown of input received on the Mobility Survey, which the majority of respondents indicated that they make no more than two non-work-related trips per day. Additionally, personal vehicles were the most common travel mode for weekday and weekend trips. While personal vehicles were the most common travel mode, walking and biking were the next most common travel modes for weekdays and weekends. Notably, respondents indicated that their Typical Weekend Destinations included grocery stores, dining and entertainment, church or community events, and shopping.



» Exhibit 17: Mobility Survey: Daily Travel Responses

# Mobility Survey Feedback (Continued)

Exhibit 18 shows the most common travel modes used during the past two years include personal vehicle, walking, and biking as indicated by respondents of the Mobility Survey. Notably, the most preferred trip type for walking or biking is for recreation and the most common reasons for not walking and biking include distance, access, and comfort.



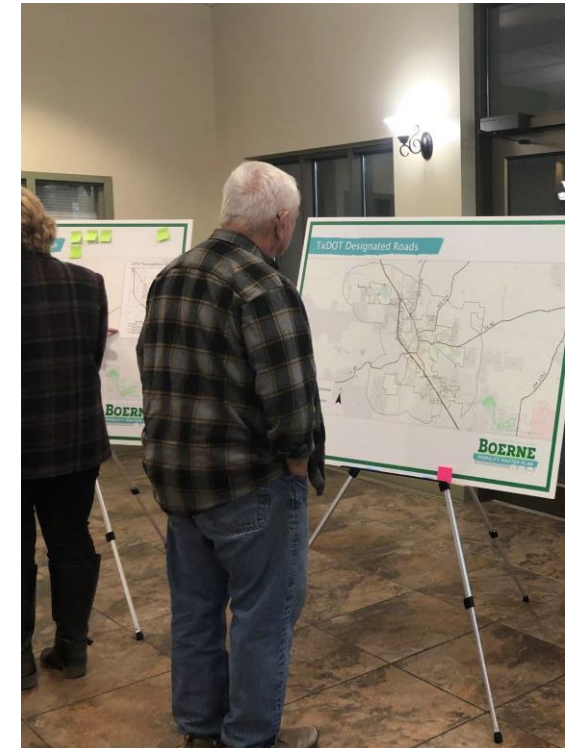
» Exhibit 18: Mobility Survey: Ways To Travel Responses

# Open House I

Open House I was held on Thursday, March 3, 2022 from 3:00 to 7:00 PM at the Kronkosky Place in Boerne, Texas. The purpose of this open house was to introduce the community to the goals and objectives of the Mobility Master Plan and obtain input from the public on perceived concerns, needs, and desires regarding mobility within the City of Boerne. Attendees were encouraged to sign-in as they were welcomed to the open house based on which 55 people were in attendance.

During the open house, several activities and tools were available to engage and obtain community feedback such as interactive maps, prioritization exercises, surveys, and comment cards.

- ◇ Interactive maps were provided for the community to comment, draw, and annotate areas of concern, existing needs, and desires from their experience.
- ◇ Priority Pyramid exercises were available for the community to rank the goals of the Mobility Master Plan in order of most to least important to them.

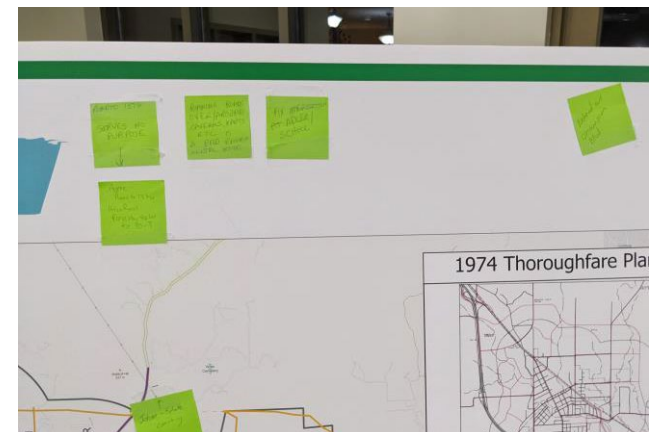
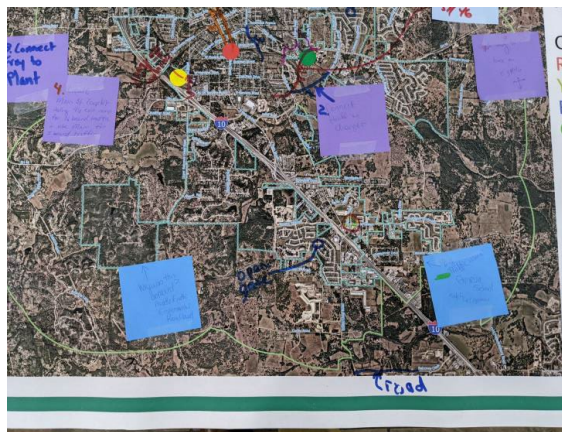
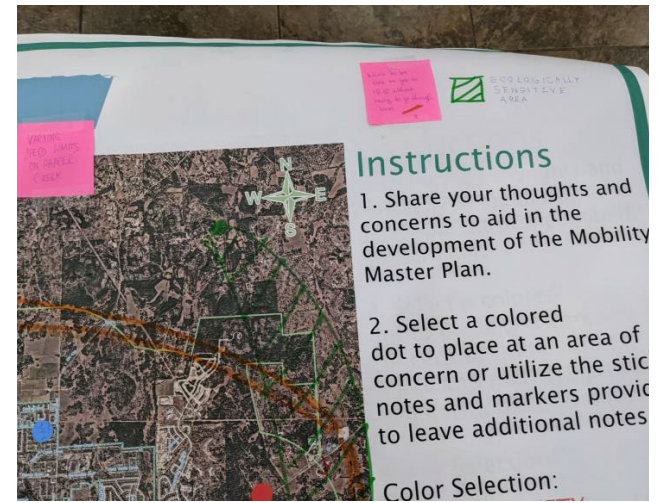
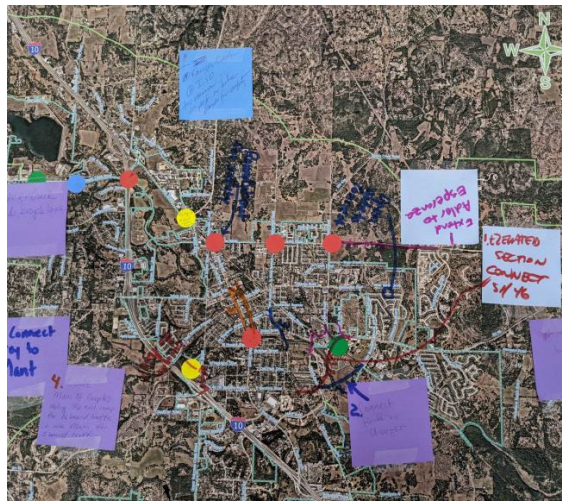


# Open House I (Continued)

- ◇ Mobility Surveys were utilized to gather information on the way the community currently travels and utilizes transportation infrastructure within Boerne as well as how they would prefer to travel and transportation infrastructure that they would like to see more of in the future.
- ◇ Comment cards were available to the community to provide general input as well as the project team was available for receiving comments or questions.

All activities available at the open house were also available online via the project website for community input.

Community input at the open house varied greatly amongst attendees and online participants. Many folks expressed the need for alternative connections to IH-10 and existing concerns with the intersections of River Road & Herff Road/Esser Road and Main Street & School Street/Sisterdale Cutoff being an operational burden to navigating Boerne.



## 55

Attendees

## 28

Comment Cards Received

## 76

Priority Pyramids \* Submitted

\* Combined total with in-person and online submissions

# Open House II

Open House II was held on Tuesday May 17, 2022 at the Kronkosky Place in Boerne, Texas as a forum to receive feedback on proposed intersection, roadway, and bicycle and pedestrian projects. Attendance at Open House II was approximately 40.

Open House II was centered around receiving feedback on recommended projects. All intersection, roadway, and bicycle and pedestrian projects were prioritized based on prior goals and objectives established through community input and attendees utilized a voting system to directly vote for projects they supported or opposed. To express support for a project, an upvote sticker was used and to show opposition to a project, a downvote sticker was used.

Additionally, attendees were able to engage with the project team, complete comment cards, as well as annotate boards with project-specific or location-specific comments.



# Open House II (Continued)

As attendees examined project recommendations, the project team answered questions and engaged in feedback to gain a better understanding of public support or opposition on projects.

Takeaways from the recommended bicycle and pedestrian projects included the following:

- ◊ Preference for facilities that benefit both cyclists and pedestrians such as trails and shared use paths
- ◊ Preference towards off road bicycle facilities due to safety concerns
- ◊ Widespread support for trail extensions

Takeaways from the recommended intersection projects included a general enthusiasm for roundabouts and an overwhelming support for improvements at the intersections of River Road & Main Street, River Road & Herff Road/Esser Road, and Main Street & School Street/Adler Road.

Takeaways from the recommended roadway projects included support for improvements along Cascade Caverns, the School Street Corridor Study, and widening of Old San Antonio Road.

34

Attendees

321

Priority Arrows Placed

01

Comment Card Received

### Roadway Enhancement Project Rankings

Rank	Project Name	Score (Max. of 100)	Uprate or Downvote
1	School Street Corridor Study	62.88	
2	Old San Antonio Road Widening	60.75	
3	River Road Corridor Study	60.38	
4	Scenic Loop Road Widening	60.26	
5	Johns Road Widening	59.16	
6	Adler Street Widening	57.01	
7	W Blanco Road Reconstruction	56.41	
8	Main Street Corridor Study	56.35	
9	Cascade Caverns Widening	54.30	
10	Upper Cibolo Creek Road Widening	53.52	
11	W Kronkowsky Street Reconstruction	52.59	
12	Parkway Drive Reconstruction	50.73	
13	Ranger Creek Road Widening	50.67	
14	N Shooting Club Road Reconstruction	48.52	
15	Coughlan Road Realignment and Widening	45.85	
16	Essex Road Restriping	44.19	
17	Cascade Caverns Improvements	43.87	
18	Johns Road Realignment and Widening	42.37	

#### Scoring Categories and Key Considerations

- 25 pts** Maximize Efficiency of Existing Infrastructure
- 25 pts** Preserve Rural Character
  - Create Classification
  - Review and Reevaluate
  - Review of Land Use
- 20 pts** Prioritize Local Mobility
  - Local Connectivity
  - Review and Reevaluate
  - Review of Land Use
- 15 pts** Minimize Environmental Impact
  - Preserve
  - Review
  - Review
- 15 pts** Enhance Connectivity
  - Create
  - Review
  - Review
- 10 pts** Enhance River Safety
  - Create
  - Review
  - Review

Maximum points available in each category are based on public feedback on the Priority Pyramid via the project website and first public meeting held on March 3, 2023.

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### Intersection Project Rankings

Rank	Project Name	Score (Max. of 100)	Uprate or Downvote
1	River Road & Herff Road/Esser Road Turn Lane Improvements (Short Term)	84.50	
2	River Road & Herff Road/Esser Road Intersection Improvements (Long Term)	77.00	
3	Main Street & River Road Intersection Improvements	73.00	
4	Charger Boulevard & SH 46 Turn Lane Improvements	72.13	
5	Main Street & Blanco Road Traffic Signal Improvements	67.50	
6	Main Street & Bandera Road Intersection Improvements	64.75	
7	Scenic Loop Road & Cascade Caverns Traffic Signal Installation	62.00	Committed Project
8	Sheridan Cutoff & Adler Street Intersection Improvements (Short Term)	58.63	
9	Old San Antonio Road & Herff Road Intersection Improvements	57.25	
10	Main Street & School Street Roundabout	56.00	
11	Sheridan Cutoff & Adler Street Roundabout (Long Term)	53.00	
12	School Street & Johns Road Roundabout	50.00	
13	Old San Antonio Road & Cascade Caverns Roundabout	46.50	Committed Project
14	Copper Creek/Esperanza Boulevard & SH 46 Intersection Improvements	45.13	
15	Essex Road & Adler Street Turn Lane Improvements (Short Term)	44.63	
16	Essex Road & Adler Street Roundabout (Long Term)	44.63	
17	Main Street & Herff Road Turn Lane Improvements	43.50	
18	Essex Road & Blanco Road Traffic Signal Improvements (Short Term)	42.38	
19	Essex Road & Blanco Road Roundabout (Long Term)	40.75	
20	Main Street & Johns Road Turn Lane Improvements	38.63	

#### Scoring Categories and Key Considerations

- 45 pts** Existing Conditions
  - Level of Service (LOS)
  - Intersection Delay
  - Turn Volume
  - Queue
  - Queue Length
- 25 pts** Improved Conditions
  - Queue Length
  - Intersection Delay
  - Capacity
  - Queue Reduction
- 10 pts** Feasibility
  - Rights of Way
  - Bridges
  - Overpass
  - Swamps
- 10 pts** Cost
  - Estimated Construction Cost

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### Bicycle & Pedestrian Project Rankings

Rank	Project Name	Score	Uprate or Downvote
1	S. Main Street at River Road Sidewalk Reconstruction	61	
2	Johns Road Shared Use Path	51	
3	Essex Road Shared Use Path	48	
4	Old No. 9 Greenway Connection	40	
5	S. Plant Avenue Bike Lane	39	
6	Cibolo Creek Trail Extension 1	37	
7	Rosewood Avenue Bike Lane	36	
8	Old No. 9 Greenway Extension 4	35	
9	Cibolo Creek Trail Extension 3	33	
10	Curry Creek Trail Extension 1	32	
	Old No. 9 Greenway Extension 2	32	

#### Scoring Categories and Key Considerations

- 25 pts** Connectivity
  - Walkability
  - Review of Land Use
  - Review of Land Use
  - Review of Land Use
  - Review of Land Use
- 25 pts** Safety
  - Pedestrian and Bicycle Conditions
  - Severity of Collisions
  - Power Street Lane
- 15 pts** Other
  - Ranked by Previous Public Open House
  - Roadway Classification
  - Road Needs to be Addressed in Meeting
  - Road Needs to be Addressed in Meeting

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# Business Stakeholder Meeting

As part of the public involvement efforts for the Mobility Master Plan, a business stakeholder meeting was held on Thursday, March 3, 2022 at Kronkosky Place to engage local business owners and introduce the goals and objectives of the Mobility Master Plan while obtaining input on concerns, needs, and desires within the City of Boerne, similar to that obtained at the Open House I. Transportation infrastructure is vital to many businesses and organizations, therefore the purpose of this meeting was to ensure the development of the plan included considerations of the local economy and how the local economy could be supported through improved mobility.



# Open House III

Open House III was held on Wednesday,

November 30, 2022 from 4:00 PM to 6:00 PM at City Hall to present the proposed cross sections for the Mobility Master Plan. During this meeting, the ten cross sections detailed in Chapter 5 were presented to the community for review and input, which included cross sections for Local, Collector, and Arterial streets within the Central, Standard, and Preservation context areas. Overall, the proposed cross sections as presented were well received and one comment was received regarding the cross sections following the meeting.





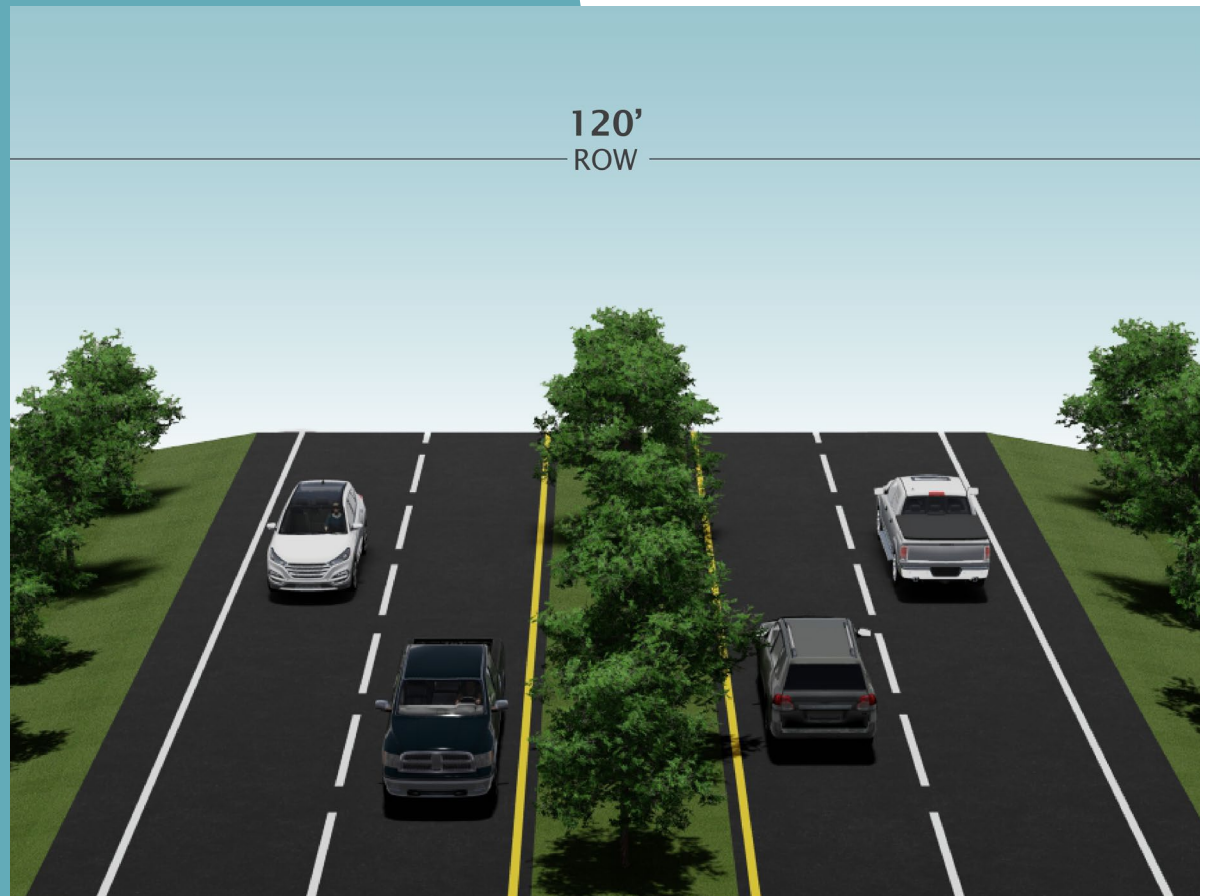
# Thoroughfare Plan and Cross Sections



# CHAPTER 5

A Thoroughfare Plan is a crucial tool used to preserve connectivity and continuity in a transportation system as well as to ensure future development has the capacity needed to serve it. Periodically, a Thoroughfare Plan is revised to maintain relevance with the existing transportation network and accommodate growth.

In conjunction with Thoroughfare Plans, cross sections are established by roadway classification and context area to create consistency as well as to modernize street design in Boerne to reflect the goals and priorities expressed by the community.

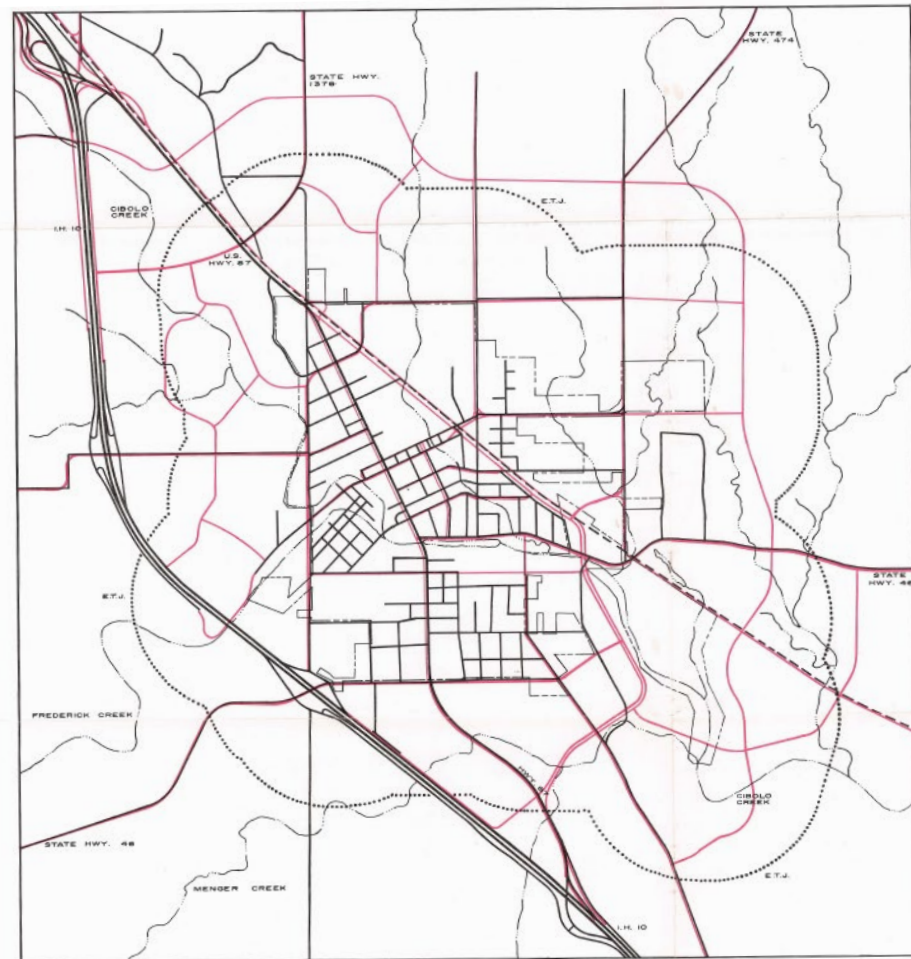


# Purpose of Thoroughfare Plans

The intent of the Mobility Master Plan is to analyze existing and future needs as well as opportunities for additional connectivity as the City of Boerne continues to grow. A critical component of this process is the thoroughfare plan, which preserves space for future roadway connections as development occurs in Boerne. With a thoroughfare plan in place, the City can ensure the transportation network has adequate capacity and right-of-way to accommodate future growth. While thoroughfares or trails are typically built as part of development, on rare occasions the City, TxDOT, or County may construct a thoroughfare or a trail (e.g. Herff Road).

Thoroughfare planning is a data driven process that identifies existing roadway deficiencies that result in circuitous, unsafe, or congested traffic conditions and evaluates how to best prepare for future traffic conditions in the form of new roadways. The thoroughfare planning process includes review of all current and planned development as well as population and employment projections to help forecast future demand on the roadway network.

While actual future roads that are built may deviate from the exact alignment depicted on the thoroughfare plan, the end points of the connection will remain the same to achieve the desired connectivity. **Exhibit 19** shows the City of Boerne's first thoroughfare plan enacted in 1974.



## MAJOR STREETS PLAN

PRIMARY MAJOR THOROUGHFARE: OLD SOUTHERN PACIFIC RAILROAD.

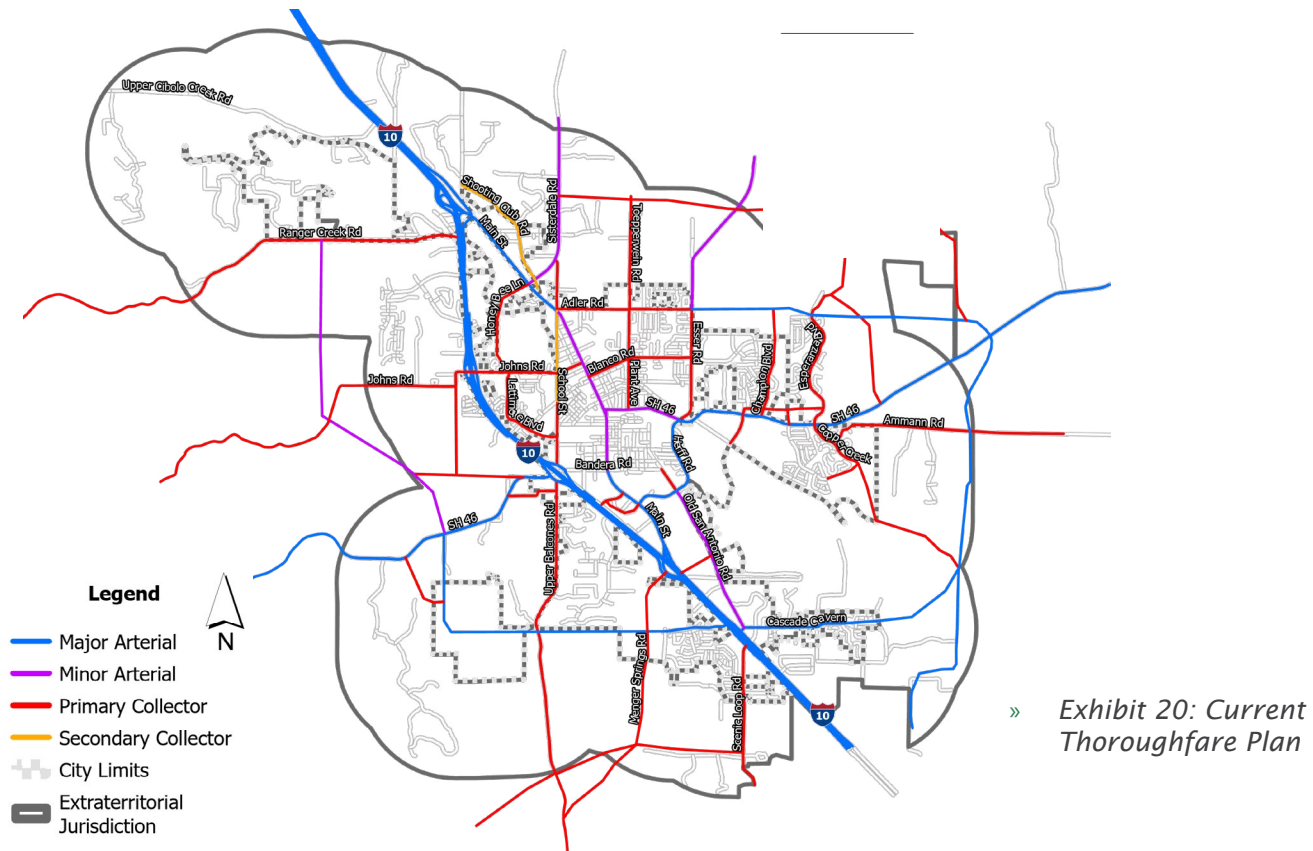
SECONDARY MAJOR THOROUGHFARE: MAIN STREET, PLANT AVENUE, PECAN-SAUNDERS STREETS, BLANCO ROAD AND SAN ANTONIO, ONE PAIR THROUGH THE CBD.

PRIMARY COLLECTOR STREETS: F.M. 1376, ADLER STREET, ESSER ROAD, F.M. 474, SCHOOL STREET, JOHNS ROAD, WEST SAN ANTONIO AVENUE AND BANDERA ROAD.

SECONDARY COLLECTOR STREET: ROSEWOOD AVENUE, THIESSEN STREET, HOSSACK STREET, PLANT STREET AND FREY STREET.

PLATE-5

» *Exhibit 19: The City of Boerne's 1974 Thoroughfare Plan*



As part of the Mobility Master Plan, revisions to the Current Thoroughfare Plan were established to preserve connectivity through growth. The Proposed Thoroughfare Plan, as adopted and updated in the Comprehensive Plan, was developed in coordination with City staff, the Advisory Committee, input received from the community, as well as recommendations presented by KCBFOTC in their publication, *County At A Crossroads: A Citizens' Plan for Transportation in Kendall County (2022)*.

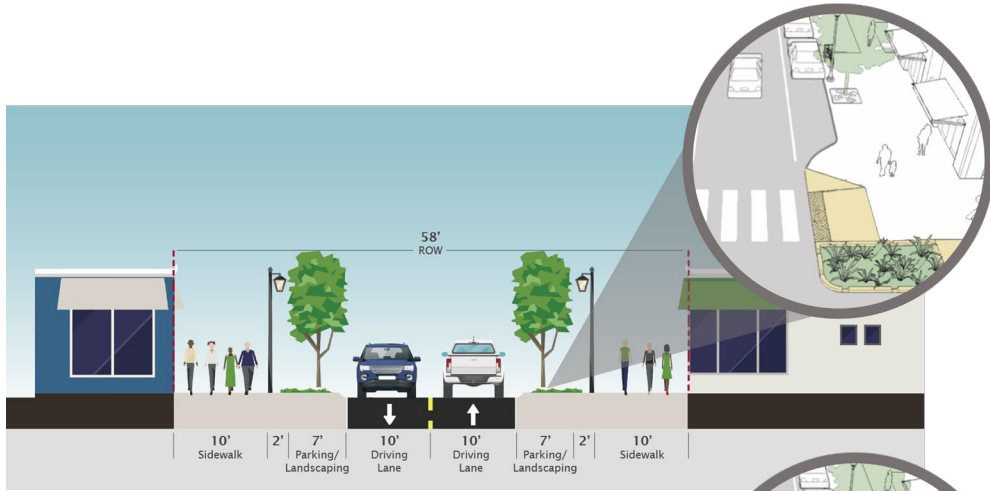
Throughout the development of the Proposed Thoroughfare Plan, simplifications to roadway classifications were recommended to create consistency across the transportation system, which included consolidation of Major Arterial and Minor Arterial to Arterial and consolidation of Primary Collector and Secondary Collector to Collector. The Proposed Thoroughfare Plan provides coverage over the city limits as well as the 1-mile ETJ. It should be noted that once the City of Boerne's population exceeds 25,000, the ETJ will expand to 2-miles, consistent with Texas Statutes, at which time any line on the Proposed Thoroughfare Plan that intersects the 1-mile ETJ should be expected to extend linearly until intersection with the 2-mile ETJ boundary.

To further support connectivity and the intent of the Proposed Thoroughfare Plan, it is recommended to amend the City of Boerne's Unified Development Code to require a minimum of one Collector facility per development with stub-outs on at least one property line to ensure connectivity amongst adjacent properties. Furthermore, should stub-outs exist on adjacent to properties being developed, additional Collector facilities may be required to create a complete transportation system.

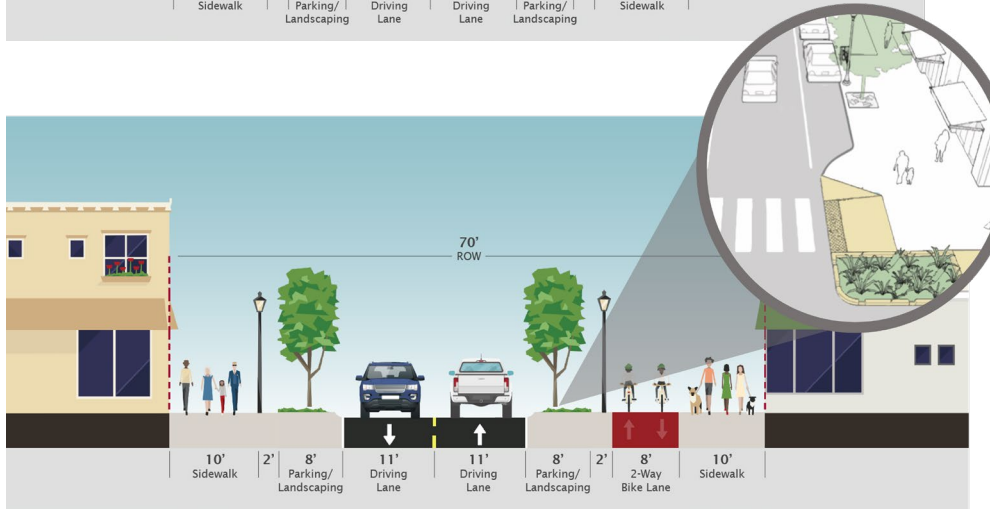


# Cross Sections: Central Context Area

Local Streets



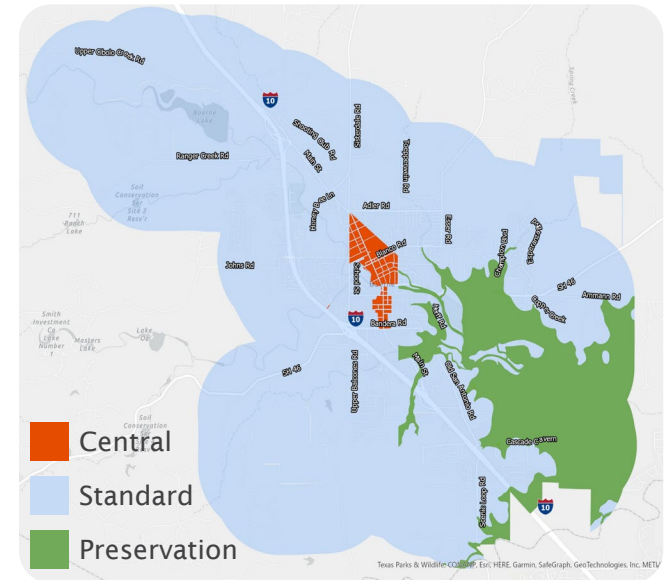
Collector Streets



Arterial Streets

To be determined in Main Street Corridor Study

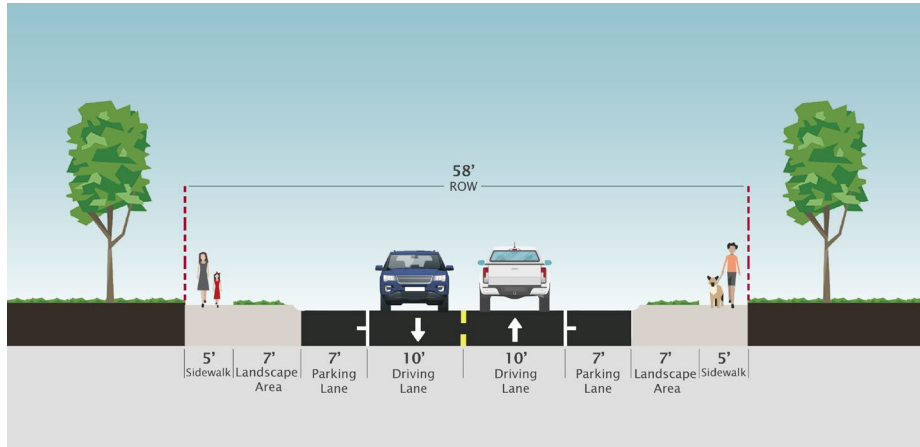
## Context Areas



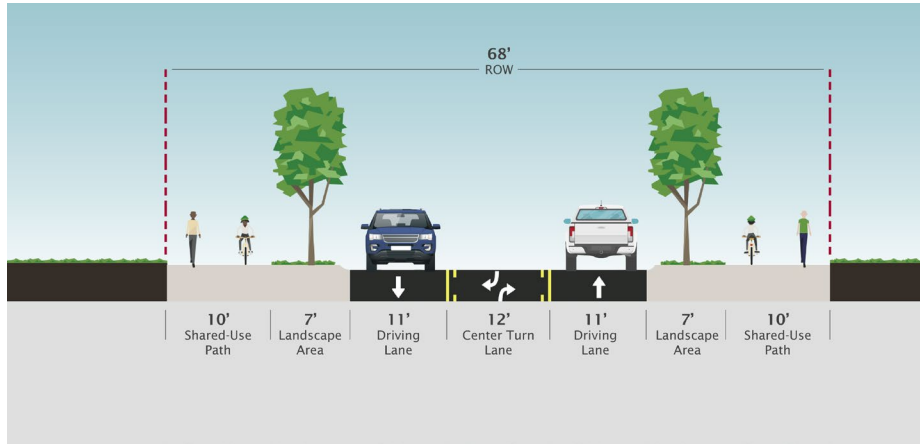
*On Local and Collector Streets within the Central context area, the parking/landscaping area will vary between parking within the midblock and landscaped bulb outs at intersections.*

# Cross Sections: Standard Context Area

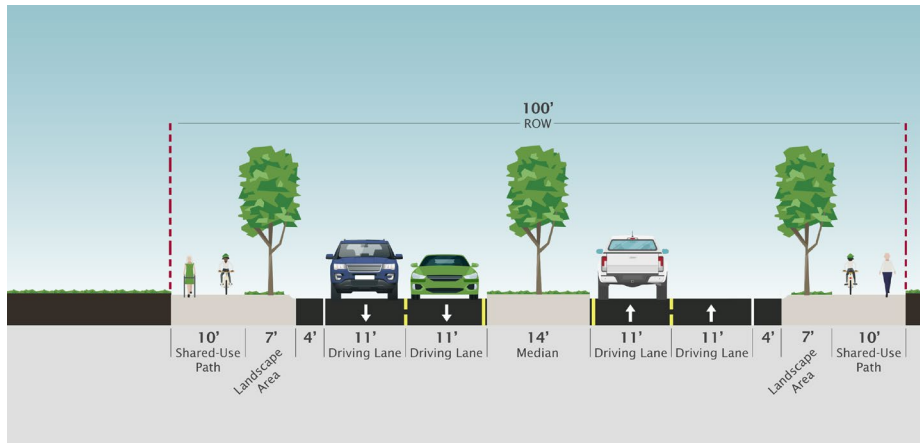
Local Streets



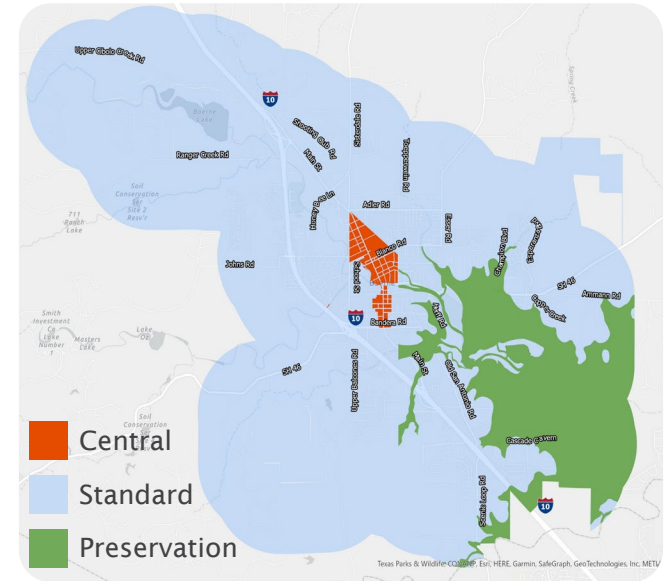
Collector Streets



Arterial Streets

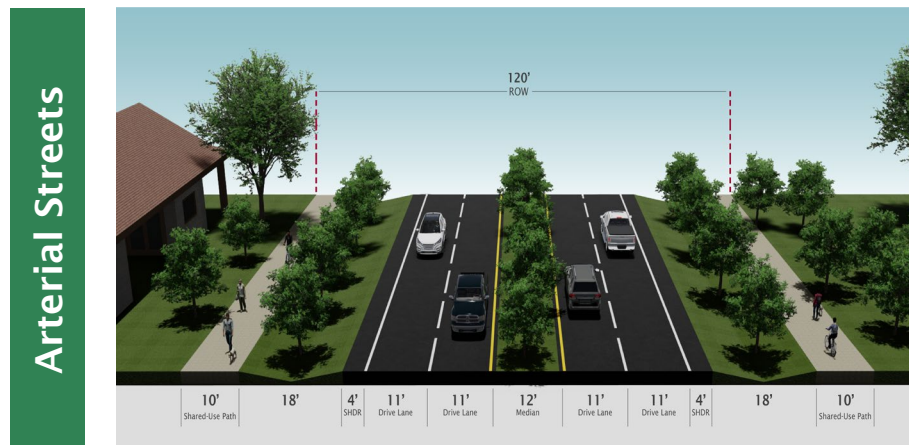
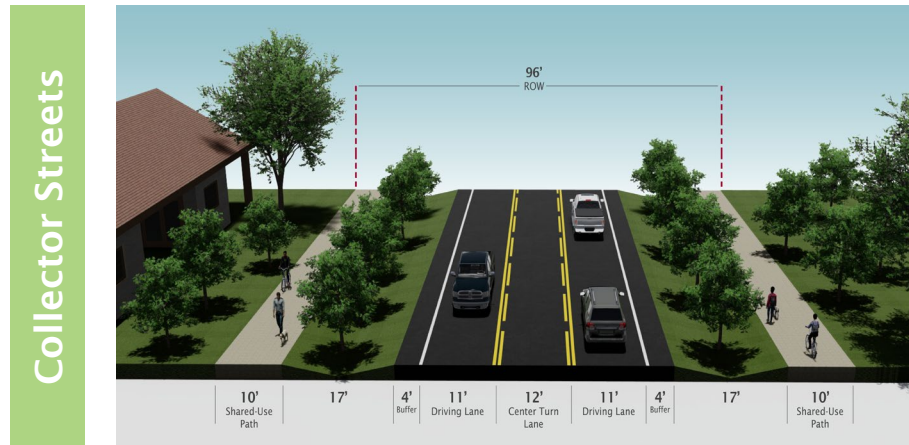
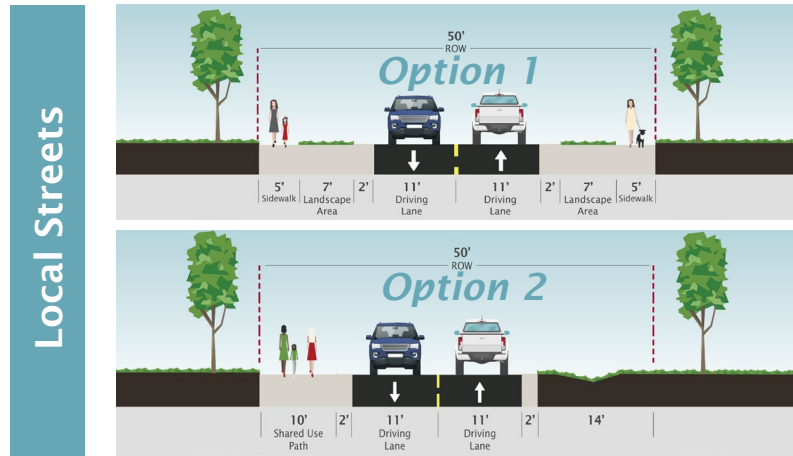


## Context Areas

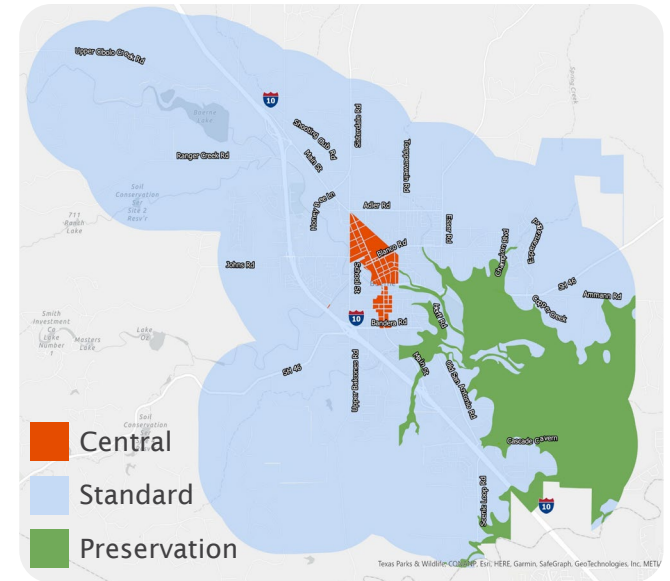


*Additional right-of-way shall be required at street intersections consistent with turn lane requirements set forth in the City of Boerne's Engineering Design Manual.*

# Cross Sections: Preservation Context Area



## Context Areas



*Additional right-of-way shall be required at street intersections consistent with turn lane requirements set forth in the City of Boerne's Engineering Design Manual.*

### Notes:

- ◇ Right-of-way shown is the minimum for cross sections with bar ditches, additional right-of-way may be required for stormwater conveyance.
- ◇ The design of preservation roadways should consider the use of permeable shared use paths to reduce runoff.
- ◇ The design of preservation roadways should consider providing water quality treatment within the right-of-way.

# Future Capital Projects

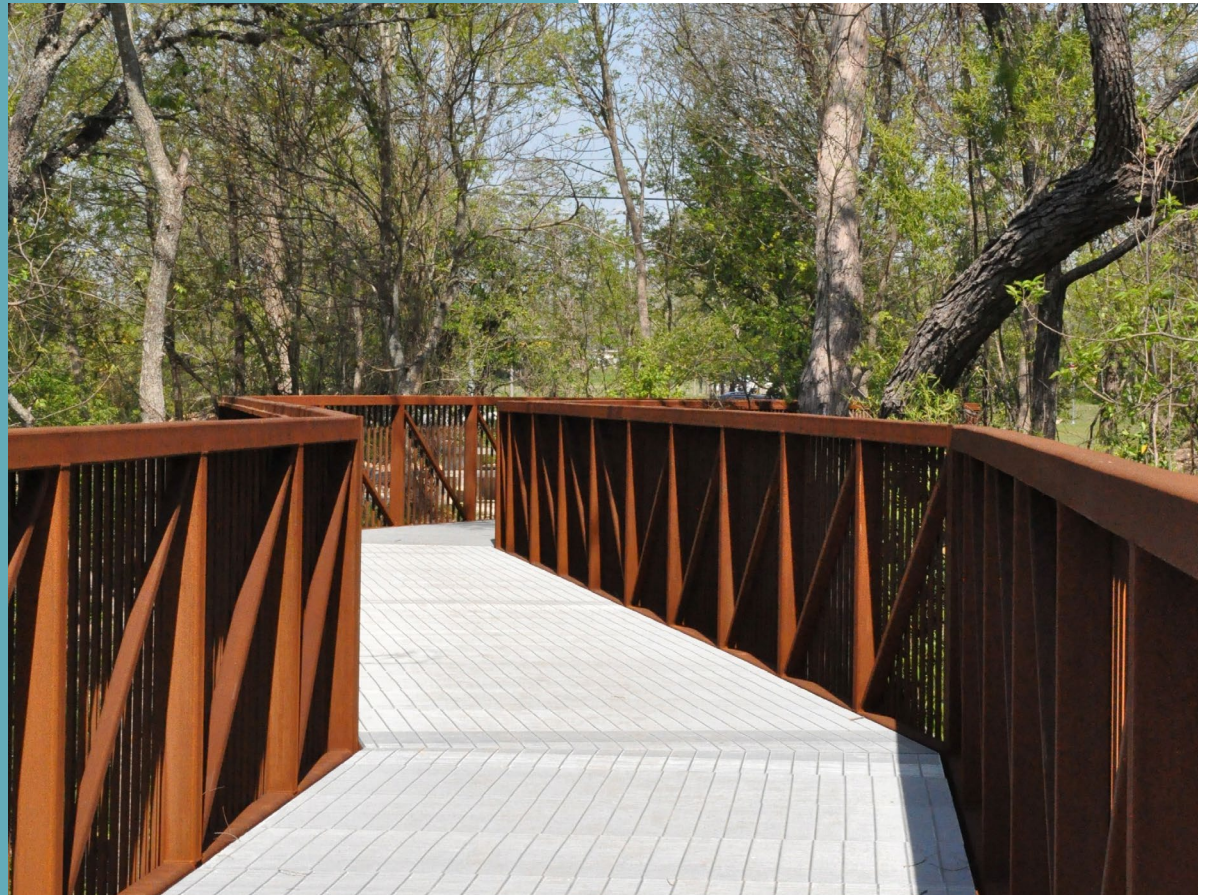


# CHAPTER 6

When planning for improvements and future roadways, capital projects are necessary to improve existing conditions. A capital project is a project that helps maintain or improve a City asset such as infrastructure, which may include improvements to the existing transportation network such as roadway widening, restriping, or traffic control (e.g., traffic signal or stop sign) as well as constructing new facilities such as sidewalks, trails, and roadways.

The Mobility Master Plan includes the identification of potential City-led projects to address congestion, safety, and connectivity deficiencies. These proposed projects are prioritized using weighted criteria derived from the plans goals and objectives. After public input, projects are further prioritized based on public support or opposition to reflect the most immediate and impactful community needs.

Projects identified were geared toward improving local mobility within the City of Boerne.

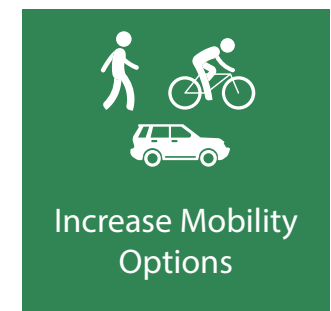
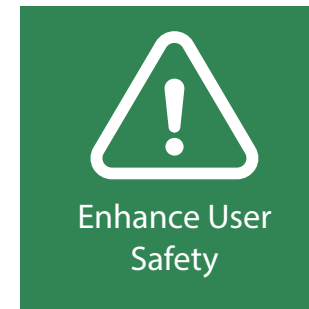
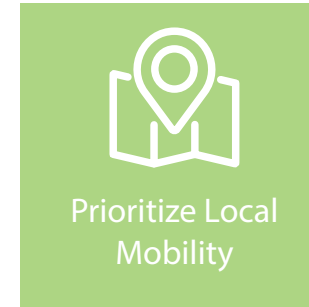


# Community Priorities

As this Mobility Master Plan touches on many of the transportation goals outlined in the Boerne Master Plan (2018), it was critical to prioritize goals as they pertain to the community needs. To do this, the community and stakeholders were asked to rank the plans goals from most to least important as part of the Priority Pyramid activity. This helped to create a hierarchy of project goals and provided a framework for developing performance measures to rank proposed projects.

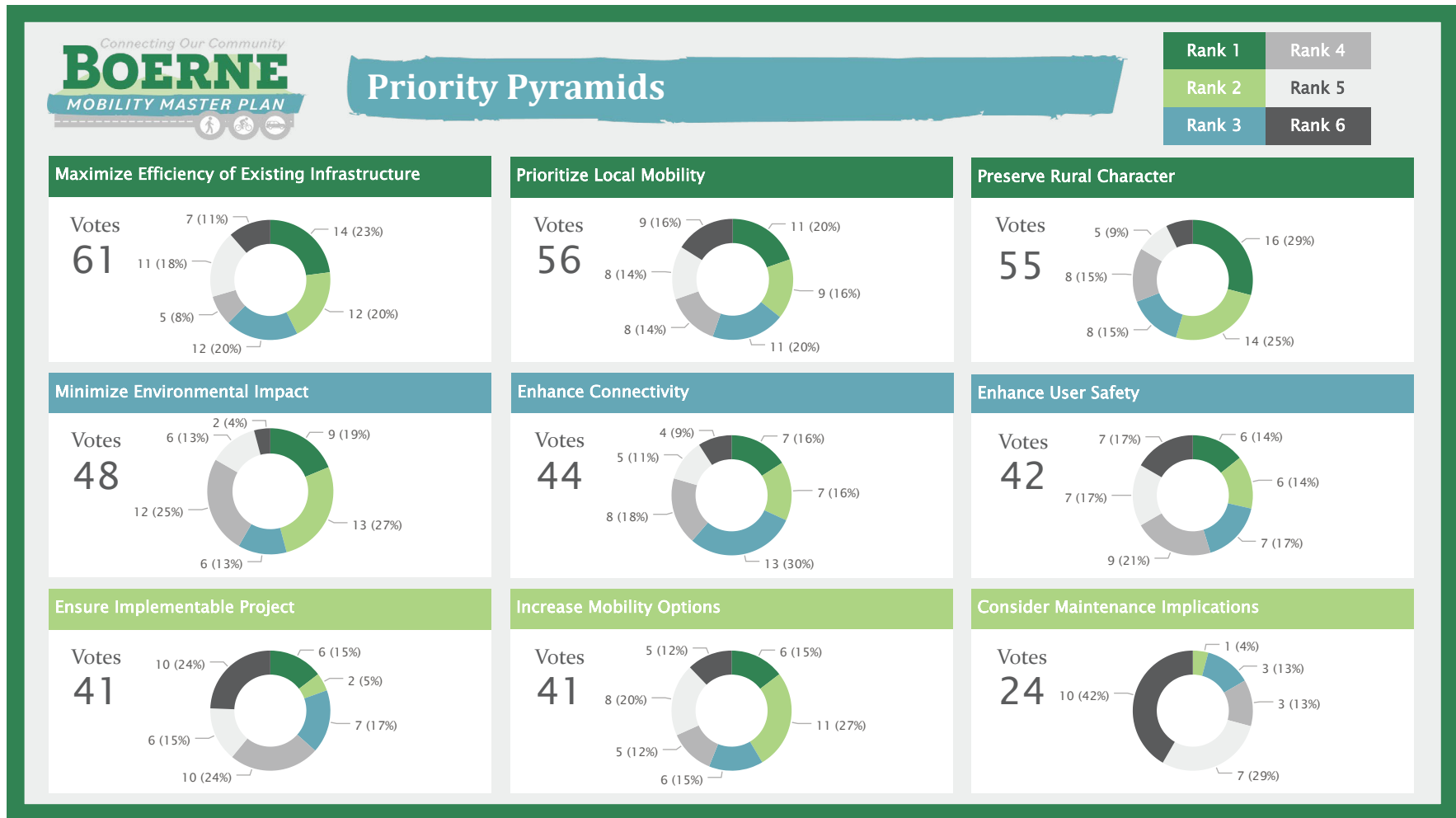
The following goals were identified and ranked by the community:

- ◇ Ensure Implementable Projects
- ◇ Prioritize Local Mobility
- ◇ Enhance Connectivity
- ◇ Maximize Efficiency of Existing Infrastructure
- ◇ Enhance User Safety
- ◇ Consider Maintenance Implications
- ◇ Preserve Rural Character
- ◇ Minimize Environmental Impact
- ◇ Increase Mobility Options



# Priority Pyramid Results

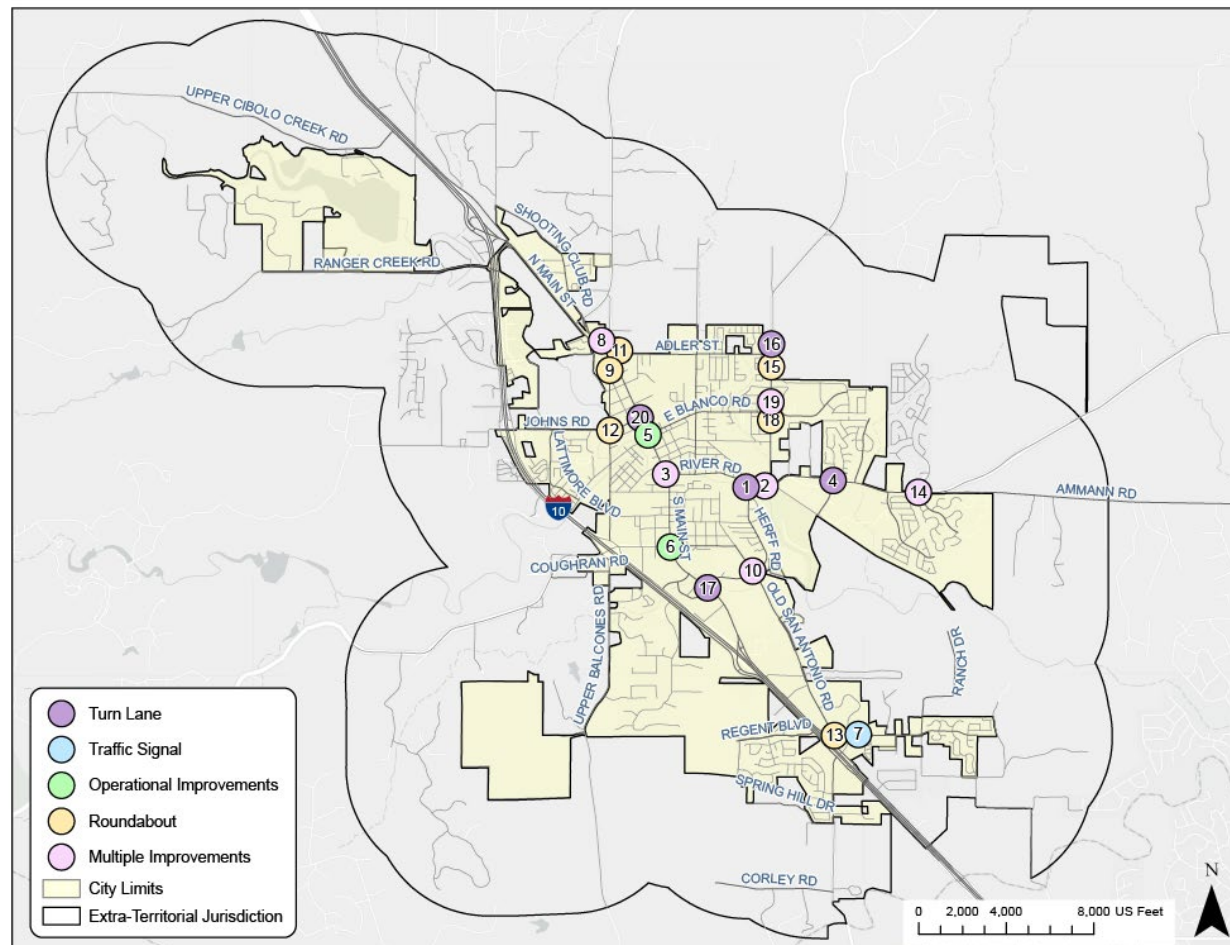
As a part of the Priority Pyramid activity, respondents were asked to rank their six highest priorities out of the nine available. Based on this input, the community held a strong preference toward preserving rural character, maximizing the efficiency of existing infrastructure, and prioritizing local mobility. **Exhibit 22** shows the results of priorities indicated by survey respondents.



» Exhibit 22: Prioritization of Goals

# Intersection Improvement Projects

As part of the Mobility Master Plan, sixteen of the City's core intersections were studied and evaluated to determine where the greatest needs exist in combination with the feedback received from the community at Open House I. Based on this evaluation, a total of 20 intersection improvement projects that are anticipated to improve operations were developed and prioritized for inclusion in the plan. Criteria for prioritizing intersection improvements was divided into five categories: Existing Intersection Conditions, Intersection Improvements, Feasibility, Cost, and Community Feedback. Each category was weighted based on priority as indicated by input received from the community during the Priority Pyramid activity. Within each category, performance measures were established to evaluate and prioritize projects based on their degree of impact and ability to align with the needs and desires of the community. Detailed intersections projects and rankings are provided in **Appendix B**.



**Note:**  
See Appendix D for more information regarding the project identified for intersection No. 1/No. 2.

» Exhibit 23: Intersection Improvements Map

## Intersection Project Rankings

Rank	Project Name	Score (Max. of 100)	Priority	Cost
1	River Road & Herff Road/Esser Road Turn-Lane Improvements (Short-Term)	98.50	High	\$150,000
2	River Road & Herff Road/Esser Road Intersection Improvements (Long-Term)	81.75	High	\$5,000,000
3	Main Street & River Road Intersection Improvements	74.00	High	\$350,000
4	Charger Boulevard & SH 46 Turn-Lane Improvements	72.63	High	\$400,000
5	Main Street & Blanco Road Traffic Signal Improvements	68.25	High	\$50,000
6	Main Street & Bandera Road Intersection Improvements	65.25	High	\$50,000
7	Scenic Loop Road & Cascade Cavern Traffic Signal Installation (Committed)	62.00	Committed Project	
8	Sisterdale Cutoff & Adler Street Intersection Improvements (Short-Term)	59.13	Medium	\$700,000
9	Main Street & School Street Roundabout - Paired with Project #1-L	58.50	Medium	\$5,000,000
10	Old San Antonio Road & Herff Road Intersection Improvements	58.25	Medium	\$500,000
11	Sisterdale Cutoff & Adler Street Roundabout (Long-Term) - Paired with Project #2	56.25	Medium	\$3,000,000
12	School Street & Johns Road Roundabout	51.75	Medium	\$1,500,000
13	Old San Antonio Road & Cascade Cavern Roundabout (Committed)	46.25	Committed Project	
14	Copper Creek/Esperanza Boulevard & SH 46 Intersection Improvements	45.38	Low	\$50,000
15	Esser Road & Adler Street Roundabout (Long-Term)	45.38	Low	\$1,500,000
16	Esser Road & Adler Street Turn-Lane Improvements (Short-Term)	45.13	Low	\$150,000
17	Main Street & Herff Road Turn-Lane Improvements	45.00	Low	\$200,000
18	Esser Road & Blanco Road/Bentwood Drive Roundabout (Long-Term)	43.00	Low	\$2,000,000
19	Esser Road & Blanco Road/Bentwood Drive Traffic Signal Improvements (Short-Term)	42.63	Low	\$25,000
20	Main Street & Johns Road Turn-Lane Improvements	33.88	Low	\$200,000

## Scoring Categories and Key Considerations

45  
pts

### Existing Conditions

- Level of Service (LOS)
- Intersection Delay
- Total Volume
- Queues
- Crash History

35  
pts

### Improved Conditions

- Level of Service (LOS)
- Intersection Delay
- Capacity
- Crash Reduction

10  
pts

### Feasibility

- Right-of-way
- Utilities
- Bridges
- Drainage
- Feedback from Open House II

10  
pts

### Cost

- Estimated Construction Cost

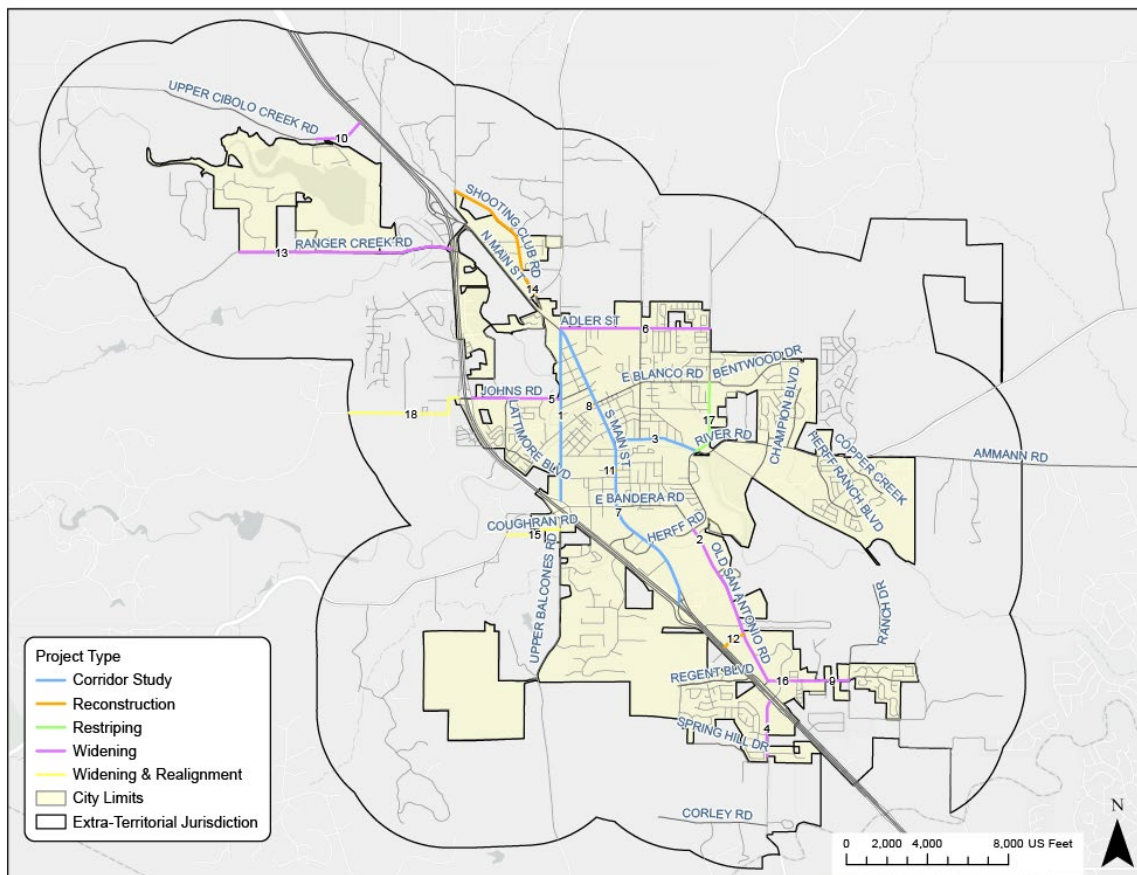


### Notes:

- » Following further analysis, additional improvements were recommended for the River Road & Herff Road/Esser Road (Rank No. 1 and No. 2) intersection totaling approximately \$21 million. See Appendix D for more information regarding these long-term improvements.
- » The final scoring of each project reflects 0.25 points added or subtracted for each upvote or downvote received at Open House II.

# Roadway Enhancement Projects

While the intersection improvement projects provide an opportunity to improve efficiency within the City of Boerne, roadway enhancement projects provide further opportunity to alleviate congestion, reduce travel times, and improve safety. Traffic data and historical crash data were obtained for key roadways within Boerne to identify roadways that were overutilized as well as those that could be better utilized to navigate throughout the community. A total of 18 roadway enhancement projects were developed and prioritized for inclusion in the Mobility Master Plan. Detailed roadway enhancement projects and rankings are provided in **Appendix B**.



» Exhibit 24: Roadway Enhancement Projects

Criteria for prioritizing roadway enhancement projects was divided into seven categories, which included Maximize Efficiency of Existing Infrastructure, Preserve Rural Character, Prioritize Local Mobility, Minimize Environmental Impact, Enhance Connectivity, Enhance User Safety, Community Feedback. These categories directly correspond to the goals established for the Mobility Master Plan and the weights assigned to each category were informed by community input received on the Priority Pyramid activity. Performance measures were then established within each category to further prioritize projects that best meet the needs and goals of the community.

## Roadway Enhancement Project Rankings

Rank	Project Name	Score (Max. of 100)	Priority	Cost
1	School Street Corridor Study	65.88	High	\$500,000
2	Old San Antonio Road Widening	64.00	High	\$6,750,000
3	River Road Corridor Study	62.63	High	\$500,000
4	Scenic Loop Road Widening	61.76	High	\$2,700,000
5	Johns Road Widening	61.41	High	\$3,900,000
6	Adler Street Widening	59.26	Medium	\$6,300,000
7	Main Street Corridor Study	57.60	Medium	\$500,000
8	W Blanco Road Reconstruction	56.66	Medium	\$500,000
9	Cascade Cavern Widening	55.05	Medium	\$1,350,000
10	Upper Cibolo Creek Road Widening	54.02	Medium	\$2,025,000
11	W Kronkosky Street Reconstruction	52.59	Medium	\$500,000
12	Parkway Drive Reconstruction	50.73	Medium	\$500,000
13	Ranger Creek Road Widening	49.92	Low	\$3,000,000
14	N Shooting Club Road Reconstruction	48.52	Low	\$1,000,000
15	Coughran Road Realignment and Widening	45.85	Low	\$2,250,000
16	Cascade Cavern Improvements	45.42	Low	\$500,000
17	Esser Road Restriping	44.19	Low	\$100,000
18	Johns Road Realignment and Widening	42.87	Low	\$6,750,000

## Scoring Categories and Key Considerations

<p>20 pts</p> <p><b>Maximize Efficiency of Existing Infrastructure</b></p> <ul style="list-style-type: none"> <li>• Roadway Classification</li> <li>• Vehicular Capacity</li> <li>• Pavement Condition</li> </ul>	<p>20 pts</p> <p><b>Preserve Rural Character</b></p> <ul style="list-style-type: none"> <li>• Context Classification</li> <li>• Number of Lanes</li> </ul>
<p>15 pts</p> <p><b>Minimize Environmental Impact</b></p> <ul style="list-style-type: none"> <li>• Floodplains</li> <li>• Karst Features</li> <li>• Trees</li> </ul>	<p>20 pts</p> <p><b>Prioritize Local Mobility</b></p> <ul style="list-style-type: none"> <li>• Local Destinations</li> <li>• Local Connectivity</li> <li>• Bicycle and Pedestrian Mobility</li> <li>• Feedback from Open House II</li> </ul>
<p>15 pts</p> <p><b>Enhance Connectivity</b></p> <ul style="list-style-type: none"> <li>• Connected Network</li> <li>• Alternative Routes</li> <li>• Gap Closures</li> </ul>	<p>10 pts</p> <p><b>Enhance User Safety</b></p> <ul style="list-style-type: none"> <li>• Crash Rates</li> <li>• Crash Severity</li> <li>• Safety Concerns</li> </ul>

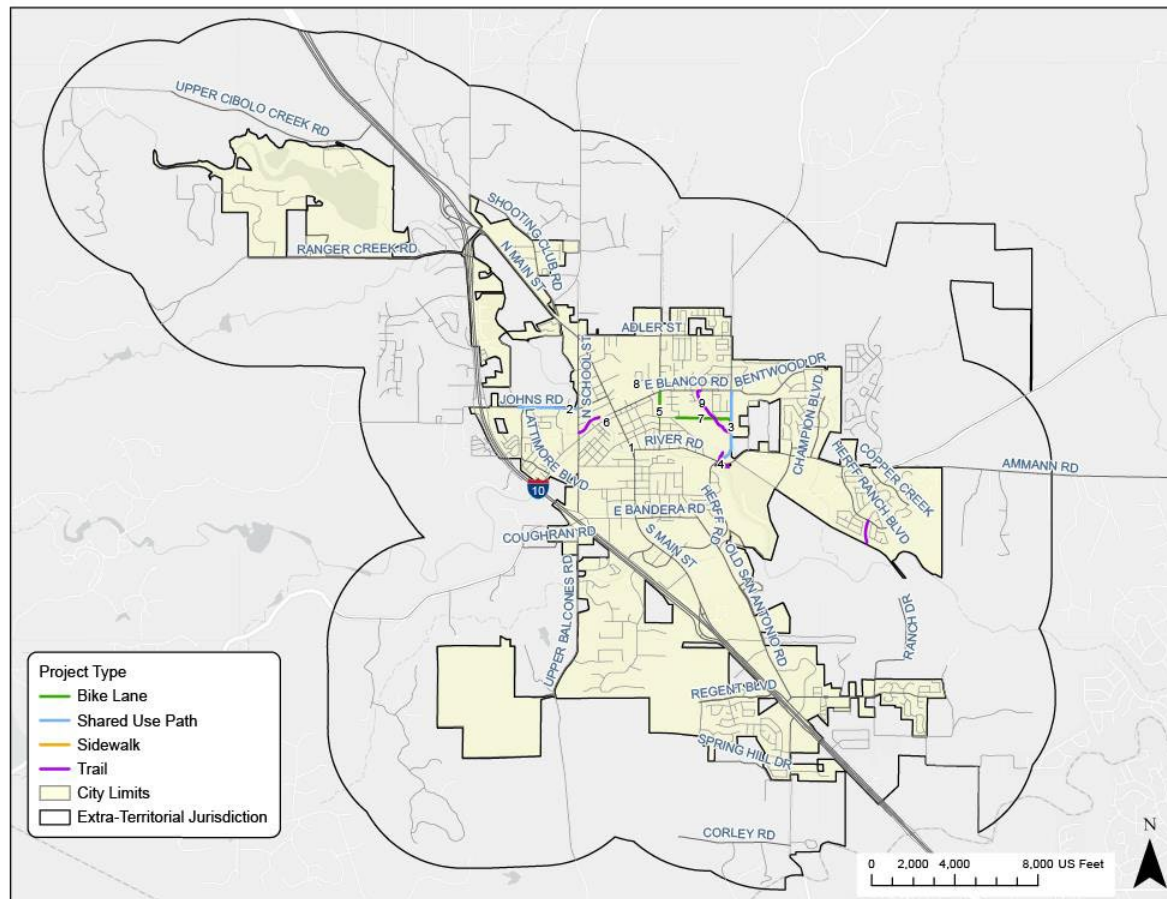
Maximum points available in each category are based on public feedback on the Priority Pyramid via the project website and first public meeting held on March 3, 2022



» The final scoring of each project reflects 0.25 points added or subtracted for each upvote or downvote received at Open House II

# Bicycle and Pedestrian Projects

A total of 86 bicycle and pedestrian projects were identified as part of the Mobility Master Plan and prioritized by evaluating connectivity and safety. These criteria were weighted to reflect community needs and project goals to ensure that projects with the most impact are ranked highest. Details on bicycle and pedestrian projects and rankings are provided in **Appendix B**.



» *Exhibit 25: Bicycle and Pedestrian Projects*

The bicycle and pedestrian projects identified within the Mobility Master Plan were sourced from public input, the City of Boerne, AAMPO, TxDOT, the Boerne Independent School District (BISD), and developed directly by the MMP. Of the 86 total projects, the following is a breakdown of projects sourced:

- ◇ Public Input - 26
- ◇ City of Boerne - 25
- ◇ AAMPO - 23
- ◇ TxDOT - 8
- ◇ BISD - 3
- ◇ MMP - 1

All projects have been screened to ensure they don't directly overlap and offer a mix of bicycle, pedestrian, and trail improvements.

## Bicycle & Pedestrian Project Rankings

Rank	Project Name	Score (Max. of 70)	Priority	Cost
1	South Main St at River Rd Sidewalk Reconstruction	62.75	High	\$10,650
2	Johns Road Shared Use Path	52.75	High	\$544,000
3	Esser Road Shared Use Path	51	High	\$667,000
4	Old No. 9 Greenway Connection	43	Medium	\$319,500
5	Cibolo Creek Trail Extension 1	40	Medium	\$370,500
6	South Plant Ave Bike Lane	37.75	Medium	\$45,600
7	Old No. 9 Greenway Extension 4	36.75	Medium	\$55,500
8 (Tie)	Rosewood Ave Bike Lane	34.75	Low	\$121,000
	Old No. 9 Greenway Extension 2	34.75	Low	\$319,500
10	Cibolo Creek Trail Extension 3	34.25	Low	\$45,000
11	Currey Creek Trail Extension 1	34	Low	\$786,000

## Scoring Categories and Key Considerations

25  
pts

### Connectivity

- Within Downtown
- Within a ¼ Mile of a School
- Within a ¼ Mile of a Park
- Within a ¼ Miles of Commercial Zoning
- Direct Connection to Existing Sidewalk, Bike Lane, or Trail

25  
pts

### Safety

- Pedestrian and Bicycle Collisions
- Severity of Collisions
- Posted Speed Limit

20  
pts

### Other

- Identified by Previous Public Input
- Roadway Classification
- Dual Benefit to Pedestrians and Bicyclists
- Feedback Received From Public Meetings\*



» The final scoring of each project reflects 0.25 points added or subtracted for each upvote or downvote received at Open House II

# Bond Project Development

During the development of the Mobility Master Plan, the City of Boerne developed a 2022 Quality of Life bond program to be voted on during the General Election on November 8, 2022. The 2022 Quality of Life Bond allocated \$23 million (Proposition A) toward Streets and Mobility projects. Projects that were identified and presented to the community at Open House II were able to then be prioritized based on project characteristics and community input. As a result, a few of these projects developed were able to be incorporated into this bond program. Following the General Election, Proposition A passed with approximately 60% of voter approval.



» Exhibit 26: 2022 Quality of Life Bond Program

# Plan Implementation



## CHAPTER 7

This chapter serves as the “Action Plan” for the Mobility Master Plan. The existing conditions, thoroughfare plan and cross sections, and prioritized projects developed within the plan must be programmed into implementable strategies to ensure the goals of the Mobility Master Plan are achieved. While some projects may be high ranking, many times these are the most costly and lengthiest projects to complete. Therefore, programming projects into a short-term capital plan allows for some lower priority projects with shorter timeframes and budgets to round out a complete Capital Improvement Program (CIP) program. Potential funding sources have been identified for each ranked project to aid in the planning and implementation of projects.



*The identification of funding sources for each project will be a continuous process as the implementation of this plan takes place. For example, a Safe Streets for All (SS4A) Grant Application for the River Road & Herff Road/Esser Road Intersection Improvements (Long-Term) project in September 2022. Although the application was unsuccessful in being awarded funding, opportunities such as this will continue to be explored for all projects identified within the MMP.*

# Project Implementation

Prioritized projects identified within the Mobility Master Plan were considered alongside potential funding sources such as the 2022 Quality of Life Bond, a short-term capital improvement program, long-term capital improvement program, safety funding, and a 10-year+ funding source. By diversifying the funding sources, projects of various sizes, costs, and complexities can be implemented within each funding source to maintain progress toward plan implementation.

## Roadway Enhancement Projects

Project	Description	Potential 2022 Bond Program	General Revenue or CIP (0-5 Yrs)	General Revenue or CIP (5-10 Yrs)	Safety Action Plan	Beyond 10 Years	Cost
Old San Antonio Road Widening	Widen Old San Antonio Road to a collector roadway section from the movie theater to Herff Road	X					\$6,750,000
Adler Street Widening	Widen Adler Street to a collector roadway section and improve intersections from Sisterdale Cutoff to Esser Road	X			X		6,300,000
School Street Corridor Study	Perform a corridor study along School Street to determine the improvements best fit for the corridor from IH-10 Northbound Frontage Road to Main Street.	X					\$500,000
River Road Corridor Study	Perform a corridor study along School Street to determine the improvements best fit for the corridor from Main Street to Herff Road/Esser Road.	X					\$500,000
Main Street Corridor Study	Perform a corridor study along School Street to determine the improvements best fit for the corridor from IH-10 to Sisterdale Cutoff.	X					\$500,000
W Blanco Road Reconstruction	Pavement reconstruction on W Blanco Road from W San Antonio Avenue to Main Street	X					\$500,000
W Kronkosky Street Reconstruction	Pavement reconstruction on W Kronkosky Street from Mueller Street to Main Street	X					\$500,000

## Roadway Enhancement Projects (Continued)

Project	Description	Potential 2022 Bond Program	General Revenue or CIP (0-5 Yrs)	General Revenue or CIP (5-10 Yrs)	Safety Action Plan	Beyond 10 Years	Cost
Esser Road Restriping	Restripe Esser Road to have one lane in each direction and a two-way-left-turn lane from River Road to Blanco Road		X		X		\$100,000
Scenic Loop Road Widening	Widen Scenic Loop Road to a collector roadway section from City Limit to IH-10		X		X		\$2,700,000
Johns Road Widening	Widen Johns Road to a collector roadway section from IH-10 Northbound Frontage Road to School Street		X				\$3,900,000
Cascade Cavern Widening	Widen Cascade Cavern to a collector roadway section from Buckskin Drive to Ranch Drive						\$1,350,000
Coughran Road Realignment and Widening	Realign Coughran Road to smooth out horizontal curves and widen to a collector roadway section from Upper Balcones Creek Road to SH 46						\$2,250,000
Upper Cibolo Creek Road Widening	Widen Upper Cibolo Creek Road to a collector roadway section from Boerne City Lake Entrance to IH-10 Southbound Frontage Road					X	\$2,025,000
Ranger Creek Road Widening	Widen Ranger Creek Road to a collector roadway section and install shoulders for bicycle users from City Limit to IH-10 Southbound Frontage Road				X	X	\$9,000,000
Johns Road Realignment and Widening	Realign Johns Road to smooth out horizontal curves and widen to a collector roadway section from ETJ Limit to IH-10 Southbound Frontage Road					X	\$6,750,000

## Intersection Projects

Project	Description	Potential 2022 Bond Program	General Revenue or CIP (0-5 Yrs)	General Revenue or CIP (5-10 Yrs)	Safety Action Plan	Beyond 10 Years	Cost
River Road & Herff Road/ Esser Road Turn-Lane Improvements (Short-Term)	Modify the intersection to have a northbound free right-turn lane		X				\$150,000

## Intersection Projects (Continued)

Project	Description	Potential 2022 Bond Program	General Revenue or CIP (0-5 Yrs)	General Revenue or CIP (5-10 Yrs)	Safety Action Plan	Beyond 10 Years	Cost
<b>Main Street &amp; River Road Intersection Improvements</b>	Widen to the northeast corner of the intersection to accommodate a dedicated southbound left-turn lane and modify the existing traffic signal to accommodate a northbound right-turn overlap	X					\$350,000
<b>Sisterdale Cutoff &amp; Adler Street Intersection Improvements (Short-Term)</b>	Convert the southbound approach of Sisterdale Cutoff to right-in, right-out, allow the westbound approach of Adler Street to operate free of traffic control, and increase the storage length of the westbound right-turn lane	X					\$700,000
<b>Main Street &amp; Bandera Road Intersection Improvements</b>	Restripe the eastbound and westbound approaches to unsplit the traffic signal and protect the left-turn movements			X			\$50,000
<b>Charger Boulevard &amp; SH 46 Turn-Lane Improvements</b>	Install a westbound right-turn lane and widen into the northbound median to accommodate dual left-turns and one shared through-right lane northbound			X			\$300,000
<b>Main Street &amp; Blanco Road Traffic Signal Improvements</b>	Convert the existing left-turn traffic signals to Flashing Yellow Arrows (FYAs)			X			\$30,000
<b>Copper Creek/Esperanza Boulevard &amp; SH 46 Intersection Improvements</b>	Modify the existing traffic signal to install Flashing Yellow Arrows (FYA) and restripe the northbound and southbound approaches to include dedicated left-turn lanes and shared through-right lanes			X			\$50,000
<b>Esser Road &amp; Adler Street Turn-Lane Improvements (Short-Term)</b>	Increase the storage length for the eastbound channelized right-turn lane			X			\$150,000
<b>Esser Road &amp; Blanco Road/Bentwood Drive Traffic Signal Improvements (Short-Term)</b>	Convert the existing left-turn traffic signals to Flashing Yellow Arrows (FYAs) and retime traffic signal to better accommodate pedestrians			X			\$25,000
<b>River Road &amp; Herff Road/ Esser Road Intersection Improvements (Long-Term)</b>	Create a quadrant roadway intersection in the northeast quadrant of the intersection in order to introduce two, new continuous green "T" intersections and restrict left-turn movements at the intersection of River Road & Herff Road/Esser Road. The proposed concept is further detailed in Appendix E.				X	X	\$21,000,000

## Intersection Projects (Continued)

Project	Description	Potential 2022 Bond Program	General Revenue or CIP (0-5 Yrs)	General Revenue or CIP (5-10 Yrs)	Safety Action Plan	Beyond 10 Years	Cost
Main Street & Sisterdale Cutoff/School Street Roundabout	Installation of 5-leg dual-lane roundabout that serves School Street, Main Street, Sisterdale Cutoff, and Adler Street			X	X		
Old San Antonio Road & Herff Road Intersection Improvements	Modify the existing traffic signal and install dedicated turn-lanes on the northbound and southbound approaches to unsplit the traffic signal and implement a northbound right-turn overlap			X			\$500,000
School Street & Johns Road Roundabout	Installation of a single-lane roundabout with enhanced pedestrian accommodations			X	X		
Esser Road & Blanco Road/Bentwood Drive Roundabout (Long-Term)	Install a single-lane roundabout in place of the existing traffic signal			X	X		
Esser Road & Adler Street Roundabout (Long-Term)	Installation of a single-lane roundabout						\$750,000
Main Street & Herff Road Turn-Lane Improvements	Install a northbound right-turn lane			X			\$250,000
Main Street & Johns Road Turn-Lane Improvements	Install an eastbound right-turn lane			X			\$200,000

## Pedestrian and Bicycle Projects

Project	Description	Potential 2022 Bond Program	General Revenue or CIP (0-5 Yrs)	General Revenue or CIP (5-10 Yrs)	Safety Action Plan	Beyond 10 Years	Cost
South Main St at River Rd Sidewalk Reconstruction	Reconstruction of sidewalk on South Main from River Rd	X			X		\$10,650
Johns Road Shared Use Path	Construct shared use path on Johns Rd from Latimore to School St	X			X		\$544,000

## Pedestrian and Bicycle Projects (Continued)

Project	Description	Potential 2022 Bond Program	General Revenue or CIP (0-5 Yrs)	General Revenue or CIP (5-10 Yrs)	Safety Action Plan	Beyond 10 Years	Cost
Esser Road Shared Use Path	Construct shared use path on Esser Rd from Bentwood Dr to River Rd	X			X		\$667,000
Old No. 9 Greenway Connection	Continue Old No. 9 Trail at the intersection of river Rd and Herff Rd	X			X		\$319,500
Cibolo Creek Trail Extension 1	Extend Cibolo Creek Trail to School St		X		X		\$370,500
South Plant Ave Bike Lane	Construct bike lane on S Plant Ave from Blanco Rd to Rosewood Ave.		X		X		\$45,600
Old No. 9 Greenway Extension 4	Extend Old No. 9 Trail to Autumn Ridge		X		X		\$55,500
Rosewood Ave Bike Lane	Construct bike lane on Rosewood Ave from Esser Rd to Ebner St			X	X		\$121,000
Old No. 9 Greenway Extension 2	Connect Old No. 9 Trail to Herff Ranch Blvd			X	X		\$319,500
Cibolo Creek Trail Connection 3	Connect Cibolo Creek Trail at W San Antonio Ave			X	X		\$45,000
Currey Creek Trail Extension 1	Extend Currey Creek Trail from Blanco Rd to Esser Rd			X	X		\$786,000

# Opportunities for Funding

The table below identifies opportunities for project funding. While this is not a comprehensive list of funding sources available, it provides those that are most relative to the projects identified within the Mobility Master Plan.

City Fees and Taxes	
<b>2022 Quality of Life Bond</b>	An allocation of \$23 million toward streets and mobility as passed in the November 8, 2022 General Election.
<b>City General Funds (Property Taxes)</b>	General funds are flexible for cities to spend as they see fit. Any roadway infrastructure project could be funded through general funds or used as a match for other funding. Certificates of Obligation (CO) Bonds fall into this category and are not the same as General Obligation (GO) Bonds.
<b>Street Maintenance Fee</b>	A source of revenue to fund street system maintenance based on use of the street system by residential and commercial properties.
Outside Funding Sources	
<b>Unified Planning Work Program (UPWP)</b>	This funding source is managed by AAMPO and provides funding for various transportation studies in the region.
<b>AAMPO Call for Projects</b>	AAMPO solicits a call for projects when developing a Transportation Improvement Program (TIP) with funding for studies, design, and construction to offer funding matches for transportation projects that are competitively awarded.
<b>Highway Safety Improvement Program</b>	The Highway Safety Improvement Program (HSIP) is a federal aid program distributed by the US Department of Transportation (USDOT) with the purpose of reducing traffic fatalities and serious injuries on all public roads.
<b>Safe Streets and Roads for All Grant Program</b>	This program issues grants to jurisdictions either looking to develop or implement projects identified within a Safety Action Plan. As a part of this Mobility Master Plan, a Safety Action Plan was developed, allowing for application to the Safe Streets and Roads for All (SS4A) Grant Program. The Safety Action Plan is included in <b>Appendix A</b> .
Developer Contributions	
<b>Impact Fees</b>	A one-time charge assessed to new development and redevelopment, calculated with the methodology outlined in Chapter 395 of the Texas Local Government Code.
<b>Traffic Study Improvements</b>	A traffic study or traffic impact assessment (TIA) can be used to identify the responsible party for the construction of new infrastructure to support a development. The cost may be responsibility of the developer, City, or both.
Special Districts	
<b>Public Improvement District (PID)</b>	A defined geographical area established to provide specific types of improvements or maintenance which are financed by assessments against the property owners within the area.
<b>Tax-Increment Finance (TIF) or Tax-Increment Reinvestment Zone (TIRZ)</b>	Sidewalk and streetscape improvements can often be included as part of larger efforts of business improvements and retail district beautification. TIFs collect levies on businesses in order to fund area-wide improvements that benefit businesses and improve access for customers.

# Tracking Implementation

The period following the adoption of the Mobility Master Plan, considered to be the implementation phase, defines the success of the plan by testing recommendations and implementing the projects identified.

## Project Tracking

Many cities will use a project dashboard or tracking mechanism to provide updates to City Council and the community at-large on how progress is going on different City programs. The City of Boerne can incorporate updates on the progress of the Mobility Master Plan at regular intervals by tracking what stage recommended projects are in. Some examples of categories for tracking implementation include:

- ◇ Not Started
- ◇ Planning
- ◇ Design
- ◇ Construction
- ◇ Complete

In addition to the above categories, tracking funding status allows the community to understand the potential of a project being implemented within a specific budget year. This process increases transparency and establishes trust with citizens by making it clear how the plan is progressing.

## Plan Updates

It is recommended to revisit and update the Mobility Master Plan on a regular basis, roughly every 5-10 years depending on the growth of the City. As growth occurs, future land uses may vary and roadway alignments may differ from what's shown in this plan. Community priorities may also change over time and new preferences can inform updated project prioritization. In addition, as projects are completed, a fresh look at the short-term capital plan is helpful to inform the annual development of a capital improvement plan and any potential future bonds or new funding opportunities.



Complete In Progress Ongoing Identified/Planned Not Yet Started N/A or On Hold

» Exhibit 27: Example Project Tracking Dashboard



APPENDIX **A**

# SAFETY ACTION PLAN

## Introduction

The purpose of the Mobility Master Plan is to develop a long-range plan that casts a vision for future transportation investment for people who walk, drive, bike, ride, or roll in and around the City of Boerne. A key component of the plan is to not only ensure the implementation not only improves mobility but improves the safety of those users.

The purpose of the Safety Action Plan is to serve as a supplemental resource to the Mobility Master Plan to highlight safety concerns within the City of Boerne and prioritize those projects that improve safety for all users navigating throughout the City of Boerne.

## Tracking Progress

Project implementation will be monitored by a committee appointed by City Council that will receive annual reports on the progress made in implementing projects to coincide with annual budget and CIP processes. Once projects are implemented, performance will be measured utilizing the Texas Department of Transportation's (TxDOT) Crash Records Information System (C.R.I.S.), which reports traffic incidents monthly including crash type, crash date, crash time, crash severity, weather conditions, lighting conditions, contributing factors, and more. Performance will compare 6 months of crashes after construction is complete for a project with 6 months of data prior to commencement of construction to compare crash rates and types and avoid analysis of construction-related incidents.

# SAFETY ACTION PLAN

## Safety Analysis

A city-wide safety analysis was performed by evaluating historical crash data for the most recent five-years of available data from 2017 to 2021. Crash data was obtained from the Texas Department of Transportation’s (TxDOT) Crash Records Information System (C.R.I.S.) which includes crashes reported on and off system. During this five-year period, a total of 2,456 crashes were reported within the City of Boerne, an average of 491 crashes per year.

### 2,456 TOTAL CRASHES FROM 2017 TO 2021

Of the 2,456 crashes reported, approximately 80% were vehicular crashes only. Approximately 81% of crashes resulted in no injuries, whereas 1.5% and less than 1% resulted in serious and fatal injuries, respectively.

#### CRASH SEVERITY

Not Injured	1986	81%
Possible Injury	241	10%
Suspected Minor Injury	180	7%
Suspected Serious Injury	33	1.5%
Unknown Injury	11	0.5%
Fatal Injury	5	0%

#### CRASH TYPE

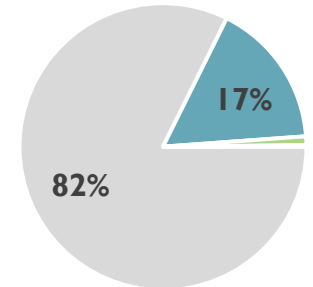
Vehicle	1,967	80%
Fixed Object	284	12%
Other	98	4%
Animal	41	2%
Overtaken	33	1%
Pedestrian	21	1%
Bicycle	12	0%

Contributing factors such as surface conditions, lighting, and weather conditions were evaluated over the five-year period. Approximately 9% of crashes occurred during times of inclement weather such as rain, snow, sleet, or fog. Approximately 14% of all crashes occurred under dark conditions and of those 14%, 53% occurred in areas that lacked roadway or intersection lighting.

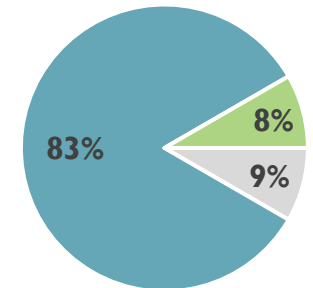
## Crash Severity By Mode

- NOT INJURED
- MINOR INJURY
- SERIOUS INJURY
- FATAL INJURY

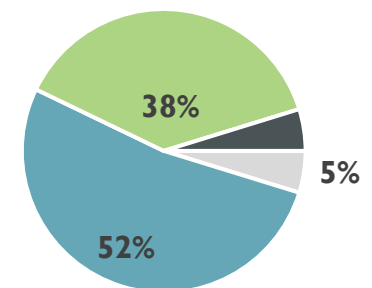
#### VEHICLE



#### BICYCLE



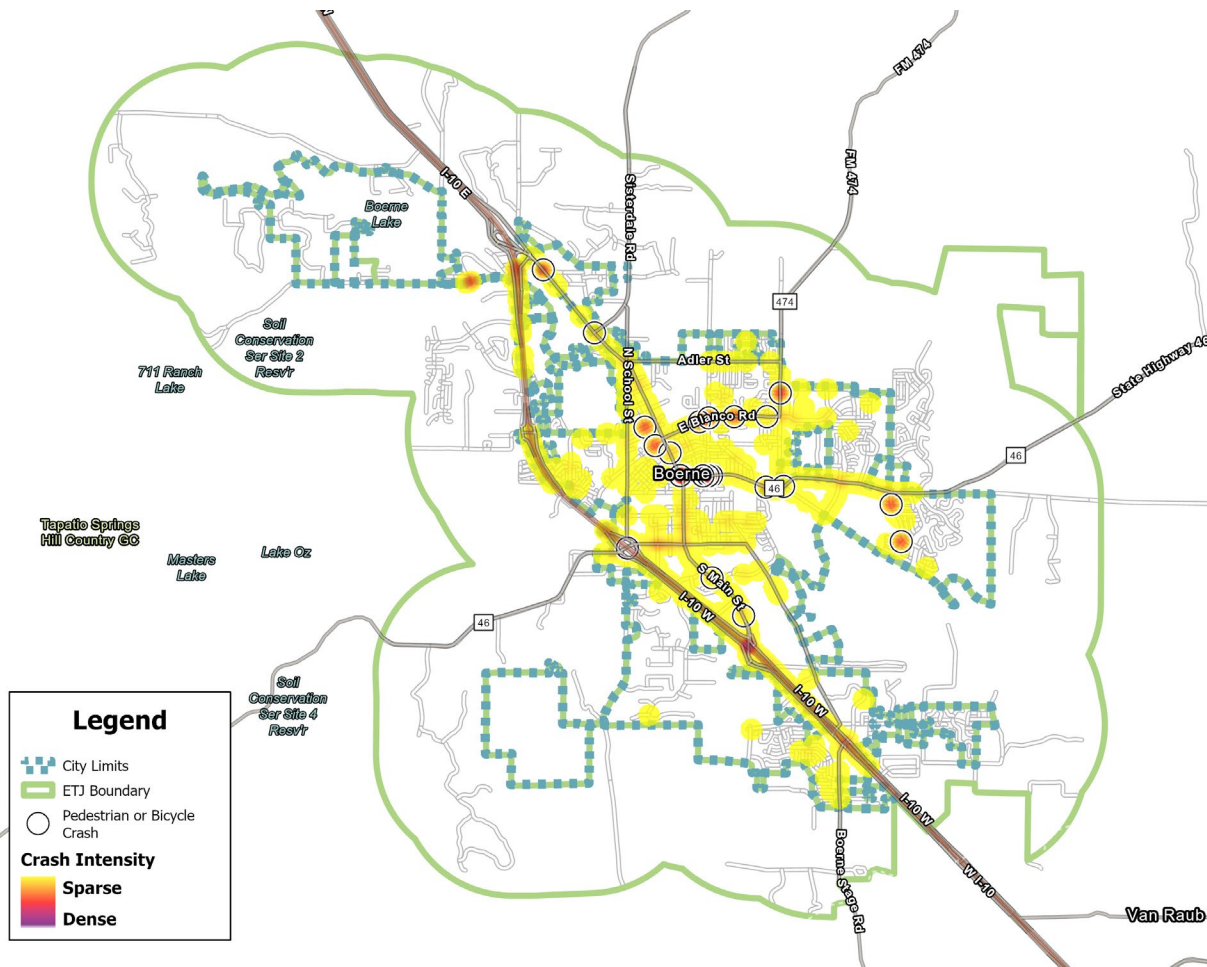
#### PEDESTRIAN



# SAFETY ACTION PLAN

## Safety Analysis

A geospatial analysis of the 2,456 crashes reported from 2017 to 2021 was performed to identify the locations where crash frequency and severity was the highest as shown below. While some corridors and intersections were able to be identified as higher density locations, the frequency of crashes appear to be consistent throughout Boerne.



Corridors within the City of Boerne that exhibited the highest frequency of crashes occurred primarily on TxDOT facilities and include:

- ◇ Interstate 10
- ◇ Johns Road
- ◇ E Blanco Rd
- ◇ Main St
- ◇ River Rd
- ◇ Esser Rd

Corridors that exhibited the highest frequency of bicycle and/or pedestrian crashes included:

- ◇ Blanco Road
- ◇ Main Street
- ◇ School Street

# SAFETY ACTION PLAN

## Engagement and Collaboration

The Mobility Master Plan was developed with continuous public engagement and collaboration to ensure the needs and desires of the community were reflected in the plan. A combination of in-person and virtual public engagement methods were employed to maximize public participation throughout the process. To complement these public engagement efforts, an Advisory Committee was formed to serve as representatives from the community to provide additional insight into the needs and desires of the community as well as to review and provide feedback on recommended projects. Committee members included representatives from City of Boerne Council, City of Boerne Planning and Zoning Commission, Boerne Independent School District, Texas Parks and Wildlife, and Cibolo Nature Center.

Throughout the development of the Mobility Master Plan, two open houses were held. Open House I was held on Thursday, March 3, 2022 to introduce the goals and objectives of the Mobility Master Plan, present existing conditions, and gather input from the community on perceived concerns, needs, and desires on mobility within the City of Boerne. Geospatial safety analysis was presented at this Open House. Open House II was held on Tuesday, May 17, 2022 to present the recommended bicycle and pedestrian, intersection, and roadway projects and obtain input from the community. Prioritization criteria and results for projects, including safety criteria, were presented at this Open House. In addition to the open houses, all information available at each open house was available on the project website for public review and comment throughout the duration of the process.

In addition, a business stakeholder meeting was held on Thursday, March 8, 2022 to engage local business owners to introduce the plan and obtain input on concerns, needs, and desires for mobility within the City of Boerne. Attendees were encouraged to stay engaged throughout the remainder of the process.

During engagement, safety concerns expressed by the community included a lack of connectivity for bicycle and pedestrian users and specific safety hazards at key congested intersections.

For more information regarding the engagement process, see Chapter 4 of the Mobility Master Plan.

# SAFETY ACTION PLAN

## Project Selection

Projects were developed in three categories: Bicycle and Pedestrian, Intersection, and Roadway. Within each of these categories, projects were ranked based on several categories, one of which was safety. As a result of projects being ranked on several categories, projects with the highest safety need did not consistently rank high across all categories. Therefore, a safety prioritization matrix was developed to rank projects solely on their need and potential for safety improvement as a supplemental resource to the Short-Term Capital Improvement Plan presented within the Mobility Master Plan. Projects ranked by safety improvement potential are shown below. For project descriptions, see the Short-Term Capital Improvement Plan provided in Chapter 7.

In addition to projects, some safety strategies identified to be implemented City-wide include conversion of permissive left turn signals to flashing yellow arrows, restriping crosswalks with high-visibility markings, implementation of safety lighting where lacking on existing overhead power poles and signals, and enhancing mid-block pedestrian crossings with pedestrian hybrid beacons or rectangular rapid flashing beacons, as has recently been implemented in a PHB on the Old No. 9 Trail. Projects are planned to be implemented as part of the annual CIP budget process and as funding becomes available, but is not programmed at this time into any budgets.

### *Prioritized Safety Project List: Bicycle and Pedestrian Projects*

- 1 South Main Street at River Road Sidewalk Reconstruction**
- 2 Johns Road Shared Use Path**
- 3 Esser Road Shared Use Path**
- 4 South Plant Avenue Bike Lane**
- 5 Rosewood Avenue Bike Lane**
- 6 Old No. 9 Greenway Connection**
- 7 Cibolo Creek Trail Extension 1**
- 8 Old No. 9 Greenway Extension 4**
- 9 Rosewood Avenue Bike Lane**
- 10 Old No. 9 Greenway Extension 2**
- 11 Cibolo Creek Trail Extension 3**
- 12 Currey Creek Trail Extension 1**

# SAFETY ACTION PLAN

## Project Selection

### *Prioritized Safety Project List: Intersection Projects*

- 1 **River Road & Herff Road/Esser Road Turn-Lane Improvements (Short-Term)**
- 2 **River Road & Herff Road/Esser Road Intersection Improvements (Long-Term)**
- 3 **Charger Boulevard & SH 46 Turn-Lane Improvements**
- 4 **Main Street & Bandera Road Intersection Improvements**
- 5 **Main Street & River Road Intersection Improvements**
- 6 **Main Street & Blanco Road Traffic Signal Improvements**
- 7 **Scenic Loop Road & Cascade Cavern Traffic Signal Installation (Committed)**
- 8 **Main Street & School Street Roundabout**
- 9 **Old San Antonio Road & Herff Road Intersection Improvements**
- 10 **Main Street & Herff Road Turn-Lane Improvements**
- 11 **Sisterdale Cutoff & Adler Street Intersection Improvements (Short-Term)**
- 12 **Sisterdale Cutoff & Adler Street Roundabout (Long-Term)**
- 13 **Esser Road & Blanco Road Traffic Signal Improvements (Short-Term)**
- 14 **School Street & Johns Road Roundabout**
- 15 **Copper Creek/Esperanza Boulevard & SH 46 Intersection Improvements**
- 16 **Esser Road & Blanco Road/Bentwood Drive Roundabout (Long-Term)**
- 17 **Old San Antonio Road & Cascade Cavern Roundabout (Committed)**
- 18 **Esser Road & Adler Street Roundabout (Long-Term)**
- 19 **Esser Road & Adler Street Turn-Lane Improvements (Short-Term)**
- 20 **Main Street & Johns Road Turn-Lane Improvements**

# SAFETY ACTION PLAN

## Project Selection

### *Prioritized Safety Project List: Roadway Enhancement Projects*

- 1 River Road Corridor Study**
- 2 Main Street Corridor Study**
- 3 Esser Road Restriping**
- 4 School Street Corridor Study**
- 5 Scenic Loop Road Widening**
- 6 Johns Road Widening**
- 7 Adler Street Widening**
- 8 W Blanco Road Reconstruction**
- 9 Ranger Creek Road Widening**
- 10 Old San Antonio Road Widening**
- 11 Parkway Drive Reconstruction**
- 12 Cascade Cavern Widening**
- 13 Upper Cibolo Creek Road Widening**
- 14 W Kronkosky Street Reconstruction**
- 15 N Shooting Club Road Reconstruction**
- 16 Cascade Cavern Improvements**
- 17 Coughran Road Realignment and Widening**
- 18 Johns Road Realignment and Widening**



APPENDIX **B**

APPENDIX  
B

# PROJECT PRIORITIZATION

Boerne Mobility Master Plan Roadway Enhancement Project Scoring Matrix						
Objective	Weighted Objective Value	Points Available	Objective Category	Performance Measure	Points	
Score = Weighted Objective Value * (Points Received / Maximum Points Available)						
Maximize Efficiency of Existing Infrastructure	20.00	55	Functional Classification	Arterial	10	
				Collector	5	
				Local	0	
			Volume to Capacity Ratio	> 0.8 (LOS E/F)	15	
				> 0.65 and < 0.80 (LOS D)	10	
				> 0.50 and < 0.65 (LOS C)	5	
				< 0.50 (LOS A or B)	0	
				Not Assessed	0	
			Vehicular Capacity	Widening	10	
				New Alignment	5	
				No Additional Throughput	0	
			Growth Potential for Existing Corridor	High (Minimally Developed)	10	
				Medium (Moderately Developed)	5	
				Low (Mostly Developed) or Not An Existing Corridor	0	
Pavement Condition	Poor (PCI Less than 50)	10				
	Decent (PCI Between 50 and 70)	5				
	Good (PCI Between 70 and 100)	0				
	Not Assessed	0				
Maximum Points Available = 55						
Preserve Rural Character	20.00	20	Context Classification	Downtown	10	
				Suburban	5	
				Rural	0	
			Lanes	2 Lane Roadway	10	
				3 Lane Roadway	5	
Maximum Points Available = 20						
Prioritize Local Mobility	20.00	30	Local Destinations	Enhances Connectivity to Local Destinations (Schools, parks and recreation, grocery stores, shopping)	10	
				Does Not Enhance Connectivity to Local Destinations	0	
			Local Connectivity	Provides Connectivity between an Arterial and Collector or Local Street	10	
				Does Not Provide Connectivity Between an Arterial and Collector or Local Street	0	
			Bicycle and Pedestrian Mobility	Enhances Bicycle or Pedestrian Mobility	10	
Maximum Points Available = 30						
Minimize Environmental Impact	15.00	30	Floodplain	No Floodplains Present	10	
				Floodplains Present	0	
			Karst Features	No Karst Features Present	10	
				Karst Features Present	0	
			Trees	No Impact to Trees Anticipated	10	
Maximum Points Available = 30						
Enhance Connectivity	15.00	35	Connected Network	Connectivity to I-10	15	
				Connectivity to an Arterial	10	
				Connectivity to a Collector or Local Street	5	
				No Connectivity Enhancements	0	
			Alternative Routes	Parallel to I-10	10	
				Parallel to an Arterial	5	
			Alignments	Does not Run Parallel to I-10 or an Arterial	0	
Maximum Points Available = 35						
Enhance User Safety	10.00	50	Five-Year Corridor Collision Rate	More than 10 Collisions Per Mile Per Lane	15	
				Between 5 and 10 Collisions Per Mile Per Lane	10	
				Between 2 and 5 Collisions Per Mile Per Lane	5	
			Five-Year Crash Severity	<2 Collisions Per Mile Per Lane or a New Roadway	0	
				Fatal Collisions Along Corridor	10	
				Serious Injury Collisions Along Corridor	5	
				No Fatal or Serious Injury Collisions Along Corridor	0	
			Safety Issues	Extreme Safety Issues (Low water crossing, sight distance, poor pavement, lack of turn lanes)	15	
				Moderate Safety Issues (Vertical or Horizontal Curvature, Vulnerable Road Users)	10	
				Minor Safety Issues (Lighting)	5	
Safety Comments	No Safety Concerns	0				
	3 or More Safety Comments	10				
Maximum Points Available = 50						

# PROJECT PRIORITIZATION



## Roadway Enhancement Projects Evaluation Matrix

Rank	Project ID	Name	Description	Limits	Maximize Efficiency of Existing Infrastructure					Preserve Rural Character		Prioritize Local Mobility			Minimize Environmental Impact			Enhance Connectivity				Enhance User Safety				Total Overall Score					
					Functional Classification	Volume to Capacity Ratio	Vehicular Capacity	Growth Potential for Existing Corridor	Pavement Condition	Total Score: Maximize Efficiency of Existing Infrastructure	Context Classification	Lanes	Total Score: Preserve Rural Character	Local Destinations	Local Connectivity	Bicycle and Pedestrian Mobility	Total Score: Prioritize Local Mobility	Floodplain	Karst Features	Trees	Total Score: Minimize Environmental Impact	Connected Network	Alternative Routes	Alignments	Total Score: Enhance Connectivity		Five-Year Corridor Collision Rate	Five-Year Crash Severity	Safety Issues	Safety Comments	Total Score: Enhance User Safety
1	12	School Street Corridor Study	Perform a corridor study along School Street to determine the improvements best fit for the corridor.	I-10 NB Frontage Road to Main Street	5	0	0	5	5	5.45	5	10	15.00	10	10	10	20.00	0	10	10	10.00	10	5	0	6.43	10	5	15	10	6.00	62.88
2	8	Old San Antonio Road Widening	Widen Old San Antonio Road to a collector roadway section	Movie Theater to Herff Road	10	15	10	5	10	18.18	5	5	10.00	10	10	10	20.00	0	0	0	0.00	10	10	0	8.57	5	0	15	5	4.00	60.75
3	18	River Road Corridor Study	Perform a corridor study along School Street to determine the improvements best fit for the corridor.	Main Street to Herff Road	10	15	0	0	0	9.09	5	10	15.00	10	10	10	20.00	0	0	10	5.00	10	0	0	4.29	15	5	15	5	7.00	60.38
4	11	Scenic Loop Road Widening	Widen Scenic Loop Road to a collector roadway section	City Limit to I-10 SB Frontage Road	5	5	10	10	10	14.55	5	5	10.00	10	10	10	20.00	0	0	0	0.00	15	10	0	10.71	10	0	15	5	5.00	60.26
5	5	Johns Road Widening	Widen Johns Road to a collector roadway section	I-10 NB Frontage Road to School Street	5	10	10	5	5	12.73	5	5	10.00	10	10	10	20.00	0	10	0	5.00	15	0	0	6.43	5	5	15	0	5.00	59.16
6	1	Adler Street Widening	Widen Adler Street to a collector roadway section and improve intersections	Sisterdale Cutoff to N Esser Road	5	5	10	5	10	12.73	5	5	10.00	10	10	10	20.00	0	10	0	5.00	10	0	0	4.29	10	0	15	5	5.00	57.01
7	14	W Blanco Road Reconstruction	Pavement reconstruction on W Blanco Road	W San Antonio Avenue to Main Street	5	0	0	0	10	5.45	10	10	20.00	0	10	0	6.67	10	10	10	15.00	10	0	0	4.29	10	0	15	0	5.00	56.41
8	17	Main Street Corridor Study	Perform a corridor study along School Street to determine the improvements best fit for the corridor.	IH-10 to Sisterdale Cutoff	10	0	0	0	0	3.64	10	0	10.00	10	10	10	20.00	0	0	10	5.00	15	10	0	10.71	15	5	15	10	7.00	56.35
9	2	Cascade Cavern Widening	Widen Cascade Cavern to a collector roadway section	Buckskin Drive to Ranch Drive	10	5	10	10	0	12.73	0	5	5.00	10	10	10	20.00	10	0	0	5.00	15	5	0	8.57	0	0	15	0	3.00	54.30
10	13	Upper Cibolo Creek Road Widening	Widen Upper Cibolo Creek Road to a collector roadway section	Boerne City Lake Entrance to I-10 SB Frontage Road	5	0	10	10	0	9.09	5	5	10.00	10	10	10	20.00	0	10	0	5.00	15	0	0	6.43	0	0	15	0	3.00	53.52
11	15	W Kronkosky Street Reconstruction	Pavement reconstruction on W Kronkosky Street	Mueller Street to Main Street	0	0	0	0	10	3.64	10	10	20.00	0	10	0	6.67	10	10	10	15.00	10	0	0	4.29	0	0	15	0	3.00	52.59
12	9	Parkway Drive Reconstruction	Pavement reconstruction on Parkway Drive	I-10 NB Frontage Road to Old San Antonio Road	0	0	0	0	10	3.64	5	10	15.00	0	10	0	6.67	10	10	10	15.00	15	0	0	6.43	5	0	15	0	4.00	50.73
13	10	Ranger Creek Road Widening	Widen Ranger Creek Road to a collector roadway section and install shoulders for bicycle users	City Limit to I-10 SB Frontage Road	5	0	10	10	5	10.91	5	5	10.00	0	10	10	13.33	0	10	0	5.00	15	0	0	6.43	0	10	15	0	5.00	50.67
14	7	N Shooting Club Road Reconstruction	Pavement reconstruction on N Shooting Club Road	Market Avenue to FM 1376 (Pfeiffer Road)	5	5	0	5	10	9.09	5	10	15.00	0	0	0	0.00	10	10	10	15.00	5	10	0	6.43	0	0	15	0	3.00	48.52
15	3	Coughran Road Realignment and Widening	Realign Coughran Road to smooth out horizontal curves and widen to a collector roadway section	Upper Balcones Creek Road to SH 46	5	0	0	10	10	9.09	5	5	10.00	0	10	10	13.33	0	10	0	5.00	10	5	0	6.43	0	0	10	0	2.00	45.85
16	4	Esser Road Restriping	Restripe Esser Road to have one lane in each direction and a two-way-left-turn lane	River Road to Blanco Road	5	15	0	5	0	9.09	5	5	10.00	0	10	0	6.67	0	0	10	5.00	10	5	0	6.43	15	5	15	5	7.00	44.19

APPENDIX  
B

# PROJECT PRIORITIZATION

Boerne Mobility Master Plan Intersection Project Scoring Matrix						
Category	Weighted Category Value	Points Available	Category Detail	Performance Measure	Points	
Score = Weighted Category Value * (Points Received / Maximum Points Available)						
Existing Intersection Conditions	45.00	75	Existing Level of Service (LOS)	LOS E/F	15	
				LOS D	10	
				LOS C	5	
				LOS A/B	0	
				Over 30 Hours of Delay	15	
			Total Intersection Delay (hours)	20-30 hours of Delay	10	
				10-20 hours of Delay	5	
				<10 hours of Delay	0	
			Total Entering Volume (Peak Hour)	>2,500 vehicles	15	
				1,750 - 2,500 vehicles	10	
				1,000 - 1,750 vehicles	5	
				<1,000 vehicles	0	
			Queues	Queues Extend Beyond Existing Storage on One or More Approaches	10	
				Queues Do Not Extend Beyond Existing Storage on Any Approaches	0	
			Five-Year Collision Rate	More Than 10 Collisions Per Year on Average	10	
Between 3 and 10 Collisions Per Year on Average	5					
Less Than 3 Collisions Per Year on Average	0					
Five-Year Collision Severity	Fatal Collisions Over the Past Five Years	10				
	Injury Collisions Over the Past Five Years	5				
	No Injury Collisions Over the Past Five Years	0				
					<i>Maximum Points Available =</i>	75
Intersection Improvements	35.00	40	Anticipated Level of Service (LOS)	Improved LOS	10	
				No Improvement to LOS	0	
			Delay	Delay Reduction of 15% or More	10	
				Delay Reduction Between 5% and 15%	5	
				Delay Reduction Less than 5%	0	
			Capacity	Increases Capacity	10	
				Does Not Increase Capacity	0	
			Safety	Collision Reduction Greater than 30%	10	
Collision Reduction Between 10% and 30%	5					
Collision Reduction Less Than 10%	0					
					<i>Maximum Points Available =</i>	40
Feasibility	10.00	40	Right-of-Way	No Right-of-Way Acquisition Required	10	
				Right-of-Way Acquisition Required	0	
			Utilities	No Impact to Utilities	10	
				Impact to Utilities	0	
			Bridges	No Impact to Bridges	10	
				Impact to Bridges	0	
			Drainage	No Impact to Drainage	10	
Impact to Drainage	0					
					<i>Maximum Points Available =</i>	40
Cost	10.00	10	Construction Cost	Less Than \$200,000	10	
				Between \$200,000 and \$500,000	5	
				More Than \$500,000	0	
					<i>Maximum Points Available =</i>	10

# PROJECT PRIORITIZATION



## Intersection Project Evaluation Matrix

Rank	Project ID	Name	Description	Existing Intersection Conditions							Intersection Improvements				Feasibility				Cost		Total Overall Score		
				Existing Level of Service (LOS)	Total Intersection Delay (hours)	Total Entering Volume (Peak Hour)	Queues	Five-Year Collision Rate	Five-Year Collision Severity	Total Score: Existing Intersection Conditions	Anticipated Level of Service (LOS)	Delay	Capacity	Safety	Total Score: Intersection Improvements	Right-of-Way	Utilities	Bridges	Drainage	Total Score: Feasibility		Construction Cost	Total Score: Cost
1	7	River Road & Herff Road/Esser Road Intersection Improvements	Widen to the northwest corner of the intersection and modify the existing traffic signal to accommodate the following approach configuration: one left, one through, two right-turn lanes northbound, one left, one through, and one right turn-lane eastbound, one left, one through, one right turn-lane southbound, and two left, one through, and one unchanneled right turn lane westbound.	15	15	15	10	10	5	42.00	10	10	10	10	35.00	0	0	0	0	0.00	0	0.00	77.00
2	6	Main Street & River Road Intersection Improvements	Widen to the northeast corner of the intersection to accommodate a dedicated southbound left-turn lane and modify the existing traffic signal to accommodate a northbound right-turn overlap	10	15	15	0	10	5	33.00	10	10	10	10	35.00	0	0	0	0	0.00	5	5.00	73.00
3	8	Charger Boulevard & SH 46 Intersection Improvements	Install a westbound right-turn lane and widen into the northbound median to accommodate dual left-turns and one shared through-right lane northbound	15	15	15	10	5	5	39.00	10	10	10	5	30.63	0	10	0	0	2.50	0	0.00	72.13
4	5	Main Street & Blanco Road Traffic Signal Improvements	Convert the existing left-turn traffic signals to Flashing Yellow Arrows (FYAs)	10	10	10	10	5	5	30.00	10	5	0	5	17.50	10	10	10	10	10.00	10	10.00	67.50
5	12	Main Street & Bandera Road Intersection Improvements	Restripe the eastbound and westbound approaches to unsplit the traffic signal and protect the left-turn movements	10	15	15	10	0	10	36.00	0	0	0	10	8.75	10	10	10	10	10.00	10	10.00	64.75
6	16	Scenic Loop Road & Cascade Cavern Traffic Signal Installation (Committed)	Installation of a traffic signal and turn-lanes to be funded through a committed project with AAMPO	15	15	5	10	0	0	27.00	10	10	10	10	35.00	0	0	0	0	0.00	0	0.00	62.00
7	1-5	Sisterdale Cutoff & Adler Street Intersection Improvements (Short-Term)	Convert the southbound approach of Sisterdale Cutoff to right-in, right-out, allow the westbound approach of Adler Street to operate free of traffic control, and increase the storage length of the westbound right-turn lane	10	0	0	10	5	5	18.00	10	10	10	5	30.63	10	0	10	0	5.00	5	5.00	58.63
8	13	Old San Antonio Road & Herff Road Intersection Improvements	Modify the existing traffic signal and install dedicated turn-lanes on the northbound and southbound approaches to unsplit the traffic signal and implement a northbound right-turn overlap	10	5	10	10	0	0	21.00	10	10	10	0	26.25	0	10	10	0	5.00	5	5.00	57.25
9	2	Main Street & School Street Roundabout - Paired with Project #1-L	Installation of 5-leg dual-lane roundabout that serves School Street, Main Street, Sisterdale Cutoff, and Adler Street	5	5	5	10	5	5	21.00	10	10	10	10	35.00	0	0	0	0	0.00	0	0.00	56.00
10	1-L	Sisterdale Cutoff & Adler Street Roundabout (Long-Term) - Paired with Project #2	Installation of 5-leg dual-lane roundabout that serves School Street, Main Street, Sisterdale Cutoff, and Adler Street	10	0	0	10	5	5	18.00	10	10	10	10	35.00	0	0	0	0	0.00	0	0.00	53.00
11	10	School Street & Johns Road Roundabout	Installation of a single-lane roundabout with enhanced pedestrian accommodations	5	0	5	10	0	5	15.00	10	10	10	10	35.00	0	0	0	0	0.00	0	0.00	50.00
12	9	Copper Creek/Esperanza Boulevard & SH 46 Intersection Improvements	Modify the existing traffic signal to install Flashing Yellow Arrows (FYA) and restripe the northbound and southbound approaches to include dedicated left-turn lanes and shared through-right lanes.	5	5	10	0	0	0	12.00	0	0	10	5	13.13	10	10	10	10	10.00	10	10.00	45.13
13	3-5	Esser Road & Adler Street Turn-Lane Improvements (Short-Term)	Increase the storage length for the eastbound channelized right-turn lane	5	0	0	10	0	0	9.00	10	10	10	5	30.63	10	0	10	0	5.00	0	0.00	44.63
14	3-L	Esser Road & Adler Street Roundabout (Long-Term)	Installation of a single-lane roundabout	5	0	0	10	0	0	9.00	10	5	10	10	30.63	10	0	10	0	5.00	0	0.00	44.63
15	14	Main Street & Herff Road Intersection Improvements	Install a northbound right-turn lane	5	10	10	0	5	5	21.00	0	10	10	0	17.50	0	0	0	0	0.00	5	5.00	43.50
16	4-5	Esser Road & Blanco Road/Bentwood Drive Traffic Signal Improvements	Convert the existing left-turn traffic signals to Flashing Yellow Arrows (FYAs) and retime traffic signal to better accommodate pedestrians	10	5	5	10	0	0	18.00	0	0	0	5	4.38	10	10	10	10	10.00	10	10.00	42.38
17	4-L	Esser Road & Blanco Road/Bentwood Drive Turn-Lane Improvements	Install a single-lane roundabout in place of the existing traffic signal	10	5	5	0	0	0	12.00	0	0	10	0	8.75	10	10	10	10	10.00	10	10.00	40.75
18	15	Old San Antonio Road & Cascade Cavern Roundabout (Committed)	Installation of a single-lane roundabout to be funded through a committed project with AAMPO	5	0	0	0	0	0	3.00	10	10	10	10	35.00	0	0	10	0	2.50	0	0.00	40.50
19	11	Main Street & Johns Road Turn-Lane Improvements	Install an eastbound right-turn lane	0	0	5	0	0	0	3.00	0	5	10	0	13.13	0	10	10	10	7.50	10	10.00	33.63

Notes:

» Following further analysis, additional improvements were recommended for the River Road & Herff Road/Esser Road (Rank No. 1) intersection, which are further detailed in Appendix D.

# PROJECT PRIORITIZATION



## Bicycle and Pedestrian Project Prioritization Tool

Performance Measures	Ped&bike = 5pt, ped OR bike = 3pts, none = 0	Ped/bike related crashes = 5pt, 3+ = 10pt	Injury or fatality ped/bike = 10pt	Road classification (art/trail = 5pt, coll = 3pt, local = 1pt)	Posted Speed (>30mph = 5pt, <30mph = 2pt)	In Downtown boundary = 5pt	Within 1/2 mile school = 3pt, 1/4 mile = 5pt	Within 1/2 mile park = 3pt, 1/4 mile = 5pt	Public input ID= 5pt	Within 1/2mile of commercial = 3pt, 1/4 mile =5pt	Direct connect exist sidewalk to park or trail = 5pt	Final Score (Max = 60)
Project												
S Main at River Rd Sidewalk Reconstruction	3	10	10	5	5	5	3	5	5	5	5	61
Johns Road Shared Use Path	5	5	10	3	5	5	5	5	0	3	5	51
Esser Road Shared Use Path	5	5	10	3	5	0	5	5	0	5	5	48
Old Number 9 Connection	5	0	0	5	2	5	3	5	5	5	5	40
South Plant Ave Bike Lane	3	5	10	3	2	0	3	3	0	5	5	39
Cibolo Creek Trail Extension 1	5	0	0	5	2	0	5	5	5	5	5	37
Rosewood Ave Bike Lane	3	5	10	1	2	0	5	5	0	0	5	36
Old No 9 Extension 4	5	0	0	5	2	0	5	5	5	3	5	35
Currey Creek Trail Extension 1	5	0	0	5	2	0	5	5	5	0	5	32
Old No 9 Extension 2	5	0	0	5	2	0	5	5	5	0	5	32
Live Oak St Bike Lane	3	0	0	1	2	5	5	5	0	5	5	31
Theissen Sidewalk 1	3	0	0	1	2	5	5	5	0	5	5	31
Saunders Sidewalk	3	0	0	1	2	5	5	5	0	5	5	31
Turner Sidewalk 1	3	0	0	1	2	5	5	5	0	5	5	31
Turner Sidewalk 2	3	0	0	1	2	5	5	5	0	5	5	31
Harz Sidewalk	3	0	0	1	2	5	5	5	0	5	5	31
E San Antonio Sidewalk	3	0	0	5	2	5	5	5	0	5	0	30
Hosack SUP	3	0	0	1	2	5	3	5	0	5	5	29
Highland SUP	5	0	0	1	2	5	0	5	0	5	5	28
Stand Alone Downtown Greenway Trail	5	0	0	5	2	0	0	0	5	5	5	27
Schweppe Street Sidewalk	3	0	0	1	2	5	0	5	0	5	5	26
Hosack Sidewalk 2	3	0	0	1	2	5	0	5	0	5	5	26
Hickman Sidewalk	3	0	0	1	2	5	0	5	0	5	5	26
Frey Sidewalk	3	0	0	1	2	0	0	3	0	3	5	17
Bentwood Sidewalk	3	0	0	1	2	0	5	0	0	0	5	16
Theissen Sidewalk 3	3	0	0	1	2	0	0	0	0	5	5	16
Theissen Sidewalk 2	3	0	0	1	2	0	0	0	0	5	0	11



# APPENDIX C

## PUBLIC COMMENTS

ID	Type	Jurisdiction	Comment	Up Votes	Down Votes	Latitude	Longitude
1	Congestion Issue	City Limits	Both Elementary and Middle School cause congestion on this 4-way stop. I believe that Cascade Caverns Road needs lane additions as well as curbs/ storm sewer. It seems that there might be a need for some minor ROW acquisition and utility power pole relocations.	7	0	29.756722	-98.703339
2	Safety Issue	ETJ	The low water crossing between Bexar County/ Kendall County has a safety issue because it is very difficult to see incoming traffic and it would be nicer if the lanes were a little wider in this area. I believe the culvert might also need to be upsized and road profile raised to help with the creek drainage.	4	0	29.738836	-98.677011
3	Intersection Concern	City Limits	Alignment is dangerous and awkward.	8	2	29.803784	-98.737543
4	Safety Issue	ETJ	New flashing lights at this intersection are causing more drivers to stop on the flashing YELLOW - I've driven through this intersection multiple times daily for the last 12 years - it seems the confusion is just getting worse.	4	1	29.820205	-98.754323
5	Other Concern	ETJ	The county commissioners need to actually do something about road congestion that is felt primarily in the city. The city is part of the county, but the commissioners act like it's not.	8	4	29.793734	-98.673363
6	Accessibility Concern	City Limits	Sidewalk is not accessible to get to the light to cross main street if you are walking south in front of Kelani.	3	1	29.789496	-98.729485
7	Intersection Concern	City Limits	Cars parked on both sides of North Street at the intersection of Main narrow North street to one lane down the center of the street. Cars parking along the side of Business 87 block view of traffic when turning onto Business 87 as you are leaving the parking lot behind the office building or even when turning left onto to Main from North. Parking along the side of North Main is not practiced anywhere else until you reach downtown.	5	1	29.799028	-98.734839
8	Safety Issue	City Limits	Adler road from Esser to School has many cracks, pot holes and degraded payment the whole road need to be redone	8	1	29.804645	-98.724343
9	New Road Connection Needed		46 to adler and widen adler	6	3	29.804472	-98.714283
10	Intersection Concern	ETJ	Fix Herff Road Hwy 46 intersection. Add left hand turn lane from Hwy 46 onto Herff. It can be a combo left and lane that has the option of going straight. Add a right hand turn lane from Herff onto 46.	16	1	29.787554	-98.716536
11	New Road Connection Needed	ETJ	Need connection from Esperanza to Adler.	6	8	29.803885	-98.698082
12	Intersection Concern	City Limits	Fix this poor intersection. Transportation committee has some suggestions.	11	2	29.804469	-98.73765
13	Intersection Concern	City Limits	This is a dangerous and confusing intersection. The addition of a flashing light on has confused drivers further. Drivers unfamiliar with Boerne are stopping at the flashing yellow light although they have the right of way and traffic behind them is driving 60 plus mile an hour in preparation to get onto IH 10. Maybe a full stoplight? Put a flashing yield sign where traffic is attempting to turn right onto the access road from North Main by the TxDOT barns. No one yields at this sign.	4	2	29.818292	-98.752155
14	New Road Connection Needed	ETJ	Transportation Committee has suggestions for connecting Sisterdale Hwy to Johns Road	2	5	29.80808	-98.742746
15	Intersection Concern	City Limits	Traffic on Johns Rod is now worse during school hours after the addition of a stoplight. Traffic builds up waiting for the light to change. Is there a way to adjust the light during peak hours to allow more time for traffic going over the bridge or add turn lanes?	2	1	29.794836	-98.751512
16	Accessibility Concern	City Limits	Cannot navigate wheelchair/stroller on sidewalk at Kelani Yogurt.	4	0	29.789931	-98.729652
17	New Sidewalk Needed	City Limits	Connect sidewalk on Main Street to Cibolo Creek Trail.	9	0	29.789558	-98.729701
18	Accessibility Concern	City Limits	Add a ramp in lieu of stairs on the sidewalk.	4	0	29.786788	-98.72896
19	Safety Issue	City Limits	Herff/Esser and SH46 is a dangerous intersection for pedestrians/cyclist. Crossing from Cibolo Creek Trail across SH46 has drivers merging onto S Esser that do not yield and the same for vehicles turning right from Herff to SH46.	10	1	29.787732	-98.716182
20	New Sidewalk Needed	City Limits	Connect Cibolo Creek Trail to Ranches at Creekside	2	2	29.776502	-98.692546
21	New Sidewalk Needed	City Limits	Create a trail along Browns Creek that connects from Bentwood, through Woods of Boerne, to the sidewalk near Champion. This will connect to Cibolo Creek Trail via the sidewalk in front of Champion.	7	2	29.800114	-98.699133
22	New Sidewalk Needed	ETJ	Build a trail that connects Herff Elementary to proposed trail at Browns Creek.	7	1	29.804643	-98.69585
23	Congestion Issue	City Limits	Very difficult to get out from this cross street onto River Rd.	5	3	29.788727	-98.718563
24	New Sidewalk Needed	City Limits	Add a trail here for BHS student to be able to walk to/from their neighborhood	7	1	29.796264	-98.706786
25	New Sidewalk Needed	ETJ	Add a trail here so elementary and middle school students can walk to school from their neighborhood.	6	0	29.76386	-98.703889
26	Safety Issue	City Limits	Only a short bit of sidewalk in front of Frost Bank on Bandera Rd; walkers forced to walk in roadway or on ankle-breaker rocks.	9	1	29.779567	-98.729324

## PUBLIC COMMENTS

ID	Type	Jurisdiction	Comment	Up Votes	Down Votes	Latitude	Longitude
27	Safety Issue	City Limits	Very narrow rough rock sidewalk dangerously close to Main St traffic without any barrier for protection.	10	2	29.786215	-98.729174
28	Safety Issue	City Limits	Uneven sidewalk, tripping hazard, several places on Main St	6	1	29.790282	-98.730124
29	Safety Issue	City Limits	Needs a marked crosswalk here	9	3	29.793819	-98.731931
30	Other Concern	City Limits	City Hall contractor should repair the rough road they caused here.	4	2	29.796822	-98.732666
31	Safety Issue	City Limits	Speed bumps desperately needed to slow speeding traffic on Bess and Water Streets; might force drivers to notice the STOP signs too [and hopefully start obeying them!]	3	6	29.782236	-98.730268
32	Other Concern	City Limits	Need to make existing sidewalks safer/smoothier and continuous [some end abruptly] BEFORE adding any new sidewalks anywhere else	5	1	29.79221	-98.731191
33	New Road Connection Needed	City Limits	Add a road to get to Boerne City Park or Champion from the southeast side. This would reduce so much traffic at the corner of Herff and Hwy46 during peak times.	5	5	29.78222	-98.710527
34	Other Concern		How will any environmental impacts be assessed? Will there be public discussions on these? There are many concerns regarding protecting groundwater from contaminated runoff ( Kendall County has one of the most extensive karst networks in the US). Will the public be updated regarding the details of environmental impact studies, potential methods to reduce that impact, long term data supporting the effectiveness of these? For example, use of vegetation mats to manage road runoff.	3	0	29.918724	-98.609918
35	Congestion Issue	City Limits	Due to close proximity to I-10, the adjacent middle school (Boerne Middle School South) and elementary school (Kendall Elementary), this area is EXTREMELY congested. In addition, there are apartment units and other residential areas close by.  4-lanes with turn lanes would help with traffic volumes and movements. ROW would need to be acquired and monies should be set aside for such.	10	0	29.756475	-98.703382
36	Intersection Concern	City Limits	The Intersection of Johns Road/IH 10 needs improvement. Overpass bridge needs to be replaced with wider bridge to accommodate current and future traffic. Eventually improvements are needed to IH 10 frontage roads, ramps and intersections between SH 46 and BS 87 North similar to what is currently under construction from SH 46 to the South/East in order to accommodate current and future traffic demand.	4	0	29.794955	-98.752374
37	Congestion Issue	City Limits	Scenic Loop (SL) needs to be expanded in order to accommodate current and future traffic. The large development that is currently underway south/west of Boerne Heights will generate a significant amount of traffic and will create congestion issues along SL and at SL/IH 10. There is accommodation for additional lanes under the new overpass at IH 10, but there will also need to be improvements made to SL on the East/North side of IH 10 in order to accommodate additional turning lanes.	22	0	29.752198	-98.705605
38	Other Concern		This map omits information that is critical for comprehensive/holistic long-range planning necessary to accommodate development in Kendall County, not just Boerne. A Water Control and Improvement District (WCID) No.4 was created east of the city beyond the ETJ and along the fast-growing SH 46 corridor between Boerne and Bergheim. As Boerne has decided to provide water to WCID No. 4, a map in this area must include this District, Boerne's ETJ, the city's two-mile buffer and the "extended ETJ".	1	1	29.809298	-98.629877
39	Intersection Concern	City Limits	Needs a "left turn barrier" This area creates stopped traffic in a highly congested area.	3	0	29.793859	-98.73191
40	New Sidewalk Needed	City Limits	Extend the Old # 9 Rail line south to the Bexar County line	5	0	29.776485	-98.692117
41	New Road Connection Needed		I know it is not a popular opinion, but there needs to be an additional limited access connector between 46 and 10. Please note this line is simply representative of need, not where I believe it should be explicitly.	8	1	29.738721	-98.687782
42	New Sidewalk Needed	City Limits	I would love to see the trail system extended to Northrup Park.	6	1	29.793618	-98.734689
43	New Sidewalk Needed	City Limits	I think the Currey Creek Trail should be extended south and connect to Old No. 9.	3	1	29.797184	-98.719711
44	New Bicycle Route Needed	City Limits	There needs to be some additional E/W bike lanes in our community. If done well and in the right places. there can be a reasonable expansion without a large cost	3	0	29.784232	-98.737564
45	New Bicycle Route Needed	City Limits	Not sure of the exact space limitations on School Street, but a bike path or sidewalk in this area could allow this side of town to connect to other portions of the City.	3	0	29.782072	-98.737607
46	New Road Connection Needed	ETJ	Maybe a connector between 474 and 1376 would allow some traffic that bypass having to utilize Boerne roads.	6	2	29.822928	-98.737221

## PUBLIC COMMENTS

ID	Type	Jurisdiction	Comment	Up Votes	Down Votes	Latitude	Longitude
47	Other Concern	City Limits	I would love to see some big improvements to Johns Road. Dedicated left turn lanes, better sidewalks or an adjoining bike path. With several schools and homes in this area, would be a great way to improve overall mobility for drivers and pedestrians.	7	0	29.795088	-98.743916
48	New Bicycle Route Needed	City Limits	If Blanco Road can't have better bike access, maybe look at Old San Antonio. It would be a good E/W connector and could tie right into Old No. 9 Trail.	4	0	29.795997	-98.726449
49	New Sidewalk Needed	City Limits	Trail expansion and connection with Menger Springs. I hope Cibolo Nature Center would work the community to make this possible. Would love to be able to explore more of our natural areas by foot.	3	0	29.774877	-98.729024
50	New Road Connection Needed	City Limits	Take down the gate and connect these areas. There is no need for anyone to force drivers to use major road ways when there is a single piece of iron stopping folks.	9	56	29.753051	-98.710442
51	Other Concern		Y'all need to figure out another way to get traffic to I-10 without taking people's property that has been in the family for generations! Widen the existing roads, most have ample space to do that. You are punishing the long time citizens of Kendall County and rewarding all the newcomers. They are the ones making all this mess.	0	1	29.768832	-98.665466
52	Intersection Concern	City Limits	Difficult pedestrian crossing- cars do not stop with yellow blinking lights. Need red light option like on E. Blanco at trail	5	1	29.788925	-98.725451
53	Safety Issue	City Limits	Oversized vehicles parked permanently on S. Plant obscure view when attempting to cross street at trail.	2	2	29.794939	-98.725387
54	Intersection Concern	ETJ	need three way stop light	1	3	29.807874	-98.742529
55	Intersection Concern	City Limits	need left turn lights	4	2	29.804388	-98.73785
56	Intersection Concern	City Limits	need left turn signals	3	2	29.792559	-98.731094
57	Safety Issue		Horrid intersection. I would suggest installing a traffic signal at Main and 1376 and permanently closing the North end of School Street.	0	1	29.796559	-98.66684
58	Other Concern		This area has been under threat of a greenfield road by the City of Boerne. It has karsts, swallets, historic preservation areas, conservation easements and residential development that makes this a poor location. It was a careless suggestion made by a developer 20+ years ago and needs to be abandoned. If Vista Roble or the Grossmans want to put a road through their property to enhance their downtown investments, that's an inadequate reason for a road here and is a poor mobility solution.	3	0	29.822054	-98.699309
59	New Sidewalk Needed	City Limits	Complete the connection of the Old #9 trail across the drainage swale so the sidewalk connects to SH 46 sidewalk	1	0	29.78775	-98.714561
60	Other Concern	City Limits	Great job on new HAWK signal!!	2	0	29.796438	-98.726717
61	Safety Issue	City Limits	The gate between Regent Park and Boerne Heights must remain closed! We have ONE entrance and exit and already have to share it with Kendall Creek residents. We cannot have 400+ more cars using our only entrance/exit. We already have to wait sometimes 10+ minutes just to get out of our neighborhood because we are at the mercy of drivers on Scenic Loop to let us out. Too many drivers speeding through our neighborhood is already a safety hazard to our children!	34	2	29.753028	-98.710068
62	Safety Issue	City Limits	Please do not put an access into our neighborhood!! We already experience cars who live here in this neighborhood who travel to fast through here!! Leaving our neighborhood to scenic loop road is already a struggle, please do not add to it! Thank you	44	1	29.753089	-98.710227
63	Congestion Issue	City Limits	This intersection is already very congested in the mornings with Boerne Heights residents along with Kendall Creek residents using this to leave our neighborhoods. We have no way to exit unless drivers on Scenic Loop lets us out. The gate between Boerne Heights and Regent Park must remain closed! We cannot have anymore vehicles use our neighborhood as a thoroughfare!	20	0	29.749295	-98.70577
64	Other Concern	ETJ	Too environmentally sensitive to put roads in this area, from Cave Without a Name all the way to Cascade Caverns. TXDOT and City keep proposing this, but it should not happen	0	1	29.7744	-98.669187
65	Other Concern	ETJ	Too environmentally sensitive to put roads in this area, from Cave Without a Name all the way to Cascade Caverns. TXDOT and City keep proposing this, but it should not happen	0	1	29.782221	-98.668416
66	Safety Issue	City Limits	Not in favor of opening the gate between Regent Park and Boerne Heights subdivisions. There are numerous walkers & children within Regent Park who need to continue to feel safe without having to worry about additional traffic/speeders. Wildlife within our Neighbourhood also must be allowed to flourish & not become victims of speeders who aren't familiar with our neighbourhood surroundings. Keeping our neighbourhood, families & environment safe must continue to be a high priority.	38	2	29.75284	-98.710227

## PUBLIC COMMENTS

ID	Type	Jurisdiction	Comment	Up Votes	Down Votes	Latitude	Longitude
67	Other Concern	City Limits	Open this gate between the neighborhoods. Keep it for when it may be necessary to close on temporary basis. It is unsafe to have only one entrance to Regent Park, and it is ridiculous to have to go up and turn around in the construction zones when turning on Scenic Loop to enter Regent Park will reduce congestion and reduce school bus route times. If the complain is speeding drivers then let's add some speed bumps and traffic cameras during peak hours.	0	35	29.753141	-98.710511
68	Other Concern		This line goes through a completed development and would necessitate demolition of long established homes. How is this possible?	0	0	29.747688	-98.668605
69	Safety Issue	City Limits	I fear everyone in Regent that commutes south on Scenic Loop Road will drive down through Kendall Creek Estates to turn right on Scenic Loop further congesting our exit and making it extremely hazardous for our many children who walk to the bus stop at Sage Canyon and Deer Wood Oaks. When the new sub-division south of us is complete, we'll need a traffic signal at Sage Canyon and Scenic Loop to get out to go either direction.	14	2	29.746834	-98.705678
70	Safety Issue	City Limits	Keep the gate but place a key pad to enter/exit - it will slow traffic from entering/exiting & keep children safe. There are many people and kids walking through the area.	3	18	29.753	-98.710071
71	Safety Issue	City Limits	The I-10 on-ramp here is way too short and very dangerous. Drivers on the highway are going far too fast, can't see you coming up the ramp because it is below their view point, people are not getting over to allow for merging traffic. This has caused many people trying to merge to have to stop on the on ramp, causing all kinds of other safety issues.	5	0	29.766643	-98.71802
72	Safety Issue	City Limits	The I-10 on-ramp here is way too short and very dangerous. Drivers on the highway are going far too fast, people are not getting over to allow for merging traffic. This has caused many people trying to merge to have to stop on the on ramp, causing all kinds of other safety issues.	2	0	29.771989	-98.726821
73	New Sidewalk Needed	ETJ	There is no sidewalk between the Nursery and the corner at Scenic Loop and with the construction and narrow lanes, there is not a safe way to walk here.	2	1	29.756533	-98.707877
74	Intersection Concern	City Limits	With the added homes and businesses down Scenic Loop, traffic is getting quite congested. Part of this issue is that the light is on a long cycle. So even if no one is coming from other directions, you have to wait several minutes for the lights to cycle. These should be programed with peak and night time cycles or be vehicle sensing to adjust accordingly.	7	0	29.753881	-98.705045
75	Safety Issue	City Limits	This gate needs to be available only to safety personnel (fire/ems/leo) for emergency access. Use a lock that only they can access. Gates communities use these locks to grant access for emergency use.	17	0	29.753074	-98.710075
76	Congestion Issue	City Limits	This is not a Congestion Problem but more of a Traffic Problem. Since Regent Park isn't completed, by opening the gate, Boerne Heights will have more large commercial vehicles driving thru our neighborhood tearing up Jordan Pl. & Sophia Cir. and how long will it take the city to repair the damage, years?	13	1	29.752328	-98.708317
77	Safety Issue	City Limits	Please keep this gate closed. The traffic does not need to increase in the neighborhood, which is what will happen.	14	0	29.753396	-98.710275
78	Safety Issue	City Limits	The streets in Boerne Heights were not designed to safely support a multiple neighborhood thruway. The streets are narrow and heavily used by residents for parking. Additional traffic, especially for drivers who are seeking a speedy exit from another neighborhood, would place Boerne Heights residents and property at risk. Exiting onto Scenic Loop is already heavily congested. Please keep the current gate locked.	17	0	29.753211	-98.710037
79	Other Concern	City Limits	I live on Michelle Lane in Boerne Heights and do NOT want the gate to be opened. We have lots of kids in the neighborhood and do not want additional traffic coming through our streets just to get out to the highway. I personally walk my dog every morning and do not want the additional traffic coming through. Please leave the gates closed! Thanks, Ellen	3	1	29.753927	-98.706987
80	Safety Issue	ETJ	Elementary School Bus Stop there. Many children running there at times. Would also create a traffic problem at Scenic Loop. Neighborhood does not need the extra traffic.	2	0	29.754672	-98.696752
81	Other Concern	City Limits	I live on Michelle Lane in Boerne Heights and do NOT want the gate to be opened. We have lots of kids in the neighborhood and do not want additional traffic coming through our streets just to get out to the highway. I personally walk my dog every morning and do not want the additional traffic coming through. Please leave the gates closed! Thanks, Ellen	5	1	29.755129	-98.7085
82	Safety Issue	City Limits	This neighborhood was not designed for increased traffic flow for access outside of the neighborhood. To open a gateway to another area would only increase traffic, cause safety issues for a small quiet neighborhood designed for families. This opened gate is not necessary	19	0	29.753033	-98.709932

## PUBLIC COMMENTS

ID	Type	Jurisdiction	Comment	Up Votes	Down Votes	Latitude	Longitude
83	Safety Issue	City Limits	We have already been experiencing big construction trucks on Jordan as they try to go through, only to turn around and leave since the gate is closed. As I live on Jordan, we do not need either more traffic or the construction vehicles on our street. We do have smaller children on our street. Additionally, we have to wait up to 10 minutes to get our of the track due to all the Scenic Loop Traffic as it is, we do not need more problems with this intersection.	13	0	29.753156	-98.709957
84	Safety Issue	City Limits	We have already been experiencing big construction trucks on Jordan as they try to go through, only to turn around and leave since the gate is closed. As I live on Jordan, we do not need either more traffic or the construction vehicles on our street. We do have smaller children on our street. Additionally, we have to wait up to 10 minutes to get our of the track due to all the Scenic Loop Traffic as it is, we do not need more problems with this intersection.	7	0	29.753078	-98.710049
85	New Road Connection Needed	City Limits	Why can't there be a code to get into Regent Gate? It can be helpful. There are people I know over there. It is so hard to get around Boerne since the roads aren't finished. I have seen this in other areas. It would be a good way to solve it., with code!	1	7	29.751872	-98.708826
86	Safety Issue	City Limits	The home owners of Boerne Heights should NOT have to pay the price for POOR planning in neighboring subdivisions!!! Opening the gate would create a HUGE safety risk for our children and adults!! It would also make it VERY difficult to get out of our own neighborhood due to increased traffic at an intersection that ALREADY backs causing delays. All of this would NEGATIVELY affect the appeal and market value of our homes. DO NOT OPEN THE GATE!!!!	9	0	29.75308	-98.710003
87	Other Concern	City Limits	We have been in Boerne Heights since 2005, watched all of the homes be built, even enjoyed that our neighborhood was safer because of the single entrance. As the years go by and progress happens, too many things are replaced in its name. And replacing a gate for emergency access for commuter convenience is not progress for both neighborhoods; it benefits only one. There is no shared burden because Boerne Heights streets will be serving Regent Oaks and getting no reciprocation.	7	0	29.750769	-98.708838
88	Safety Issue	City Limits	We experience extreme difficulty in getting out of of Boerne Heights neighborhood at times when Scenic Loop traffic is backed up. There are more subdivisions going up just down the road from us! This problem will only get worse. Opening the gate to Regent will interfere with the heavy traffic and our exiting capabilities we already face. As a mom of children who's bus stop is at Jordan and Michele, numerous times vehicles do not stop and a child will get hurt.	13	0	29.752944	-98.710066
89	Safety Issue	City Limits	Gate should continue to be used for emergency use only. Moving into Boerne Heights, I already knew there was one entrance to get in and out. Regent residents are full aware they had one entrance to get in and out from the highway. No need to accommodate opening an entrance for the convenience of one neighborhood, when Boerne Heights residents have to face heavy traffic on Scenic Loop already.	12	0	29.752642	-98.710077
90	Safety Issue	City Limits	this will only make current traffic within boerne heights even worse. there is no way this should happen.	11	0	29.753032	-98.710275
91	Other Concern	City Limits	traffic is very heavy on W San Antonio Ave. Cars drive very fast for a residential area	0	0	29.793221	-98.733895
92	Congestion Issue	City Limits	Cars parking on both sides of road limit traffic and visibility	0	1	29.789803	-98.733643
93	Safety Issue	City Limits	very heavy traffic on W San Antonio Ave for a residential area, and cars drive too fast over speed limit.	2	0	29.7919	-98.736019
94	Safety Issue	City Limits	Stop allowing delivery truck parking in the street at the corner of Esser Road and Blanco Road to deliver to the convenience store this should be done on private property.	2	0	29.796265	-98.725338
95	Other Concern	City Limits	The extra empty grounds (aside from overflow parking area) & the space in the wooded area away from picnic areas should be developed into mountain biking trails and obstacles. Trails and obstacles that can be integrated into the existing geographical features. Cibolo Nature preserve is off limits for mountain biking, which leaves no place to ride in all of Boerne. Just look at Bentonville, AR; They turned it into a mountain biking Mecca that brought \$137 million revenue for NW Arkansas in 2017!	0	0	29.828587	-98.775195
96	Safety Issue	City Limits	Please do not open this gate. Congestion is already bad leaving Boerne Heights to get on to Scenic Loop road. Having many more cars from a completely different neighborhood (which is still building and expanding) will only worsen the issue. Please leave our quiet and peaceful neighborhood the way it was intended.	8	0	29.753376	-98.710053

## PUBLIC COMMENTS

ID	Type	Jurisdiction	Comment	Up Votes	Down Votes	Latitude	Longitude
97	Safety Issue	City Limits	As a resident on Jordan Pl, I beg you to keep the gate locked! We already frequently yell at drivers to slow down. Let's not add more drivers on our street! Please don't jeopardize our children's lives. Drivers already run the stop sign at Jordan Pl and Amalia Breeze and you want to add more drivers coming through that intersection.	5	0	29.751684	-98.707815
98	Safety Issue	City Limits	The I-10 entrance lane at this location is dangerous. It's impossible to see existing highway traffic if you are entering the ramp. The ramp itself is way too short. Who designed this hazardous highway entry??	1	0	29.766054	-98.716578
99	Safety Issue	City Limits	Please do not open the gate to allow thru traffic. Boerne Heights is at capacity and opening the gate would be detrimental to child safety and we have many people who walk and ride bikes continuously throughout the neighborhood. We already are experiencing lots of congestion when trying to exit on to Scenic Loop road. Regent Park residents knew they would only have one exit and it needs to remain that way.	7	0	29.751411	-98.708704
100	Safety Issue	City Limits	This gate needs and should remain closed. Boerne Heights is a small neighborhood with lots of kids playing and people walking with pets and we knew we had one entrance/exit when we moved in just like Regent Park. We are not responsible for their traffic and frustration of having moved into a neighborhood on a frontage road that is only a one direction road. They knew this. We need to keep our families safe from more traffic and possible speeders.	5	0	29.753091	-98.710041
101	Congestion Issue	City Limits	It would be good if the right turn lane extended further up Scenic Loop. Cars turning right would make the line of cars shorter. The cars in line going straight through the light would move up faster.	1	0	29.753557	-98.705059
102	Intersection Concern	City Limits	There needs to be a long right turn lane on the north bound side of main by Herff so the traffic that is trying to turn right onto Herff is not stacking up waiting for the traffic light to change. The right turn lane should start just north of the Dog and Pony.	0	0	29.780023	-98.728037
103	Intersection Concern	City Limits	There needs to be a long right turn lane on the north bound side of main street at the intersection on main and herff. The traffic that is trying to turn right onto herff is stacking up because there is no turning lane. The turning lane needs to start just north of the Dog & Pony.	0	0	29.774455	-98.722466
104	Intersection Concern	City Limits	Dangerous Intersection, not much room coming from Adler to turn south on School st.	1	0	29.804635	-98.737527
105	Intersection Concern	City Limits	There is no protected left turn on to Herff coming up North on Old San Antonio.	0	0	29.777256	-98.716975
106	Intersection Concern	City Limits	Need to add a 5 way stop light system by adding one light at Adler and School that works in conjunction with the stop lights on main to eliminate the congestion issues.	0	0	29.803962	-98.736388
107	Congestion Issue	City Limits	Major congestion issue	2	0	29.78798	-98.716297
108	Intersection Concern	City Limits	add left turn lanes to the north bound and south bound lanes of Old San Antonio for turning onto Herff	0	0	29.776273	-98.716819
109	Safety Issue	City Limits	No sidewalks along north school for kids walking from Stone Creek Apartments to Boerne North Middle School. I see kids struggling to stay safe walking to & from school.	0	0	29.797887	-98.737551
110	Intersection Concern	City Limits	Dangerous Intersection	2	0	29.756637	-98.705399
111	New Sidewalk Needed	City Limits	Sidewalk and perhaps a bike lane needed on Old San Antonio Rd.	1	0	29.77451	-98.716578
112	Other Concern	City Limits	More traffic on Old San Antonio Rd since the I-10 frontage roads are now one way and which has caused more people to drive on Old San Antonio Road. Makes it difficult leaving the Police and Municipal Court Complex.	0	0	29.7654	-98.710254
113	Safety Issue	City Limits	No sidewalk or cross walk for children walking to and from school.	0	0	29.804634	-98.717165
114	Other Concern		What about all of the private property and family ranches that have been passed down generation to generation? Is the city really demanding these sacred family spaces be given up?  What happens in 5 years when growth continues coming in and this isn't enough? Will the city demand more?	0	0	29.800507	-98.783913
115	Safety Issue	City Limits	As an owner on Michelle Lane, I oppose the gate being opened. This is an EMERGENCY Gate only and needs to stay that way. Through traffic will cause a major safety concern in our small neighborhood as well as additional congestion trying to exit. There are many children in our community, and we need to keep them safe. Opening this up will increase the traffic speed and jeopardize our children's safety.	3	0	29.753381	-98.70978
116	Safety Issue	City Limits	Opening up the gate between Boerne Heights and Regent park is a very bad idea. We've already experienced what opening up the gate does for a weekend during a phase of I-10 construction. It poses a significant safety risk due to increased traffic.	3	0	29.753091	-98.709937

## PUBLIC COMMENTS

ID	Type	Jurisdiction	Comment	Up Votes	Down Votes	Latitude	Longitude
117	Other Concern		A Thoroughfare Road should not intersect existing Neighborhoods nor should it be placed in areas that the Property owners have stated they do not intend to sell for future Development. Kendall County Hill Country is now in the Camp Bullis Sentinel Landscape Partnership and we need to strengthen the preservation not weaken it with "Convenience Roads" for Regional transportation planning.	0	0	29.81888	-98.695887
118	Safety Issue	City Limits	Adding more traffic to Boerne Heights will endanger our children and folks who walk or ride bikes for exercise. Our community has no place for kids to play together so they often end up playing in or near the streets. Please do NOT open the gate between us and Regent Park and add to our congestion and lack of safety.	5	0	29.750431	-98.707535
119	New Road Connection Needed	City Limits	Horrible frontage road! This road is not smooth at all. I understand there is construction going on but the road is absolutely horrible. I should not feel like I just put my infant through a roller coaster everyday just to get home.	0	0	29.758296	-98.708736
120	Accessibility Concern	ETJ	Please allow me to help you create a transportation plan to include and provide transportation for individuals with disabilities. Approx 15% of our population is disabled. And if a person is not disabled...your time is coming. I want everyone to have equal access and support. Please email or call me. I have studied this.	1	0	29.736955	-98.724518
121	Safety Issue	City Limits	Need a light going into/ out of Boerne High school. Or a policeman directing traffic. Too many accidents, almost accidents. Families car totaled here going straight by HS.	1	0	29.798567	-98.714433
122	Safety Issue	City Limits	Tripping Hazard at Johnny's Feed	0	0	29.795589	-98.732623
123	Congestion Issue	City Limits	I spend approx. 30 minutes everyday waiting on this stop sign. There are parents dropping kids at BMSS as well as Geneva and there are several apartments and neighborhoods working to access I-10/Boerne here. Desperately need turn lanes and a light here.	0	0	29.756712	-98.703001
124	New Road Connection Needed	City Limits	There is no link from this busy area in the south to the thoroughfares running east west. There is only ONE access out of this area in the south, Cascade Caverns, unless you drive much further south on windy narrow roads. To relieve in-town congestion, a new access really needs to be discussed that travels north/south along the east side of Boerne.	0	0	29.756782	-98.692975
125	Safety Issue	City Limits	This section of main needs to be widened for a turn lane and passing traffic. It has a lot of emergency vehicle use, large trucks, standard personal vehicles, etc. There are not enough lights on it, resulting in alot of brakes slamming to avoid rear ending folks turning into businesses or industrial park. In addition, there is no pedestrian access, this should be addressed.	0	0	29.815289	-98.748786
126	Intersection Concern	City Limits, ETJ	Takes a very long time, and is quite dangerous trying to edge into the constant traffic on Old San Antonio Rd. (from the neighborhood as well as all streets and businesses.	0	0	29.7643	-98.709626
127	Congestion Issue	City Limits	Major backup here with schools' traffic every day. Old SA Rd. really needs to have a turn lane the entire length of the road for all the streets and businesses. Much too narrow. EVEN stopping traffic just for the trash haulers to do their job. This is a major thorough fare (especially to connect to east Boerne from the south) and should be treated so!	0	0	29.759306	-98.707352



# APPENDIX D

# RIVER ROAD & HERFF ROAD/ESSER ROAD IMPROVEMENTS (LONG-TERM)

As previously mentioned, throughout the course of the Mobility Master Plan, significant needs were expressed by the community for improvements at the intersection of River Road & Herff Road/Esser Road. As a result, further analysis was performed for this intersection to evaluate alternative intersection configurations that have the potential to improve both safety and operations of the intersection in the long-term. As a result, a concept to convert the existing four-leg intersection to a quadrant roadway with T-intersections using City-owned land located northeast of the intersection was developed.

Following analysis and concept development, this new concept shown below was vetted through preliminary coordination with TxDOT San Antonio District and submitted for consideration of grant funding in the Safe Streets for All discretionary grant program in September 2022. The planning, design, and construction of this intersection improvement and new roadway connection is anticipated to be approximately \$21 million. Although this project was unsuccessful at being awarded funding, additional avenues for funding will continue to be explored. Further details and benefits of the project can be found detailed in the grant application that follows within Appendix D.



# SAFE STREETS FOR ALL GRANT

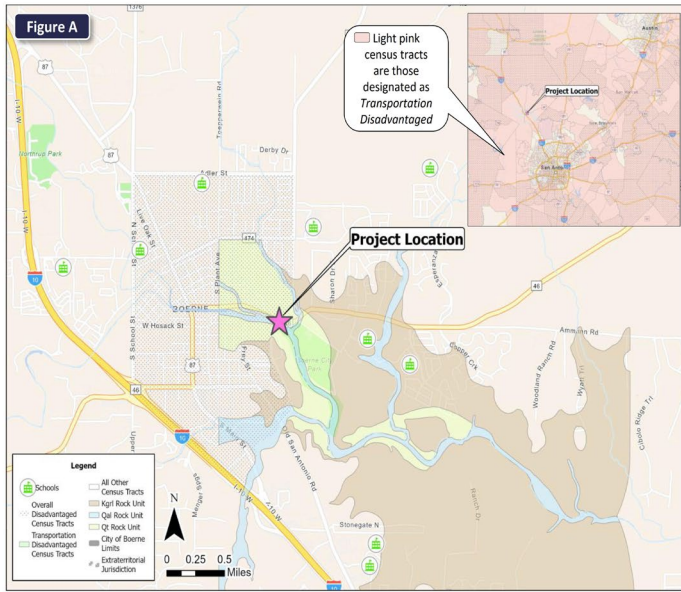
Safe Streets for All (SS4A) Implementation Grant Application  
Herff Road/Esser Road & River Road Intersection Improvements



## NARRATIVE

### OVERVIEW (1 OF 3)

The Herff Road/Esser Road & River Road Intersection Improvement project located within the City of Boerne aims to improve safety by implementing a quadrant roadway intersection that will reduce the number of conflict points and subsequently, reduce the severity of crashes that have the potential to occur at this location. Due to its geographical location, this intersection is vital to local and regional mobility as it is the only intersection connecting the eastern, rural side of Boerne to downtown, schools, and Interstate 10. As shown on **Figure A**, this intersection is the easternmost node providing a north-south connection between State Highway 46 and Interstate 10. With existing rivers, parks, and geological features present, the existing roadway network on the east side of town is limited making this a vital intersection now and for the future of Boerne as development continues to occur. Currently, over 20,000 vehicles per day traverse this intersection and is expected to continue to grow at the historical annual rate of 6% creating a high potential for a fatal or serious injury crash to occur. Because of its location, improvements to this intersection would serve the community at-large as the intersection is located entirely within designated Transportation Disadvantaged Census Tracts and partially within an Overall Disadvantaged Census Tract.



September 2022

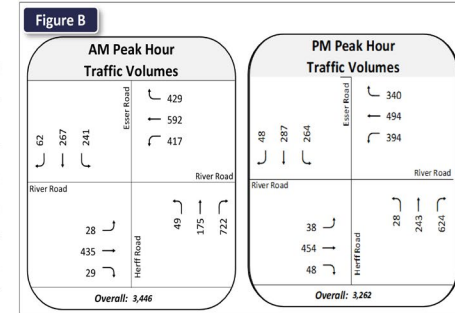
Safe Streets for All (SS4A) Implementation Grant Application  
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## NARRATIVE

### OVERVIEW (2 OF 3)

In existing conditions, the intersection of Herff Road/Esser Road & River Road is a four-legged signalized intersection with the current traffic volumes shown in **Figure B** and current lane assignment and configuration shown in **Figure C**. As depicted, this intersection experiences a high volume of northbound right-turning traffic, eastbound through traffic, and westbound traffic across all movements during 2022 peak hour conditions. These movements which experience the highest concentration of traffic volumes also have the highest potential of meeting at a “crossing” conflict point, creating a significant safety risk. Observations made during intersection peak hours further revealed significant congestion and queuing on all approaches resulting in driver impatience.



September 2022

# SAFE STREETS FOR ALL GRANT

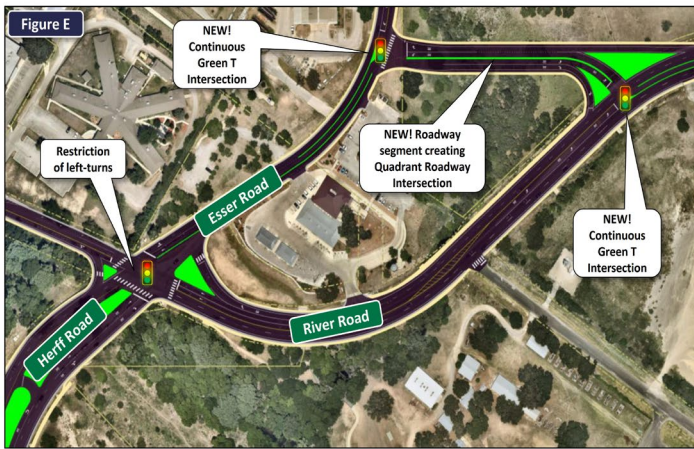
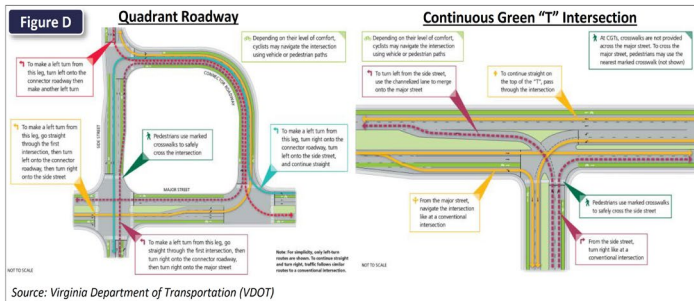
Safe Streets for All (SS4A) Implementation Grant Application  
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## NARRATIVE

### OVERVIEW (3 OF 3)

The proposed project, as shown in **Figure E**, implements a quadrant roadway to create two new three-legged signalized intersections in order to restrict all left-turn movements at the four-legged signalized intersection of Herff Road/Esser Road & River Road. The two newly created three-legged intersections will operate as continuous green “T” intersections which allow the primary through movements to operate continuously, free of traffic control while protecting the left-turn movements with a physical barrier. The flow of traffic through these intersections is illustrated in **Figure D**. By implementing the quadrant roadway and continuous green “T” intersections, the number of conflict points are reduced which eliminates the potential for collisions, especially left-turn and angle collisions.



September 2022

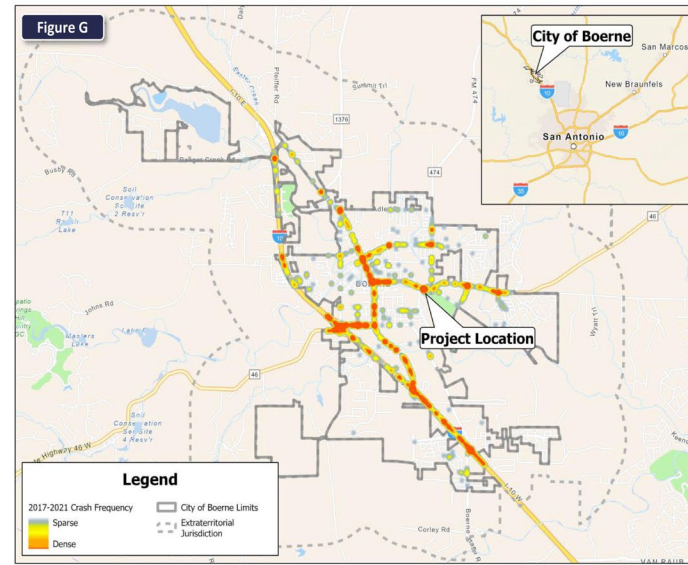
Safe Streets for All (SS4A) Implementation Grant Application  
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## NARRATIVE

### LOCATION

The City of Boerne located in Kendall County, Texas is approximately 30-miles northwest of the San Antonio, Texas. Crash data for the City of Boerne was obtained from 2017 to 2021 using the Texas Department of Transportation’s (TxDOT) Crash Records Information System (C.R.I.S.) and is depicted on the heat map in **Figure G**. The project location is the existing signalized intersection of Herff Road/Esser Road & River Road, which has experienced the second highest number of crashes at an intersection within the City of Boerne, a total of 117 crashes over the five-year period. Additionally, the east-west corridor of this intersection, River Road, is one of the City’s highest crash frequency corridors. This intersection serves as a key point of connectivity for the City, providing both local and regional connectivity. As shown in the *Placar* data (**Figure F**) obtained by the City of Boerne in February 2022, visits to this intersection originate locally and regionally from all sides of the City.



September 2022

# SAFE STREETS FOR ALL GRANT

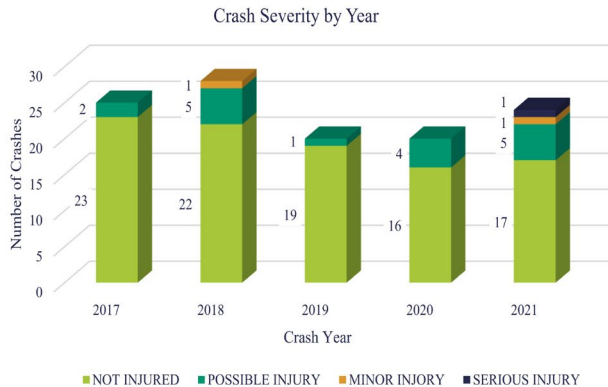
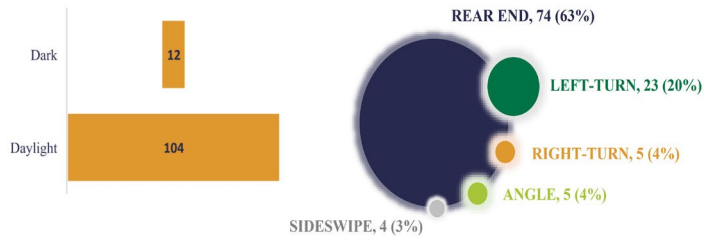
Safe Streets for All (SS4A) Implementation Grant Application  
Herff Road/Esser Road & River Road Intersection Improvements



## NARRATIVE

### SELECTION CRITERION #1: SAFETY IMPACT (1 OF 2)

Over the five-year period from 2017 to 2021, this intersection experienced a total of 117 crashes. Of those crashes, none resulted in fatalities, one (1) resulted in a serious injuries, two (2) resulted in a minor injuries, 17 resulted in possible injuries, and 97 resulted in no injuries. Crashes of significance include 1 pedestrian, 1 bicycle, and 1 school bus crash that occurred during this time period as these crashes involve vulnerable road users with a high potential of resulting in serious injury. Rear end crashes were the most common (63%) while left-turn crashes were the second most common (20%). The occurrence of rear end crashes often indicate congestion which aligns with public input, observational evaluations, and operational analyses of this intersection. Similarly, the angle and left-turn crashes experienced correspond with the high volume of traffic traveling through this intersection.



Safe Streets for All (SS4A) Implementation Grant Application  
Herff Road/Esser Road & River Road Intersection Improvements



## NARRATIVE

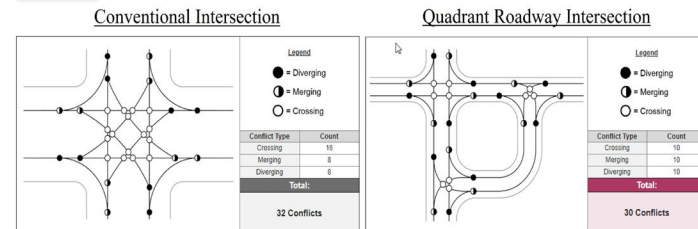
### SELECTION CRITERION #1: SAFETY IMPACT (2 OF 2)

The proposed improvements intend to reduce the occurrence of left-turn, angle, and right-turn crashes by implementing a quadrant roadway intersection which will result in a reduction of the number of conflict points as shown in **Figure H**, subsequently limiting the potential for crashes. In addition to a reduction in total conflict points, the number of crossing conflict points reduces from 16 to 10 which is significant as crossing conflicts (i.e. left-turn crashes, angle crashes) frequently result in a higher crash severity. According to FHWA's [A Safe System-Based Framework and Analytical Methodology for Assessing Intersections](#), benefits of a quadrant roadway intersection include:

- ✓ Removal of all left turn movements from main intersection, reducing crossing conflicts.
- ✓ Simplification of crossing for nonmotorized road users, as there are no left turn vehicles intersecting crosswalks at the main intersection.
- ✓ Increase in capacity and improved operational efficiency due to removal of all direct left turns from main intersection.

Furthermore, according to FHWA's [Safety Evaluation of Continuous Green T Intersections](#), the implementation of the continuous green T intersections proposed for the two new intersections that will be created as part of this project is considered favorable over traditional intersections and is estimated to have a Crash Modification Factor of 0.96.

Figure H



For pedestrians and bicyclists, the reduction in conflict points limits and the restriction of left-turn movements at the primary intersection reduces the potential for a collision to occur. Additionally, by restricting left-turns at the primary intersection, more time can be given to pedestrians and bicycle users utilizing the crosswalks by introducing a leading pedestrian interval. This will give those vulnerable road users dedicated time to begin crossing without any vehicular conflicts. According to FHWA, implementing a [leading pedestrian interval](#) reduces pedestrian-vehicle crashes at intersections by 13%.

# SAFE STREETS FOR ALL GRANT

Safe Streets for All (SS4A) Implementation Grant Application  
Herff Road/Esser Road & River Road Intersection Improvements

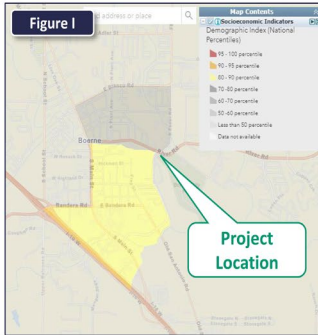


Safe Streets for All (SS4A) Implementation Grant Application  
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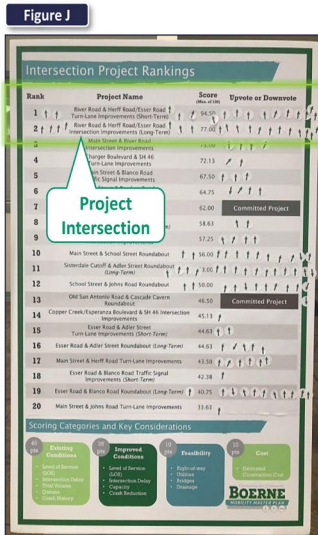


## NARRATIVE

### SELECTION CRITERION #2: EQUITY, ENGAGEMENT, AND COLLABORATION



As indicated on *Page 1*, the proposed project is located partially within an Overall Disadvantage Census Tract and entirely within a designated Transportation Disadvantaged Census Tract. Utilizing the EPA's Environmental Justice Screening Tool, the proposed project is in a location that would directly serve those in the 70<sup>th</sup> to 90<sup>th</sup> percentile of the demographic index, a combined indicator of low-income and minority, as shown in **Figure I**.



As part of development of the City's Mobility Master Plan and Safety Action Plan, several public engagement opportunities took place that include both in-person events and online platforms consisting of mapping and prioritization activities. Additionally, an advisory committee was formed to support informed decision making as part of this process and was made up of representatives from City Council, Planning and Zoning Commission, Boerne Independent School District Board, Texas Parks and Wildlife, and the Cibola Nature Center. Overwhelming, between public comments, advisory committee feedback, and intersection ranking activities (**Figure J** and **Figure K**), this intersection received the most community support amongst all proposed intersection projects.



## NARRATIVE

### SELECTION CRITERION #3: EFFECTIVE PRACTICES AND STRATEGIES

#### SAFE SYSTEM APPROACH

The proposed project aligns with the safe system approach by *mitigating for human error*, *accounting for human vulnerability*, and *implementing proactive solutions*. Fortunately, the severity of crashes that have occurred at the intersection of Herff Road/Esser Road & River Road over the previous five years is low, however, consistent with the safe system approach, the potential for risk at this location remains high due to traffic volumes, conflict points, and driver impatience indicated through public engagement necessitating this *proactive solution*.

Implementation of the proposed quadrant roadway intersection allows the restriction of left-turn movements at the existing four-legged signalized intersection while creating two new continuous green T intersections, which *mitigates for human error* by reducing the number of conflict points and allowing the heavier traffic movements to operate free of traffic control with physical separation from turning traffic.

Furthermore, the two newly created signalized intersections and existing modified signalized intersection will *account for human vulnerability* by incorporating pedestrian signals with leading pedestrian intervals which will allow pedestrians the opportunity to enter the crosswalk prior to vehicles receiving a green indication limiting the potential for conflict.

#### INNOVATIVE PRACTICES AND STRATEGIES

The proposed project aligns with the innovative practices and strategies value by introducing a quadrant roadway intersection and continuous green T intersections, both considered to be innovative intersection solutions. To ensure the project will serve the intersection and future growth beyond a safety capacity, a traffic operational analysis was performed using *Synchro II* software and Highway Capacity Manual (HCM) methodologies to evaluate peak hour operations during Existing 2022, Build 2028, and Horizon Year 2038 Conditions. Existing 2022 Conditions reflect the current traffic volumes and intersection configuration without the proposed improvements while the Build 2028 and Horizon 2038 Conditions reflect implementation of the proposed improvements with traffic volumes grown 4% annually. Based on this analysis (**Figure L**), the proposed project is expected to perform well through the Horizon 2038 Conditions and even better than the existing intersection performance.

**Figure L**

Intersection	Existing 2022 Conditions		Build 2028 Conditions				Horizon 2038 Conditions					
	AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak	
	LOS	Delay <sup>1</sup>	LOS	Delay <sup>1</sup>	LOS	Delay <sup>1</sup>	LOS	Delay <sup>1</sup>	LOS	Delay <sup>1</sup>	LOS	Delay <sup>1</sup>
1	F	187.7	F	107.0	B	12.8	B	16.4	C	33.3	D	47.9
2	DOES NOT EXIST IN EXISTING CONDITIONS		A	9.2	B	10.8	D	46.0	B	14.9		
3	DOES NOT EXIST IN EXISTING CONDITIONS		C	20.4	C	21.0	E	56.1	E	75.5		

<sup>1</sup> Delay is in seconds

# SAFE STREETS FOR ALL GRANT

Safe Streets for All (SS4A) Implementation Grant Application  
Herff Road/Esser Road & River Road Intersection Improvements



## NARRATIVE

### SELECTION CRITERION #4: CLIMATE CHANGE AND SUSTAINABILITY, AND ECONOMIC COMPETITIVENESS

As a result of improving traffic operations and reducing delay with the proposed project, gas emissions are significantly reduced. Utilizing *Synchro 11* software, emissions of carbon monoxide (CO), nitrogen oxide (NO<sub>2</sub>), and volatile oxygen compounds (VOC) were computed based on fuel consumption, delay, and number of stops using existing traffic volumes. A before and after comparison of emissions within the study area is shown in **Figure M**, revealing the significant improvement in emissions indicating that the proposed project will be sustainable in the long-term based on safety, traffic operations, and climate evaluations.

Figure M

### EMISSIONS REDUCTIONS

	CO	NO <sub>2</sub>	VOC
AM	-8,925 gal/hour	-1,735 gal/hour	-2,070 gal/hour
PM	-1,793 gal/hour	-347 gal/hour	-413 gal/hour

Intersection	Gas	Gas Emissions (gallons/hour)			
		Before (2022)		After (2022)	
		AM	PM	AM	PM
4-Leg Intersection	CO	18,996	11,908	4,948	5,213
	NO <sub>2</sub>	3,696	2,317	963	1,014
	VOC	4,403	2,760	1,146	1,209
3-Leg Continuous Green "T" Intersection	CO	INTERSECTIONS DO NOT EXIST IN BEFORE SCENARIO		3,099	2,820
	NO <sub>2</sub>			603	550
	VOC			718	655
3-Leg Continuous Green "T" Intersection	CO	INTERSECTIONS DO NOT EXIST IN BEFORE SCENARIO		2,024	2,082
	NO <sub>2</sub>			395	406
	VOC			469	483
Cumulative Study Area	CO	18,996	11,908	10,071	10,115
	NO <sub>2</sub>	3,696	2,317	1,961	1,970
	VOC	4,403	2,760	2,333	2,347

Additionally, by improving mobility at this intersection for vehicle, bicycle, and pedestrian users, the likelihood for economic and business activity to expand east increases in the rural, undeveloped areas of Boerne due to improved access and connectivity.

Safe Streets for All (SS4A) Implementation Grant Application  
Herff Road/Esser Road & River Road Intersection Improvements



## NARRATIVE

### PROJECT READINESS

Indicators of project readiness for the proposed project include:

- ✓ No right-of-way acquisition required, all impacted parcels are owned by the City of Boerne
- ✓ Engineering traffic operational analysis for proposed improvements performed for Existing 2022, Build 2028, and Horizon 2038
- ✓ Public engagement efforts performed
- ✓ Coordination ongoing with stakeholders such as representatives on the Kendall County Boerne Fair Oaks Transportation Committee and TxDOT
- ✓ Preliminary project schedule established

The proposed project is anticipated to include coordination with several agencies and stakeholders, considerable drainage accommodations, utility relocations, environmental documentation in compliance with NEPA, and programming into the State Transportation Improvement Program (STIP). Based on this information, a preliminary project schedule was developed as shown in **Figure N** and assumes execution of a grant agreement by the third quarter of 2023, which allows for planning, design, environmental, and construction activities to be completed within the allotted five-year time period.

Figure N

Herff Road/Esser Road & River Road Intersection Improvements	Total Months	2023					2024					2025					2026					2027					2028								
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
<b>Planning</b>	15																																		
Execution of Grant Agreement	1																																		
Procure Engineering and Environmental Services	2																																		
Preliminary Engineering and Design	4																																		
STIP Programming	9																																		
<b>Design</b>	16																																		
Data Collection	2																																		
Prepare 30% Schematic and Estimates	3																																		
Local Government Review of 30% Plans	1																																		
Prepare 60% Design Plans, Specifications, and Estimates	6																																		
Local Government Review of 60% Plans	1																																		
Prepare 90% Design Plans, Specifications, and Estimates	3																																		
Local Government Review of 90% Plans	1																																		
Approval of 100% Plans, Specifications, and Estimates	1																																		
<b>Environmental</b>	12																																		
Perform Environmental Surveys and Assessments	4																																		
Prepare Environmental Documentation	7																																		
Local Government Review of Environmental Documentation	1																																		
Approval of Environmental Documentation	1																																		
<b>Construction</b>	26																																		
Project Letting and Award	1																																		
Notice To Proceed	1																																		
Construction	21																																		
Project Inspection	2																																		
Project Complete	1																																		
<b>Total Project Development Time</b>	<b>63</b>																																		