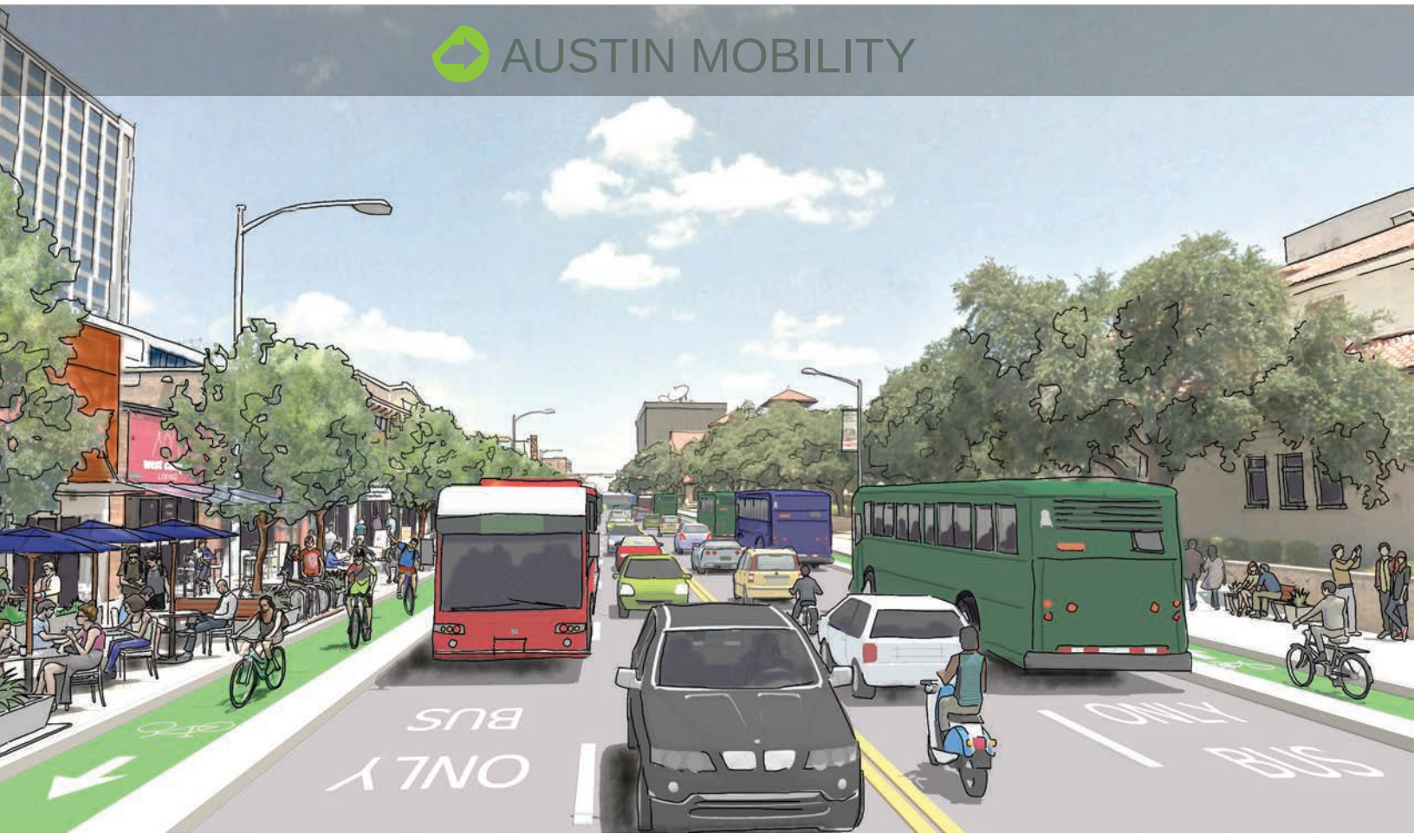
GUADALUPE STREET CORRIDOR AND WEST CAMPUS DEVELOPMENT REPORT

NOVEMBER 2017

AUSTIN MOBILITY



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EXECUTIVE SUMMARY

PROJECT PURPOSE AND GOALS

The Austin City Manager was directed by City Council in August 2013 to update the 2004 design and engineering plans for streetscape improvements to Guadalupe Street via Resolution No. 20130829-075; the effort received funding through the 2012 Bond Program. The resolution describes Guadalupe Street as "an important multi-modal corridor, serving students as well as full-time Austin residents traveling on foot, by bicycle, by car, by fixed-route bus service, and soon by bus rapid transit".

Based on direction from City Council, adopted policies, plans and zoning guidelines, and feedback from stakeholders, the following are key goals and considerations for the corridor:

- Increase non-automobile trips and improve access to transit (Imagine Austin)
- Prioritize modes as follows: pedestrians, transit, bicycle and cars (University Neighborhood Overlay (UNO) Design Guidelines, Ordinance No. 20040826-56)
- Create a safe environment for pedestrians and bicyclists along and crossing the corridor (public engagement, Complete Streets, and Vision Zero)
- Maintain a viable redevelopment context along the corridor for additional retail, service and residential uses to support the growing West Campus neighborhood (Central Austin Combined Neighborhood Plan (CACNP) and UNO)
- Improve/add streetscape improvements behind the curb to create a safer and more pleasant place for pedestrians and transit users (Council Resolution No. 20130829-075)

The Guadalupe Street corridor is one of four major corridors abutting the University of Texas at Austin (UT Austin) campus. It also is a gateway into downtown, and supports a vibrant business district. With the competing needs of the different modes of transportation – automobiles, buses, bicycles and pedestrians, it is no surprise that the Guadalupe Street corridor is one of the most congested corridors in the City and does not accommodate any mode of transportation effectively.

PROJECT PROCESS

This corridor analysis initiative is a result of the City of Austin's 2012 Bond Program. The project process began in 2014 when data was collected to assess current conditions along the corridor. The City of Austin understands that for the Guadalupe Street corridor to be successful, the project outcomes should fit the needs and desires of stakeholders who live, work, drive, play, and study along the corridor. Consequently, a robust public engagement approach must invite and welcome users to share their concerns and ideas for improving the corridor. Committed to principles of inclusion, transparency, and openness to learning, the City developed the Guadalupe Street

Corridor and West Campus Development Report to inform and educate the community about the project and offer opportunities to help shape a vision and identify transportation solutions. The City and the consultant team undertook targeted outreach efforts for the project's public meetings. An online survey was conducted and the results of this survey provided useful input into the project process.

The City of Austin is funding this corridor plan and is working in partnership with Capital Metropolitan Transportation Authority (CapMetro) and UT Austin. In addition, the Center for Transportation Research (CTR) at UT Austin provided transportation modeling support for the initiative. One of the key elements of this study is a Health Impact Assessment (HIA), which has been an important input into the development of the preferred scenario and reinforces the ultimate recommendations of this effort. The goal of the HIA is to assess the various health-related impacts of different infrastructure solutions. With respect to transportation, this means building a transportation system that emphasizes active transportation modes such as walking, bicycling, or using public transportation so that physical activity can be easily incorporated into regular daily routines.

Four scenarios were generated for analysis and testing to understand which scenario best implemented the key goals and considerations of the project. Based on the results of the analysis and testing, a preferred scenario was created and improvements to the corridor were recommended. Ultimately, the recommended improvements and policy recommendations expressed within this document are intended to be refined as the City undertakes the schematic and final design process that is needed to implement the recommendations.

PLANS, POLICIES, AND ZONING REGULATIONS

Within the study area, several plans and regulations have been adopted by the City in the past few years. These studies are critical to the history and future layout of the corridor and have informed the goal and recommendations of this report. The following plans, policies and regulations define the history, context of the corridor and future layout with regards to several aspects of the built environment, including neighborhood character, university growth, development regulations, bicycle accommodations, etc.

- Great Streets Master Plan, 2001
- Guadalupe Street: Transit Corridor Improvement Project, 2003
- Central Austin Combined Neighborhood Plan, 2004
- University Neighborhood Overlay (UNO) Zoning, 2004
- University of Texas at Austin Campus Master Plan, 2012
- Imagine Austin Comprehensive Plan, 2012
- Complete Streets Policy, 2014
- City of Austin Bicycle Master Plan, 2014
- Vision Zero, 2016

EXISTING CORRIDOR CONDITIONS

This corridor plan is focused on the section of Guadalupe Street just north of Downtown from MLK Jr. Boulevard to West 29th Street. Any improvements to the Guadalupe Street corridor must also consider adjacent roadways due to impacts on the overall network. To understand these impacts, the project influence area includes the West Campus streets bounded by 29th Street to the north, MLK Blvd to the south, Rio Grande Street to the west and Guadalupe Street to the east. In addition, the 24th Street corridor from Lamar Blvd to Guadalupe Street is also included as the primary east/west corridor within the project area. The study area streets are owned and maintained by the City of Austin.

This section of Guadalupe Street is approximately one mile in length and is mostly characterized by the UT Austin campus fronting the east side of the corridor, and retail and restaurant uses that mainly cater to University students fronting the west side of the corridor. The West Campus neighborhood has seen tremendous growth in residential density over the past few years due to the University Neighborhood Overlay (UNO) Zoning District. This area will continue to see additional residential growth given its strategic location and neighborhood vibrancy.

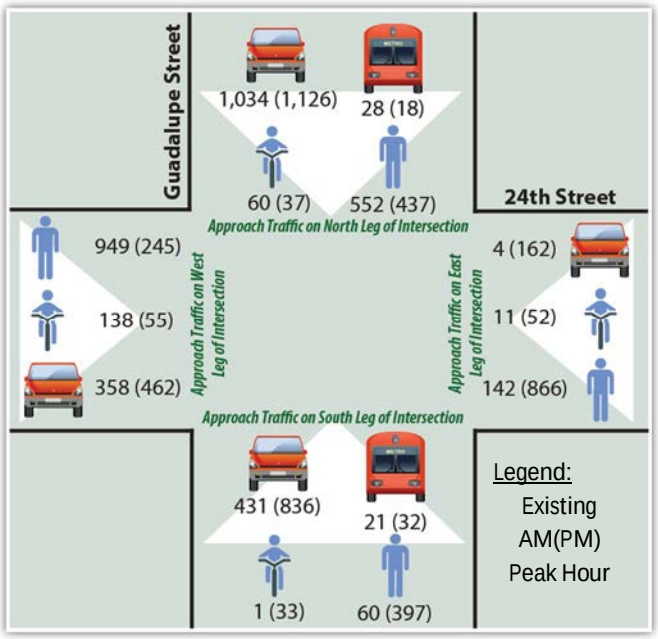
The existing street has varying roadway and right-of-way (ROW) widths along the corridor. Some of the corridor has dedicated bicycle facilities and wide sidewalks, whereas other sections of the corridor have limited ROW, roadway widths, and pedestrian accommodations. Some sections of the corridor also have improved transit stop accommodations.

EXISTING GUADALUPE STREET CORRIDOR

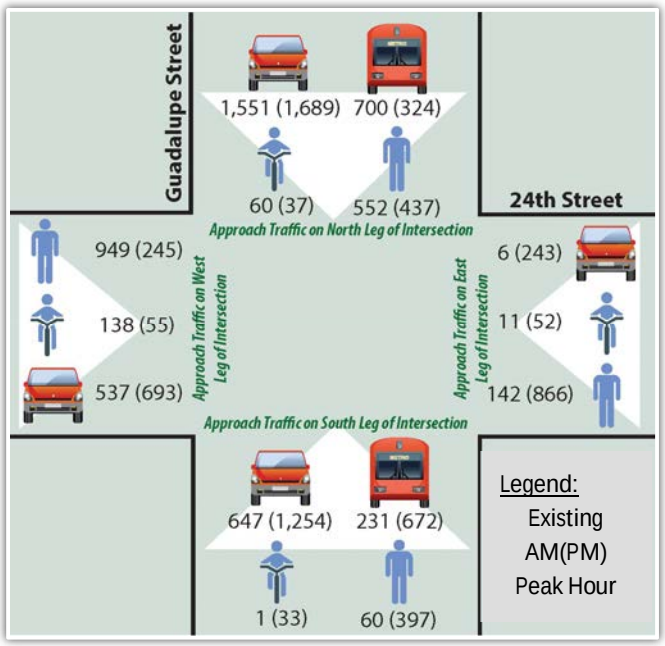
In addition to the automobile traffic, this corridor is one of the highest volume pedestrian, bicycle, and transit corridors within the City of Austin. As seen in the following graphics, traffic volumes by mode are shown on the left and the people equivalent volumes are shown on the right at the intersection of Guadalupe Street and 24th Street during the PM rush hour. Another comparison to understand the relationship between automobiles and pedestrians along this corridor is that there are approximately 2,000 vehicles traveling north/south along Guadalupe Street with approximately 7,500 pedestrians crossing Guadalupe Street east/west during the PM rush hour. This mix of different modes of travel creates a complex design challenge to accommodate all modes efficiently.

From a traffic standpoint, the Guadalupe Street corridor within the study area has been congested for much of the life of the corridor due to the major regional connectivity the corridor provides, the proximity to Downtown, and the proximity of the University of Texas campus along the corridor.

Traffic Volumes by Mode
(Guadalupe Street at 24th Street)



People Equivalent Volumes by Mode
(Guadalupe Street at 24th Street)

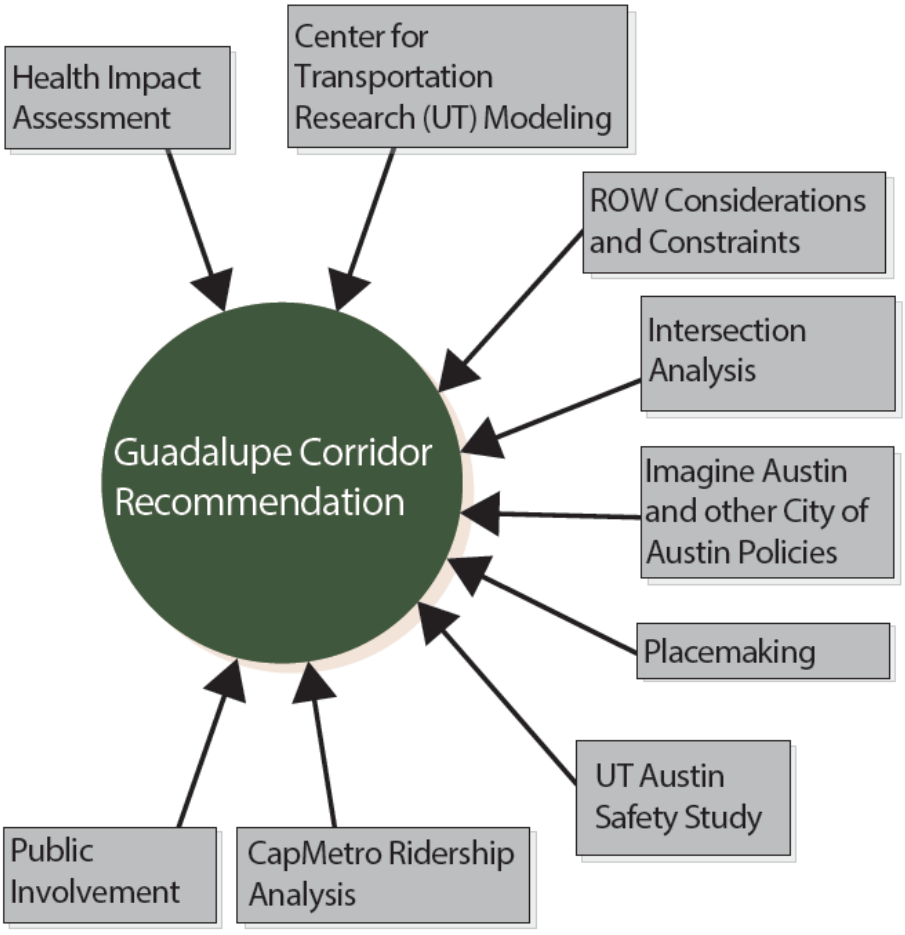


Vehicle occupancy = 1.5 people/vehicle (from National Household Survey, August 2017)
Bus Occupancy from CapMetro August 2014 Data

A peak-hour traffic analysis was performed using the existing traffic patterns within the corridor. The following table shows the existing condition travel time runs for the corridor, which demonstrates the current congestion during the PM rush hour. This congestion affects CapMetro's ability to maintain their bus schedules through the corridor.

Run Number	Southbound Travel Time Runs		Northbound Travel Time Runs	
	AM	PM	AM	PM
Travel Time Runs in Minutes/Seconds (#m #s)				
Run 1	3 m 1 s	4 m 22 s	2 m 37 s	2 m 42 s
Run 2	4 m 20 s	3 m 27 s	3 m 34 s	5 m 59 s
Run 3	4 m 49 s	4 m 52 s	3 m 21 s	9 m 52 s
Run 4	4 m 43 s	4 m 12 s	3 m 51 s	9 m 23 s
Run 5	3 m 46 s	-	2 m 58 s	7 m 28 s
Average Time	**4 m 8 s**	**4 m 13 s**	**3 m 16 s**	**7 m 5 s**

The many considerations shown in the graphic below informed the Guadalupe Street corridor preferred scenario and recommendations. More information on each consideration can be found throughout the report.



FUTURE CORRIDOR CHARACTERISTICS AND RECOMMENDATIONS

The traffic demand for the corridor exceeds its capacity, meaning there is latent demand for more roadway capacity in the area. This is indicative of the fact that there is significant regional north-south traffic congestion and the severe capacity limitations in this area of the City. With the current constraint of the University of Texas campus on the east side of the corridor including the presence of a University-controlled retaining wall and existing mature trees, expansion of the existing right of way is constrained. With this constraint, the automobile capacity is also constrained. Taking that constraint into account, the traffic modeling effort demonstrated that increased future traffic volumes on the corridor was not feasible due to regional gridlock, where "vehicles cannot move through the network due to downstream congestion propagation".

In addition to the automobile traffic, this corridor is one of the highest pedestrian, bicycle, and transit corridors within the City of Austin. The corridor experiences a high volume of pedestrian and bicycle traffic due to the University of Texas located on the eastern side of the Guadalupe Street corridor and a significant amount of off-campus housing that caters to students and faculty located on the western side of the corridor, which requires the students and faculty to cross Guadalupe Street to enter campus.

This mix of different modes of travel creates a complex design challenge to accommodate all modes efficiently. If all modes can't be effectively improved (e.g. the automobile capacity is constrained), it is beneficial in these situations to prioritize the different modes of travel to better utilize the corridor as opposed to inefficiently serving all modes of travel.

Given the above, the only opportunity to significantly increase any mobility capacity to accommodate future growth along the corridor is to increase capacity for pedestrians, bikes and transit, while attempting to manage car traffic at current levels. In fact, even scenarios that favor automobile traffic along Guadalupe (by moving transit and bikes off the corridor) do not show any improvement in automobile level of service given the City's overall network capacity limitations. Conversely, the benefits of investing in bike, pedestrian, and transit improvements along Guadalupe can be significant. These modes can accommodate three times as many people moving though the corridor compared to cars alone.

The preferred scenario includes converting the outer lane in each direction along the Guadalupe Street corridor from automobile to transit only lanes. Other modes of travel such as transit, bike, and pedestrian travel can be enhanced along the corridor to provide future growth opportunities. This allows for additional growth in the corridor by focusing on "people" throughput rather than automobile throughput. As the corridor becomes more and more congested, there will have to be a mode shift to higher density modes like transit along the corridor, which supports the Imagine Austin goal of increased non-automobile trips and therefore the prioritized modes of transportation for this corridor. The CTR modeling effort demonstrated that the corridor cannot build its way out of the congestion caused by future latent demand, and a purely level of service analysis cannot be the ultimate decision maker on the preferred scenario for Guadalupe Street.

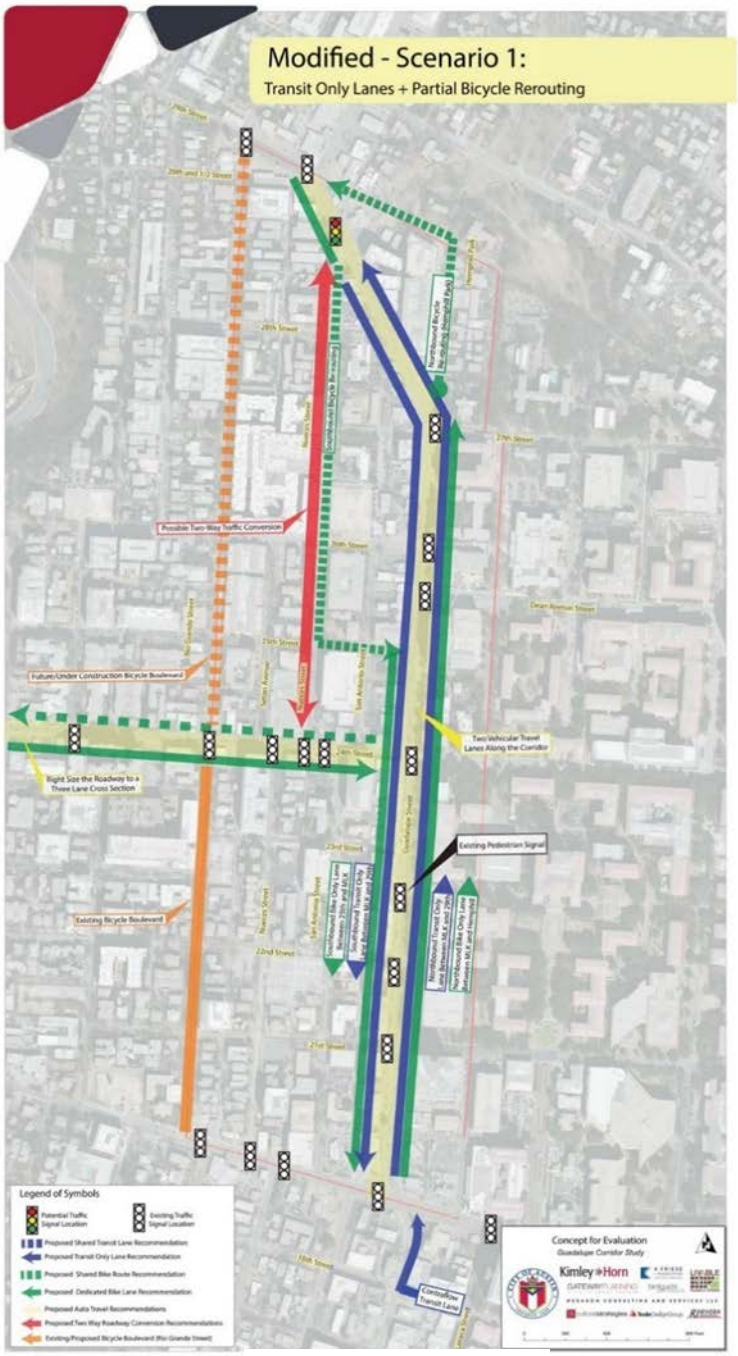
This lane conversion will decrease automobile throughput capacity but increase person throughput of the Guadalupe Street corridor. To lessen the impact of this reallocation of automobiles, this scenario proposes converting Nueces Street north of 24th Street to two-way traffic operations and diverting all local traffic access in West Campus from Guadalupe Street to Nueces Street. This scenario shows a focus on transit along the Guadalupe

Street corridor by providing more capacity and improved access for the transit buses in the form of transit only lanes. Based on an analysis from CapMetro, transit only lanes through this corridor "will save CapMetro buses up to 3 minutes in travel time" and "time savings alone will attract 218,000 new riders annually."

PROPOSED GUADALUPE STREET CORRIDOR

There is limited ROW on the north end of the Guadalupe Street corridor (north of 25th Street). Continuous bike lanes were not able to fit through this section of Guadalupe Street. To better accommodate bicycle traffic within the study area, a parallel route was proposed along Nueces Street for southbound bicycle traffic and Hemphill Park for northbound bicycle traffic. This parallel bicycle route will provide a safer path for bicyclists on lower volume roads with additional space to accommodate them.

The on-street parking along Guadalupe Street was removed in the preferred scenario. While the on-street parking on Guadalupe Street is something that many of the business owners are opposed to losing, CapMetro is concerned about the friction between parallel parking and transit operations; CapMetro has communicated that automobiles often park too close to the transit lanes, which can result in lost mirrors or buses having to change lanes to get around the parked automobile; on the Guadalupe Street corridor, CapMetro has reported a high number of bus/parked car incidents. When a transit only lane is implemented, the on-street adjacent parking is removed, as seen on Lavaca Street. This space was reallocated to widen the undersized and insufficient sidewalk on the UT side as well as to provide for buffered bicycle lanes. Improved wayfinding signage to nearby off-street parking areas is recommended to help guide visitors.



PREFERRED SCENARIO

This scenario also includes the reconfiguration of 24th Street from Lamar Blvd to Guadalupe Street from a four-lane undivided roadway to a three-lane roadway with a two-way left-turn lane and an eastbound bike lane, with westbound bikes sharing the travel lane. This will provide additional bicycle accommodations as recommended by the City of Austin Bicycle Master Plan and wider travel lanes for automobiles and CapMetro buses along 24th Street. In addition, the turning movement volumes showed that there is a significant amount of turning traffic along the 24th Street corridor. The proposed three-lane cross section for this corridor would provide a dedicated left turn lane along the corridor, which would provide safer intersection and midblock operations.

BENEFITS AND RESULTS

The preferred scenario implements improvements that meet many of the desired goals of Guadalupe Street. Since all modes cannot be effectively improved, choices must be made. The preferred scenario decreases the number of automobile travel lanes, which will not improve auto travel, but increases people throughput by improving the transit capacity and sidewalk width. In addition, it is expected to improve pedestrian crossing safety due to decreased speeds of conflicting traffic and pedestrians. Likewise, the transit only lane will provide a buffer between the automobile travel lane and the dedicated bicycle lane. The dedicated transit lanes will provide for a meaningful improvement in the existing transit operations along the Guadalupe Street corridor.

Based on the Health Impact Assessment, the health benefits of improving the quality of the walking and biking environment include increased levels of physical activity due to walking and biking for transportation or leisure purposes. The increased ADA compliance within the study area would eliminate barriers for all users. The streetscape amenities, such as shade trees and street furniture, will also help to improve pedestrian comfort while using the corridor within the study area.

The social cohesion benefits include higher levels of casual interaction, support, collective monitoring ("eyes on the street"), social trust, sense of community, and shared cultural identity. Above all, such improvements can also reduce the frequency and severity of traffic crashes, especially injury to pedestrians and bicyclists.

IMPROVEMENT IMPLEMENTATION COSTS

The overall recommended improvement project will require several steps forward to be implemented. The implementation of the Guadalupe Street Corridor and West Campus Development Report recommendations within the study area is estimated to cost $33.7 million. The following table provides a summary of the opinion of probable construction cost for the corridor, prior to any design.

Guadalupe Street Corridor Development - Opinion of Probable Construction Cost

By Segment	Cost
SEGMENT 1: Lavaca Street from 16th St to 18th St; Guadalupe St from 18th St to 20th St	$ 1,930,000
SEGMENT 2: Guadalupe St from 20th St to 25th St	$ 3,820,000
SEGMENT 3: Nueces St from 25th St to 27th St; Guadalupe St from 25th St to 27th St	$ 5,246,000
SEGMENT 4: Nueces St from 27th St to Guadalupe St; Fruth St from Guadalupe St to 29th St; Guadalupe St from 27th St to 29th St	$ 3,546,000
SEGMENT 5: 24th St from Nueces St to Lamar Blvd	$ 3,557,000
Construction Cost Sub Total	$ 18,100,000
Inflation Contingency (10%)	$ 1,810,000
Franchise Utility Relocates (5%)	$ 905,000
Engineering, Surveying and Testing (20%)	$ 3,620,000
Mobilization (6%)	$ 1,086,000
ROW/Easement Acquisition (20%)	$ 3,620,000
ROW Prep (5%)	$ 905,000
Contingency (20%)	$ 3,620,000
Conceptual Project Cost Total	$ 33,700,000

FUTURE POLICY STRATEGIES

The Guadalupe Street corridor will continue to evolve over the coming decades. That evolution and reinvention can bring about great change in terms of place making and implement the ultimate goal for the corridor. Traffic congestion will remain; however, more people can move through the corridor comfortably while the corridor supports a more economically sustainable pattern of mixed-use development. The explosion of development in West Campus has increased the number of people who live within walking distance of campus and the commercial strip, thus increasing the percentage of trips taken on foot or by bike. As the sections of the corridor continue to evolve, especially south of 21st Street and north of Dean Keaton Street, away from auto-oriented uses to walkable urban forms, the UNO zoning guides the interaction between development and the streets.

It is recommended to periodically reevaluate the zoning code over time as West Campus continues to transition to one of the preeminent urban neighborhoods in Texas. As the neighborhood is built out and transitions, it may be appropriate to address concerns or future needs in the decades to come. Particular attention should be given to the application of the zoning code rewrite process currently underway. The market has already begun to transition away from an auto-oriented land uses in the corridor but more may be done to help mitigate the impact of the remaining mid-block curb cuts and drive-through uses.

CHAPTER 1: PROJECT INTRODUCTION

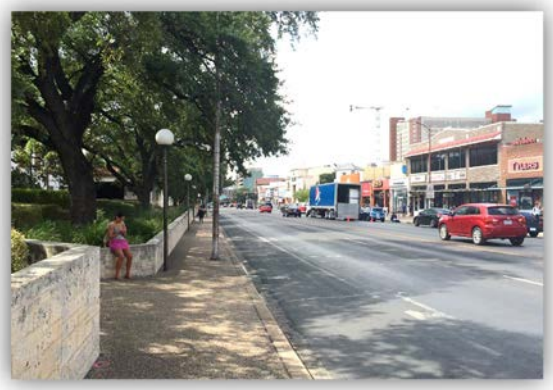
PROJECT PURPOSE AND GOALS

The Guadalupe Street corridor is one of four major corridors abutting the University of Texas at Austin (UT Austin) campus. It also is a gateway into downtown, and supports a vibrant business district. Because of its popularity, the Guadalupe Street corridor is one of the most heavily traveled corridors in the city for all modes of transportation - automobiles, buses, bicycles, and pedestrians. With all these competing needs, it is no surprise that the Guadalupe Street corridor is congested and does not accommodate any mode of transportation effectively.

The Austin City Manager was directed in August 2013 to update the 2004 design and engineering plans for streetscape improvements to Guadalupe Street via Resolution No. 20130829-075; the effort received funding through the 2012 Bond Program. The resolution describes Guadalupe Street as "an important multi-modal corridor, serving students as well as full-time Austin residents traveling on foot, by bicycle, by car, by fixed-route bus service, and soon by bus rapid transit".

Based on direction from City Council, adopted policies, plans and zoning guidelines, and feedback from stakeholders, the following are key goals and considerations for the corridor:

- Increase non-automobile trips and improve access to transit (Imagine Austin)
- Prioritize modes as follows: pedestrians, transit, bicycle and cars (University Neighborhood Overlay (UNO) Design Guidelines, Ordinance No. 20040826-56)
- Create a safe environment for pedestrians and bicyclists along and crossing the corridor (public engagement, Complete Streets, and Vision Zero)
- Maintain a viable redevelopment context along the corridor for additional retail, service and residential uses to support the growing West Campus neighborhood (Central Austin Combined Neighborhood Plan (CACNP) and UNO)
- Improve/add streetscape improvements behind the curb to create a safer and more pleasant place for pedestrians and transit users (Council Resolution No. 20130829-075)



PROJECT AREA

This corridor plan is focused on the section of Guadalupe Street just north of Downtown from MLK Jr. Boulevard to West 29th Street. Any improvements to the Guadalupe Street corridor must also consider adjacent roadways due to impacts on the overall network. To understand these impacts, the project influence area includes the West Campus streets bounded by 29th Street to the north, MLK Blvd to the south, Rio Grande St to the west and Guadalupe St to the east. In addition, the 24th Street corridor from Lamar Blvd to Guadalupe Street is also included. This report provides recommendations along these other corridors in addition to the primary improvement recommendations to Guadalupe Street.

The study area streets are owned and maintained by the City of Austin. This section of Guadalupe Street is approximately one mile in length and is mostly characterized by the University of Texas at Austin campus fronting the east side of the corridor, and retail and restaurant uses that mainly cater to University students fronting the west side of the corridor. The West Campus neighborhood has seen tremendous growth in residential uses over the past few years due to the University Neighborhood Overlay Zoning District. This area will continue to see additional residential growth given its strategic location and neighborhood vibrancy.

The median age of the study area census tracts is lower (ranging from 19.6 to 32.3) than that of the entire city (34.2 based on 2015 census) given the overwhelming supply of housing serving the University students. In addition, commuting characteristics (source: American Community Survey (2015), US Census Bureau) of the study area residents show some interesting commuter trends:

- 22% commute by car less than 10 minutes,
- 49% commute by car between 10 and 20 minutes,
- 28% commute regularly by walking,
- 9% commute regularly by bicycling, and
- 4% commute regularly by transit.

Guadalupe Street is a major north-south connector providing access to the University and to Downtown. A dozen cross streets intersect the one-mile long corridor, some at odd angles. Of these dozen intersections, nine are signalized. The roadway configuration along this section varies, but it generally includes four travel lanes without a median or turn lanes. A buffered bike lane and on-street parking spaces are also provided along some portions of the corridor.

BACKGROUND

This initiative is a result of the City of Austin's 2012 Bond Development Process. The City of Austin's 2012 Bond Election included Proposition 12 that allowed the City to address urban mobility issues by providing funding for designing, constructing, and improving streets, sidewalks, bridges, and bikeways.

The corridor plan is intended to meet one of the key principles established by the Imagine Austin Comprehensive Plan – *investing in a compact and connected Austin*.

Guadalupe Street faces some unique challenges unlike other corridors in the City:

- The corridor sees a high volume of pedestrians because of the location of the University of Texas at Austin campus immediately adjacent to the corridor on the east, the location of parking behind stores, in nearby parking garages and on adjacent streets, and the continued evolution of the West Campus neighborhood into a thriving urban neighborhood with new high density mixed-use development. There are approximately 2,000 vehicles traveling north/south along Guadalupe Street with approximately 7,500 pedestrians crossing Guadalupe Street east/west during the PM rush hour. Many pedestrians cross Guadalupe Street to access both the UT Austin campus and the West Campus neighborhood and need "convenient and safe pedestrian crossings at arterial roadways" (CACNP Objective 5.1).
- Guadalupe Street has often-competing roles as a local connector, a thriving retail street, a major transit corridor, a bicycle corridor, and a regional commuter corridor.
- The City's focus on increasing non-automobile trips and improving access to transit (Imagine Austin) along with the corridor's right-of-way constraints reinforce the need for a more nuanced approach to this corridor.
- Guadalupe Street has been designated as a Core Transit Corridor by the City through its Land Development Code (Chapter E), which recognizes streets that should have enhanced urban design elements that support transit.

PROJECT PARTNERS

Much like the diversity of transportation needs, there is a diversity of project partners. The City of Austin is funding this corridor plan and is working in partnership with Capital Metropolitan Transportation Authority (CapMetro) and the University of Texas at Austin (UT Austin). In addition, the Center for Transportation Research (CTR) at UT Austin provided transportation modeling support for the initiative.

The University of Texas at Austin, founded in 1883, is one of the largest universities in the nation. It is a diverse learning university with over 51,000 students — from every state and more than 100 countries. The main campus is 430 acres and can accommodate an additional 75% of the potential growth of the University which is approximately an additional 2.4 million sq.ft. per decade (Source: UT Austin Campus Master Plan, 2012). This

implies that university enrollment is also projected to increase, but may be at a slower rate due to an increased focus away from traditional classroom learning to online and distance education.

During the course of this study, the University of Texas initiated a complementary study entitled the Guadalupe Street Corridor Safety Study, which focused on higher crash intersections and safety improvements for pedestrians and bicyclists. The study provided recommendations, including early implementation projects, which have been incorporated into this study. The Guadalupe Street Corridor Safety Study is located in Appendix H.

CapMetro is the public transportation agency which operates buses, paratransit, and commuter rail (MetroRail) in the greater Austin area. Guadalupe Street corridor is one of the most heavily used transit corridors with 20 routes (2 MetroRapid routes, 4 MetroExpress routes, 4 UT Shuttles, and 10 MetroBus routes) being operated along the corridor and 14,000 persons moving through the corridor using approximately 1,400 bus trips per day. CapMetro staff were involved in the process and provided information related to ridership and their desires for the future of transit in the study area.

PROJECT PROCESS

This initiative has been undertaken as part of a series of corridor plans to implement the 2010 and 2012 Bond Development Process by creating multimodal transportation proactive plans for the City's major corridors. The project process began in 2014 when data was collected to assess current conditions along the corridor. The consultant team met with City staff and key project stakeholders to identify key project goals and outcomes. The City and the consultant team undertook targeted outreach efforts for the project's public meetings. An online survey was conducted and the results of this survey provided useful input into the plan process.

One of the key elements of this study is a Health Impact Assessment (HIA), which has been an important decision-making tool and reinforces the ultimate recommendations of this effort. The HIA report is provided in Appendix D. Increasingly, communities are studying a range of health impacts of certain transportation and public investments on the general population. The goal of an HIA is to make healthy choices more easily. With respect to transportation, this means building a transportation system that emphasizes active transportation modes such as walking, bicycling, or using public transportation so that physical activity can be easily incorporated into regular daily routines. Specifically, the HIA evaluated the different options and scenarios considered for Guadalupe Street based on the goals and benefits of:

- Increased level of physical activity;
- Social cohesion; and
- Multimodal traffic safety.

REPORT ORGANIZATION

This report provides a detailed accounting of the preliminary assessment, public input, scenario assessment, and recommendations for the ultimate improvements to the corridor.

Chapter 2: Community Outreach and Involvement. Provides more detail on the public involvement that was incorporated throughout the process and how that influenced the results of the study.

Chapter 3: Corridor Background. Provides information on the background of the corridor. This chapter summarizes the existing physical context of the corridor as well as plans, policies and zoning regulations along the corridor.

Chapter 4: Future Scenario Assessment. Describes the four scenarios that were generated for analysis and testing through the study process.

Chapter 5: Recommendations and Preferred Scenario. Presents the recommended improvements for the corridor based on the results of the modeling, Health Impact Assessment, and public input on the different scenarios.

Chapter 6: Project Implementation and Chapter 7: Future Policy Strategies for the Corridor. Highlights the implementation and future policy strategies for the study area. Ultimately, the projects, policy recommendations, and overall goal expressed within this document are intended to be refined as the City undertakes the schematic and final design process that is needed before the corridor goal expressed through this preliminary effort can become a reality.

CHAPTER 2: COMMUNITY OUTREACH AND INVOLVEMENT

The City of Austin understands that for the Guadalupe Street corridor to be successful, the project outcomes should fit the needs and desires of stakeholders who live, work, commute through, play, and study in the study area and its environs. Consequently, a robust public engagement approach must invite and welcome users to share their concerns and ideas for improving the corridor. Committed to principles of inclusion, transparency, and openness to learning, the City developed the Guadalupe Street Corridor and West Campus Development Report to inform and educate the community about the project and offer opportunities to identify and discuss transportation solutions. Understanding these perspectives helped the City develop recommendations that create the greatest benefit for users.

The Austin Transportation Department's Master Public Involvement Plan (PIP) serves as a general framework and provides a common public engagement approach to communications and outreach activities for corridor improvement programs, while allowing flexibility to address the unique needs and conditions along each corridor. The goals, objectives, and guiding principles for the City and consultant teams are outlined below, while the project strategies can be read in full in the complete Guadalupe Street Corridor and West Campus Development Report PIP, found in Appendix B.

GOALS OF THE PUBLIC INVOLVEMENT STRATEGY

The goals and objectives of the public involvement element of this initiative include:

1. Provide commuters, neighbors, property owners, and other stakeholders served by the corridor with information about the project, goals, processes, timelines, anticipated outcomes, and opportunities to contribute input to the City of Austin and its consultants; collect input that aids in assessing and defining current characteristics, conditions, and needs of the corridor; identify the desired physical, functional, aesthetic and cultural character of the corridor; and provide opportunities for public comment, review, and feedback on the project's recommendations.
2. Ensure that historically underrepresented and hard-to-reach populations and groups have sufficient opportunity to engage in the process. This involves using targeted outreach strategies to reach groups including environmental justice populations, small businesses, property owners, nonprofits, faith-based organizations, and others served by the corridor.

3. Maintain communications and outreach between the City, project consultants, other transportation providers, government agencies, and key public and private partners.
4. Communicate and enable opportunities for input from interested citizens throughout the City, including transportation and mobility advocates, and other communities of interest.

PUBLIC INVOLVEMENT PHILOSOPHY

With the goal of providing for a robust and well-represented public involvement plan, the overarching philosophy for community engagement was designed for:

Inclusiveness and Multiculturalism: The public involvement process recognizes that individuals and groups bring varied experiences and challenges to participation. In anticipation of potential individual barriers, such as scheduling conflicts, multiple outreach opportunities were created to accommodate the needs of stakeholders. Mindful of Austin's Spanish-speaking population, the City provided Spanish translations for meeting materials, invitations, and flyers.

Transparency: The City worked to earn the trust of stakeholders through best practices in transparency. Stakeholders were given access to the public involvement planning process throughout the project. Feedback received during the outreach efforts was addressed by the outreach team and incorporated into review, analysis, and recommendations in the Guadalupe Street Corridor Transportation Report and the development of the Public Involvement Plan.

Openness to learning: The project team paid special attention to listening to constructive feedback that could improve the public engagement process. Staying flexible and receptive to suggestions from the community about the process helped create bridges with stakeholders, and allowed for a wider understanding of public opinion.

Throughout the plan process, there were different activities and opportunities for public input and involvement and these were tailored based on the phase of the project and the most effective means of communicating and gathering input.

OUTREACH AND EMAIL CONTACT LIST

In an effort to welcome the variety of stakeholders who live, work, commute through, play, and study in the study area and its environs to participate, an early step in the public involvement process was the development of a targeted Outreach and Email Contact list. Throughout the course of the initiative, the list was used to update

stakeholders on the project, share key dates, and send meeting invites. Individuals and organizations included in the list include, but are not limited to:

- Businesses, and property owners,
- University Area Partners,
- AURA,
- Churches,
- Americans with Disabilities Act advocates,
- Transportation, pedestrian, and bicycling advocates,
- Community serving organizations and non-profits,
- University of Texas student organizations, including fraternities and sororities,
- Neighborhood Associations,
- University of Texas departments,
- Capital Metro,
- City of Austin staff, and commissions,
- List serve sign-ups through project website, and
- Interested citizens.

ONLINE SURVEY

An important component of the community listening phase of this report was an online public survey. Understanding that individuals and groups bring a varied level of insight, this tool was designed with a combination of multiple choice and open-ended questions, providing respondents an opportunity to share their feedback at their comfort level. More than 780 participants took the 47-question survey from November 15, 2014 to February 6, 2015. Besides being available online, the survey could also be filled out by attendees at the first Public Open House. The City and consultant team received input on several corridor-related topics, including:

- Physical conditions,
- Aesthetic conditions,
- Functionality,
- Cultural characteristics, and
- Safety.

On March 10, 2015 the City of Austin released the detailed survey results, which also included the complete "Thought Wall" comments, which were the open-ended comments, collected during the December 3, 2014 Open House Meeting. The survey results were made available for download on the project website, and promoted through an e-newsletter sent to the project Outreach and Email Contact List. The complete survey results are included in Appendix B of this report.

COMMENT HOTLINE

Along with the survey, a comment hotline was launched to provide another opportunity for public feedback, offering non-computer users an additional method to share their thoughts and opinions. Users who called a dedicated toll-free number were greeted in English and Spanish, and encouraged to leave their comments on a messaging system. The comment hotline was open during the listening period from November 17, 2014 through February 6, 2015 and was promoted on the project website, e-newsletters, and on all publicly distributed materials.

FIRST PUBLIC OPEN HOUSE

On December 3, 2014 the City of Austin held the first public event for this report, an Open House Meeting at University Presbyterian Church from 6:00PM – 8:00PM. A total of 81 people attended the event to gain a deeper understanding of the purpose of the project and existing conditions along the Guadalupe Street corridor. The Open House was an opportunity for the public to share input on how to improve the area for pedestrians, bicycles, public transportation, and cars.

The Open House allowed attendees to meet one-on-one with City staff and the consultant team members to identify and recommend the short-term to long-term transportation improvements to the Corridor. Throughout the evening, the consultant team discussed project details with participants, and assisted with questions and identifying improvement priorities. Attendees were provided with a series of informational boards with existing transit, land use, and automobile traffic maps. Other materials included Austin area plans such as the University Neighborhood Overlay Zoning, UT Austin Master Campus Plan, and the Sidewalk Master Plan. The informational boards are provided in Appendix C.

To help the consultant team better understand stakeholder needs and desires for the corridor, Open House attendees were asked to pick six elements from nine categories related to the corridor, then rank each in order of importance on a Priority Pyramid. Open-ended comments and Priority Pyramids were then attached to a Thought Wall. Priority elements included:

- Safety,
- Automobiles,
- Environment,
- Aesthetics/Sense of Place,
- Parking,
- Bicycles,
- Pedestrian, and
- Economic Vitality.

A complete record of Thought Wall comments collected during the Open House can be found in Appendix B.

STAKEHOLDER MEETINGS

To gain a more nuanced and detailed understanding of issues, concerns, and opportunities for improving the Guadalupe Street corridor, the City of Austin held five (5) small group Stakeholder Meetings on February 19-20, 2015 at One Texas Center. The process began with identifying groups and individuals with an intimate knowledge of the corridor and the issues affecting the area. The targeted stakeholders received an initial email invite, follow-up phone calls from the consultant team, and a reminder email including an agenda in advance of the meetings. Details of meeting information are provided in Appendix B.

AURA, one of the stakeholders, is an advocacy group in Austin that promotes improved pedestrian and transit accommodations within the study area. They released a memorandum in August 2015, independent of the consultant team, documenting three recommendations for Guadalupe Street to promote transit along the corridor:

- Extend transit priority lanes from downtown to the University of Texas campus - to increase the throughput of people in the corridor.
- Remove the wall on the east side of Guadalupe Street - to use the space behind the wall for multimodal accommodations.
- Remove on-street parking from the west side of the street - to reuse that space for pedestrian, bicycle and transit facilities.

The University Area Partners also provided feedback throughout the project. City staff will continue to refine the traffic operations along the corridor and work closely with them on future implementation of recommendations.

BUSINESS OPEN HOUSE / SECOND PUBLIC MEETING

On May 11, 2016, the City of Austin Transportation Department (ATD) hosted a Business Open House (3:30PM – 5:30PM) followed by a Public Meeting (6:00PM – 8:00PM) to review and discuss scenarios and the preferred recommendation for improvements to enhance mobility, safety and quality of life along the Guadalupe Street corridor.

The presentation was composed of several stations with illustrative boards. For those unable to attend, an email was sent to the stakeholder list including links to the presentation boards and the following related materials:

- Existing Conditions for Ped/Bike Activity, Imagine Austin, Land Use, and Transit Service
- Four Tested Scenarios
- The Decision Making Tools for the process
- The Preferred Recommendation showing cross-sections of study area roadways, example intersection layouts, and a 3D rendering of Guadalupe Street.

The University of Texas provided findings from its complementary safety study and the early safety-related recommendations from that project. Capital Metro provided an infographic board describing the current and future transit service in the corridor. Approximately 80 people attended the meeting and spent quality one-one-one time with the consultant team members at each station. The presentations and discussions aimed to help participants gain a deeper understanding of existing conditions along the corridor and discuss the reasons for the recommended multimodal solutions.

Links to the meeting boards, including the UT Austin Guadalupe Street Safety Study board and Capital Metro Infographic can be found online at http://austintexas.gov/guadalupe and are also provided in the Appendix C.

PUBLIC INFORMATION

Maintaining open communication and keeping stakeholders informed about the Guadalupe Street Corridor and West Campus Development Report was an essential goal of the public involvement process. Through a variety of public information tactics, the City of Austin shared project updates, timelines, goals, objectives, and opportunities for public participation and feedback.

Project Web Page: The project web page was hosted through the City of Austin Transportation Department website. The page includes a general overview of the project, project material downloads, email list sign-up, and information about completing the survey and accessing the comment hotline.

E-newsletter: Throughout the life of the campaign, e-newsletters were sent to the Outreach and Email Contact List to share project updates, such as project public event invites and reminders, and the Survey Results Deck. Below is a list of dates for each e-newsletter and number of recipients that received it. A sampling of the E-newsletters is provided in the Appendix B.

EMAILS	SENT	NUMBER OF RECIPIENTS
Save the Date Public Meeting	6-Nov-14	498
You're Invited Public Meeting	17-Nov-14	589
Final Reminder Public Meeting	2-Dec-14	613
Open House Recap & Jan 5th Survey Deadline	15-Dec-14	762
Extended Survey Deadline, Feb. 6	7-Jan-15	757
Survey Deadline This Friday, Feb. 6	2-Feb-15	751
Survey Results Now Available	10-Mar-15	891
Project Update	3-Jun-15	822
Fall Project Update	17-Nov-15	798
Save the Date Public Meeting and Business Open House	27-Apr-16	788
Invitation Public Meeting and Business Open House	10-May-16	780
May 11 Open House Recap Email	20-May-16	785

Social Media: The City of Austin Transportation Department Twitter handle, '@AustinMobility' was used to promote project public events, including the Open House and Public Meeting, and boost Survey participation before the February 6 deadline. To compliment those efforts, a unique hashtag (#) was created for the project, #thedrag (local nickname for Guadalupe Street). The following social media posts are provided as examples:

Jan. 31	Were you stuck in traffic driving to @UTAustin? A few clicks can improve mobility along #TheDrag. Survey closes 2/6. http://ow.ly/EuaLo
Feb. 2	Your input is needed to improve Guadalupe Street for pedestrians, cyclists, transit, & drivers. Survey closes 2/6. http://ow.ly/EuaLo #TheDrag
Feb. 4	Want to help boost quality of life along Guadalupe Street? Take the online survey before it closes this Fri. http://ow.ly/EuaLo #TheDrag #ATX
Feb. 6	Last day to take the Guadalupe Street Corridor online survey. Take 5 mins and help enhance safety+mobility along #TheDrag. http://ow.ly/EuaLo

Informational Materials: Several informational materials were created to share project information and opportunities for participation with the public. The process began with developing a brand identity and logo, which was the creative basis for an E-newsletter template, double-sided 11x17 inch poster, and double-sided 4x9 inch push card. Both the poster and push card were reverse English and Spanish, and included information about the project, Open House, and opportunities for public participation.

Posters and postcard size meeting invitations were hand-delivered to area retail stores, restaurants, churches, bus stops, and fraternity and sorority houses, and apartment buildings. Copies of all informational materials can be found in Appendix B.

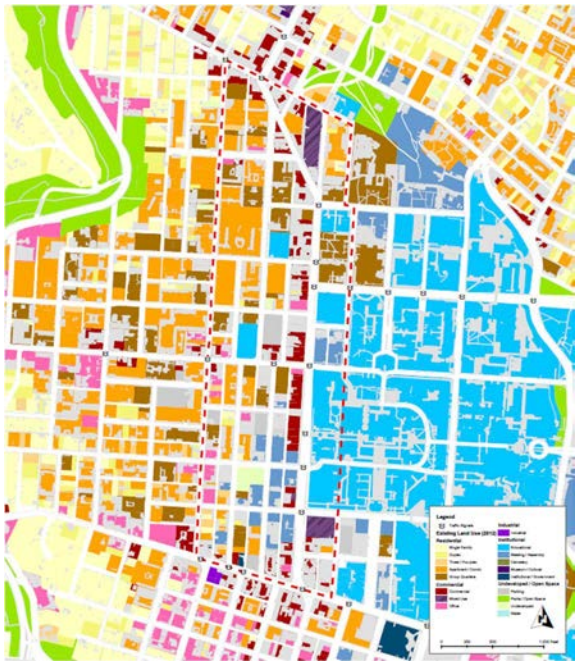
CHAPTER 3: CORRIDOR BACKGROUND

This chapter of the report provides a detailed assessment of the existing corridor conditions and a summary of plans, policies and zoning regulations for the corridor.

EXISTING CORRIDOR CONDITIONS

The existing corridor conditions portion of this report summarizes the existing land uses and characteristics of the corridor including the transportation characteristics, sidewalk conditions, crash and traffic analyses.

EXISTING LAND USES AND CHARACTER



Prior to 1940, Guadalupe Street was a pedestrian-scaled commercial street with a streetcar line. Even after the streetcar closure in 1940, the retail frontage retained its pedestrian nature due to its proximity to the University. However, by the 1980s and 90s, more auto-oriented uses developed along the corridor and several driveways were introduced to allow access to drive-thru restaurants, especially along the northern and southern sections of the study area.

Currently, Guadalupe Street fronts the UT Austin campus edge and Dean Keeton Street is the only corridor that runs through the campus. However, in many locations along this edge of the campus, there is a masonry wall that creates narrow sidewalk conditions and tends to act as a physical barrier within the street's public realm. The sidewalk is undersized for the large amount of pedestrian traffic and pedestrians frequently spill over into the street at intersections. It should be noted that the wall is University of Texas property and the University considers it to have historical significance; any proposed changes to the wall will need the University's approval.

The Renaissance Market was created when the City closed a portion of 23rd Street, west of Guadalupe Street; this has become a spot for food trucks, vendors, and transients, in addition to the students and residents of the area. This is an opportunity for the City to work with the community to activate the space and mitigate the pedestrian safety concerns related to the transient population.

In the last decade, land uses have begun to transition away from auto-oriented uses to denser, pedestrian-friendly uses. The existing and transitioning land uses in the figure above is also shown in Appendix I. The drive-thru facilities are transforming to mixed-use buildings with pedestrian retail frontage. The UNO Design Guidelines recommend enhanced sidewalks throughout the West Campus area. However, even with this gradual transformation, in many places unused curb cuts and substandard sidewalks still remain to be improved.

Much of the recent change in pedestrian activity, along with an increased focus on multimodal-mobility is due to the 2004 adoption of the UNO zoning, which significantly increased development potential in the West Campus area. Thousands of apartments have been added since the rezoning and the City anticipates 2,000 to 4,000 new beds over the next 10-15 years; the area has transformed into a vibrant mixed-use student neighborhood. This increase in density, which allows building heights of up to 220' and decoupled leasing of parking spaces in the UNO area in a neighborhood that was predominantly low rise multifamily and older single family housing stock, has allowed for a dramatic increase in the number of residents (predominantly students) that could live within walking and biking distance of the University. This has increased multimodal activity and the demand for retail and commercial services along the Guadalupe Street corridor. As new development continues to occur along Guadalupe Street and in the West Campus neighborhood, it is assumed that the pressure for Guadalupe Street to serve as a pedestrian corridor with street level shopfront uses will only continue to increase. A more complete description of the UNO zoning is found later in this chapter.

EXISTING TRANSPORTATION CHARACTERISTICS AND CONDITIONS

This section of the report provides an assessment of the transportation and traffic conditions for the section of Guadalupe Street and adjoining streets within the plan area. The Guadalupe Street corridor within the study area is approximately one mile and runs from MLK Jr. Boulevard to West 29th Street. The speed limit is posted at 30 miles per hour, but due to the side friction and congestion, it is common for the corridor to operate at a lower speed during peak hours. The corridor serves approximately 25,000 vehicles daily as a major north-south connector through the city connecting the north to the downtown area, and serves as an alternative route for commuters to the congested IH-35 corridor. With future improvements to IH-35 and MoPac, some of the regional commuter pressure on Guadalupe Street could be reduced. Guadalupe Street is also a major transit corridor. Due to the adjacency to the University of Texas campus and its parking constraints along with the West Campus high density residential uses, this corridor experiences high pedestrian and bicycle traffic volumes that travel along and across Guadalupe Street.

The existing Guadalupe Street has varying roadway and right-of-way (ROW) widths along the corridor. Some sections of the corridor have dedicated bicycle facilities, improved transit stop accommodations and wide sidewalks, whereas other sections of the corridor have limited ROW, roadway widths, and pedestrian accommodations. For most of the corridor, Guadalupe Street is a four-lane undivided roadway without left-turn lanes; left turns are prohibited at majority of the signalized intersections along Guadalupe Street within the study area except for 29th Street, Nueces Street, 27th Street and Martin Luther King Jr. Blvd. The corridor concept will take into account these existing conditions and constraints.

The West 24th Street study corridor spans from Lamar Boulevard to Guadalupe Street and is approximately two-thirds of a mile long. The roadway is posted at 30 miles per hour, but due to the adjoining lane friction, congestion, and reduced lane widths, the prevailing speeds on the corridor are much lower. This corridor serves approximately 13,000 vehicles daily within the study area. West 24th Street also provides an important east-west connection between MoPac Expy and Guadalupe Street. This corridor is a four-lane undivided roadway, but the lane widths are very narrow, with 9-foot-wide lanes in certain areas. There are also limited pedestrian and bicycle accommodations along this corridor.

The West Campus neighborhood is generally encompassed by Rio Grande Street to the west, Guadalupe Street to the east, West 29th Street to the north, and MLK Jr. Boulevard to the south.

EXISTING OPERATIONAL ANALYSIS AND SUMMARY

This section of the report assesses the traffic operational analysis that was undertaken to understand the overall network capacity and congestion issues in the study area and surroundings.

EXISTING INTERSECTION ANALYSIS

A peak-hour traffic analysis was performed using the existing traffic patterns within the corridor. The analysis evaluates the intersection operations from collected traffic counts along the corridor. The traffic counts suggested that the intersections operate better than what was observed; this was due to the corridor experiencing some gridlock and queuing during the peak hour preventing vehicles from adequately progressing along the corridor. The intersection analysis metrics do not fully quantify this latent demand, although it is evident from the travel time runs seen below. The travel time run analysis can be seen in Appendix E.

	Southbound Travel Time Runs		Northbound Travel Time Runs	
Run Number	AM	PM	AM	PM
Travel Time Runs in Minutes/Seconds (#m #s)				
Run 1	3 m 1 s	4 m 22 s	2 m 37 s	2 m 42 s
Run 2	4 m 20 s	3 m 27 s	3 m 34 s	5 m 59 s
Run 3	4 m 49 s	4 m 52 s	3 m 21 s	9 m 52 s
Run 4	4 m 43 s	4 m 12 s	3 m 51 s	9 m 23 s
Run 5	3 m 46 s	-	2 m 58 s	7 m 28 s
Average Time	**4 m 8 s**	**4 m 13 s**	**3 m 16 s**	**7 m 5 s**

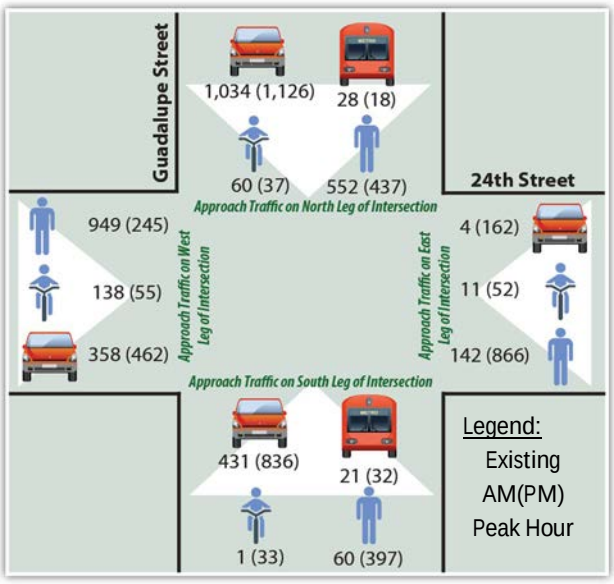
The existing analysis model was more specifically used to evaluate design alternatives to alleviate congestion within the corridor's bottlenecks and ultimately to develop a list of improvements that could be carried forward as short and long-term recommendations. The level of service projections is useful for comparing competing corridor scenarios to evaluate the change in operations. The baseline existing conditions analysis is summarized in the existing conditions report in Appendix E.

EXISTING TRAFFIC VOLUME

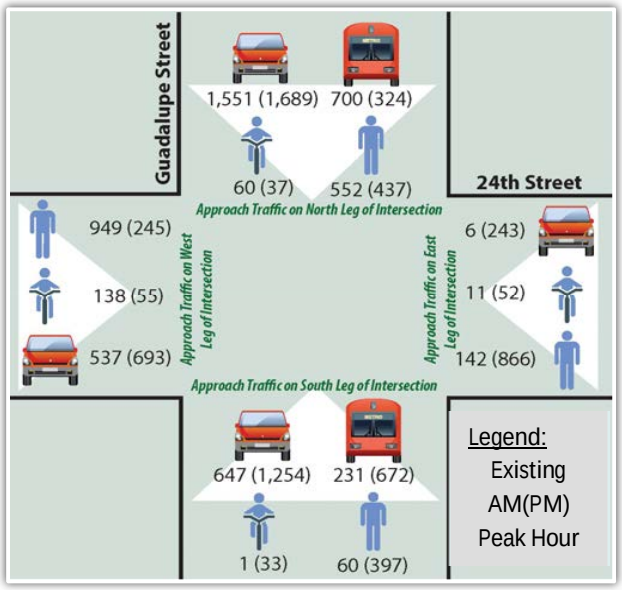
From a traffic standpoint, the Guadalupe Street corridor within the study area has been congested for much of the life of the corridor due to the major regional connectivity the corridor provides, the proximity to Downtown, and the proximity of the University of Texas campus along the corridor. The traffic demand for the corridor exceeds its capacity, meaning there is latent demand for more roadway capacity in the area. This is indicative of the fact that there is significant regional north-south traffic congestion and the severe capacity limitations in this area of the City. This is impacted by the IH-35 corridor congestion, which makes regional traffic move to other local north-south corridors that are not focused on regional traffic. Traffic counts collected during this project found that Guadalupe Street is handling between 19,500 (south end) and 25,200 (north end) automobiles per day. On the parallel facility of Rio Grande Street, the daily traffic volumes are approximately 3,500 automobiles northbound.

In addition to the automobile traffic, this corridor is one of the highest pedestrian, bicycle, and transit corridors within the City of Austin. As seen in the following graphics, traffic volumes by mode are shown on the left and the people equivalent volumes are shown on the right at the intersection of Guadalupe Street and 24th Street during the PM rush hour. Another comparison to understand the relationship between automobiles and pedestrians along this corridor is that there are approximately 2,000 vehicles traveling north/south along Guadalupe Street with approximately 7,500 pedestrians crossing Guadalupe Street east/west during the PM rush hour.

Traffic Volumes by Mode
(Guadalupe Street at 24th Street)



People Equivalent Volumes by Mode
(Guadalupe Street at 24th Street)



Vehicle occupancy = 1.5 people/vehicle (from National Household Survey, August 2017)
Bus Occupancy from CapMetro August 2014 Data

The corridor experiences a high volume of pedestrian and bicycle traffic due to the University of Texas located on the eastern side of the Guadalupe Street corridor and a significant amount of off-campus housing that caters to students and faculty located on the western side of the corridor, which requires the students and faculty to cross Guadalupe Street to enter campus. As mentioned in the existing transportation characteristics and conditions section of Chapter 3, the existing roadway network in the study area experiences a significant amount of latent demand. The model was planned to evaluate the future year traffic on the preferred scenario; however the CTR modeling effort demonstrated that increased future traffic volumes on the corridor was not feasible due to regional gridlock, where "vehicles cannot move through the network due to downstream congestion propagation" (See Appendix F).

Increasing automobile traffic volume capacity along the corridor to handle future regional demand is not feasible, but other modes of travel such as transit, bike, and pedestrian travel can be enhanced along the corridor to provide future growth opportunities. This allows for additional growth in the corridor by focusing on "people" throughput rather than automobile throughput. As the corridor becomes more and more congested, there will have to be a mode shift to higher density modes along the corridor like transit, which supports the City's goal of increased modal shift away from single-occupancy automobiles as the primary mode of transportation for this corridor. A study performed by CapMetro concluded that the current buses have additional capacity that is expected to increase with faster and more consistent travel times. Converting single-occupancy automobiles to transit by better utilizing the current transit services would pay dividends to the corridor operations and overall sustainability.

SIDEWALK CONDITIONS

During the initial phase of the project, the consultant team and City performed a walking tour of the corridor to kick off the project and become more familiar with existing conditions. This walking tour included the pedestrian facilities along Guadalupe Street and through West Campus.

The intent of the walking tour was to gain familiarity with the corridor and its constraints, including focusing on the following:

- Sidewalks (width and pavement condition)
- Intersections and Pedestrian Crossings
- Transit Services/ Bus Stops
- Bicycle Facilities
- Driver Behavior/ Parking
- Corridor Comfort and Appeal

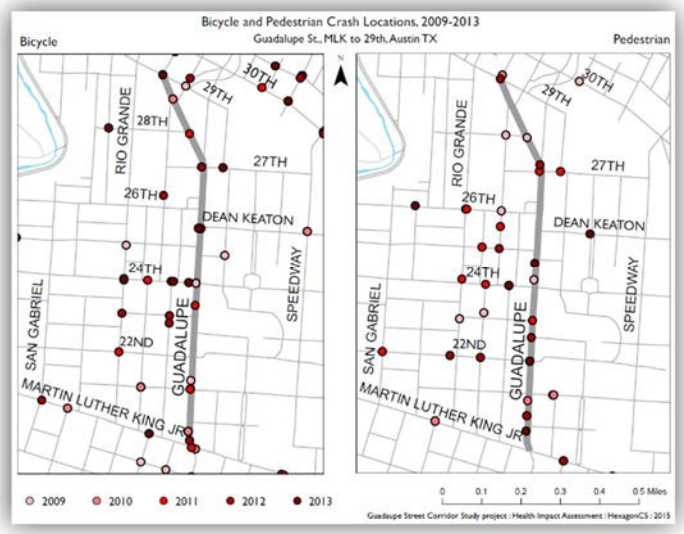
The information obtained helped inform the Health Impact Assessment and provided a basis for the recommended improvements as well as initial cost projections.

There are a number of improvements recommended to the sidewalks within the study area. Within the study area, general sidewalk issues include cracks or crumbling surfaces, some portions with pinch points from utility poles and limited right-of-way (ROW) and some curb ramps without detectable warning surfaces. Crossing distances at intersections such as Guadalupe Street at Nueces Street are long due to the angle at which the streets meet. One

section of the pedestrian pathway on the east side of Guadalupe in the 2800 block has parking in front of small retail shops that blocks the pathway and creates conflicts for pedestrians and motorists pulling in and backing out of parking spaces. Some trees along the corridor, especially where the UT campus is adjacent, provide shade and a more attractive streetscape although the sidewalk is insufficiently sized for the pedestrian volumes it carries, causing people walking along much of the sidewalks to be subjected to full effects of the sun's heat. Some of the streets in West Campus have been built to the new UNO regulations, which includes wider sidewalks, street trees, and street furniture.

CRASH ANALYSIS

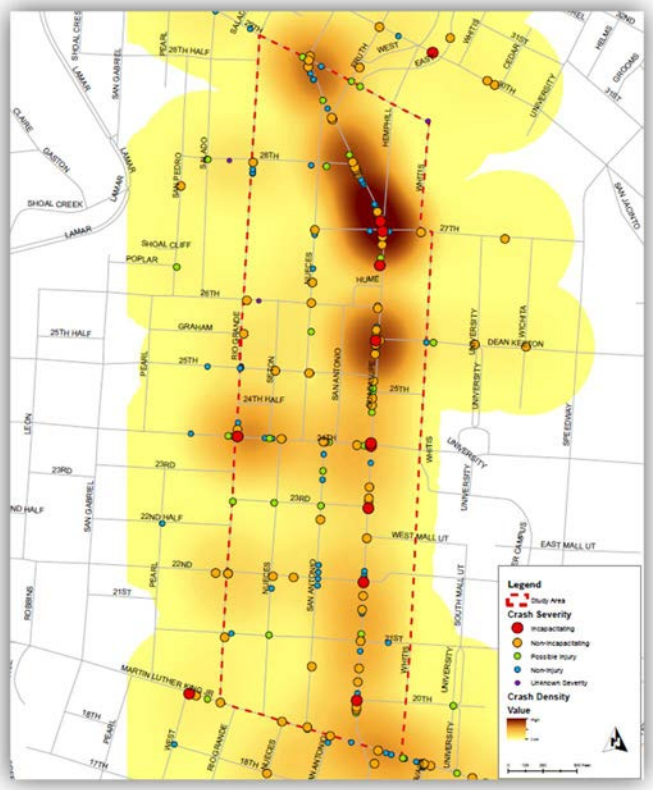
The crash data used in the analysis ranged from 2011 until 2014. Over this period, there were a total of 197 crashes along Guadalupe Street and 226 on adjacent roadways within the study area, this equates to an average annual crash rate of 141 for the study area. Annual crash analysis did not identify major problem areas when focused on the entire corridor. However, the nature of the crashes can provide some additional information that helps to clarify solutions that might be applicable across the corridor.



Of the 423 crashes that occurred in the study area, a total of 229 (54%) involved an injury or possible injury. Of these crashes, 26 (6% of all crashes) involved a pedestrian while 14 (3.3%) involved a bicycle. Of note, 15 (3.5%) serious incapacitating injuries occurred because of crashes within the corridor, six which involved a pedestrian and a vehicle. One crash occurred in which there was a fatality; this crash involved a pedestrian and a vehicle. The low amount of pedestrian crashes (6% of all crashes) can be attributed to automobile drivers' heightened awareness of the large volume of pedestrians on the corridor.

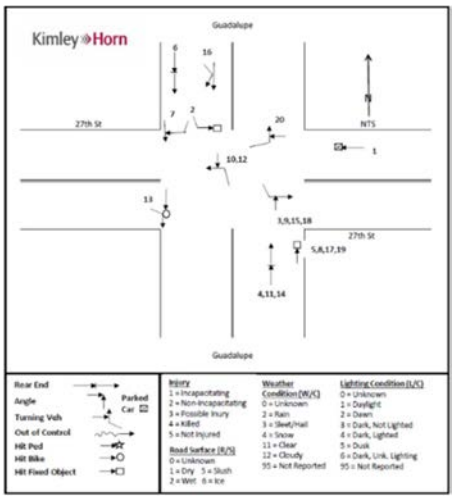
The City seeks to reduce serious and fatal crashes as part of its Vision Zero Action Plans and this report needs to take into consideration interim and long-term safety improvements in its recommendations. In addition, longer-term policy recommendations for this corridor have been shown elsewhere to reduce crashes, by reducing conflict points and creating predictable behavior patterns for all users of the transportation system.

Within the Guadalupe Street study area, the higher crash locations along the corridor include the intersections of Guadalupe Street at 27th Street and Guadalupe Street at Dean Keeton Street. Apart from these two intersections, the corridor has a consistent distribution of automobile crashes. In terms of pedestrian crashes, the study area has a consistent distribution along the corridor with no major intersection with a significant change from a different intersection. In terms of bicycle crashes, there appears to be a trend of crashes on 24th Street for the last few blocks until Guadalupe Street as well as towards the southern end of Guadalupe Street before MLK Jr. Boulevard. Prohibiting right turn on red may reduce the pedestrian and bicycle crashes, as discussed in the UT Austin Safety Study.



UNIVERSITY OF TEXAS AT AUSTIN SAFETY STUDY

Conducted in conjunction with this initiative, the UT Austin Safety Study documents the results of an assessment of safety for Guadalupe Street from Martin Luther King, Jr. Boulevard to 29th Street in the City. Crash data was analyzed for both Guadalupe Street and Dean Keeton Street corridors near the University of Texas Campus; however, the top seven crash locations all occurred along Guadalupe. The study documents the results of crash data analysis and walk audits of areas of high crash rates (hot spots) along the corridors. Collision diagrams are presented along with details of each accident in table format, followed by field observations and possible safety countermeasures. Safety countermeasures are presented based on selection by the review committee and coordinated with City of Austin staff and can be seen in the following table. See Appendix H for the University of Texas at Austin Safety Study.



UT SAFETY STUDY: SAFETY COUNTERMEASURES

Time Frame	Countermeasure	Intersections	Direction	% Reduction Ped	% Reduction Bike	% Reduction Auto	Cost	Unit
In Progress	Realign Bike Lane	Guadalupe and MLK Jr Blvd	S. of 20th	N/A	Unknown	N/A	$5,000	Each
	Remove Parking Near Intersection	Guadalupe and Dean Keeton	SB Far Side	30	Unknown	49	$250	Per Space
Short-Term	Re-Stripe Crosswalks (Continental Bar Style)	Guadalupe and 27th	NB, SB	25/37	N/A	N/A	$2,540	Each X-Walk
		Guadalupe and MLK Jr Blvd	SB Rt. Trn					
		Guadalupe and 29th	NB, SB					
		Guadalupe and Ped Xing	Full Width					
		Guadalupe and 28th	SB					
	Flashing Yellow Arrow	Guadalupe and 27th	NB, SB	Unknown	Unknown	Unknown	$2,500	Per Approach
	Add Bike Box	Guadalupe and 24th	SB	N/A	36	N/A	$11.50	Sq. Ft.
	"Yield to Bikes" Sign	Guadalupe and MLK Jr Blvd	SB Rt. Trn	N/A	67	N/A	$300 - $3,200	Each
		Guadalupe and 22nd	SB Rt. Trn					
	Extend Clearance Interval	Guadalupe and MLK Jr Blvd	All	Unknown	N/A	15	$1,000	Intersection
		Guadalupe and Dean Keeton	NB, SB					
	Add Leading Pedestrian Interval (LPI)	Guadalupe and 22nd	SB Xing	58.7	N/A	N/A	$500	Intersection
	Prohibit Left Turn	Guadalupe and 28th	NB	10	Unknown	45	$500	Per Approach
		Guadalupe and Inner Campus	WB					
	Add Protected Left Turn Phase	Guadalupe and 29th	EB, WB	44.85	Unknown	1 (99)	$3,500	Per Approach
	Re-Route Cyclists (Signs)	Guadalupe and 28th	NB, SB	N/A	Unknown	N/A	$500	Per Segment
	Ped Detection for Turn Mvmt	Guadalupe and 27th	NB Xing	Unknown	N/A	N/A	$5,000	Each
	Prohibit Right Turn	Guadalupe and 22nd	SB	Unknown	Unknown	45	$500	Per Approach
	Advisory Speed Signs	Guadalupe and 27th	SB, NB	34.2	Up to 48	29	$500	Per Sign
		Guadalupe and 29th	SB, NB					
	Speed Reduction Pavement Markings	Guadalupe, 27th to 29th	NB, SB	Unknown	Unknown	18	$2,000	Per Segment
Medium-Term	Improve Lighting	Guadalupe and MLK Jr Blvd	SW Corner	42	60 (Night)	4-30	$5,000	Each
		Guadalupe and 29th	NE Corner					
	Relocate Bus Stops to Far Side	Guadalupe and Dean Keeton	NB	1	Unknown	1	$5,000 - $24,000	Bus Stop
		Guadalupe and 24th	SB					
		Guadalupe and 29th	SB					
	Add Pedestrian Hybrid Beacon (PHB)	Guadalupe near 28th	N/A	69	Unknown	29	$57,680	Per Location
Long-Term	Add Right-Turn Bay	Guadalupe and 27th	NB	N/A	N/A	Rear-End: 65 RT: 50-56 Rt. Angle: 50	$70,000	Each Approach
	Raised Bike Lane Crossings	Guadalupe and Ped Xing	W. Side	N/A	Unknown	N/A	$2,500	Each
	Close Advanced Left Turn	Guadalupe and MLK Jr Blvd	WB Lt. Trn	Unknown	N/A	Unknown	$150,000	Intersection
	Expand Pedestrian Space	Guadalupe and 22nd	All Corners	12 (at corners)	N/A	N/A	Unknown	Sq. Ft.
		Guadalupe and 24th	All Corners					
		Guadalupe and Ped Xing	E. Side					
	Raised Intersection/Crosswalk	Guadalupe and Ped Xing	N/A	45*	N/A	N/A	$25,000 - $100,000	Per Crossing
	Adjust Crossing Width (Pull in Curbs)	Guadalupe and 28th	SB	21.5*	Unknown	25	$21	Linear Foot
		Guadalupe and 29th	SB					
	Replace Ramps	Guadalupe and 29th	SB	37	N/A	Unknown	$3,000	Per Ramp
	Realign Skewed Intersection	Guadalupe and Nueces	EB	33	33	33	$100,000	Per Approach

* Yielding increase by vehicles

HEALTH IMPACT ASSESSMENT OF EXISTING CONDITIONS

This section of the report provides the assessment of existing conditions as it relates to the Health Impact Assessment (HIA) conducted as part of this initiative. The HIA is located in Appendix D. The HIA component of the plan provides more detailed analysis of the effects of a particular set of policies or plan on public health. This assessment in turn, provides a basis to make recommendations to improve a population's health and well-being through injury prevention, increased physical activity, and reduce risk of personal mental and physical health issues through better policies regarding the built environment. Said another way, an HIA is "a multidisciplinary process within which a range of evidence about the health effects of a proposal is considered in a structured framework."[1]

[1] http://www.hiaguide.org/glossary#definition-health-impact-assessment

Two of the initial steps in an HIA include scoping and assessment of existing conditions as they relate to health issues. The scoping task evaluated health concerns such as risk of injury, chronic disease, lack of physical activity, and lack of social cohesion. Three primary methods were used to identify which of these health concerns were present for people along the corridor: review of existing data, field assessment, and a public survey, which assessed active travel behaviors along the corridor and perceptions of the environment related to active travel. This task included an assessment of the demographic data of the plan area which is discussed in Chapter 1. In addition, it evaluated the existing transit service, bicycle and pedestrian activity, and crash data along the corridor (discussed earlier in this chapter).

Of relevance was the walking assessment of the corridor that evaluated the physical environment with respect to the possible health impacts of the different conditions identified, which is summarized in the following table from the Health Impact Assessment:

Type of traveler	Condition	Potential health impact
Pedestrians and transit riders	• Poor pedestrian network along the roadway, including poor ADA compliance for curb ramps and sidewalk conditions • Not enough places to cross the street	• Disincentive for walking (reduced physical activity) • Lack of social cohesion (low levels of social interaction, social support, collective monitoring, social trust, sense of community, shared cultural identity)[3] • Risk of injury
Bicyclists	Mix of high and low stress facilities	Risk of injury, especially when transitioning between the two
Pedestrians and bicyclists	Debris at base of some curb ramps; debris in bicycle lanes	Fall risk and reduced mobility for pedestrians; crash risk for bicyclists

In addition, the online survey that was conducted at the beginning of this process included questions and opportunities for comments that provide a picture of health concerns for respondents. Survey respondents noted health concerns such as crash risk for bicyclists (due to the lack of separated bicycle lanes and clear pathways at some intersections), crash risk for pedestrians (due to insufficient pedestrian crossing locations and time to cross the street), along with other health concerns:

- Lack of shade from the heat, especially for waiting transit passengers
- Insufficient lighting (personal security) and benches at transit stops
- The presence of trash on sidewalks and overflowing bins, and
- Confusion for travelers regarding shared travel lanes (bicyclists and automobiles), prohibited and permitted left turns, way-finding to on-campus destinations

MULTIMODAL LEVEL OF SERVICE

In determining appropriate infrastructure for the Guadalupe Street and 24th Street corridor, the project team utilized various planning-level tools that examined the efficiency of automobile realm improvements, while balancing the needs of the transit patrons, bicyclists, and pedestrians throughout the corridor with an emphasis on pedestrians. Various software platforms including the proposed Highway Capacity Manual's Multimodal Level of Service (MMLOS) Software were utilized to determine trade-offs for each infrastructure decision. However, the current versions of these tools do not differentiate well between types of bicycle facilities or transit facilities, nor do they recognize the intrinsic value of having consistent facilities throughout an entire corridor. The software examines intersections and the segments between them, rather than focusing on the user experience of proposed facilities along an entire corridor. In addition, the operating characteristics of bicycle facilities, in street versus off street, are not part of the methodology of the performance metrics of the beta version of this tool.

As such, the results of the analysis as seen in Appendix E are inconclusive due to the complexity of the Guadalupe Street and 24th street corridors. The 24th Street corridor showed a glimpse of the comparative power of the tool when looking at bicycle accommodations, but MMLOS was still not adequate as a tool that guided the ultimate recommendations for the corridor.

PLANS, POLICIES AND ZONING REGULATIONS

Within the study area, several plans and regulations have been adopted by the City in the past few years. These studies are critical to the history and future layout of the corridor and have informed the goal and recommendations of this report. The following section outlines the documents that define the history, context of the corridor and future layout with regards to several aspects of the built environment including neighborhood character, university growth, development regulations, bicycle accommodations, etc. The plans, policies and regulations summarized include:

- Great Streets Master Plan, 2001
- Guadalupe Street: Transit Corridor Improvement Project, 2003
- Central Austin Combined Neighborhood Plan, 2004
- University Neighborhood Overlay (UNO) Zoning, 2004
- University of Texas at Austin Campus Master Plan, 2012
- Imagine Austin Comprehensive Plan, 2012
- Complete Streets Policy, 2014
- City of Austin Bicycle Master Plan, 2014
- Vision Zero, 2016

GREAT STREETS MASTER PLAN, 2001

The Downtown Great Streets Master Plan, also referred to as the Great Streets Master Plan (GSMP), adopted in November 2001, prepared by Black & Vernooy and Kinney & Associates, was created with Downtown specifically in mind but the concepts have since been applied in multiple places in Austin. The Guadalupe Street corridor is very similar in function and land use to several other primary corridors that feed into the Downtown area, and many of the Great Streets Master Plan elements, such as enhanced sidewalks, were adopted as part of the UNO ordinance. The Great Streets treatment for Guadalupe Street were also recommended in the Central Austin Combined Neighborhood Plan (CACNP). The creation of the Great Streets Master Plan was based on extensive public involvement and a Community Advisory Group that included representation of 34 stakeholder groups.

A goal of the Master Plan is to serve "…as an instrument to pursue this vision of *streets for people*." This vision would be achieved through the application of a user hierarchy with the highest priority for pedestrians and lowest priority for automobiles. This hierarchy was later incorporated into the CACNP, which includes the study area. In this context, five street typologies were established and most of the streets within the Downtown Core were designated as one of these five street types.

- Pedestrian Dominant Street (streets such as Second Street)
- Mixed Mode Street (streets such as San Antonio and Rio Grande Streets)
- Rapid Transit Streets (streets such as Lavaca and 4th Streets)
- Bicycle and Local Access Street (streets such as Nueces and 18th Streets)
- Commuter Street and Commuter Boulevard (streets such as Cesar Chavez Street and MLK Jr. Blvd)

Attention is not only given to the allotment of user space within the ROW but also to the detailing of elements within the pedestrian areas. The Plan makes a compelling case for a well-detailed streetscape area arguing that "a wide variety of streetscape elements constitute and enliven the street. The elements providing the location and dimensional relationships of integral aspects of a street, such as the through-pedestrian crosswalks and accessible ramps, can be described as building blocks, or the basic street DNA." Details are provided on the arrangement and types of street trees, planters, light poles, street furniture, utility accruements, etc. Many of these technical details would be of use and a good reference for detailed design and engineering for this section of Guadalupe Street north of MLK Jr. Boulevard as well.

GUADALUPE STREET: TRANSIT CORRIDOR IMPROVEMENT PROJECT, 2003

In 1996, City Council approved a resolution "directing the City Manager to provide necessary assistance to the University Area Partners, the University of Texas, and Capital Metro in their efforts to enhance and establish Guadalupe Street, from Martin Luther King to 29th Street, as a pedestrian corridor." (Austin City Council Minutes, February 8, 1996) Guadalupe Street: Transit Corridor Improvement Project was undertaken in 2003 by Sinclair Black and Andrew Vernooy to serve as an implementation handbook for sections of Guadalupe Street contained in the study area.

The plan documents the importance of the corridor to the University and the City of Austin as well as its rich history and culture adjacent to the University of Texas campus. This context is compared to the contemporary condition of the streetscape and sidewalks along the corridor. The project concludes that the corridor

infrastructure is in poor condition in 2003. Due to deteriorating conditions on Guadalupe Street, the plan references a 1995 University Area Partners partnership with the University of Texas, Capital Metro and the City of Austin to "…rebuild and revitalize a 10-block long stretch of Guadalupe Street."

The 2003 Guadalupe Street: Transit Corridor Improvement Project highlights design standards for the sidewalk which are still relevant to the ultimate improvements recommended within this report including:

- Generous sidewalks,
- Simple, durable sidewalk materials,
- Street trees,
- Pedestrian-oriented street lighting,
- Furnishings that are simple and timeless in design,
- Sidewalk vendor accommodations, and
- Safe and comfortable transit stops.

CENTRAL AUSTIN COMBINED NEIGHBORHOOD PLAN, 2004

The Austin City Council adopted the Central Austin Combined Neighborhood Plan (CACNP) on August 26, 2004 (Ordinance No. 20040826-56).

The plan covers several neighborhoods that are represented in the project area, including the West University Neighborhood, the North University Neighborhood, and the Hancock Neighborhood. The following goals from the plan are transportation-related:

- Goal Three: Allow mixed-use development along the existing commercial corridors that is pedestrian oriented, neighborhood friendly, neighborhood scaled, and serves neighborhood needs.
- Goal Four: West Campus should become a dense, vibrant, mixed-use and pedestrian oriented community.
- Goal Five: Provide a safe environment and opportunities for all modes of transport.

The plan also points out the higher than citywide average rates of walking and bicycling in these neighborhoods: "According to the 2000 Census, over eighteen percent of the residents in the CACNP area walked to work as compared to the nearly four percent in the rest of the City of Austin's Urban Core. The percentages of those who bicycle to work are equally impressive. Over six percent of the residents bicycle to work in the CACNP area, whereas only one and a half percent of those in the Urban Core do the same."

The plan includes many transportation-related objectives and recommendations, such as:

- Objective 4.5: The residents of West Campus and the West University Neighborhood should have safe and shaded pedestrian and bicycle access to shops, restaurants, and transit along Guadalupe Street and to the University of Texas. To this end, sidewalks should be considered equally if not a more important public pathway as the roads they line.
    - *Recommendation 13:* Designate and stripe one or two east-west streets as bicycle routes to provide safer access for West Campus' residents to Guadalupe Street and the University of Texas. These routes could be planned in conjunction with the creation of pedestrian ways.

- Objective 5.1: Provide convenient and safe pedestrian crossings at arterial roadways.
- Objective 5.2: Complete and improve the pedestrian network within the planning area. This can reduce the need for automobiles to access services in the planning area.
- Objective 5.3: The residents of the combined planning area should have safe pedestrian and bicycle access to Guadalupe Street and the University of Texas.
    - *Recommendation 6:* Improve the safety of existing bicycle lanes along Guadalupe Street.
    - *Recommendation 7:* Install a bike lane along Guadalupe Street between 24th Street and 45th Street.
- Objective 5.14: Improve integration among modes of transport.
- Objective 5.15: Improve the convenience and comfort of bus travel.
    - *Recommendation 32:* Increase the capacity of the #1 and #7 bus routes during peak times.
    - *Recommendation 33:* Install pedestrian-scaled lighting near well-used bus stops along routes that run late at night, especially #1, #5 and #7. Investigate the feasibility of using solar-powered lighting.

This plan also calls for, as one of the "Top Ten Priorities," establishment of an overlay (University Neighborhood Overlay [UNO]) for the West Campus area that allows denser, pedestrian-oriented commercial and multifamily development.

UNIVERSITY NEIGHBORHOOD OVERLAY ZONING, 2004

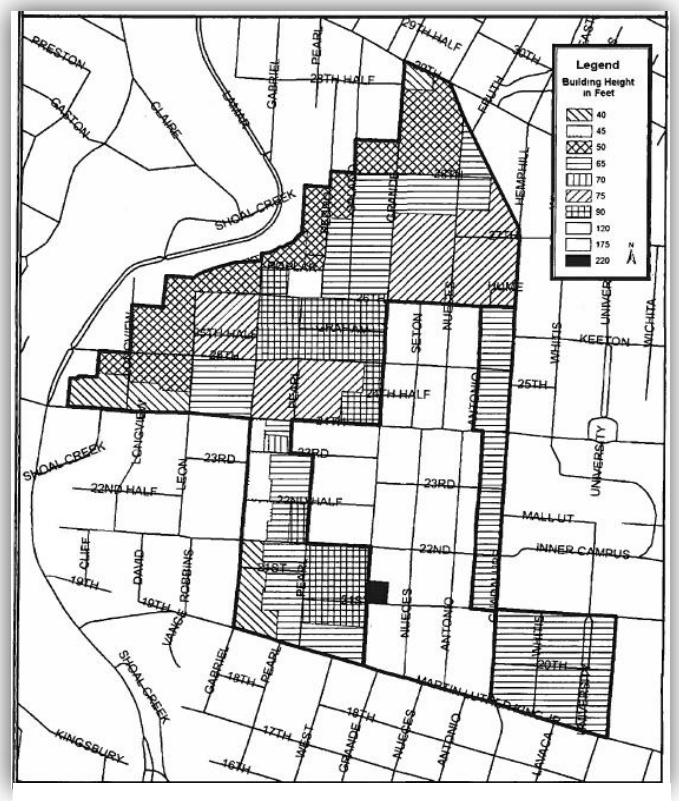
The Zoning Ordinance creating the University Neighborhood Overlay (UNO) zoning district was adopted by Austin City Council on September 2, 2004 (No. 20040902-058).

The UNO area is bounded by the University and Guadalupe Street on the east, MLK Jr. Boulevard on the south, and roughly Lamar Boulevard to the west from 29th Street to 24th Street and San Gabriel Street from 24th Street to MLK Jr. Boulevard.

The ordinance describes the purpose of the UNO district as follows: "to promote high density redevelopment in the area generally west of the University of Texas campus, provide a mechanism for the creation of a densely populated but livable and pedestrian friendly environment, and protect the character of the predominantly single-family residential neighborhoods adjacent to the district."

Thousands of apartments have been added since the rezoning, as evidence by census tract 6.03 increasing from 5,273 in 2000 to 7,793 in 2010, an increase of 49%. The area has transformed into a vibrant mixed-use student neighborhood, has tremendously increased the number of students walking and cycling as a primary mode of transportation. Although there are minor commercial nodes throughout the UNO area, Guadalupe Street acts as the primary commercial corridor and the transition from West Campus to the UT campus proper.

The West Campus/UNO Design Guidelines were adopted as a component of the CACNP. The guidelines state that the intent of the UNO is to support "City of Austin's, Capitol Metro's and the University of Texas' vision for an integrated transportation plan which includes commuter options and a reduced reliance on cars – through density and planning." The adopted design guidelines also created a hierarchy of transportation concerns in street design: pedestrian traffic, transit, bicycle traffic, and then cars. The guidelines include provisions for urban setbacks, façade design, and streetscape improvements. The building design standards require an integration of certain design elements including contrasting materials, textures and colors, awnings or colonnades, and balconies or projected window boxes. The streetscape design standards dictate the use of street trees, pedestrian scale street lighting, and street furnishings to create active sidewalks.



UNO PERMITTED HEIGHT MAP

UT CAMPUS MASTER PLAN, 2012

The UT Campus Master Plan, adopted in Fall 2012, addresses the long-term facility and mobility plan for the entire UT Austin campus area. There is considerable focus on multimodal transportation with attention given to the Guadalupe Street corridor in particular.

The plan recognizes the context of the campus and how its success hinges on maximizing opportunities to improve mobility and development potential:

"UT Austin has unusual assets. It is located at the heart of one of America's most vibrant cities; it has a magnificent campus that is connected to the city by an excellent transportation network; and as one of the nation's largest campuses, it has a scale and density well suited to supporting major initiatives in cross-disciplinary research and a fully integrated learning experience for students…Building on these extraordinary assets, there are opportunities for enhancement to allow UT Austin to move to the next level and become the leading public research university in the United States."

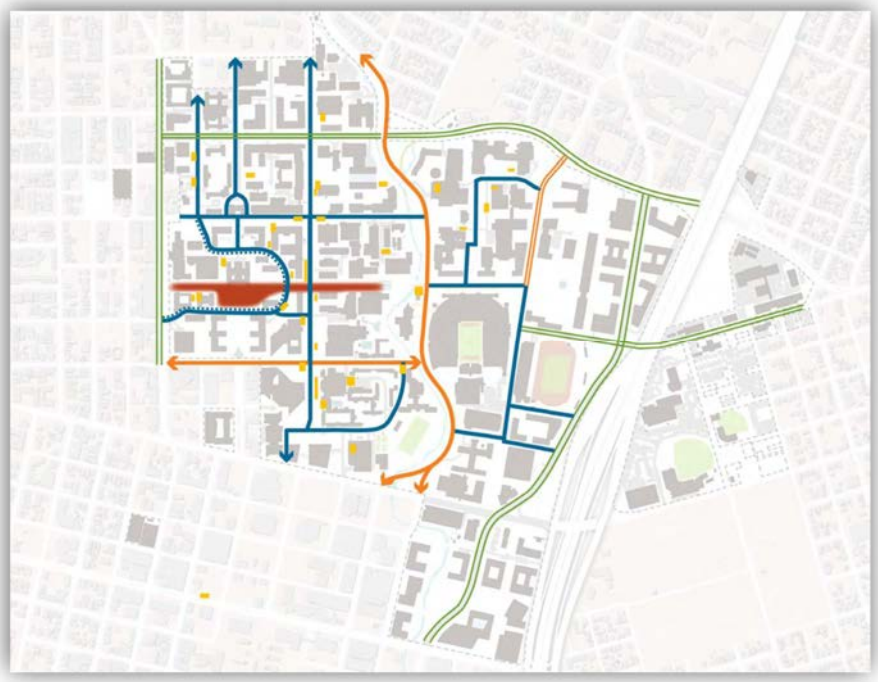
One of the opportunities listed is to "…facilitate safer and more efficient mobility." The plan states that "(m)oving around the campus easily, comfortably, and safely is critical to the wellbeing of the campus community. Safe,

efficient mobility helps ensure a vibrant academic setting." Since the Guadalupe Street corridor defines the western edge of campus, maximizing its potential for "efficient mobility" is paramount.

The UT campus covers a large area (approximately 400 acres) and represents the potential to double the amount of development on campus, thus increasing the mobility demand to a campus setting that for the most part does not have interior through street access. However, the campus is "…ordered by a grid, and overlaid with separate but interacting systems of mobility by foot, bicycle, vehicles of all sorts, and potentially light rail." The plan points out that in many of these corridors the function of the transportation system is in tension with the place making of the corridor and explains that under "…these circumstances it is critical to harmonize the modes of mobility to, within, and across the campus. This means designing paths and spaces to ensure that people in motion know what to expect and how to behave." Further, the plan reinforces that the "…best transportation system is one that comports with people's natural inclinations while providing clear and authoritative guidance and protocols."

A mobility plan was a key element of the Master Plan scope of work. The mobility plan "…integrates pedestrian, bicycle, vehicle, transit, and transportation demand management (TDM) strategies, and service-vehicle circulation. The mobility plan tests a range of mobility scenarios to address the complex mobility systems that converge on campus, and recommends an integrated strategy to address current and long-term conditions." Guadalupe Street is certainly a key part of this overall mobility plan by being a primary north-south corridor for pedestrian, bicycle, transit and automobile movements.

PEDESTRIAN MOVEMENTS: MALLS, PASSAGEWAYS, AND SIDEWALKS (UT CAMPUS MASTER PLAN)



BICYCLE FRAMEWORK (UT CAMPUS MASTER PLAN)

There are several key mobility goals to improve connectivity and address mobility conflicts from the Master Plan that are relevant to the Guadalupe Street corridor.

First, the goal to improve connectivity within and around the Core Campus area references key corridors "…including Dean Keeton Street, 24th Street, 21st Street, Speedway, Inner Campus Drive, and Guadalupe Street." Second, the goal to address mobility conflicts directly relates to the function of Guadalupe Street. The plan highlights some of the conflicts between mobility types by stating the "high density of the Core Campus is desirable, but in many places pedestrians come into conflict with bicycles, cars, and service vehicles. Improving the safety and efficiency for all modes is one of the major design challenges in the Core Campus."

Sustainability is also a key scope item in the Master Plan with multimodal options being a cornerstone of sustainability. "Efficient and well-coordinated mobility strategy improves accessibility for all and reduces carbon emissions. In addition to the environmental benefits, increased walkability and bicycle utilization increases physical activity, leading to better overall health."

Another goal is to utilize efficient land use principles around campus to promote "…sustainability through smart-growth development principles, use of existing infrastructure, and developing within walking and bicycling distance of the campus." Development within the campus footprint is shown in the Master Plan which anticipates the campus edge along the eastern side of Guadalupe Street to remain the same; however, new buildings are depicted at MLK Jr. Blvd and Guadalupe Street (currently under construction) and a proposed building at 26th Street and Guadalupe Street.

The Master Plan mobility section evaluates the different systems and focus areas:

- The Pedestrian system is the backbone of campus mobility as "(P)edestrian paths define the campus' main axes—the malls—and also comprise the fine-grained network of interstitial passageways formed by the arrangement of campus buildings."
- The Bicycle system is accommodated through providing "…a functional and attractive system of connections and paths, parking, and support services."
- The West Mall Guadalupe Street Gateway is the focus area most relevant to the Guadalupe Street corridor study area. The Master Plan recommends "…(i)mprovements to the pedestrian experience along Guadalupe Street by narrowing the street crossing at intersections and enhancing the streetscape along the street's western edge." It is anticipated that these improvements would "…transform the Guadalupe Street corridor pedestrian environment." The plan requests that at some point in the future "the University should work with the City and local businesses to devise a broader revitalization strategy for Guadalupe Street and the West University Neighborhood. This strategy should address land use and public-realm improvements in a way that balances community, university, and student resident interests."

The Master Plan shows the existing cross section and proposed a cross section that includes streetscape and crosswalk improvements that would improve the pedestrian environment. The cross section features special paving and bulbouts at crosswalks used to narrow pedestrian crossings and allow for future bus rapid transit accommodations.

GUADALUPE STREET, CIRCA 2012

GUADALUPE STREET PROPOSED SECTION (UT CAMPUS PLAN)

IMAGINE AUSTIN COMPREHENSIVE PLAN, 2012

The Austin City Council adopted the Imagine Austin Comprehensive Plan on June 14, 2012 (Ordinance No. 20120614-158).

The number one priority program of Imagine Austin, "invest in a compact and connected Austin," discusses long-term strategies to reduce dependence on driving including "improving rail and bus service, creating better bicycling routes, expanding our network of sidewalks and trails, and implementing travel demand strategies." The goals included for the priority program are to increase non-automobile trips and improve access to transit.

The comprehensive plan also contains multiple action and policy statements that informed the Guadalupe Street corridor goals and design considerations. Here is a sample of those statements:

- Land Use and Transportation Policy (LUT P)11. Promote complete streets design that includes features such as traffic calming elements, street trees, wide sidewalks, and pedestrian, bicycle, and transit access throughout Austin, considering the safety needs of people of all ages and abilities.
- LUT P12. Achieve the goals of area transit plans through effective planning, sufficient funding, and continued partnerships between the City of Austin, Capital Metro, and other transportation providers.
- LUT P19. Reduce traffic congestion, increase transit use, and encourage alternative transportation modes through such practices as Transportation Demand Management, which includes carpooling, flex time work schedules and subsidizing transit costs for employees.
- LUT P33. Apply high standards of urban design to ensure that "complete streets" are safe and accessible for all users. Encourage people to use alternative forms of transportation that are sensitive to the demands of the Central Texas climate.
- LUT P36. Transform all major streets into vibrant, multi-functional, pedestrian-friendly corridors.
- Land Use and Transportation Action (LUT A)1. Give priority to City of Austin investments to support mixed use, transit, and the creation of compact walkable and bikeable places.
- LUT A14. Increase public transit ridership.
    - Expand service to compact centers and activity corridors
    - Increase the number of people who use transit by choice
    - Create inviting public spaces at stops and transfer centers
    - Provide real-time schedule information
    - Add more covered bus shelters
    - Make stops more convenient
    - Add park and ride facilities
    - Make routes more convenient and the system more intuitive
    - Create street design standards (bus turnouts, sidewalk width, benches, shelter)
    - Give transit priority (queue jumpers, signal priority, managed lanes, and dedicated lanes)
    - Launch an informative and enticing public relations campaign
    - Implement first and last mile solutions such as carpooling, vanpools and bicycle and car sharing
    - Add more bicycle carrying capacity to buses and trains

COMPLETE STREETS POLICY, 2014

The Austin City Council adopted the Complete Streets Policy on June 12, 2014 (Ordinance No. 20140612-119).

The policy includes the City's commitment to "improvements that support safe, efficient, and convenient mobility for all roadway users – pedestrians, bicyclists, transit riders, and motorists – regardless of age or ability." Safety is singled out as "a fundamental consideration" of the Complete Street Policy.

The adopted Complete Streets principles include:

- *Complete Streets serve all users and modes.* The City of Austin commits to design, operate and maintain the community's streets and right-of-way so as to promote safe, comfortable and convenient access and modes of travel for people of all ages and abilities. This is the core intent of this policy.
- *Complete Streets require connected travel networks.* The City of Austin shall prioritize opportunities to create a complete transportation network that provides connected facilities to serve all people and modes of travel, now and in the future. Streets shall be connected to create complete street networks that provide travelers with multiple choices of travel routes and help to reduce congestion on major roadways. This network includes off-street hard-surface trails for biking and walking. All roadways and routes need not be optimized for all modes; however, people using each mode require a network of safe and convenient travel routes and crossings throughout the City.

CITY OF AUSTIN BICYCLE MASTER PLAN, 2014

The City of Austin Bicycle Master Plan adopted November 2014 was an update to the 2009 Bicycle Master Plan that was guided by the vision that "Austin is a place where people of all ages and abilities bicycle comfortably and safely for transportation, fitness and enjoyment. Bicycling brings benefits not just to people who bicycle, but to the whole community by helping to activate the Imagine Austin Comprehensive Plan for our shared sustainable future."

In fact, the Imagine Austin Comprehensive Plan adopted in 2012 was a large step forward in advancing a "compact and connected" vision for multimodal activity and growth along key transit corridors.

"The 2014 Bicycle Plan is shaped by Imagine Austin and will serve as a tool for implementing the comprehensive plan's policies and eight priority programs, including key support for compact and connected, affordable, healthy, workforce-related programs. Imagine Austin establishes big-picture,

long-range goals; the 2014 Plan addresses specific projects and programs to activate the comprehensive plan's principles over the next five years."

The guiding vision of the Bicycle Plan was to build a network that would be comfortable for cyclists of all levels to use. The protected bike lane includes "…a physical barrier between motor vehicle traffic and separation from pedestrian traffic. Protected bicycle lanes are a tool to make high-volume or high-speed streets comfortable for users of all ages and abilities."

The plan also provides several common strategies to implement bicycle facilities within constrained retrofit environments, similar to the study area section of Guadalupe Street. These strategies include:

- Narrow Existing Lanes
- Lane Conversions (Right Sizing Roadways)
- Street Reconstructions
- Private Development

The Bicycle Master Plan proposes a protected bike lane for the length of Guadalupe Street from MLK Jr. Boulevard to 29th Street and for the length of 24th Street from Windsor Road to Guadalupe Street.

Particular attention is given to the benefits of coordination between transit and cycling. A key objective of the plan is to "Fully Integrate Cycling with Transit Services". The plan exposes the mutual benefit of coordinating transit and cycling by solving the "first and last mile problem" to "effectively increase the service area for either end of a transit trip."

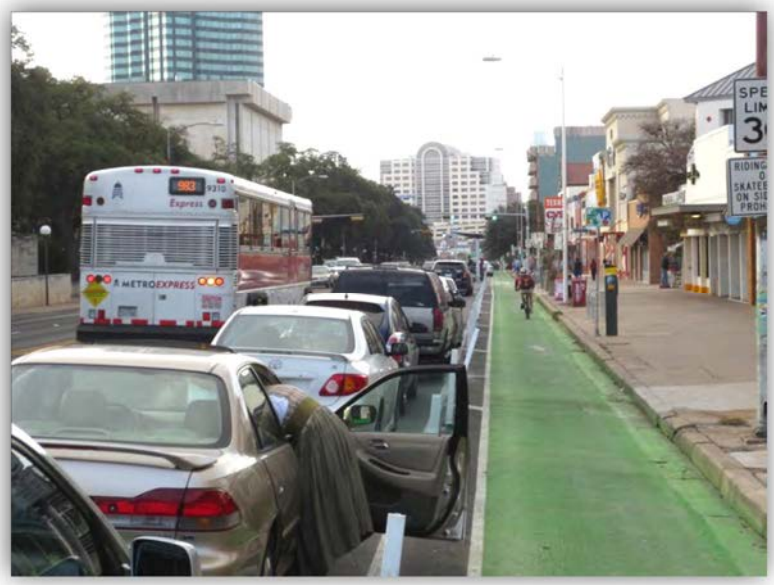
The plan highlights Capital Metro's proactive approach to providing "comprehensive training to their bus operators on sharing the road safely with cyclists." On the infrastructure side, "Capital Metro has recently installed high capacity bicycle parking shelters, branded as MetroBike at seven major rail and bus transfer stations. They have also increased the capacity on their bus racks from two bikes to three providing more reliable transport of bicycles, especially during peak periods."

The protected bike lane currently on Guadalupe Street is seen as a success that the plan calls out as a best practice. The Guadalupe Street/Lavaca Street Transit and Bicycle Accommodations (immediately south of the study area) are seen as a multimodal combination that has been a successful model for expanded use in the city. "In 2014, Capital Metro launched MetroRapid, a faster, more convenient transit service which includes signal prioritization, real-time arrival information and transit priority lanes through Downtown Austin along the Guadalupe Street and Lavaca Street corridors. These transit priority lanes are paired with buffered bicycle lanes and shared lane markings (i.e., "sharrows") throughout Downtown Austin. In addition to separated bicycle facilities throughout Downtown Austin, this project also allowed the City of Austin to upgrade the existing bicycle lane on Guadalupe Street near the University of Texas campus. This portion of the corridor includes the first green-colored bicycle facility physically separated from motor vehicles by parked cars, planters and pedestrian refuge areas."

A focus of the plan is to demonstrate the myriad of positive impacts of investments in cycling infrastructure. In the "Return on Investment" section, the plan demonstrates the "multidimensional benefits that we would expect to receive from the full investment in the recommended all ages and abilities network."

Several key ideas from the master plan are applicable specifically to the Guadalupe Street corridor including the impact of infill development to "diverting short driving trips to walking and bicycle trips" through increased density and diversity of uses. This Plan also identifies five elements of a "strong, comprehensive bicycle system" all of which can apply to the Guadalupe Street corridor:

- Create an All Ages and Abilities Bicycle Network
- Provide Comprehensive End-of-Trip Facilities
- Fully Integrate Cycling with Transit Services
- Maintain and Expand the Bike Share System
- Provide Superior Bicycle Facility Maintenance

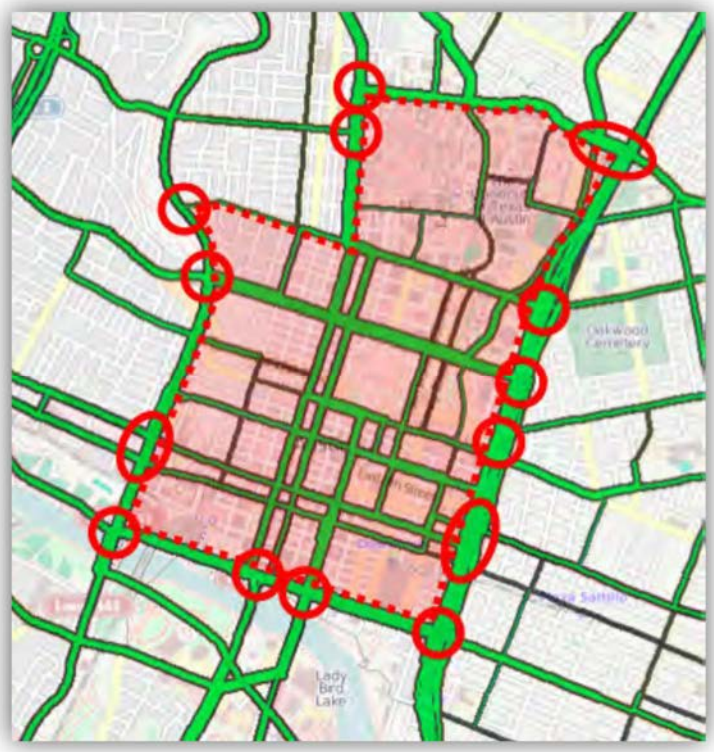


The Bicycle Master Plan outlines several focus areas for short term investment in the All Ages and Abilities Network. Two of these focus areas overlap in the Guadalupe Street corridor – Central City and Imagine Austin Centers and Corridors. Guadalupe Street is located in Central Austin where there is the "highest concentration of short trips because there are high density, mixed-use properties that are in close proximity to the region's primary employment center. The short trips in the central city present the most significant opportunity to reduce drive alone trips by substituting them with bicycle trips. As regional traffic issues are concentrated in the central city, the conversion trips to bicycle in this area represent a significant opportunity to address regional congestion while offering mode choice to those interested in traveling by bicycle."

Additionally, focus on the Imagine Austin Centers and Corridors are areas ripe for investment as these are "…places where there is a desire to create a dense mix of uses to encourage walkable, bikeable, and transit friendly areas."

Finally, the plan demonstrates the value not just to the users of a bike system but to other transportation users by showing the impact of bicycle investments towards solving Austin's intractable congestion problem. The Plan reinforces that a "…significant portion of our regional congestion is caused by local trips on our region's roadways. These trips are concentrated in the central city, to get into the central business district, the Capital Complex, and University of Texas campus. The boundary for this area has been locally termed the "ring of congestion" as the roadway network has a limited ability to allow additional motor vehicle access during peak periods." By focusing bicycle investment in the central Austin Corridors we can decrease congestion in one of the highest congested

areas in the City by converting short automobile trips into bicycle trips lessening the impact of automobile trips in the "Ring of Congestion".



AUSTIN'S "RING OF CONGESTION" –
THE CENTRAL BUSINESS DISTRICT, CAPITOL COMPLEX, AND UNIVERSITY AREA.
(AUSTIN BICYCLE MASTER PLAN)

VISION ZERO, 2016

On November 20, 2014, the Austin City Council approved Resolution No. 20141120-103 calling for the City Manager to create a Vision Zero Task Force to study this policy and produce a report, including any recommendations, to the Council.

On October 1, 2015, City Council approved Ordinance No. 20151001-058 amending the Imagine Austin Comprehensive Plan to prioritize transportation system safety and commit the City "to eliminating transportation-related deaths and serious injuries through a holistic Vision Zero approach."

On May 19, 2016, the Austin City Council approved Resolution No. 20160519-049 adopting the Vision Zero Action Plan, which was subsequently attached to Imagine Austin.

The plan's several key principles are:

- Traffic deaths and injuries are a preventable, public health issue. Any traffic death is too many.
- People will make mistakes; the transportation system should be designed so those mistakes aren't fatal.
- Safety is the primary consideration in transportation decision-making.
- Traffic safety solutions must be addressed holistically, through:
    - Education and culture change,
    - Enforcement and prosecution, and
    - Land use, planning, and transportation engineering.

STUDY AREA ISSUES AND OPPORTUNITIES

This section identifies some of the issues and opportunities as it relates to the assessment that was undertaken along the corridor. This assessment of issues and opportunities is categorized by: land use and design context and considerations; transportation and travel realm considerations, including transit and bicycle mode issues; and the overall corridor goal and mobility considerations.

LAND USE, URBAN DESIGN, AND PEDESTRIAN CONTEXT CONSIDERATIONS

This section of the Guadalupe Corridor carries a significant amount of automobile traffic and is one of the busiest pedestrian, bicycle, and transit corridors in the city. The demand will continue to increase as the University and the neighborhoods east of it keep growing as planned and indicated by market trends, but the current corridor is automobile capacity constrained.

Issue: *Constrained Right-of-Way*. The current constraint of the University campus on the east side of the corridor including the presence of a University-controlled retaining wall and existing mature trees limit any expansions of the existing right-of-way.

Issue: *Pedestrian Accommodation.* Several of the existing crosswalks do not meet ADA standards and any improvements should include ADA compliance as a priority.

Opportunity: *Improved and Coordinated Aesthetic*. Previous plans for the corridor and the UNO zoning identify some important urban design and development elements such as street trees, street furniture and sidewalk improvements that should continue to be incorporated as the project moves forward. In general, the existing clutter of street lights, traffic lights, signage, and parking meters should all be consolidated into a coordinated system that improves the overall corridor aesthetics.

Opportunity: *New Development*. New construction in the area is being built to the latest sidewalk UNO design guidelines.

TRANSPORTATION AND TRAVELWAY CONSIDERATIONS

This section focuses on the considerations that are specific to the travel way that is between the curbs. This includes a discussion of automobile, bicycle and transit traffic considerations.

ON-STREET PARKING

In theory, the on-street parking along the corridor provides short term parking for the local businesses fronting Guadalupe Street, but observations have shown that many people utilizing the on-street parking cross over to the University of Texas and are not patronizing local businesses. This parking acts more as teaser parking, with the majority of the parking spaces for businesses located behind stores on Guadalupe, on the adjacent streets and in nearby parking garages. While the on-street parking on Guadalupe Street is something that many of the business owners are opposed to losing, CapMetro is concerned about the friction between parallel parking and transit operations. CapMetro has communicated that automobiles often park too close to the transit lanes, which can result in lost mirrors or buses having to change lanes to get around the parked automobile; on the Guadalupe Street corridor, CapMetro has reported a high number of bus/parked car incidents. When a transit only lane is implemented, the on-street adjacent parking is removed, as seen on Lavaca Street.

STUDY AREA ROADWAY NETWORK

The existing roadways in the vicinity of the study area provide the necessary local access for all of the businesses and residents in West Campus. These local streets are misaligned and a mix of one-way and two-way streets. There are many considerations when converting a street from one-way to two-way operations; many of the facilities in West Campus were considered for change to add different parallel routes through West Campus to circumvent Guadalupe Street.

INFLUENCE OF ALL MODES OF TRAVEL

The Guadalupe Street corridor plays host to a significant amount of automobile traffic, and some of the highest bicycle, pedestrian, and transit traffic in the whole city. This mix of different modes of travel creates a complex design challenge to accommodate all modes efficiently. If all modes can't be effectively improved (e.g. the automobile capacity is constrained), it is beneficial in these situations to prioritize the different modes of travel to better utilize the corridor as opposed to inefficiently serving all modes of travel.

With the automobile capacity constraint, this study prioritizes improvements for pedestrians and transit users that are supported by the overall corridor goal and mobility considerations. By improving transit capacity in the corridor, it increases the people throughput through the corridor, which is discussed in the CapMetro memorandums (Appendix G). Based on an analysis from CapMetro, transit only lanes through this corridor "will save CapMetro buses up to 3 minutes in travel time" and they project that the "time savings alone will attract 218,000 new riders annually."

CORRIDOR GOALS AND MOBILITY CONSIDERATIONS

Based on direction from City Council, adopted policies, plans and zoning guidelines, and feedback from stakeholders, the following are key goals and considerations for the corridor:

- Increase non-automobile trips and improve access to transit (Imagine Austin)
- Prioritize modes as follows: pedestrians, transit, bicycle and cars (University Neighborhood Overlay (UNO) Design Guidelines, Ordinance No. 20040826-56)
- Create a safe environment for pedestrians and bicyclists along and crossing the corridor (public engagement, Complete Streets, and Vision Zero)
- Maintain a viable redevelopment context along the corridor for additional retail, service and residential uses to support the growing West Campus neighborhood (Central Austin Combined Neighborhood Plan (CACNP) and UNO)
- Improve/add streetscape improvements behind the curb to create a safer and more pleasant place for pedestrians and transit users. (Council Resolution No. 20130829-075)

CHAPTER 4: FUTURE SCENARIO ASSESSMENT

As discussed in the previous chapters, if all modes can't be effectively improved (e.g. the automobile capacity is constrained), it is beneficial in these situations to prioritize the different modes of travel to better utilize the corridor as opposed to inefficiently serving all modes of travel. Therefore, the only opportunity to significantly increase any mobility capacity to accommodate future growth along the corridor is to increase capacity for pedestrians, bikes and transit, while attempting to manage car traffic at current levels. The benefits of investing in bike, pedestrian, and transit improvements along Guadalupe Street can be significant. These modes can accommodate three times as many people moving though the corridor compared to cars alone.

By prioritizing transportation modes - such as walking, bicycling and transit – we will be able to maximize people mobility to anchor a vibrant, mixed-use university neighborhood, while creating a safe environment for pedestrians and transit users. To this end, several scenarios that implement this were generated and evaluated based on how they achieved the established goals of the corridor.

EVALUATED SCENARIOS

The public process and initial analysis of the corridor led to four scenarios that were evaluated for feasibility and operations. The scenarios created are as follows:

- Scenario 1: Transit Only Lanes on the Guadalupe Street Corridor – This scenario converts two lanes along the Guadalupe Street corridor from automobile traffic to transit only lanes.
- Scenario 2: Transit Rerouted to San Antonio/Nueces Street – This scenario relocates the transit service from Guadalupe Street corridor to San Antonio Street and Nueces Street.
- Scenario 3: Hybrid Scenario – Northbound Transit Only Lane with Southbound Transit Rerouted - This scenario is a mix of shared and dedicated transit facilities on the Guadalupe Street corridor, with the southbound transit operations rerouted to a parallel route through West Campus.
- Scenario 4: Hybrid Scenario – Northbound Transit Only Lane with Southbound Shared Transit Lane - This scenario is a mix of shared and dedicated transit facilities on the Guadalupe Street corridor without rerouting southbound transit operations.

Each of the scenarios also includes the reconfiguration of 24th Street from Lamar Blvd to Guadalupe Street from a four-lane undivided roadway to a three-lane roadway with a two-way left-turn lane and an eastbound bike lane, with westbound bikes sharing the travel lane. This will provide additional bicycle accommodations as recommended by the City of Austin Bicycle Master Plan and wider travel lanes for automobiles and CapMetro buses along the corridor. In addition, the turning movement volumes showed that there is a significant amount of turning traffic along the 24th Street corridor. The proposed three-lane cross section for this corridor would provide a dedicated left turn lane along the corridor, which would provide safer intersection and midblock operations. The intersection level of service is summarized in Chapter 5, which shows a slight increase in delay with the reconfiguration.

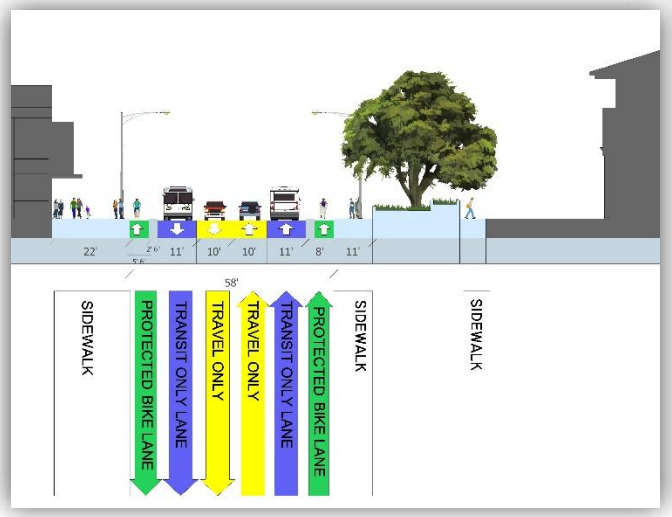
There is limited ROW on the north end of the Guadalupe Street corridor (north of 25th Street). Continuous bike lanes were not able to fit through this section of Guadalupe Street. To better accommodate bicycle traffic within

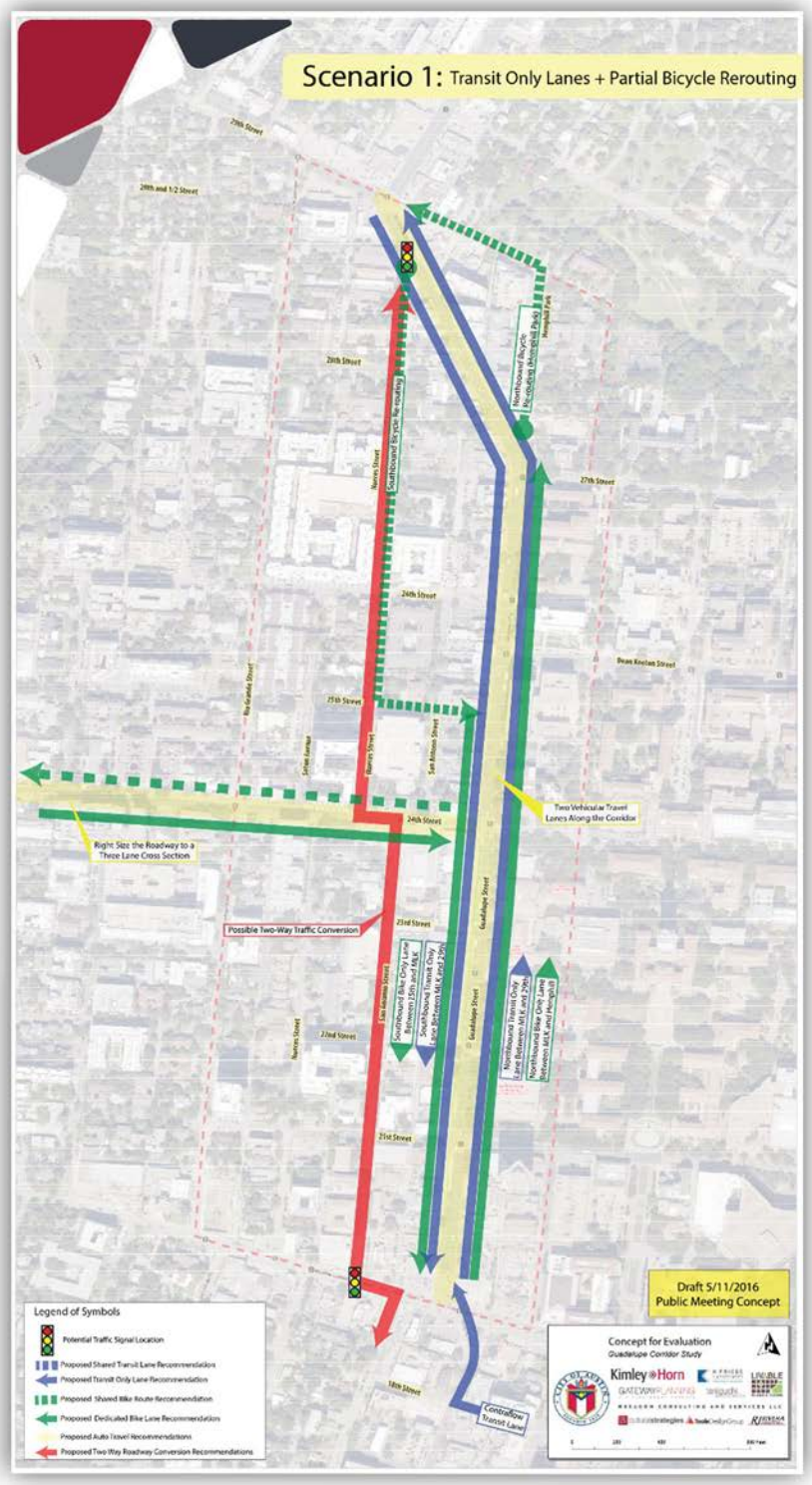
the study area, a parallel route was proposed along Nueces Street for southbound bicycle traffic and Hemphill Park for northbound bicycle traffic. This parallel bicycle route will provide a safer path for bicyclists on lower volume roads with additional space to accommodate them.

The on-street parking along Guadalupe Street was removed in each of the four scenarios. While the on-street parking on Guadalupe Street is something that many of the business owners are opposed to losing, CapMetro is concerned about the friction between parallel parking and transit operations; CapMetro has communicated that automobiles often park too close to the transit lanes, which can result in lost mirrors or buses having to change lanes to get around the parked automobile. When a transit only lane is implemented, the on-street adjacent parking is removed, as seen on Lavaca Street. This space was reallocated to provide room for wider sidewalks, protected or buffered bike lanes, and/or transit only lanes, consistent with adopted policies and plans. The preferred scenario recommendation includes signs that would assist automobile drivers to find parking in the area and the University of Texas has agreed to open their parking garage on San Antonio to allow parking for the businesses outside of business hours.

SCENARIO 1 – TRANSIT ONLY LANES ON THE GUADALUPE STREET CORRIDOR

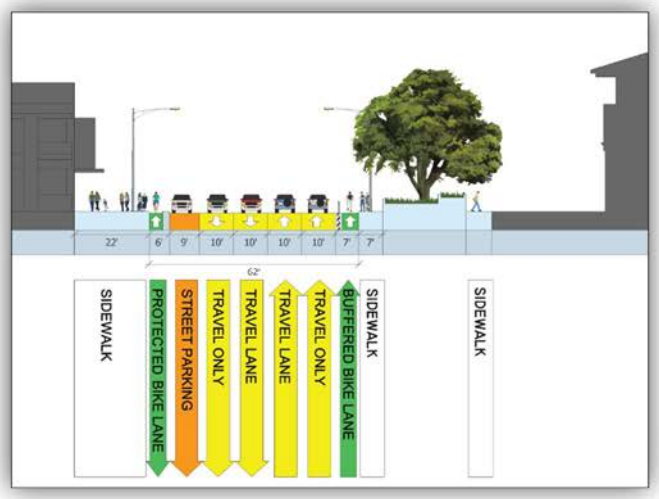
This scenario converts the two outer lanes along the Guadalupe Street corridor from automobile traffic to transit only lanes. The inside lanes on Guadalupe will remain as automobile traffic. To lessen the impact of this reallocation of automobiles, this scenario proposes converting Nueces Street north of 24th Street to two-way traffic operations and diverting all local traffic access in West Campus from Guadalupe Street to Nueces Street. This scenario shows a focus on transit along the Guadalupe Street corridor by providing more capacity and improved access for the transit buses in the form of transit only lanes as shown in the cross section below.

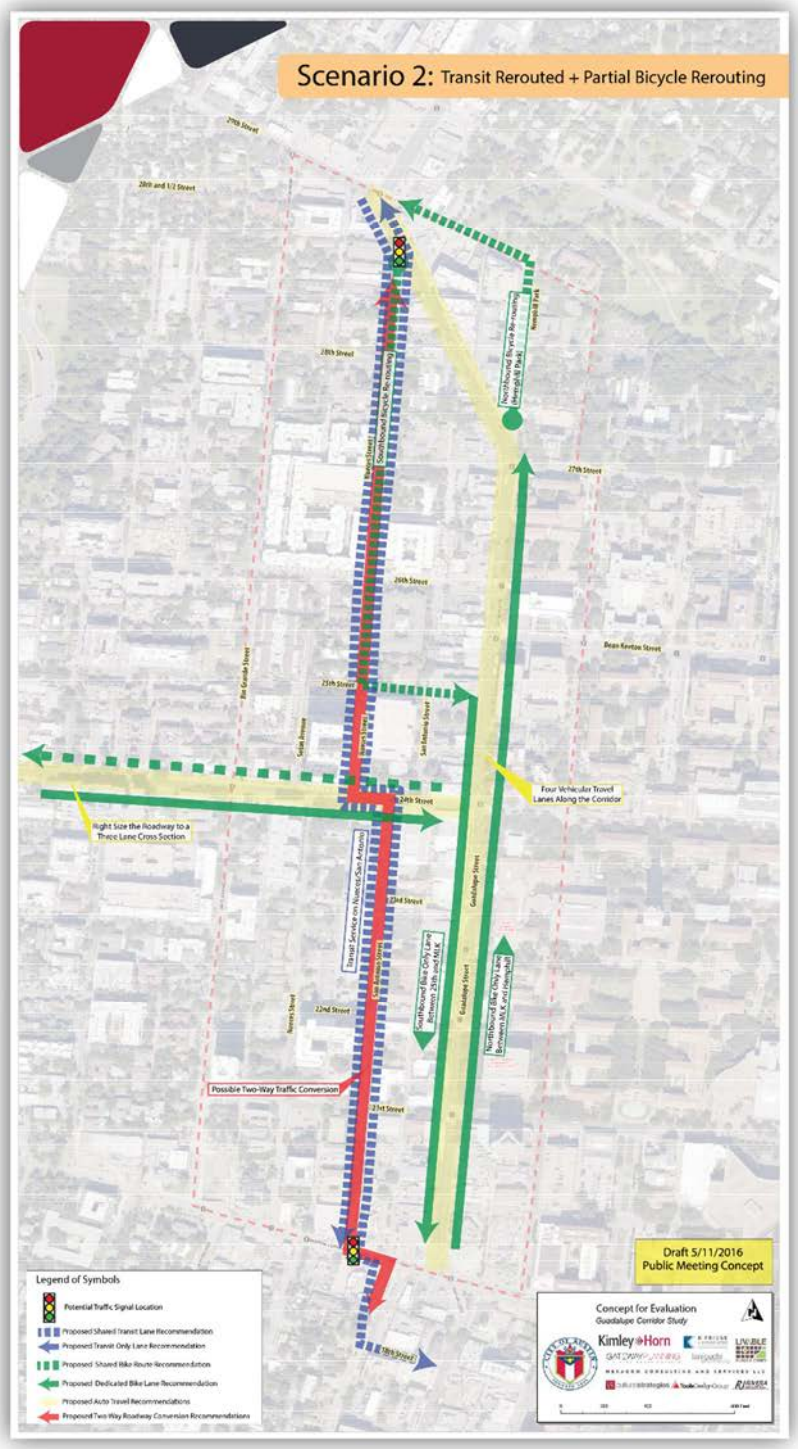




SCENARIO 2 – TRANSIT REROUTED TO SAN ANTONIO/NUECES STREET

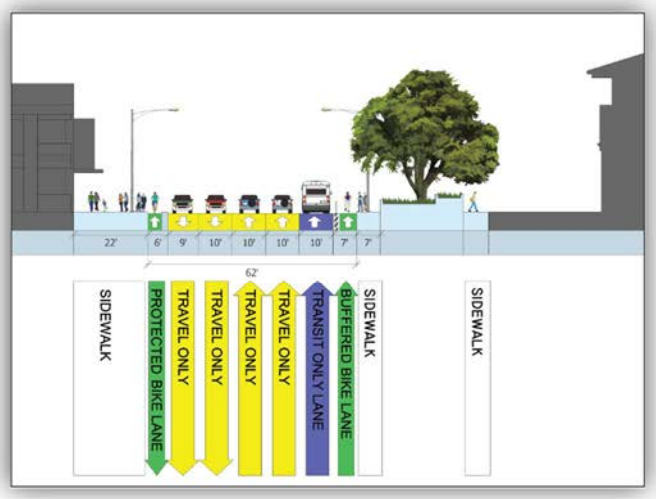
This scenario evaluated relocating the transit service from the Guadalupe Street corridor to San Antonio Street and Nueces Street. The relocation of the transit services allows for additional automobile capacity along the Guadalupe Street corridor. Also, without the transit stops, this will provide additional pedestrian walk space and decreased conflicts between the bicycles and pedestrians during transit boarding. The parallel transit route would require significant adjustments to accommodate two-way automobile travel and the addition of transit stops. The relocated transit facilities would decrease the convenience of using transit for passengers coming from the UT campus. Likewise, the pedestrian crossing volumes would likely increase on Guadalupe Street because pedestrians would need to cross Guadalupe Street to catch a northbound transit bus. This scenario shows an increased focus on automobile capacity on the Guadalupe Street corridor. The cross section below illustrates the four lanes of automobile capacity, buffered/protected bike lanes, and widened sidewalks.

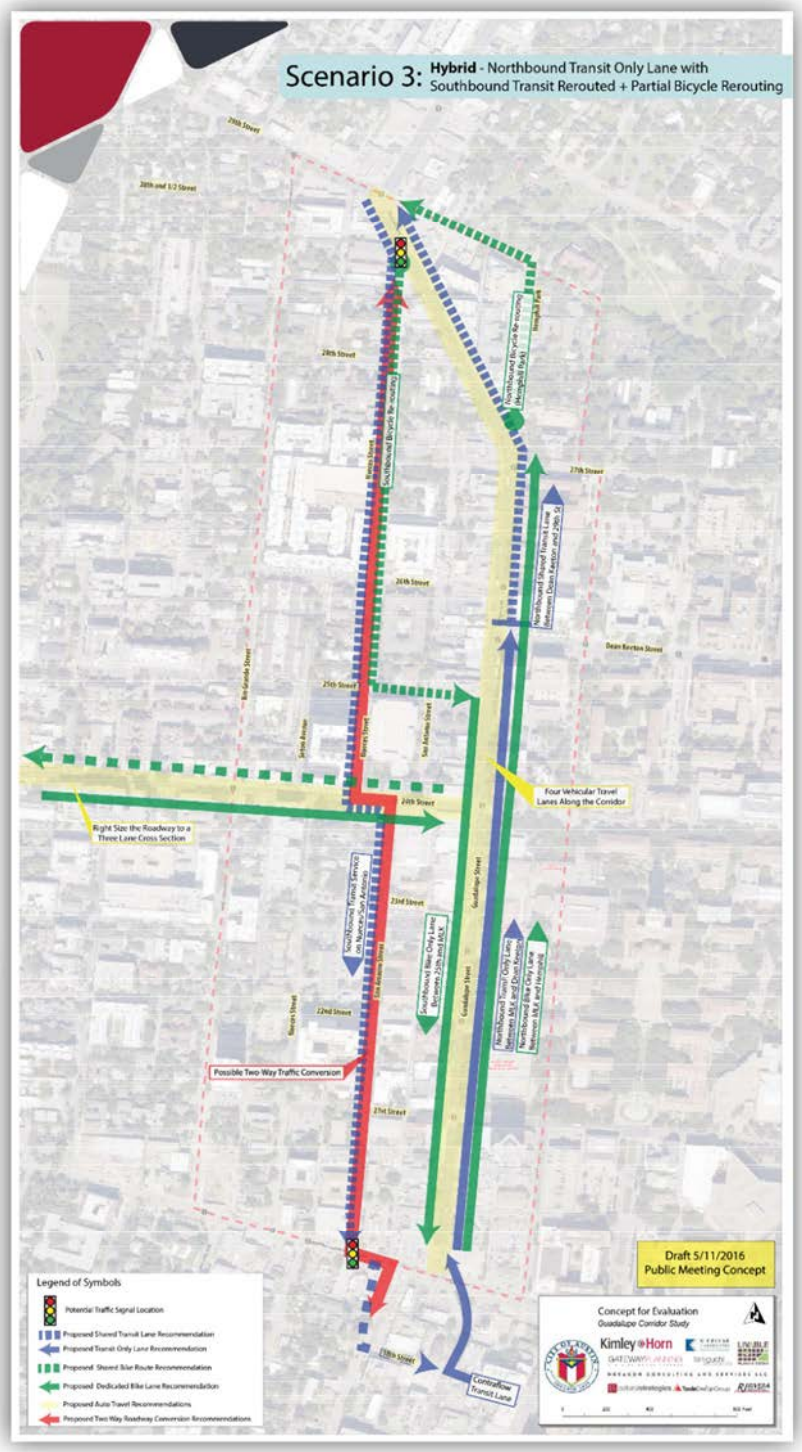




SCENARIO 3 – (HYBRID) NORTHBOUND TRANSIT ONLY LANE WITH SOUTHBOUND TRANSIT REROUTED

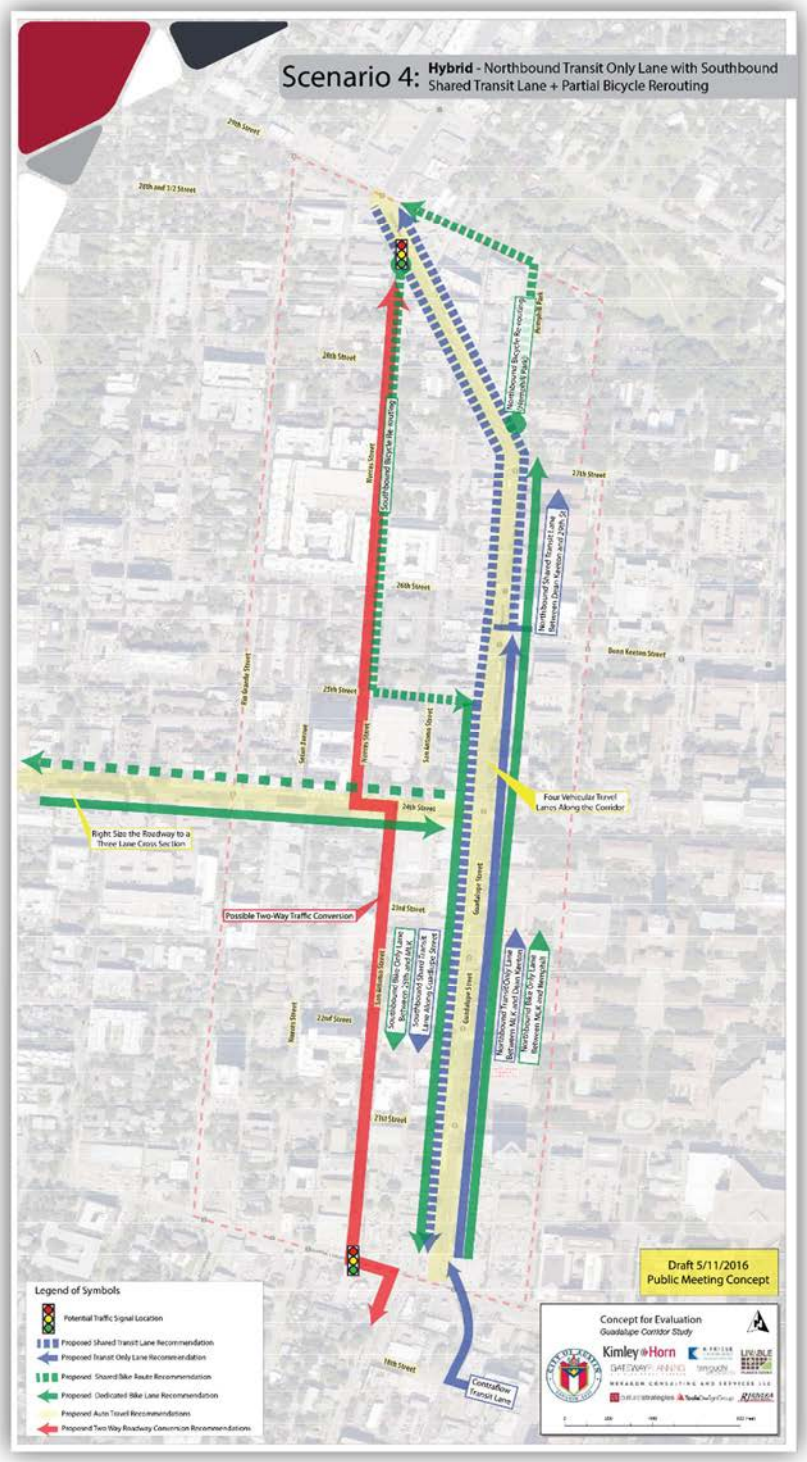
This scenario evaluated a mix of shared and dedicated transit facilities on the Guadalupe Street corridor. The northbound transit services would remain on Guadalupe Street in a dedicated transit only lane until Dean Keeton Street and then be in a shared lane from that point on. The southbound transit services would not stay on Guadalupe Street, and would instead be rerouted to a parallel corridor in a shared lane (San Antonio Street/Nueces Street). The relocated southbound transit facilities would decrease the convenience of using transit for passengers coming from the UT campus. The cross section below illustrates the travel lanes and northbound transit only lane.

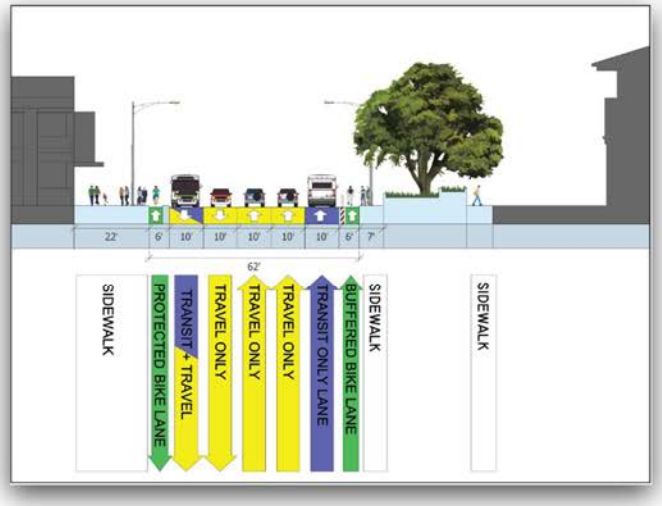




SCENARIO 4 – (HYBRID) NORTHBOUND TRANSIT ONLY LANE WITH SOUTHBOUND SHARED TRANSIT LANE

This scenario evaluated a mix of shared and dedicated transit facilities on the Guadalupe Street corridor. The northbound transit services would remain on Guadalupe Street in a dedicated transit only lane until Dean Keeton Street and then be in a shared lane from that point on. The southbound transit services would also stay on Guadalupe Street in a shared lane along the corridor. The cross section below illustrates the allocation of space within the ROW; showing the number of travel lanes, northbound transit only lane, and southbound shared transit lane.





DECISION MAKING TOOLS

Each scenario was further evaluated conceptually using the goal and key considerations of the project established by the stakeholders and public involvement input. This section provides a discussion of the qualitative and quantitative decision making tools used to arrive at the preferred scenario and improvement recommendations. The tools used to evaluate the scenarios include the following:

Regional Travel Demand Modeling: The Center for Transportation Research evaluated the study area transportation and transit services. This modeling performed the base evaluation for the feasibility of how different roadway cross-sections affected the regional vehicular traffic flow.

Capital Metro Ridership: CapMetro provided feedback on the scenarios and anticipated ridership volumes for transit only lanes.

Health Impact Assessment: The goals of the HIA were reviewed and measured for the different scenarios to determine the preferred scenario.

This section provides a summary of the technical assessment tools used to evaluate the different scenarios.

CENTER FOR TRANSPORTATION RESEARCH MODELING

The Center for Transportation Research (CTR) at the University of Texas further evaluated the scenarios using a regional demand model that incorporated transit assignment. The study area of the modeling effort was IH-35 to the east, 38th Street to the north, Cesar Chavez Street to the south, and Lamar Boulevard to the west. The objective of the study was to predict route changes and travel time gain/loss by passenger cars, as well as improvements in bus operations and its effect on passengers' route choice. The model simulated cars and buses in a mixed traffic condition to incorporate the effect of each mode on the other. A schedule-based transit assignment model was used in integration with the model to determine how transit users choose their paths and stops according to each scenario. This analysis tool was used to evaluate the feasibility of the options as well as the regional impacts of the proposed scenario improvements. The CTR modeling effort evaluated the relative differences between Scenarios 1, 2 and 3. Scenario 4 was a variation that was created after the CTR modeling was complete.

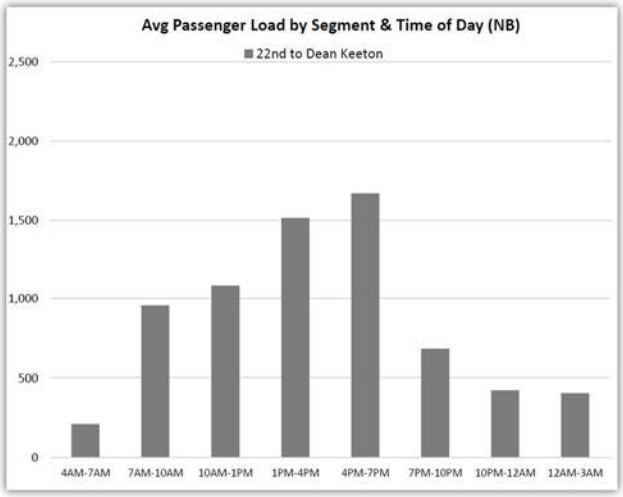
CTR MODELING CONSTRAINTS AND RESULTS

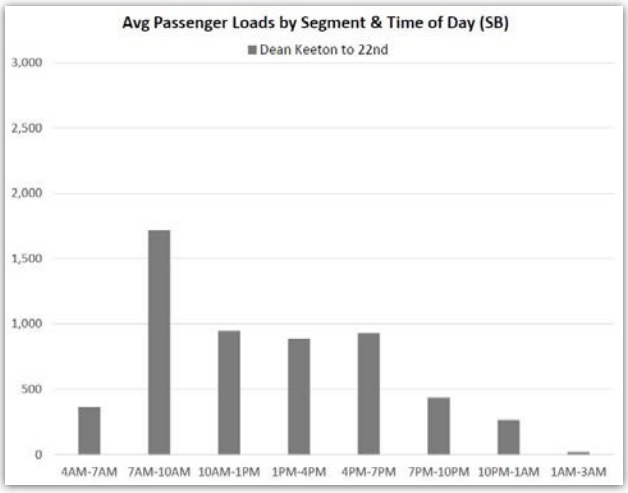
The model was run and calibrated using the existing traffic counts and regional travel demand projections. As mentioned in the existing transportation characteristics and conditions section of Chapter 3, the existing roadway network in the study area experiences a significant amount of latent demand. The model was planned to evaluate the future year traffic on the preferred scenario. Due to the latent demand and degree of congestion already in the study area, the model was unable to provide meaningful results for a future year analysis due to regional gridlock. This CTR modeling effort demonstrated that the corridor cannot build its way out of the congestion caused by future latent demand, and a purely level of service analysis cannot be the ultimate decision maker on the preferred scenario for Guadalupe Street. The model runs focused on evaluating existing traffic volumes, with different roadway configurations, as opposed to future volume scenarios.

The modeling effort evaluated the transportation impacts within the study area when the model roadway network was revised to reflect the different scenarios. The average travel times through the Guadalupe Street corridor change by scenario due to the revised roadway network. The results show that the transit priority and hybrid scenarios both show improvements during some scenarios and time periods when compared to the existing baseline scenario. The results of the study and analysis can be found in Appendix F.

CAPMETRO RIDERSHIP PROJECTIONS

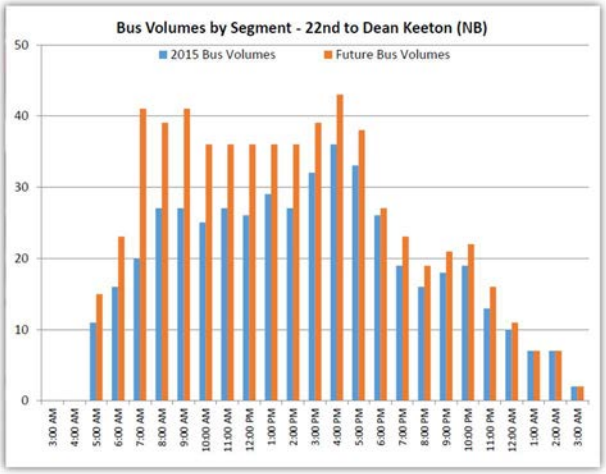
In addition to the existing and future traffic, the CapMetro transit service in the area plays a major role on the operations of the Guadalupe Street corridor. According to CapMetro, there are approximately 1,400 CapMetro buses that operate on the Guadalupe Street corridor per day which accounts for approximately 14,000 passengers. As shown in the graphs on this page, the peak ridership periods from 7AM - 10AM and 4PM - 7PM serve approximately 5,400 passengers (based on 2015 data). As expected, the existing service and ridership along the corridor is also projected to rise. Initial projections show that transit buses along the corridor should increase by up to 25% at certain peak times within the study area (see graphs on the following page). Similarly, the increased transit service is in response to the forecasted increased ridership. The transit only lanes are expected to "save CapMetro buses up to three minutes in travel time through the corridor", attracting "218,000 new riders annually to the corridor" (CapMetro Infographic, May 2016).

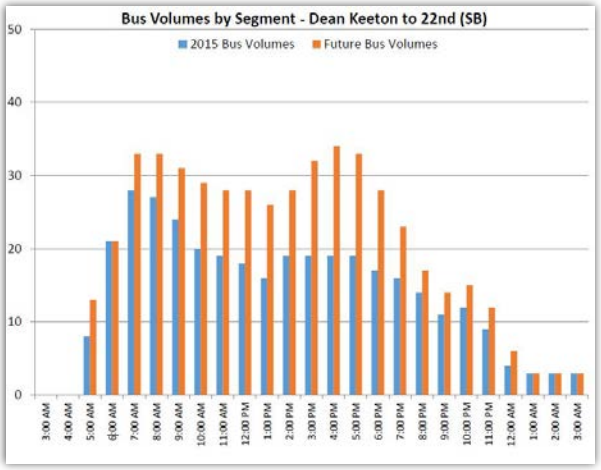




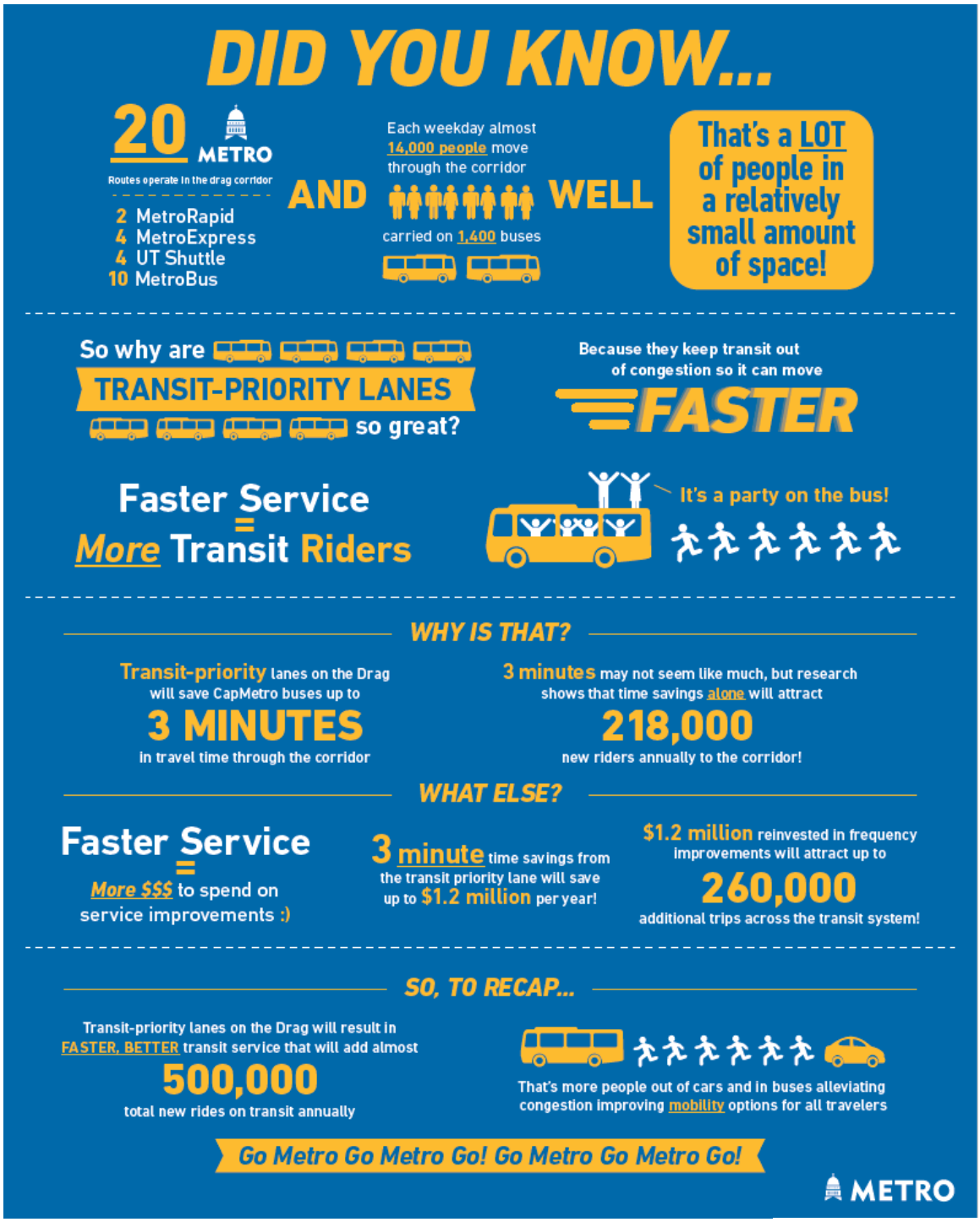
The CapMetro memorandums also discuss the benefits of dedicated transit only lanes in regard to transit operations and service.

"Research shows that transit priority lanes can carry more passengers per lane than general traffic lanes, thereby improving the efficiency and equity of the overall transportation system, especially in congested corridors. Bus lanes also improve the operating efficiency of transit service, which directly benefits riders by improving travel times and allowing for the reinvestment of operations cost savings into transit service improvements. Ultimately, such improvements attract more riders to transit, further benefiting the overall transportation system." (Mobility Benefits Resulting from the Implementation of a Transit Priority Lane on Guadalupe between Martin Luther King, Jr Blvd and 29th St) – April 20, 2016





The memorandum in its entirety can be referenced in Appendix G and the CapMetro infographic can be seen on the following page.


DID YOU KNOW...
20 METRO
Routes operate in the drag corridor
2 MetroRapid
4 MetroExpress
4 UT Shuttle
10 MetroBus
AND
Each weekday almost 14,000 people move through the corridor
carried on 1,400 buses
WELL
That's a LOT of people in a relatively small amount of space!
So why are TRANSIT-PRIORITY LANES so great?
Because they keep transit out of congestion so it can move FASTER
Faster Service = More Transit Riders
It's a party on the bus!
WHY IS THAT?
Transit-priority lanes on the Drag will save CapMetro buses up to 3 MINUTES in travel time through the corridor
3 minutes may not seem like much, but research shows that time savings alone will attract 218,000 new riders annually to the corridor!
WHAT ELSE?
Faster Service = More $$$ to spend on service improvements :)
3 minute time savings from the transit priority lane will save up to $1.2 million per year!
$1.2 million reinvested in frequency improvements will attract up to 260,000 additional trips across the transit system!
SO, TO RECAP...
Transit-priority lanes on the Drag will result in FASTER, BETTER transit service that will add almost 500,000 total new rides on transit annually
That's more people out of cars and in buses alleviating congestion improving mobility options for all travelers
Go Metro Go Metro Go! Go Metro Go Metro Go!
METRO

MAY 15, 2016

HEALTH BENEFITS

The health benefits of improving the quality of the walking and biking environment include increased levels of physical activity due to walking and biking for transportation or leisure purposes. The increased ADA compliance within the study area would eliminate barriers for all users. The streetscape amenities, such as shade trees and street furniture, will also help to improve pedestrian comfort while using the corridor within the study area.

The social cohesion benefits include higher levels of casual interaction, support, collective monitoring ("eyes on the street"), social trust, sense of community, and shared cultural identity. Above all, such improvements can also reduce the frequency and severity of traffic crashes, especially injury to pedestrians and bicyclists.

Key questions addressed for determining the health impact of each scenario were:

- Does the scenario increase the likelihood that people will continue to be physically active or increase opportunities for physical activities?
- Does the scenario reduce the injury risk, especially for pedestrians and bicyclists?
- Does the scenario increase ADA compliance?
- Does the scenario increase opportunities for shade for pedestrians walking along the corridor?
- Does the scenario reduce congestion, especially near the UT Austin campus?
- Does the scenario reduce confusion among travelers?

A summary of the impact on identified health concerns on the different scenarios is provided in the HIA in Appendix D.

SUMMARY

The future scenario assessment further validated the need for the corridor to become increasingly pedestrian and transit focused. Due to the regional gridlock within the study area, there was no solution that could build the corridor out of congestion. Instead a paradigm shift needs to occur to evaluate movement of people as opposed to focusing on automobile traffic. Automobile traffic does not have additional capacity to grow along the corridor or in the area. Instead, increasing transit, bicycle, and pedestrian trips is going to be critical to move more people through the Guadalupe Street corridor.

CHAPTER 5: PREFERRED SCENARIO AND RECOMMENDATIONS

The preferred scenario is a modified version of Scenario 1 that was presented in Chapter 4, which recommends transit only lanes along most the corridor and two-way operations for Nueces Street north of 24th Street. There were several factors that helped the consultant team evaluate the different scenarios as they made their final recommendations on the preferred alternative based on the current context along the corridor.

PREFERRED SCENARIO EVALUATION

This preferred scenario was evaluated in more detail using the following tools:

MULTIMODAL LEVEL OF SERVICE ANALYSIS

The goal and key considerations established for this project was to evaluate all modes of travel for the corridor. This tool is used to analytically compute level of service/level of comfort of all modes of travel along a study corridor. As previously mentioned, the results of the analysis are inconclusive due to how complex the Guadalupe Street and 24th Street corridors are relative to the refinement of the analysis metrics of the Highway Capacity Manual's Multimodal Level of Service tool.

INTERSECTION LEVEL OF SERVICE ANALYSIS

Similar to the CTR modeling macro analysis, a similar micro analysis was performed for the Guadalupe Street corridor and 24th Street corridor for the existing and proposed scenarios. The intersection analysis software was used to compare the traffic operations of the different scenarios to determine the benefit and impact on automobile traffic using the corridor. As previously mentioned, the existing study area has a significant amount of latent demand meaning a surplus of traffic would like to use the corridor and study area, but there is not enough capacity within the study area to accommodate the automobile demand.

The initial analysis showed the existing corridors operate at an acceptable Level of Service in the AM and PM peak hours (LOS C and D), but field observations and travel time runs in peak hours demonstrated the queue backups and latent demand for the corridor. If upstream congestion or gridlock exists, a reduced number of automobiles can travel through the intersection. From an analysis standpoint, the intersections appear to have additional capacity, but it is based on the automobiles actually traveling through the intersection. The intersection analysis is a good comparative tool between the existing and proposed conditions. The following table is a summary of the intersection level of service analyses for the existing and preferred scenarios during the AM and PM peak hours. There is a moderate increase in delay from the existing conditions to the preferred scenario due to the conversion of two automobile travel lanes to transit only lanes. However, the transit only lanes are expected to "save CapMetro buses up to three minutes in travel time through the corridor", attracting "218,000 new riders annually to the corridor" (CapMetro Infographic, May 2016). The additional transit capacity would likely result in additional pedestrians along the corridor as well.

Intersection	Existing Conditions				Preferred Scenario			
	AM		PM		AM		PM	
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
Signalized Intersections								
Guadalupe St @ MLK Blvd	19.9	B	32.9	C	31.7	C	46.7	D
Guadalupe St @ 21st St	16.7	B	36.4	D	11.3	B	52.5	D
Guadalupe St @ 22nd St	4.1	A	6.6	A	12.5	B	34.3	C
Guadalupe St @ UT Pedestrian Crossing	6.9	A	0.3	A	10.4	B	3.0	A
Guadalupe St @ 24th St	34.5	C	53.9	D	64.4	E	53.1	D
Guadalupe St @ Dean Keaton St	21.7	C	24.4	C	37.9	D	46.7	D
Guadalupe St @ 26th St	12.2	B	17.8	B	56.8	E	30.6	C
Guadalupe St @ 27th St	7.4	A	21.6	C	27.8	C	40.1	D
Guadalupe St @ Nueces St	Currently Unsignalized				67.1	E	76.8	E
Guadalupe St @ 29th St	15.2	B	23.8	C	32.2	C	53.1	D
Rio Grande St @ 24th St	15.0	B	22.7	C	17.3	B	22.4	C
San Antonio St @ 24th St	9.2	A	12.3	B	12.8	B	23.2	C
East Nueces St @ 24th St	5.4	A	6.5	A	7.3	A	14.7	B
West Nueces St @ 24th St	1.1	A	2.7	A	2.3	A	3.9	A
San Gabriel St @ 24th St	27.0	C	34.2	C	12.2	B	48.4	D
N Lamar St @ 24th St	56.7	E	66.9	E	57.1	E	61.0	E

CONSTRAINED RIGHT OF WAY

Most of the existing corridor is very constrained. This alternative provides a good opportunity for flexibility in the pedestrian realm and implementation of the desired goals of Guadalupe Street adjacent to UT Austin.

TRANSIT RIDERSHIP

The Guadalupe Street corridor is one of the heaviest transit corridors in the City and one of the best opportunities for transit only lanes. The dedicated lanes will provide for a meaningful improvement in the existing transit operations along the Guadalupe Street corridor. The preferred solution is the only scenario that provides transit only lanes in both directions and based on an analysis from CapMetro, transit only lanes through this corridor "will save CapMetro buses up to 3 minutes in travel time" and "time savings alone will attract 218,000 new riders annually."

BICYCLE RIDERSHIP

In addition, Guadalupe Street is also emerging as a major bicycle corridor due to the University location and ability to connect neighborhoods to the north with downtown. Likewise, the transit only lane will provide a buffer between the automobile travel lane and the dedicated bicycle lane.

PEDESTRIAN VOLUMES AND UNO ZONING

The study area and Guadalupe Street corridor experiences very high pedestrian crossing volumes; there are approximately 2,000 vehicles traveling north/south along Guadalupe Street with approximately 7,500 pedestrians crossing Guadalupe Street east/west during the PM rush hour. This is mostly due to the University of Texas campus

on one side of Guadalupe Street and off site residential housing on the other side that is rapidly densifying with the UNO zoning. The preferred concept converts the outside automobile lanes to transit only lanes and increases crossing safety due to decreased speeds of automobile traffic and decreased weaving maneuvers.

SAN ANTONIO STREET AND NUECES STREET

These roadways are currently one-way operations and are underutilized. The preferred concept recommends reconfiguring Nueces Street for two-way operations north of 24th Street to lessen the impact of the reallocation of automobiles on Guadalupe Street by diverting all local traffic access in West Campus from Guadalupe Street to Nueces Street. A new traffic signal is proposed at Guadalupe Street and Nueces Street. South of 24th Street, the existing couplet of San Antonio Street northbound and Nueces Street southbound will remain. Other connectivity options should be considered to enhance local access into West Campus via this secondary roadway network.

ULTIMATE GOAL FOR GUADALUPE STREET

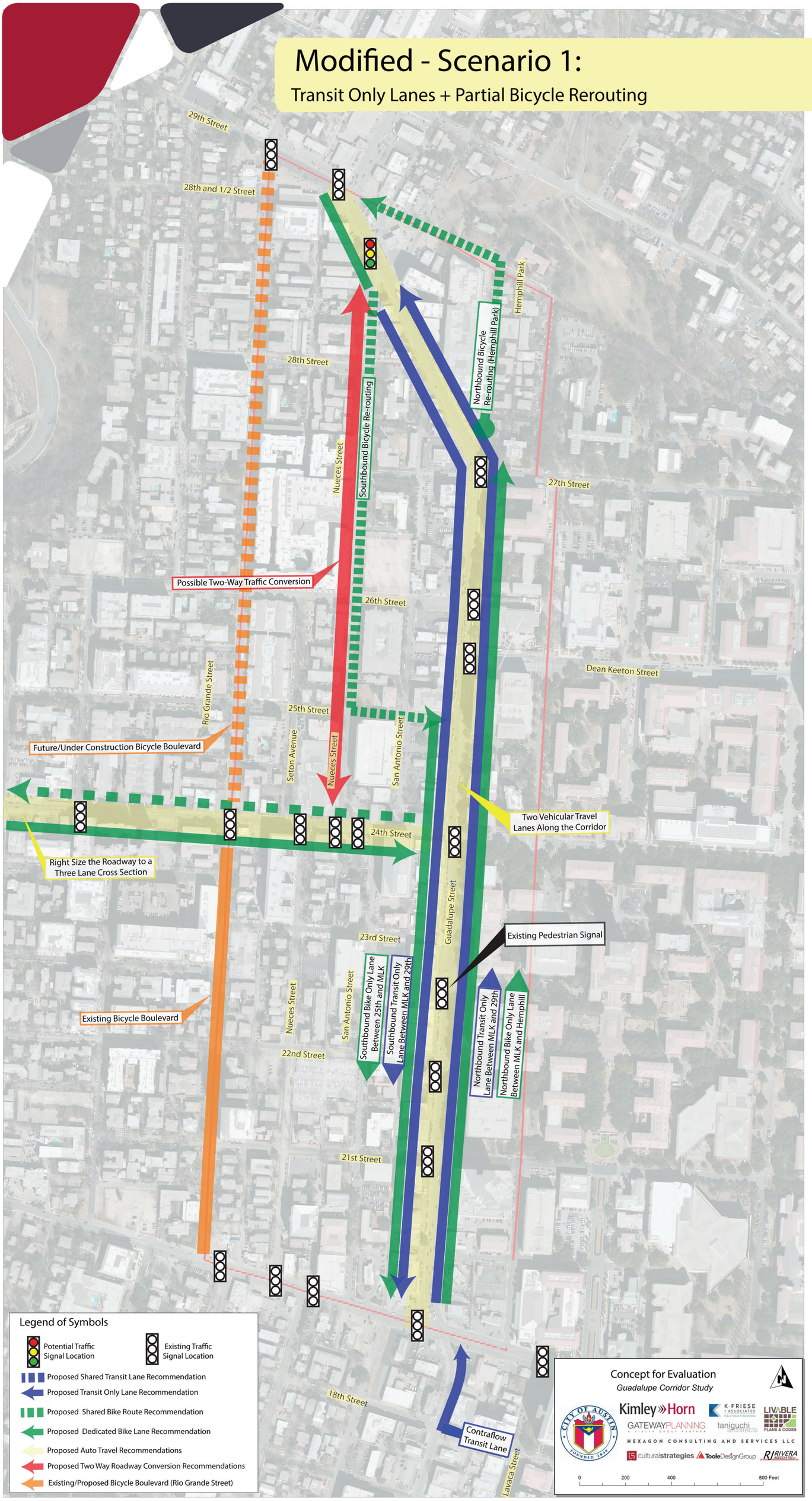
Given the above, the only opportunity to significantly increase any mobility capacity to accommodate future growth along the corridor is to increase capacity for pedestrians, bikes and transit, while managing car traffic at current levels. In fact, even scenarios that favor automobile traffic along Guadalupe (by moving transit and bikes off the corridor) do not show any improvement in automobile level of service given the City's overall network capacity limitations. Conversely, the benefits of investing in bike, pedestrian, and transit improvements along Guadalupe can be significant. These modes can accommodate three times as many people moving though the corridor compared to cars alone. In addition, such improvements are in line with City Council adopted policies including Imagine Austin, the UNO Zoning District, 2012 Bond Development Process goals, City's commitments and initiative, and project partner goals, as discussed in Chapter 3. In fact, UT, CapMetro and a majority of the stakeholders attending the public workshop, based on written comments, are in support of the scenarios that provided transit-only lanes, improved pedestrian facilities, and bicycle facilities during this process.

PREFERRED SCENARIO

Based on the above discussion, the preferred scenario was a modified version of Scenario 1 as seen on the following page. This modified version of Scenario 1 included transit-only lanes along this section of Guadalupe Street. Based on public input, the recommendation of two-way traffic on San Antonio Street south of 24th Street was removed. The two-way traffic recommendation for Nueces Street north of 24th Street is still recommended with a new traffic signal at Guadalupe Street and Nueces Street. The following pages show the preferred scenario concept, an existing photo and a future rendering of not just the roadway improvements, but how the overall concept can reinvigorate an already vibrant area.

Modified - Scenario 1:

Transit Only Lanes + Partial Bicycle Rerouting



GUADALUPE ST EXISTING CORRIDOR

GUADALUPE ST CORRIDOR WITH PROPOSED IMPROVEMENTS

As shown in the rendering of the corridor, the roadway itself is different, but there are also other significant differences:

Street Trees are now prevalent on both sides of the corridor providing shade for the pedestrian and bicycle paths consistent with the Great Street planning document design criteria.

Streetscape and restaurant seating line the west side of the Guadalupe Street corridor creating additional opportunities for restaurants to gain seating capacity, while providing additional opportunities to spend additional time on the corridor as a pedestrian. This includes tree wells, sidewalk and streetscape criteria and landscaping requirements. In addition, wider sidewalks on the east side will improve pedestrian safety and comfort. The streetscape reflects the goals of the Great Streets Master Plan, UNO Design Guidelines and CACNP.

Parallel Parking is removed to make additional room for improved bicycle accommodations on both sides of the roadway as well as pedestrian way improvements. The project team met with key stakeholders to discuss the priority of various corridor elements. Although an amount of parallel parking would be removed, there is still parking behind the buildings and the addition of dedicated transit and bicycle accommodations promote sustainable modes of travel.

Americans with Disabilities Act (ADA) Compliance is critical to the corridor. The concept shows sidewalk reconstruction as needed, reconstructed curb ramps, and signal improvements to be ADA compliant.

The preferred corridor plan and cross section helps to clearly define a more consistent context and feeling of the Guadalupe Street corridor and study area as a whole.

ADDITIONAL RECOMMENDED IMPROVEMENTS

The table on the following page provides additional specific improvements within the study area as part of the implementation of transit only lanes on Guadalupe Street, converting Nueces to a two-way street between Guadalupe Street and 24th Street, and converting 24th Street to a three-lane cross-section.

OTHER POTENTIAL IMPROVEMENTS

The City will consider various potential modifications to improve circulation, pedestrian life and business access and work with property owners and businesses concerning commercial and drop-off parking opportunities. There are many streets to analyze and consider changing from one-way to two-way or vice-versa depending on its benefit to circulation and parking. The City can add parking signage to guide motorists to parking garages in the West Campus area. Traffic signal operations will continue to be reviewed and pedestrian scramble phases could be implemented at strategic locations for signalized intersections with high pedestrian crossing volumes if they are warranted. These potential improvements are for the City to consider as they continue to work with various property owners and businesses.

RECOMMENDED IMPROVEMENTS

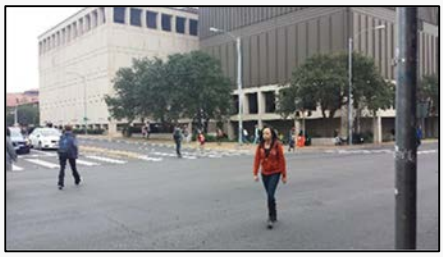
(in addition to transit only lanes on Guadalupe Street, two-way conversion of nueces street, and converting 24th street to a three-lane cross-section)

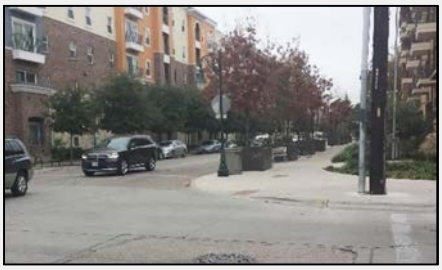
Location	Cross Street	Improvements
Guadalupe Street at	29th Street	Add EB/WB protected left turns
		Advisory speed limit signs
		Speed reduction pavement markings
		Improve intersection lighting
		Relocate bus stop to far side of intersection
		Install intersection bulb outs to reduce crossing widths
	Nueces Street	Realign Intersection and signalize to better accommodate pedestrians and new traffic movement
	28th Street	Prohibit northbound left turning traffic
		Add pedestrian hybrid beacon or enhance crosswalk
		Intersection bulb outs to reduce crossing widths
	27th Street	Flashing yellow arrow implementation (Southbound)
		Extend pedestrian clearance interval
		Advisory speed limit signs
		Speed reduction pavement markings
	Dean Keaton Street	Extend pedestrian clearance interval
		Change second left turn to a shared bike westbound left turn
	24th Street	Relocate east bus stop to far side
		No right on red for southbound approach
	Pedestrian Crossing	Raised Bike Lane Crossings
		Raised Crosswalk
	E 22th Street	Consider closing east leg of intersection accessing Guadalupe
		Yield to bikes signs
		Add leading pedestrian interval
		Prohibit southbound right turns
	21st Street	Prohibit southbound left turns at intersection
	20th Street	Prohibit southbound left turns at intersection
	MLK Boulevard	Revised intersection geometry, possible shared westbound through/left for second from the outside lane
		Yield to bikes signs
		Extend pedestrian clearance interval
		Improved intersection lighting
		Close advanced westbound left turn lane
Nueces Street at	Guadalupe Street	Signalize and reconfigure eastbound approach at intersection
	26th Street	Possible traffic signal if running two-way operations
	24th Street	Reconfigure intersection for two-way operations
MLK Boulevard	Lavaca Street	Realign queue jump to contra flow on MLK
24th Street Corridor	Between Lamar Blvd and Guadalupe Street	Restripe to provide better bicycle accommodations (3 lanes with eastbound bike lane)
		Lay-down corners or larger curb return radius at intersections
	at Nueces Street and San Antonio Street	Reconfigure intersections to better align with one another
General Improvments Throughout the Study Area	Confirm Locations of Pedestrian Scramble Phases, including the intersections of Guadalupe St and 26th St and Guadalupe St and Dean Keeton St and consider the intersections of Guadalupe St with 22nd St and 24th St.	
	Crosswalk, ADA and Pedestrian Curb Ramp Improvements	
	Corridor Aesthetics/Streetscape Improvements	
	Flashing Yellow Arrow Implementation	
	Restripe Crosswalks with Continental Bars	
	Bike Boxes	
	Bulb Outs to shorten crosswalks	
	Strategic bus stop locations	
	Wayfinding signage for off-street parking areas	
	City to continue to explore east-west connectivity improvements	

HEALTH IMPACT ASSESSMENT (HIA) RECOMMENDATIONS

One of the key tools in this initiative has been the HIA. In fact, several health benefits and outcomes were identified with corresponding infrastructure improvements in addition to general recommendations for the corridor. Both sets of recommendations are summarized in the following two tables:

Recommended Infrastructure Improvements	
Desired Outcome:	Recommendations:
MAINTAIN AND INCREASE ACTIVE TRANSPORTATION AND LIFESTYLE	• Extend the length of physically separated bike lanes or establish lower stress alternative • Dedicated bus lane to improve transit travel times • ADA-compliant sidewalks, curb ramps and crosswalks • Improve east-west travel options with longer crossing times for pedestrians, bicycle signals for key intersections (such as Guadalupe and 24th), and additional crossing locations to serve transit riders and other locations (such as marked mid-block crossings) • More attractive streetscape, including shade and better trash management
REDUCE RISK OF INJURY	• Separated bike lanes or lower stress alternative such as along Nueces Street and Hemphill Park • ADA-compliant sidewalks, curb ramps and crosswalks • Regular maintenance to keep curb ramps and bikeways clear of debris
INCREASE PEDESTRIAN SAFETY AND EASE OF TRAVEL	• Reduce conflict points with right- and left- turning automobiles • Improve east-west travel with longer pedestrian crossing times and improved crossings at unsignalized locations • Install more pedestrian scale lighting to increase personal security • Reduce automobile travel speeds
IMPROVE COMFORT ALONG THE CORRIDOR	• Provide more locations with shade for both transit riders and others with a streetscape plan and more bus shelters • Reduce the amount of trash at certain locations by working with adjacent property owners to establish a program to keep the sidewalks clean
ENSURE COHERENCE FOR ALL TRAVELERS	• Install operational and way-finding signage • Install bicycle signals • Clear paths of travel

General Recommendations	
Recommendations:	Impact on health concerns and health benefits:
Pedestrian Scramble Phases	General benefit: Reduces potential conflicts between pedestrians and turning vehicles Health benefit: Reduces risk of injury; increases comfort  Pedestrian scramble at Guadalupe and Dean Keaton
Crosswalk, ADA and Pedestrian Curb Ramp Improvements	General benefit: Provides accessible street crossings for people with disabilities; increases the capacity of crossings for all users Health benefit: Maintain and increase active transportation and lifestyle  Example of a non ADA-compliant curb ramp (curb ramp does not align with crossing)
Corridor Aesthetics/Streetscape Improvements	General benefit: Creates a more attractive, welcoming corridor, which can support economic vitality Health benefit: Maintain and increase active transportation and lifestyle; Establish comfort along the corridor  East side (UT) currently with an upgraded street scape.

Restripe Crosswalks with High Visibility Markings	General benefit: Clearly establishes pedestrian network facility Health benefit: Increase pedestrian safety and ease of travel; Ensure coherence for all travelers[2]  Example of existing faded parallel (transverse) bar marking
Curb extensions to shorten crosswalks	General benefit: Shortened crossing distance reduces pedestrian and bicyclist exposure; makes both more visible to drivers Health benefit: Reduce risk of injury; increase pedestrian safety and ease of travel  Example of a curb extension in Tacoma, WA
Bike Boxes	General benefit: Provides bicyclists with a safe and visible way to get ahead of queuing traffic during the red signal phase; increases predictable behavior for bicyclists[3] Health benefit: Reduce risk of injury; increase ease of travel; maintain and increase active transportation and lifestyle  Bike Box at Speedway and 38th Street[4]

[2] http://www.fhwa.dot.gov/publications/research/safety/pedbike/10067/

[3] http://nacto.org/publication/urban-bikeway-design-guide/intersection-treatments/bike-boxes/

[4] http://nacto.org/case-study/bike-box-at-speedway-and-38th-st-austin-tx/

Enhanced bus stops	General benefit: Increases on-time performance; supports ridership growth Health benefit: Maintain and increase active transportation and lifestyle  Enhanced stop serving MetroRapid bus passengers includes shelters, benches, and real-time arrival information
Install permissive/protected left turns with a green or yellow flashing turn arrow Recommend signage alerting motorists to yield to pedestrians and bicyclists when turning left on a green or yellow flashing arrow	General benefit: Reduced vehicular crashes[5] Health concern: Increased risk of injury for pedestrians and bicyclists[6]  Example of left turn flashing yellow arrow

[5] https://edocs.publicworks.houstontx.gov/documents/divisions/traffic/info_guide_flashing_yellow_left_turn.pdf

[6] http://www.citylab.com/commute/2013/05/flashing-yellow-turn-signal-good-drivers-bad-fo-pedestrians/5450/

SUMMARY

The selection of a preferred scenario and recommendations have been evaluated using a variety of analysis metrics and techniques, vetted through public involvement and a stakeholder process, and measured against the goals of the Health Impact Assessment. A modified version of Scenario 1, which recommends transit only lanes along a majority of the corridor, is the preferred scenario for these reasons and is consistent with Imagine Austin policy and other related policies of the City of Austin.

CHAPTER 6: PROJECT IMPLEMENTATION

The overall improvement recommendations will require several steps forward to be implemented. This section attempts to highlight those necessary steps, funding and implementation partners, and other considerations that affect the goal set forth for the Guadalupe Street corridor.

COST ESTIMATES

The total project cost is estimated at $33,700,000.

The implementation of the Guadalupe Street Corridor and West Campus Development Report recommendations within the study area is estimated to cost $33.7 million. The following table provides a summary of the opinion of probable construction cost for the corridor, prior to any design.

These cost estimates include an allocation for ROW acquisition; generally, sufficient ROW exists along Guadalupe Street to implement the identified improvements, but there may be ROW required at specific intersections. However, based on topographic and boundary survey information that will be collected during the engineering phase of each project, there may be a need for a consideration of different design options based upon localized ROW constraints. Design options may also be influenced by other factors, such as existing community feedback upon the specific design solutions for that segment of the corridor. The cost estimates attached are in 2016 dollars which includes a 10% inflation factor as well as a 20% contingency.

Guadalupe Street Corridor Development - Opinion of Probable Construction Cost

By Segment	Cost
SEGMENT 1: Lavaca Street from 16th St to 18th St; Guadalupe St from 18th St to 20th St	$ 1,930,000
SEGMENT 2: Guadalupe St from 20th St to 25th St	$ 3,820,000
SEGMENT 3: Nueces St from 25th St to 27th St; Guadalupe St from 25th St to 27th St	$ 5,246,000
SEGMENT 4: Nueces St from 27th St to Guadalupe St; Fruth St from Guadalupe St to 29th St; Guadalupe St from 27th St to 29th St	$ 3,546,000
SEGMENT 5: 24th St from Nueces St to Lamar Blvd	$ 3,557,000
Construction Cost Sub Total	$ 18,100,000
Inflation Contingency (10%)	$ 1,810,000
Franchise Utility Relocates (5%)	$ 905,000
Engineering, Surveying and Testing (20%)	$ 3,620,000
Mobilization (6%)	$ 1,086,000
ROW/Easement Acquisition (20%)	$ 3,620,000
ROW Prep (5%)	$ 905,000
Contingency (20%)	$ 3,620,000
Conceptual Project Cost Total	$ 33,700,000

FUNDING SOURCES FOR CORRIDOR IMPROVEMENTS

In today's funding realities and given the scale of the project, it will take several government funding sources for the reinvention of Guadalupe Street and other study area improvements. This section addresses the opportunity for a bond to fund the project as well as other major funding sources that could be considered for public improvements within the study area.

Bond Program: Based on the scale and scope of the improvements proposed for the Guadalupe Street corridor, funding the project through the City's general bonding authority is the most likely source. The recommendations will be evaluated along with the improvements in all other corridors to develop a recommended Corridor Construction Plan for Council's consideration. The benefits from the proposed improvements will be regional and go beyond the corridor itself.

Tax Increment Financing (TIF): In order to take advantage of private development potential at key locations along the corridor and to provide additional funding for project or area-specific improvements for public infrastructure (including drainage, water quality, and the connecting street network), a tax increment financing district could be a tool for several areas along the corridor.

Due to the additional planning and redevelopment efforts currently underway within the study area, this is a candidate for the creation of a TIF district. Future increases in tax revenues to the City can be reinvested into the corridor through the creation of a TIF district and its associated financing and infrastructure program. A list of prioritized catalytic infrastructure projects should be identified for advance funding through the TIF; in other words, if an infrastructure project provides benefits to multiple property owners or cannot be undertaken by any one property owner, it should be undertaken with up-front TIF funding (via revenue bonds).

There will be corridor improvements that can be undertaken by or combined with individual redevelopment projects to gain economies of scale. Such projects may be funded by private investment that is later reimbursed through the TIF based on development performance. Any TIF that is created should have clear policy recommendations for how projects are evaluated and prioritized for funding on an on-going basis.

State and Federal Roadway Funds: The future vision for the study area is consistent with the region's desire to create multimodal urban corridors that connect emerging and developed activity centers, as seen in the CAMPO 2040 Regional Transportation Plan. Typically, calls for projects in this funding category require additional local match funding. However, federal agencies have looked much more favorably on transportation projects that have significant private sector involvement and where the benefits are not focused solely on the provisions for automobile traffic, but rather examine multimodalism and the relationship between redevelopment initiatives and a reinvented roadway. State and federal funding may be available through coordination with TxDOT and through CAMPO future call for projects.

CHAPTER 7: FUTURE POLICY STRATEGIES FOR THE CORRIDOR

The following section outlines the likely needs within the corridor over the next 20 years, and suggests policy revisions and implementation strategies that can help achieve the goal set forth while meeting the projected needs within the corridor.

FUTURE CORRIDOR NEEDS

The Guadalupe Corridor will continue to evolve over the coming decades. That evolution and reinvention can bring about great change in terms of place making and implement the ultimate goal for the corridor. Traffic congestion will never be solved, however, more people can move through the corridor comfortably while the corridor supports a more economically sustainable pattern of mixed-use development. The explosion of development in West Campus has increased the number of people who live within walking distance of campus and the commercial strip, thus increasing the percentage of trips taken on foot or by bike. As the sections of the corridor continue to evolve, especially south of 21st and North of Dean Keaton Street, away from auto oriented uses to walkable urban forms, the UNO zoning guides the interaction between development and the streets.

EXAMPLE POLICY LANGUAGE

The following is an example of a potential policy and decision-making process for determining access to Guadalupe Street. Access drives along Guadalupe Street should be limited unless a property has no direct or indirect access (through cross-access easements) to an alley or an east-west street. Historically, transportation and access management plans have concentrated primarily on efficiently controlling the movement of vehicles, by seeking to reduce conflicts and maximizing the traffic capacity of a roadway. This policy seeks to balance the access requirements for private development with the desire to maintain a safe and continuous pedestrian environment along Guadalupe with limited interruptions through private driveways.

Left Turns: Left Turns should only be provided for at designated street intersections. Spacing between the turns must be adequate to allow for introduction of left turns with proper deceleration and storage lengths.

Shared Access: Shared access drives or lanes should be established through the use of shared access easements for landowners to connect adjoining properties and to the city street system. This will reduce direct private driveway access along Guadalupe Street and increase safety by a reduction in conflict points between the different modes of travel. When possible, shared access should be accomplished through placement of access connections on shared parcel lines or through private drives, streets and stub-outs. When applicable, owners and permittees of parcels may enter into an agreement for reasonable access, ingress and egress between property lines for the purpose of paved driveways, roadways and/or walkways.

FUTURE LAND USE STRATEGIES

With the passage of the University Neighborhood Overlay many of the typical concerns regarding streetscape, urban design and appropriate density have been addressed. It is recommended to periodically reevaluate the zoning code over time as West Campus continues to transition to one of the preeminent urban neighborhoods in Texas. As the neighborhood is built out and transitions it may be appropriate to address concerns or future needs

in the decades to come. Particular attention should be given to the application of the zoning code rewrite process currently underway. The market has already begun to transition away from an auto-oriented land uses in the corridor but more may be done to help mitigate the impact of the remaining mid-block curb cuts and drive through uses.