

# bicycle network





# BICYCLE NETWORK

## facilities barriers maintenance

Today, the San Antonio-Bexar County region has 210 miles of bicycle lanes, paths, and bicycle routes. About 175 miles of these facilities were added over the past decade. However, in a region that is 1,300 square miles and includes 9,300 miles of roadways, 210 miles of bicycle facilities is not sufficient. A fundamental component of increasing bicycle use is to ensure the facilities are in place to support bicycling.

This section focuses on providing and maintaining a comprehensive bicycle system that serves all residents and visitors of the San Antonio-Bexar County region. The bicycle network focuses on providing bicycle mobility within neighborhoods and destination areas and connectivity between destinations. Bike Plan 2011 recommends 1,768-mile bicycle network, including:

- 861 miles of bicycle lanes,
- 45 miles of buffered bicycle lanes,
- 12 miles of bicycle boulevards,
- 231 miles of multi-use paths and cycle tracks,
- 480 miles of wide shoulders, and
- 140 miles of additional bicycle routes.

Another important goal of the Bicycle Network is to maintain the network over time just as other city infrastructure is maintained.

## BICYCLE NETWORK METHODOLOGY

Bike Plan 2011 establishes a 1,768-mile interconnected bicycle network that provides access for residents and visitors of San Antonio to destinations throughout the City and surrounding region. Development of the bicycle network and prioritization of projects is shaped by a variety of things, including the existing network, where people are coming from and going to, opportunities for construction of facilities, alternatives

*“A bicycle does get you there and more.... And there is always the thin edge of danger to keep you alert and comfortably apprehensive. Dogs become dogs again and snap at your raincoat; potholes become personal. And getting there is all the fun.”*

~Bill Emerson, “On Bicycling”, Saturday Evening Post, 29 July 1967

### BICYCLE NETWORK GOAL & OBJECTIVES

**Develop a comprehensive network of on- and off-street bicycle facilities.**

Objectives:

- I. Address key barriers in the bicycle network
- II. Address and resolve the issues with parking in bicycle lanes
- III. Develop a connected and regional network of on- and off-street bicycle facilities
- IV. Improve bicycle facility maintenance practices
- V. Connect the on-street network with off-street trails and paths to create a comprehensive network of bicycle facilities

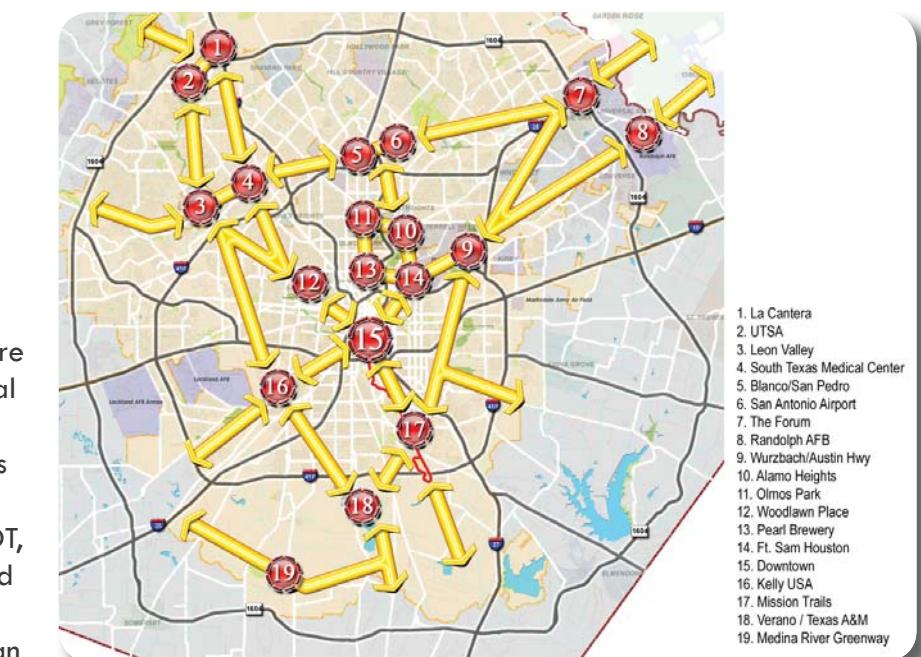
or parallel routes, traffic conditions, and connectivity of the network.

While Bike Plan 2011 identifies a specific network of streets to install bicycle facilities, this only represents the corridors studied. It is not intended that Bike Plan 2011 precludes bicycle facility improvements along streets or corridors that are not identified on the Bicycle Network Map. Bicycling is a legal mode of transportation, and to varying extents bicycles will be ridden on all roadways, making all arterials and collectors part of the bicycle network. Therefore, all streets should be designed to accommodate bicycles based on TXDOT, U.S. DOT, or AASHTO standards, whether or not the corridor is indicated on the Bicycle Network Map. If the opportunity arises to install a bicycle facility on any new or existing street in the San Antonio-Bexar County region, all efforts should be made to provide one that is appropriate to the speed and anticipated

volumes of auto-traffic based on AASHTO or FHWA standards.

As described in the previous chapter, a “node and corridor” approach was taken to develop and refine the network in order to emphasize the importance of connecting origins and destinations. Planning areas were established, within which destinations that served the local or near-local area were identified, such as parks, schools, shopping areas, colleges and businesses. Additionally, destination districts were identified around major regional attractions that create movement, and areas where the density of development and the street network could potentially support bicycling.

### NODES & CORRIDORS



The node and corridor approach emphasizes the importance of connecting origins and destinations.

### Network Hierarchy

In order to emphasize both local and regional connectivity, the network is organized into a three-step hierarchy of routes: regional network, citywide network, and local network. The purpose of this approach is to identify anticipated high demand opportunities based on their location and connectivity. The hierarchy does not specify the facility; streets should always be designed to safely accommodate bicyclists based on speed and traffic volumes, no matter their position in the hierarchy. However, in the case of regional facilities, based on the expected high level of use along these corridors, it may be necessary to make trade-offs in design to develop superior facilities that are safe and comfortable.

#### Regional Network

These corridors provide regional connectivity to major destinations throughout the city, such as downtown, the Medical Center, military bases, and other regional centers. These corridors currently have or are anticipated to have high levels of use by bicyclists based on continuity, surrounding land uses, and the corridor's role as a collector or a place where bicyclists must gravitate. This typically includes major arterials to neighborhood collectors. Examples of regional routes include Babcock, Fredericksburg, Culebra, Presa, Blanco, Eisenhauer, Military Drive, and the Greenway Trails.

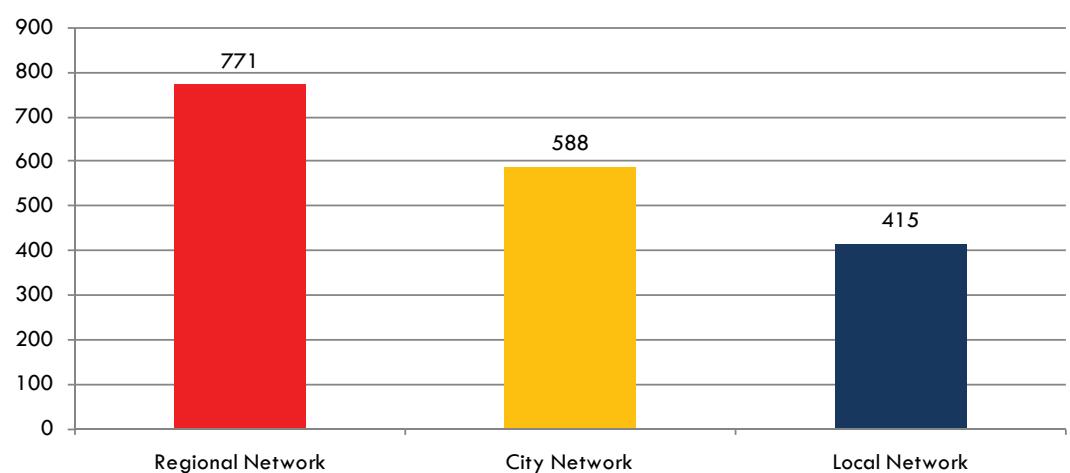
#### City Network

These facilities provide direct access to various destinations throughout the region and allow bicyclists to access the regional network. Typical corridors that serve as the city network include neighborhood collectors and minor arterials that are continuous and connect to the regional routes. Examples of city routes include Commerce, Houston, South Flores, McCullough, Nacogdoches, General McMullen, Austin Highway, and Roosevelt.

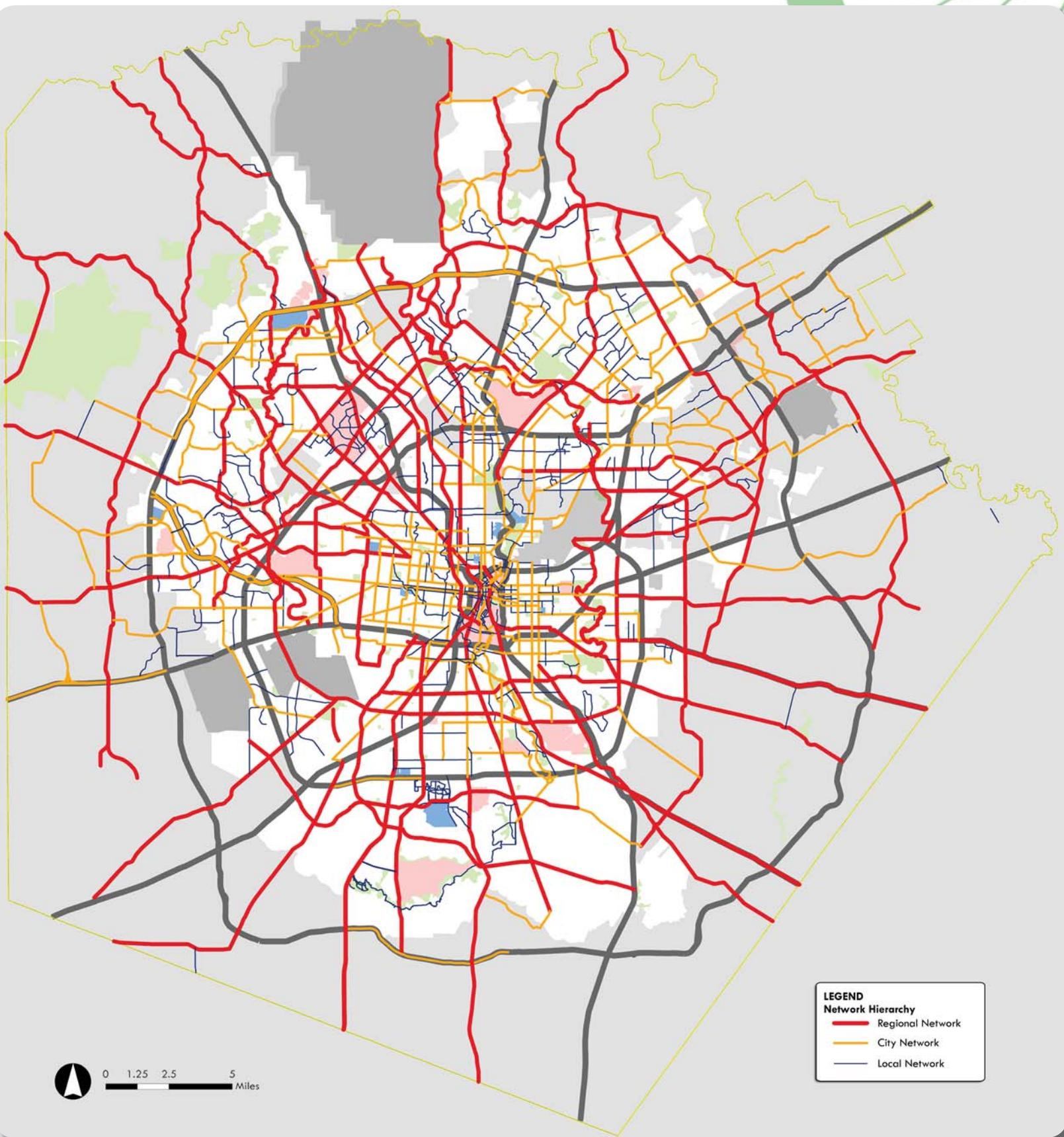
#### Local Network

Local routes serve local circulation and access within a neighborhood. These include all remaining roadways in the San Antonio-Bexar County region.

**Hierarchy of Bicycle Network  
Total Miles of Each Network Type**



### BICYCLE NETWORK HIERARCHY





## I. BICYCLE NETWORK BARRIERS

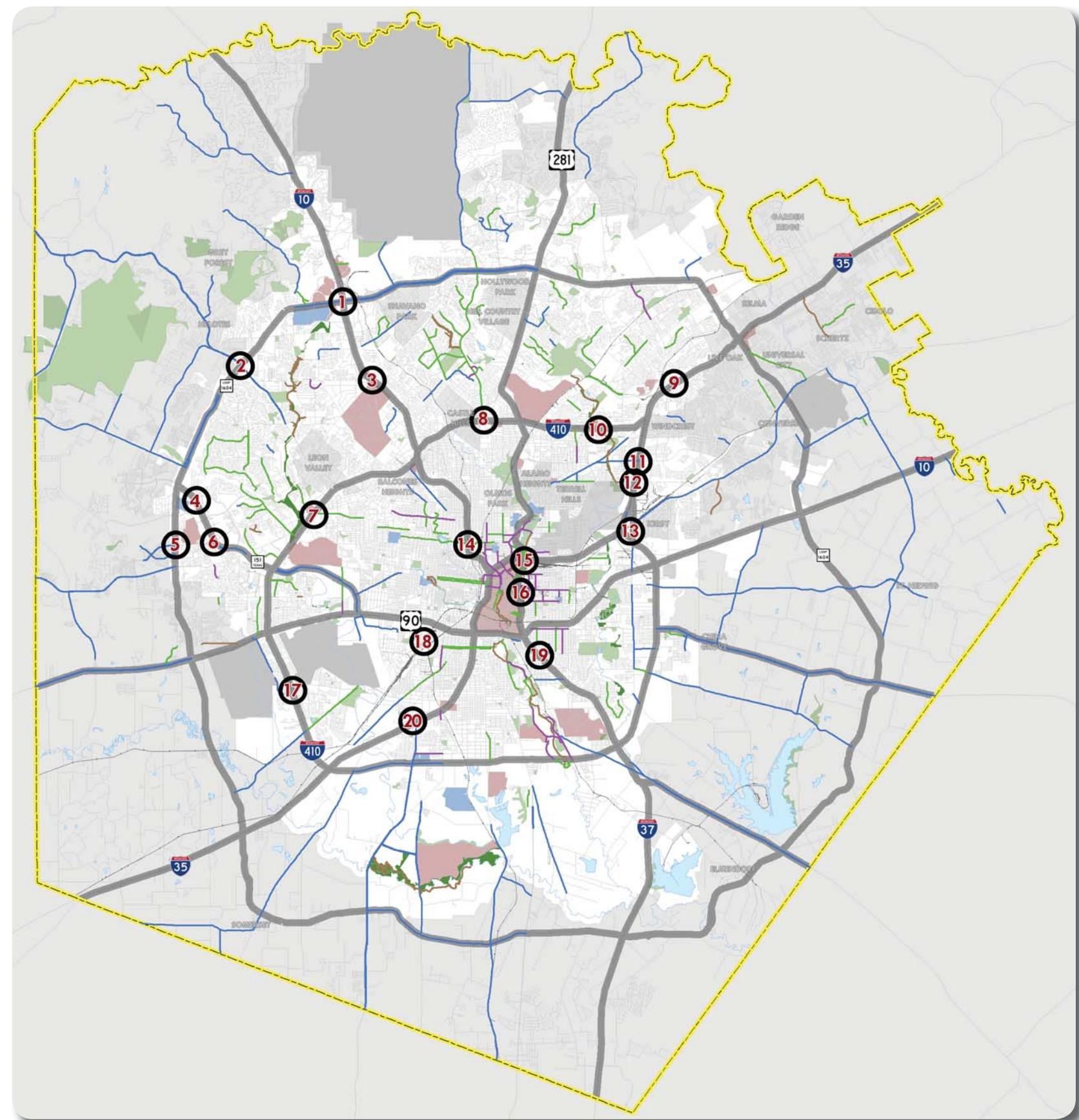
As discussed earlier, there are a number of barriers that impede bicycling in San Antonio, including freeways or major highways; railroad lines that do not have bicycle-friendly crossings; rail yards and industrial yards; major intersections of arterial roads that have challenging traffic conditions; and creeks and drainage corridors. These barriers often make otherwise useful facilities more difficult to use and discouraging to less confident riders. Depending on the barrier, coordination and agreement among agencies will be necessary, such as with TXDOT, rail authorities, and flood control/stormwater drainage entities.

### **RECOMMENDATION: IMPROVE CROSSINGS OF MAJOR BARRIERS**

While there are an innumerable amount of barriers that need to be improved for bicycle crossing, Bike Plan 2011 has identified key barriers that need to be improved and prioritized. This list is based on public comment and key facilities that are identified as priority network improvements (discussed later in this chapter).

Key Barriers			
Map No.	Barrier Location	Barrier Type	Recommended Improvement
1	Loop 1604 at IH 10	Highway	Alternative route along Vance Jackson; construct bridge over Loop 1604
2	Bandera Rd at Loop 1604	Highway	Stripe shoulders through underpass of Loop 1604
3	Huebner Rd at IH 10	Highway	Detailed study; possible to widen pavement, reduce lane width, and stripe a bike lane.
4	Wiseman Rd at SH 151	Highway	Road too narrow for bike lanes, install signs and sharrows across bridge; Detailed study for bike lanes
5	W Military Dr at Loop 1604	Highway	Interim, signs and sharrows; Long term, install bicycle lanes when bridge is constructed
6	W Military Dr at SH 151	Highway	Detailed study; road width may permit bicycle lane; otherwise signs and sharrows
7	Ingram Rd at Loop 410	Highway	Detailed study or widen underpass
8	Blanco Rd at Loop 410	Highway	Road too narrow for bike lanes, install signs and sharrows across bridge; Detailed study for bike lanes
9	Wurzbach Pkwy / O'Connor Rd at IH 35	Highway	Road too narrow for bike lanes, install signs and sharrows across bridge; Detailed study for bike lanes
10	Leon Creek at Loop 410	Highway	Detailed study to continue Leon Creek Trail under Loop 410
11	Eisenhauer Rd at IH 35	Highway	Widen pavement to install bike lanes
12	Rittiman Rd at IH 35	Highway	Widen pavement to install bike lanes
13	FM 78 and Binz-Engleman at IH 35/Loop 410 S Interchange	Highway & Rail	Detailed study
14	Woodlawn at IH 10	Highway	Road too narrow for bike lanes, install signs and sharrows across bridge; Detailed study for bike lanes
15	Josephine St at Avenue B / US 281 Access Road	Highway	Increase pavement markings and extend bicycle lane through intersection. Study potential to use colored bike lanes
16	Market St at IH 37	Highway & Rail	Detailed study. Add sharrows through underpass of Alamodome
17	Ray Ellison Rd at Loop 410	Highway	Possible restripe, or widen pavement
18	Kirk Place, from SW 21st St to Zarzamora	Rail	Existing bike/ped path along bridge; connect to path and install bike lanes. Install sharrows on bridge for more advanced cyclists
19	Southcross Blvd at IH 37	Highway	With road diet, install bike lanes
20	Poteet Jourdanton at IH 35	Highway	Possibly used colored lanes at right turn lanes; possible use of sharrows on outside lane between IH 35 access roads



**KEY BARRIERS**

## II. RESOLVING ON-STREET PARKING AND BICYCLE LANE CONFLICT

Another challenge with the existing bicycle network in San Antonio is the allowance of on-street parking in bicycle lanes that essentially prevent their effective use. What further exacerbates this problem in San Antonio is the number of neighborhood collector streets that have homes fronting on them. Along these streets, the traffic conditions (vehicle speed and traffic volumes) warrant a bicycle lane; however, with homes fronting on the street, there is demand for on-street parking as well.

Many cities do not have specific written policies that address on-street parking in bike lanes; however, they do use language in their plans to provide guidance on the day-to-day decisions.



Parking in bicycle lanes along Main Street, south of downtown.

Image Source: Halff Associates, Inc.

This is an issue not only for the existing bicycle lane facilities where on-street parking occurs, but also along corridors with permitted on-street parking where new bicycle lane facilities are proposed. In addressing this issue, there are several possible solutions for either modifying the on-street parking or deciding to remove the bicycle lane and relocate the route. Possible solutions include, but are not limited to:

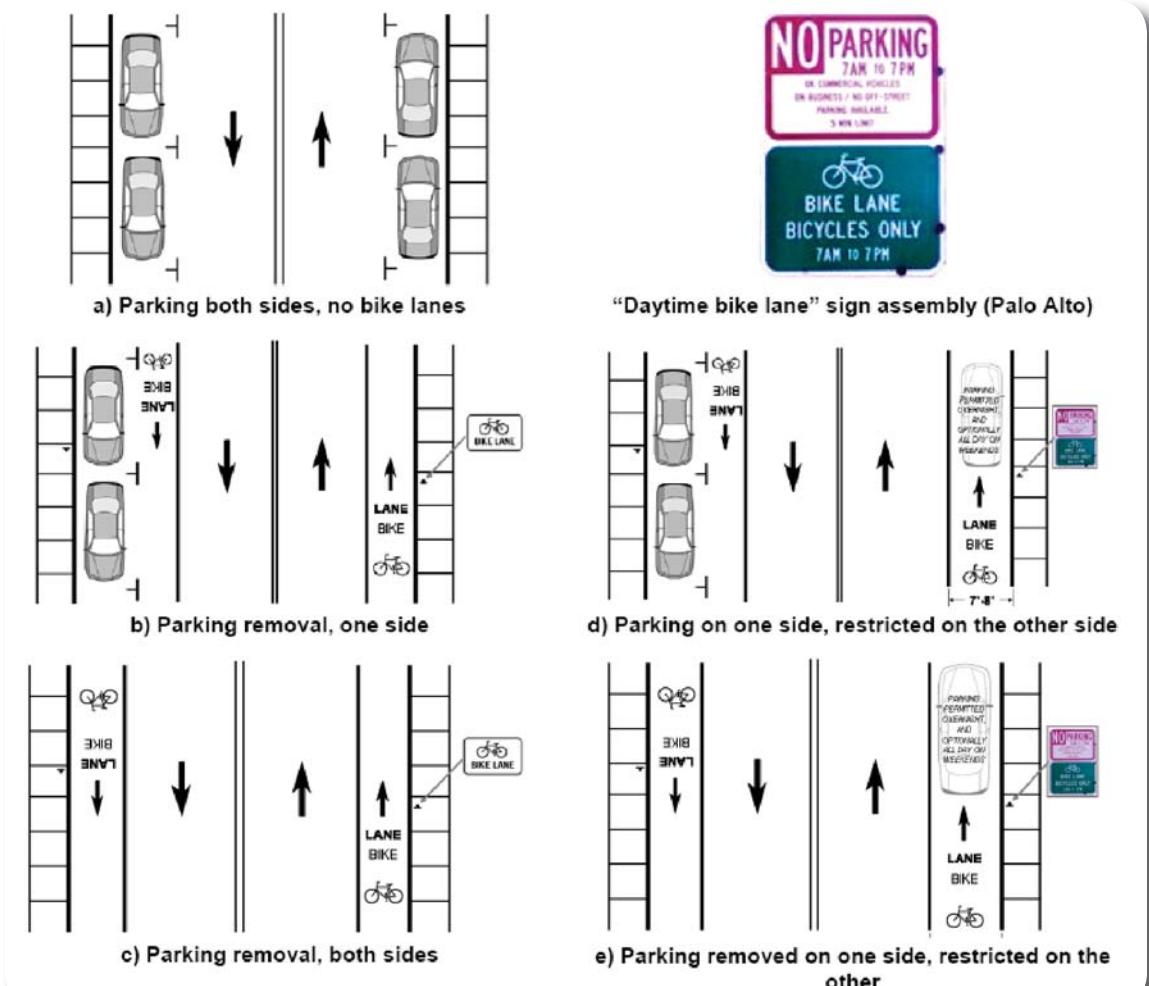
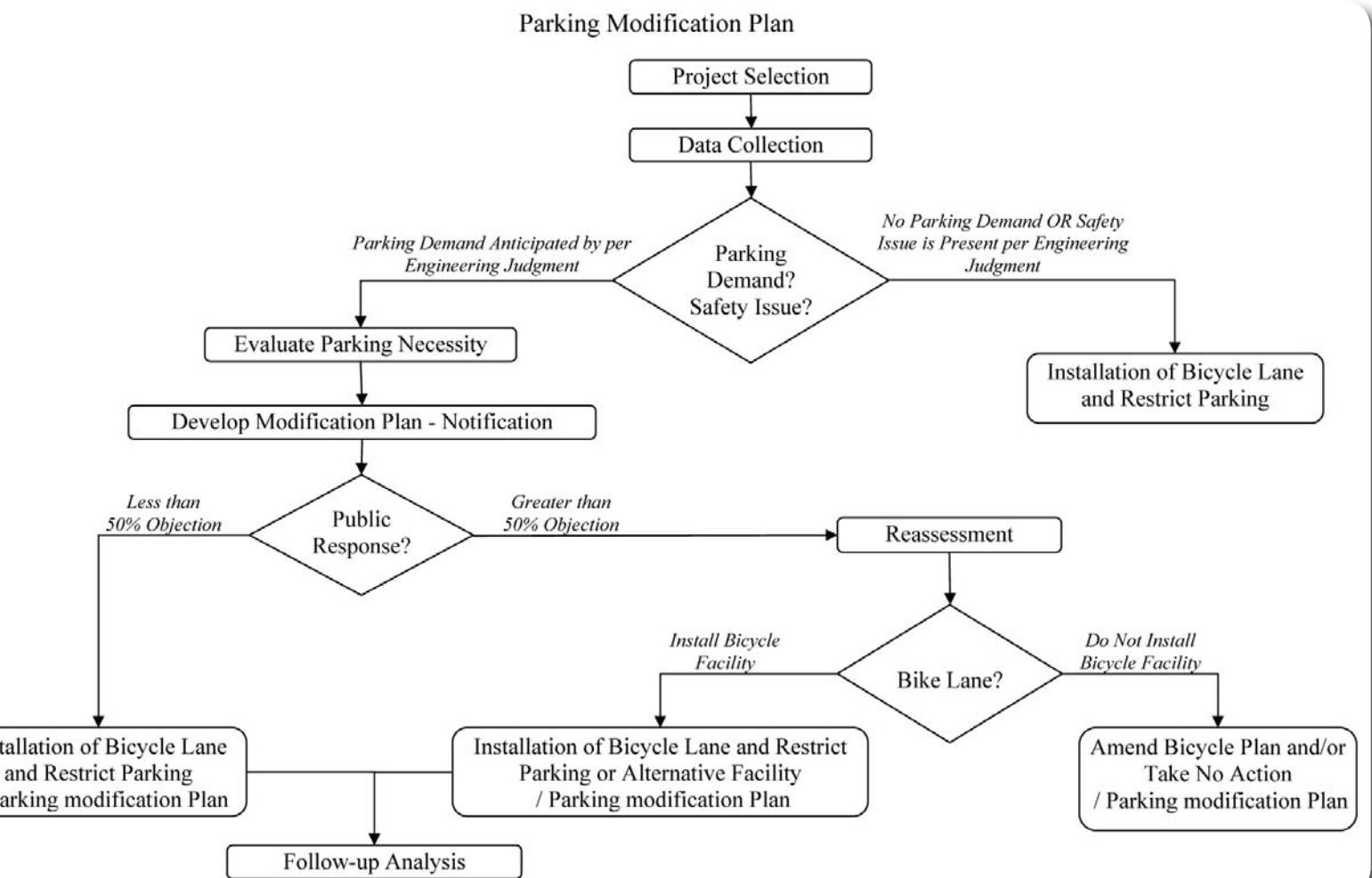
- Parking removal on both sides
- Parking removal on one side
- Time restricted parking
- Restriping for adjacent parking and bicycle lanes
- Removal of bicycle lanes

Determination of the solution depends not only on the width of pavement, but also on the demand for parking, stakeholder input, the need for the bicycle facility, and other feasible options. Therefore, implementation of the guidelines

should occur on a case-by-case basis. The diagram below is an example of the City of Austin's Parking Modification Plan.

Removal of a bicycle lane, or the decision to not install a bicycle lane where the bicycle master plan identifies a need for one, will require an amendment to the bicycle master plan and an alternative solution, either by identifying a new route or through traffic calming measures and the use of sharrows. On-street parking is already considered beneficial as a means of buffering the sidewalk pedestrian zone and as a traffic calming mechanism. In such cases where on-street parking demand is high enough to reduce vehicular velocities, designing the corridor for additional traffic calming mechanisms can create a conducive environment for shared lane configurations.

### EXAMPLE OF DECISION CHART AND DESIGN OPTIONS FOR PARKING MODIFICATION



Source: City of Austin Parking Modification Guidelines

**RECOMMENDATIONS TO ADDRESS EXISTING AND PROPOSED BICYCLE LANES ALONG CORRIDORS WITH ACTIVE ON-STREET PARKING:**

**Recommendation 1: Pass a resolution for parking-free bicycle lanes across the City of San Antonio.**

The San Antonio City Council should pass a resolution statement for parking-free bicycle lanes across the city.

**Recommendation 2: Establish and adopt guidelines and procedures for determining parking modifications where a bicycle lane exists or in the planning and design phase of a new bicycle lane with on-street parking.**

On-street parking modification guidelines and procedures should establish criteria for on-street parking modifications related to new bicycle lane installation and criteria to modify or remove parking or an existing bicycle lane that contain parking. In the case of bicycle lane removal, the document should provide guidance on identifying alternative solutions, such as an alternative route or alternative facility type that is appropriate for B/C-level cyclists. The guidelines should also outline procedures in the selection of streets for new bicycle lanes. Implement the guidelines along corridors with a bicycle lane/on-street parking conflict on a case-by-case basis.

**Recommendation 3: Implement the parking modification guidelines to address and resolve bicycle lanes with on-street parking.**

Use the guidelines identified in Recommendation 2 above to resolve the conflict of on-street parking in bicycle lanes.



The City of San Antonio already recognizes the issue with parking in bicycle lanes and has started designing streets and facilities to prevent this issue. In the top photo, Theo and Malone Streets, a one-way couplet, were re-designed to have a bike lane on one side and parking on the other side. In the bottom photo, Avenue E has a separated bicycle lane and parking lane.

Image Source: Halff Associates, Inc.



Capitalize on the traffic calming benefits of on-street parking by installing additional traffic calming devices to create a bicycle-friendly corridor.

Image Source: streetsblog.org





## DESCRIPTIONS OF BICYCLE FACILITIES

This plan lays out a network of functional, safe and accessible bicycle connections throughout San Antonio. It is critical that facilities and design solutions are appropriate for the type of user and existing space. This section provides a brief description on the type of on- and off-street facilities in the recommended network.

Bicycle Facility Categories & Types	
<b>On-Street Bicycle Facilities</b>	Bicycle Lanes Buffered Bicycle Lanes Wide Shoulders Bicycle Boulevards Signed Routes Shared Lane Markings ("Sharrows")
<b>Off-Street Bicycle Facilities</b>	Multi-Use Paths Cycle Track

### On-Street Bicycle Facilities

On-street bicycle facilities can include a range of design treatments such as bike lanes, striped shoulders, shared lane markings and signed routes. The goal of on-street facilities is to improve bicycling conditions on roadways while providing a visible reminder for motorists to share the road with bicyclists. On busy streets, an important purpose of these facilities is to provide lateral separation between bicyclists and motor vehicles and to encourage proper behavior among bicyclists and motorists. Another purpose and use of on-street bicycle facilities is to establish an interconnected bicycle network. It is important to note that many of San Antonio's roads with relatively low speeds and volumes do not require any new treatments.

### Off-Street Bicycle Facilities

The variety of off-street bicycle facilities often include multi-use paths, greenway trails, and cycletracks. Off-street facilities complement the on-street bicycle network in a variety of ways. First, many bicyclists, particularly beginner and child cyclists, prefer off-street facilities to on-street facilities due to their perceived safety. Off-street paths encourage bicycling for recreation and fitness. Furthermore, off-street facilities may serve as a way to overcome a barrier in the network, such as where a roadway does not exist to connect on-street facilities, or where retrofitting the existing roadway will not yield a

sufficient bicycle facility.

Attention to the design of off-street facilities is critical to create a safe off-street path. Off-street facilities should always be considered "shared use" and must, therefore, be designed for multiple types of users - bicyclists, walkers, joggers, rollerbladers, etc.

The following principles are important to keep in mind when planning and designing off-street facilities:

- An addition to and complementary to the roadway network
- Function best when they are in their own right of way
- Used by a wide variety of users traveling in both directions
- Need to connect to the transportation system
- Intersections between shared use paths and roadways are the greatest challenge
- Designed based on the same engineering principles that are applied to highways<sup>1</sup>

### Design of Bicycle Facilities

All pedestrian and bicycle facilities should be designed to meet current State and Federal design guidance and standards, as defined by the Texas Department of Transportation, the American Association of State Highway Transportation Officials (AASHTO), the Americans with Disabilities Act, the Texas Accessibility Standards, and the Manual on Uniform Traffic Control Devices (MUTCD). If the national standards are revised in the future, the updated standards should be followed. A more discussion on design solutions to accompany the location-specific facility recommendations for improving bicycling conditions in San Antonio is included in Appendix C.

While these documents and the guidelines provide guidance for developing bicycle facilities, there is a need to allow flexibility to develop safe and efficient roadway designs that serve the widest range of users. Since geographic and land use conditions vary from location to location, this guidance provides key design considerations for each type of bicycle facility to help identify opportunities to alter elements of the roadway. **This document is not a design standard, and should not be used as such. Application of this guidance requires the use of engineering judgment when retrofitting San Antonio streets to provide optimal bicycle facilities.**

<sup>1</sup> Pedestrian and Bicycle Information Center, Principles of Shared Use Path Planning and Design, <http://www.bicyclinginfo.org/engineering/paths-principles.cfm>



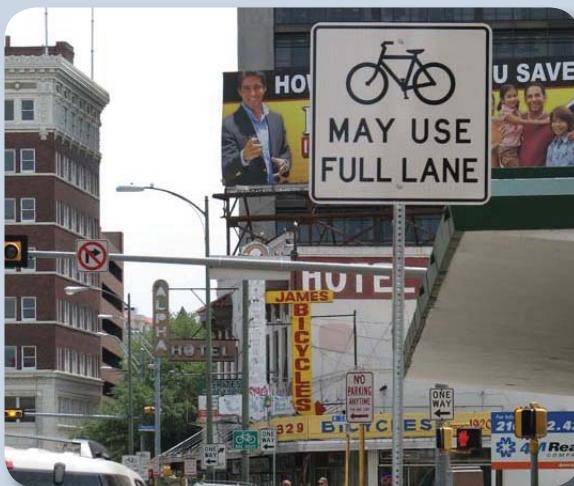
### Bicycle Lane

Bicycle lanes are portions of the roadway that have been designated for the preferential or exclusive use of bicyclists through striping, signage and other pavement markings.



### Signed Route

Signed routes are identified as streets and roads where bicyclists can be served by sharing the travel lanes with motor vehicles. Usually, these are local streets with relatively low traffic volumes and/or low speeds, which do not need special bicycle accommodations in order to be bicycle-friendly.



### Buffered Bicycle Lane

In some locations, buffers may be added to bicycle lanes to provide horizontal separation from either moving or parked cars. Ideal candidates for buffered bicycle lanes are roadways with high vehicle speeds, excess capacity, and few curb cuts or turning movements.



### Shared Lane Markings (Sharrow)

Shared lane markings ("sharrows") placed on the pavement provide guidance to bicyclists on the safest location to ride. Sharrows alert automobile drivers to the presence of bicyclists and encourage bicyclists to ride outside of the "door zone" of parked cars. Sharrows are generally used where there is not enough space for separate bicycle lanes and cyclists should be encouraged to use the full traffic lane.



### Wide Shoulders

Wide, striped, and bikable shoulders provide greater lateral separation between automobiles and bicycles, provide additional clear zone and recovery areas for vehicles, and provide an additional buffer or space for pedestrians in rural areas where sidewalks may not exist.



### Multi Use Path

Multi-use paths provide a high-quality walking and bicycling experience that is separated from vehicle traffic. These paths should be a minimum of 10 feet wide for bi-directional traffic and should be paved. Multi-use paths can be constructed along a roadway corridor, in their own corridor (such as a greenway trail or rail-trail), or a combination of both.



### Bicycle Boulevard

Bicycle boulevards are local street routes that have been enhanced to favor through bicycle movements while also restricting through motorized vehicle movements.



### Cycle Track

Cycle tracks create a physically separated and buffered space for directional bicycle travel. They are distinct from multi-use paths in that they are for the exclusive use of bicyclists and are operationally related to the overall roadway. The physical separation from other vehicles on the roadway can consist of curbs, striping, bollards, flexible posts, landscaping strips, or parked vehicles.





## NETWORK PRIORITIZATION METHODOLOGY

Realizing the vision of a connected bicycle network that serves all users demands establishing the completed network, followed by identifying the priority considerations needed to identify near-term projects with the greatest impact for bicyclists. It is less of a scientific prioritization technique, and more of a way to specifically evaluate corridors in terms of connectivity, ease or challenge of implementation, and community support.

### Phase 1: Network Selection

The entire roadway network was evaluated based on four general criteria to determine priorities for building a connected bicycle network that serves all users: (1) the location of the network within or connecting to a major regional destination in San Antonio; (2) whether the facility completes a gap in the network or overcomes a barrier; (3) the ease of implementation; and (4) the regional importance of the corridor. This evaluation is not just a yes or no evaluation, and no component is rated more important than any other. Rather, the network was identified based on these criteria, and further evaluation helped make decisions among network facility prioritization.

#### 1. CONNECTS TO A MAJOR DESTINATION

Networks that are within 3 miles of a regional destination are considered a high or near-term priority. Destinations for this evaluation are narrowly defined as regional, or those that would generate daily travel from a regional geography, rather than local geography. The regional destinations include downtown; South Texas Medical Center; and military bases.

#### 2. COMPLETES NETWORK BY OVERCOMING BARRIER OR FILLING GAP

There are several "gaps" in the network, sometimes caused by changing street cross sections or conditions that made implementation difficult, or gaps caused by physical barriers such as highways, railroads, or rivers. Projects that either fill in a gap in the network or overcome a barrier are high in importance in creating a well-connected network.

#### 3. EASE OF IMPLEMENTATION

Nearly every component of the bicycle network will require "retrofitting" an existing roadway to accommodate bicycles. In some cases that means a simple restripe or lane diet; in other cases that may mean reducing the number travel lanes; and still other cases may require widening the existing pavement to add the appropriate bicycle facility. Depending on traffic counts, speeds, and available right of way, each of these techniques differs in terms of ease of implementation. Further still, political will may present either a challenge or an incentive to implementation, especially where installing a bicycle facility may result in reconfiguring on-street parking, where a road diet may result in a reduction in motor vehicle level of service, or where an urgent safety issue needs to be addressed. Corridors within the network are prioritized based on the ease of implementation.

#### 4. REGIONAL IMPORTANCE OF THE FACILITY

Facilities are also evaluated on their regional importance, which is based on how far the corridor does or potentially can go and connectivity to other destinations. While specific connectivity to destinations is analyzed in more detail in the second phase, their proximity to a corridor are noted during this phase of evaluation as giving a bicycle corridor more regional significance.

### Phase 2: Prioritization

The second phase of the evaluation applies to the resulting list of near-term projects. This evaluation is set up as a "check-list" of criteria of connectivity, implementation challenges, and community support. While generally bicycle facilities should not be pitted against one another, there does come a point when there are limited funds and a decision must be made among a handful or so. The factors below should be considered in identifying individual projects to be pursued to achieve the Plan's goals. It is important to understand that there is no scientific method for prioritizing bicycle projects. Too many factors that have varying degrees of importance change based on the corridor being evaluated. For example, how can one say that crossing a freeway is a more important than providing connectivity to a school? Rather, the evaluation of the network is a

qualitative decision that makes a choice between two very good corridors. These criteria, however, give justification for whatever decision is made.

#### Safety

Bicycle facilities should be chosen to address existing and urgent safety issues and barriers.

#### Contributes to a city-wide network of connected facilities

Corridors that provide important connections to and between key destinations should be prioritized. These include downtown, major employers, transit hubs, and the regional trail system.

Additionally, VIA collects detailed boarding information by bus stop, which was used to identify the major transit corridors in the region. Those include: Fredericksburg Road; Zarzamora; Broadway Street; Austin Highway; New Braunfels (south of Ft. Sam Houston); Military Drive (in south San Antonio); and San Pedro Avenue.

In addition, corridors that contribute to a connected and linear network of bicycle facilities that allows users to get around San Antonio safely and comfortably should be pursued. Major corridors, especially ones that provide important cross-town connections and through the areas of high residential density should be developed in the early phases of implementation. Additionally, roads that currently have a high volume of bicyclists should be prioritized as they are already a significant corridor for bicyclists.

Furthermore, the creation of keystone facilities and connections demonstrates the City's commitment to make improvements for bicyclists. These essential connections increase the usage and value of all bicycle facilities.

#### Implementability - Impact on vehicle capacity

The San Antonio Bexar County MPO recently completed the Bicycle & Pedestrian Data Collection Project: Phase II (Road Diet Analysis) Final Report in April 2010. The report provides a useful reference for evaluating the vehicular impacts of reallocating existing pavement to create space for new bicycle lanes. Road diets are a cost effective way to create a complete street with minimal modification to the existing roadway (see page 9 for a definition of complete street).





#### Implementability - Cost

Projects that can be completed quickly and at moderate cost should be pursued first. Projects that require more significant investment should be planned for in the near-term so that it will be possible to implement them in the medium-term.

The cost of providing facilities depends on whether they are developed as standalone projects, or whether they are included as part of other improvement projects.

When completed as part of a road improvement project, a bicycle facility can in some instances be provided at no additional cost. In other cases, a bicycle improvement can be provided as an incidental cost to a larger project.

Maintenance is a critical consideration in evaluating how recommendations for specific roads in San Antonio can be implemented. Whether the City or the State maintains a road will determine who is responsible for creating and maintaining any potential bicycle facility. It will determine how a project is funded, as well as the process for road improvements. In addition to maintenance of the road, ownership of the right-of-way is a critical consideration in implementing the recommendations of this Plan. If the City or State owns the right-of-way, it will be easier to pursue improvements such as widening the road or paving the shoulder. If the right-of way is privately owned, it will likely take more time (to negotiate agreements with individuals) and money to create the facility.

#### Community Support

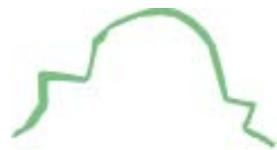
A primary goal of this Plan is to create a bicycle system that serves multiple types and comfort levels of riders. Such a system encourages more bicycling by residents and visitors for all purposes. Therefore, it is essential to give priority to corridors identified for improvement through stakeholder and public involvement.

For the purposes of identifying near-term priorities of the bicycle master plan, the following components were identified as sources of community support:

- Adopted plans, including neighborhood plans or plans created by other jurisdictions in the San Antonio-Bexar County region

- Plans created by the San Antonio-Bexar County Metropolitan Planning Organization, including the Metropolitan Transportation Plan (long-range plan) and the Transportation Improvement Plan (short-range plan), and projects identified from the Walkable Community Program
- The Bicycle Travel Patterns Study conducted by the San Antonio-Bexar County MPO between July and August of 2010
- Through the community-input opportunities offered in the planning process of this bicycle master plan update

Because public comment is an ongoing activity, continuous identification of community support is essential. In the future, as new projects are considered, these and other planning documents should be reviewed for public support for proposed bicycle facilities.



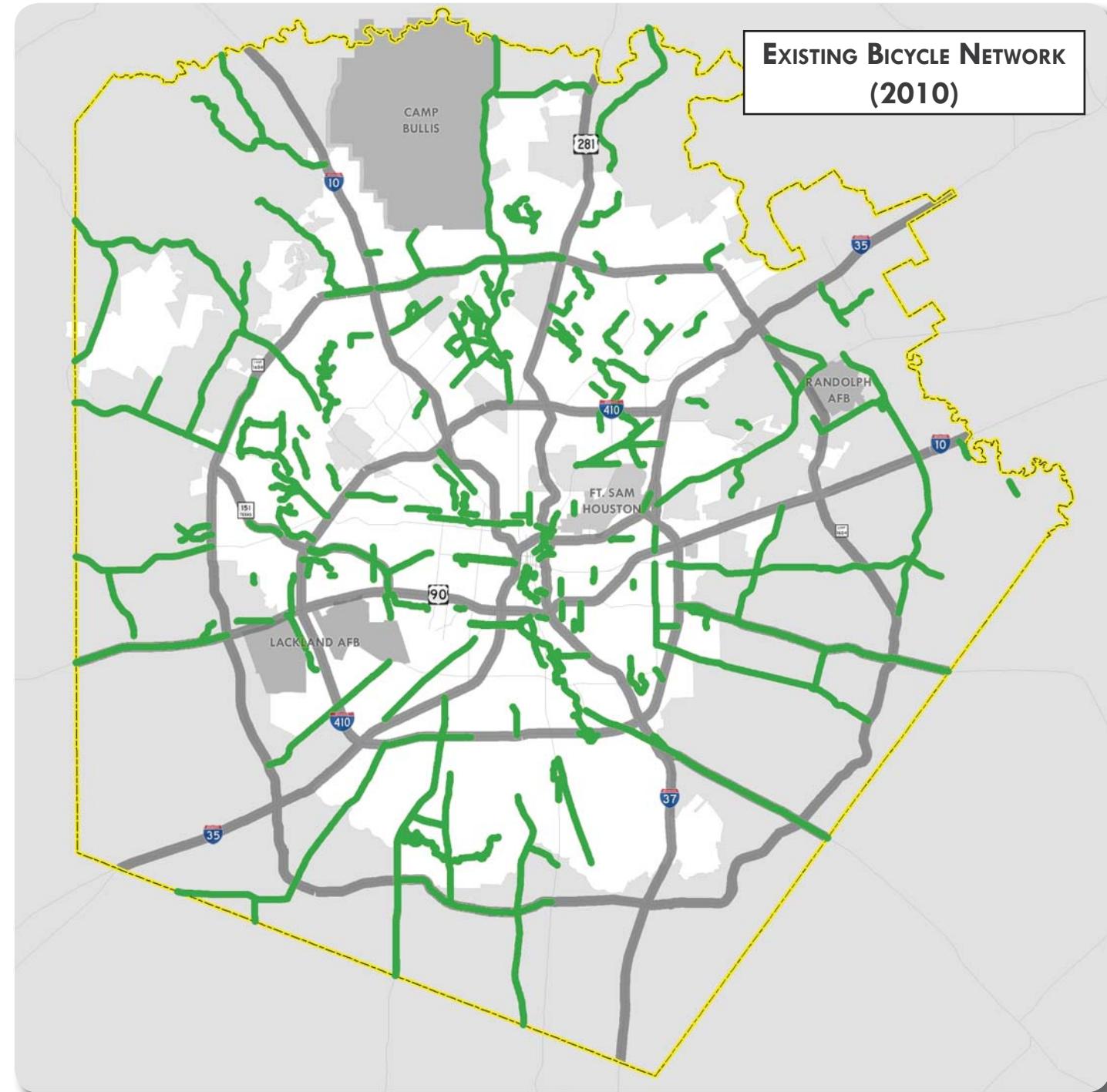
## TIER 1 AND 2 PRIORITIES

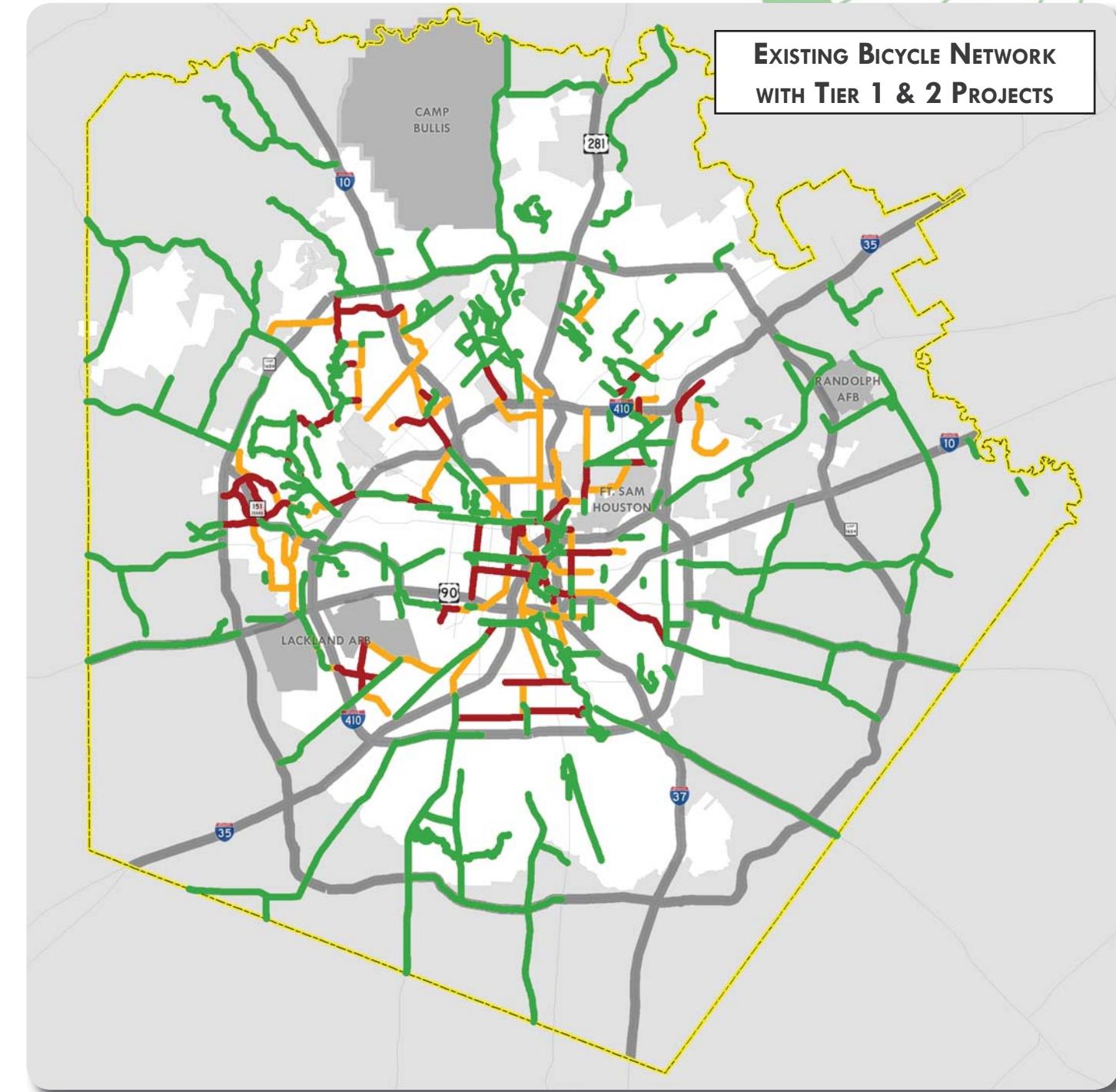
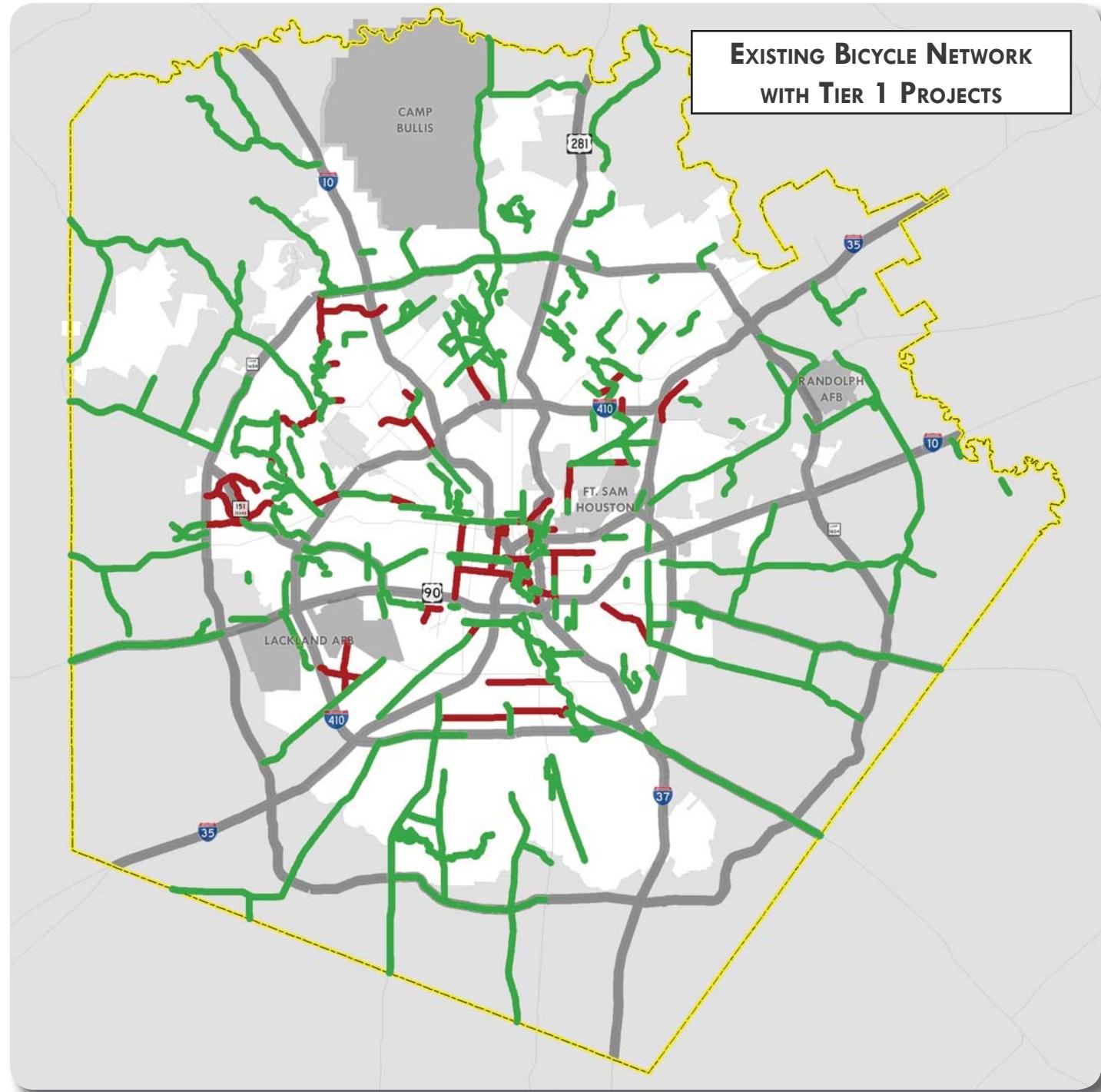
Depending on how projects were qualified based on the criteria described, priorities were categorized as either Tier 1 or Tier 2 to indicate the recommendation for timing. Tier 1 projects would be within the next 1 to 5 years, and Tier 2 within the following 5 years. However, if an opportunity arises to implement a Tier 2 project sooner, it should be done and not postponed because it is categorized as a Tier 2 project. Ultimately, timing of these projects is contingent upon available funding.

The maps to the right illustrate the growth of the bicycle network with the addition of the Tier 1 and Tier 2 projects. The first map is the network of bicycle facilities as it exists today. The second map includes the addition of the Tier 1 projects, and the third map includes the Tier 1 and Tier 2 projects.

**RECOMMENDATION: EXPAND THE BICYCLE NETWORK  
THROUGH BICYCLE FACILITY INFRASTRUCTURE  
IMPROVEMENTS**

### NEAR-TERM GROWTH OF BICYCLE NETWORK

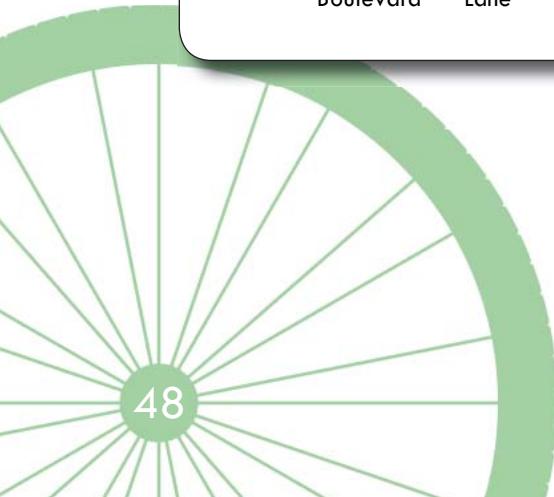
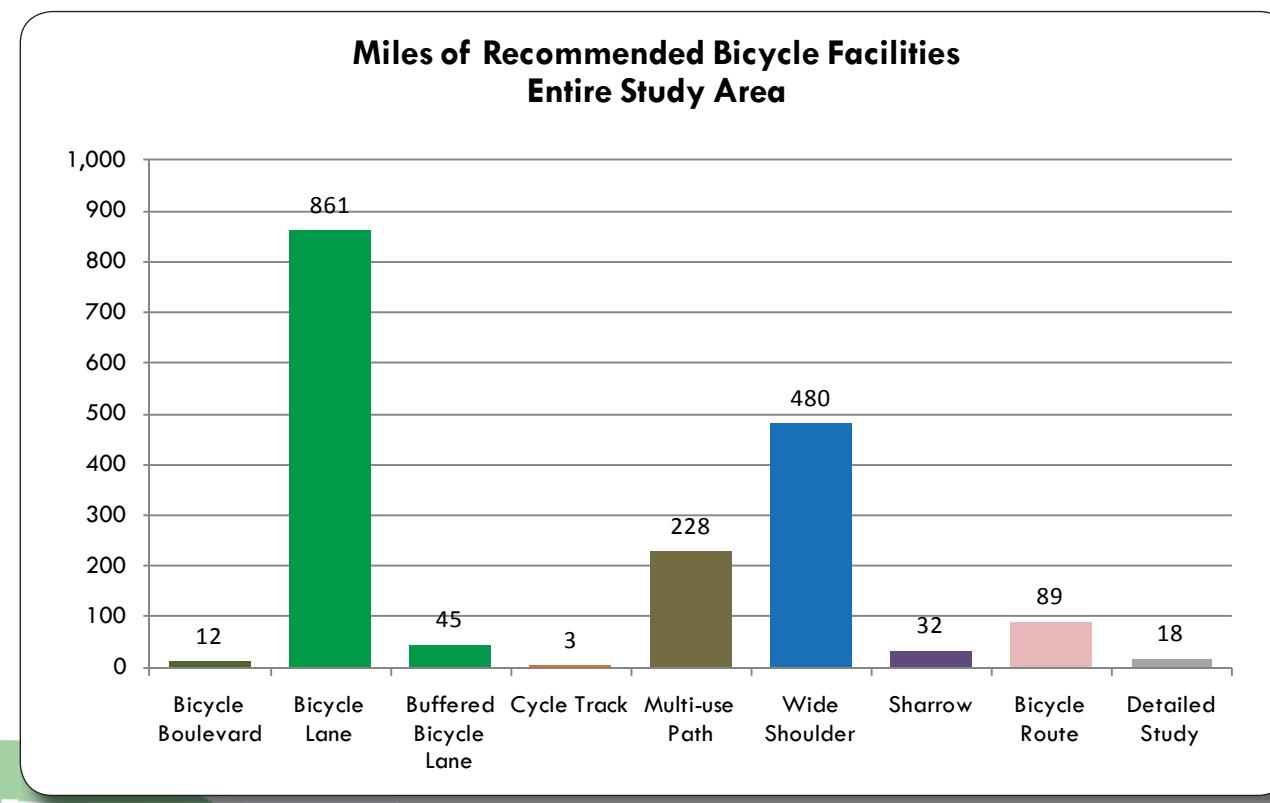




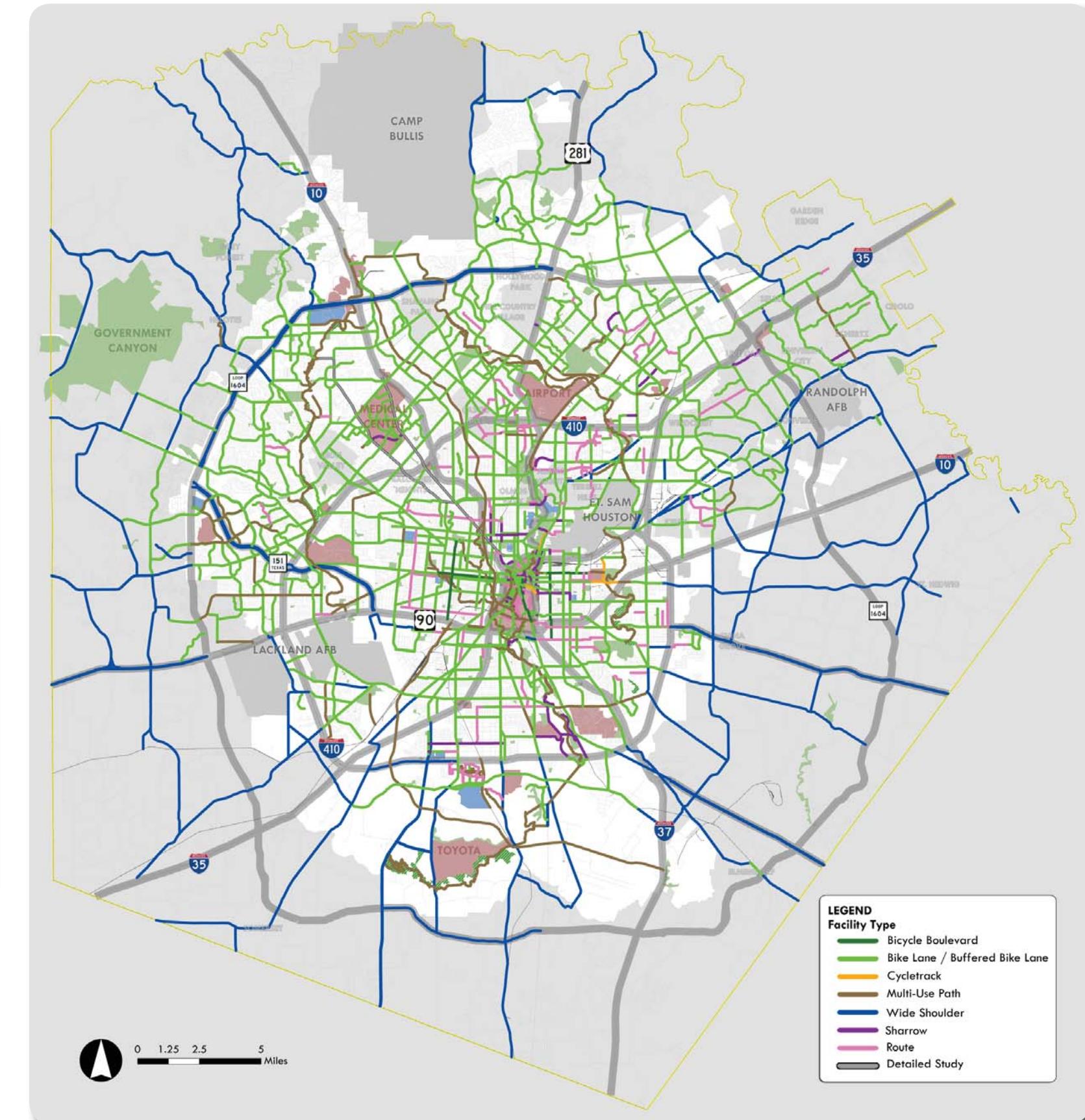


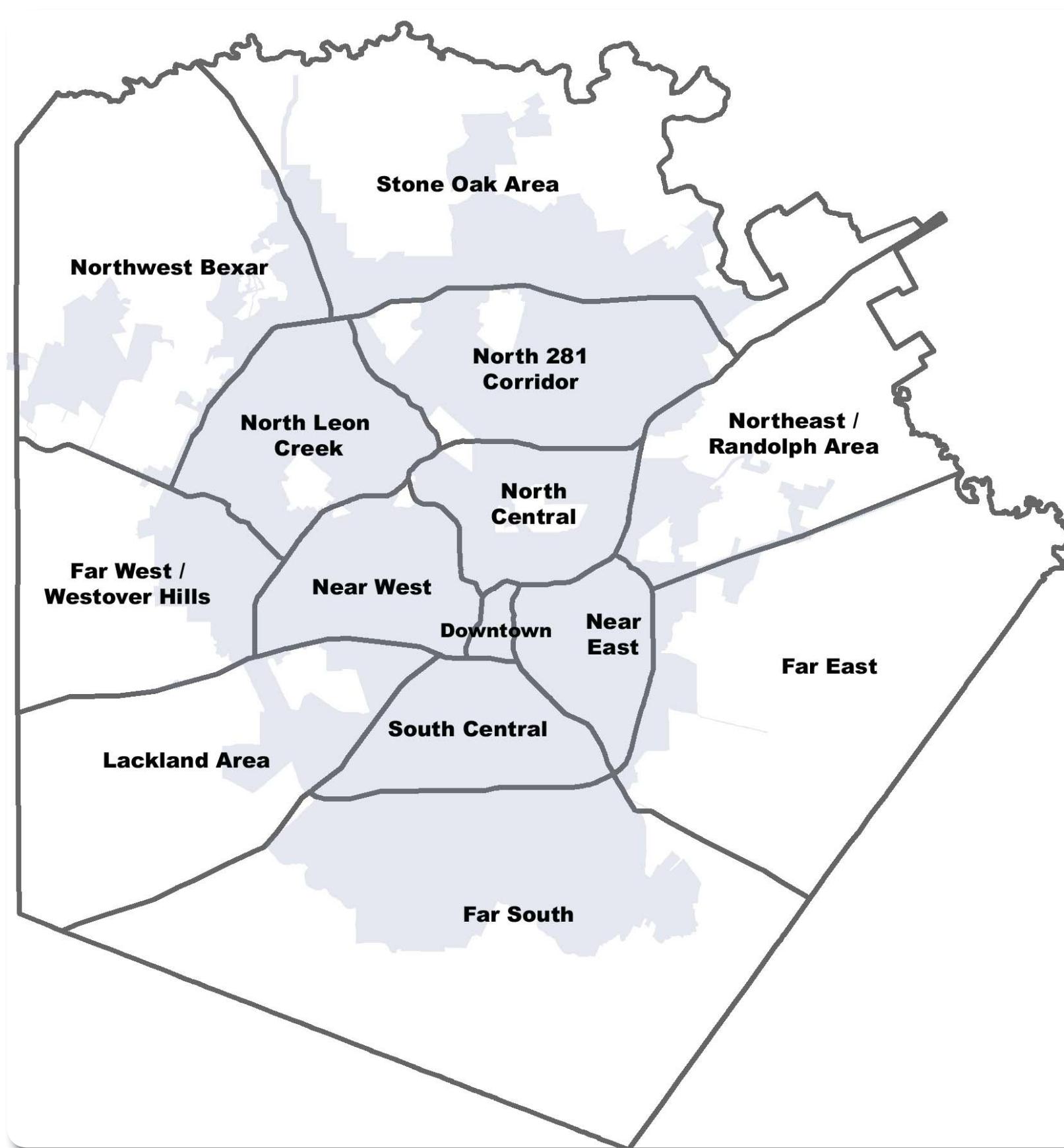
### III. RECOMMENDED BICYCLE NETWORK FACILITY RECOMMENDATIONS

Bike Plan 2011 establishes a 1,768-mile interconnected bicycle network that provides access for residents and visitors of San Antonio to destinations throughout the City and surrounding region. The chart below illustrates the mileage of different facility types that make up the network.



#### RECOMMENDED BICYCLE NETWORK



**AREAS OF SAN ANTONIO****Recommended Bicycle Network by Area**

The maps on the following pages detail the recommended network for various areas across the region. Each map illustrates the existing bicycle facility as well as the recommended facility. For each area there are associated tables that identify key network improvements, including (1) the priorities for that area; (2) projects that are funded under either the 2007-2012 Bond, the 2011 Advanced Transportation District fund that will be completed in 2011, or another source; and (3) projects that will require coordination with other jurisdictions or agencies to implement. A [complete](#) listing of the recommended route can be found in appendices D, E, and F.

*Please note that these are not planning areas. They are simply detailed map areas to see the network in more detail.*

To assist in planning for bicycle facility implementation, cost ranges for key infrastructure needs throughout the study area are shown on the following pages. Costs shown are preliminary, and are shown only to help plan for future funding needs.

An order of magnitude cost range for each typical type of bicycle facility is shown in the table below, and these are generally applied to each of the key potential projects on the following pages. These ranges are general in nature, and corridor specific needs such as right of way acquisition, widening where needed at certain intersections to accommodate bicycle lanes, significant additions to the existing pavement cross-section, major signal improvements and utility relocation if necessary should be accounted for in the detailed evaluation of each corridor. Costs shown typically include a 20% contingency factor, but do not include an escalation factor since their implementation timeframe has not been determined. All projections reflect 2010-2011 costs, and an escalation factor should be considered once a specific timeframe is identified. It should be noted that many simple bicycle lane installations may be significantly lower in cost, but some selected projects may be higher than the costs shown here.

<b>General Cost Ranges for Typical Bicycle Infrastructure Costs</b>	
Off-street Path	\$600,000 to \$1,000,000 per mile
Bicycle Lanes	
Striping & signs	\$50,000 to \$75,000 per mile
Lane diet (reduce lane widths)	\$75,000 to \$150,000 per mile
Road diet (removal of a travel lane)	\$75,000 to \$150,000 per mile
Add sharrows	\$15,000 to \$25,000 per mile
Route signage	\$5,000 to \$15,000 per mile
Bicycle Boulevard (traffic calming)	\$250,000 to \$500,000 per mile



# SAN ANTONIO BIKE PLAN 2011 + IMPLEMENTATION STRATEGY

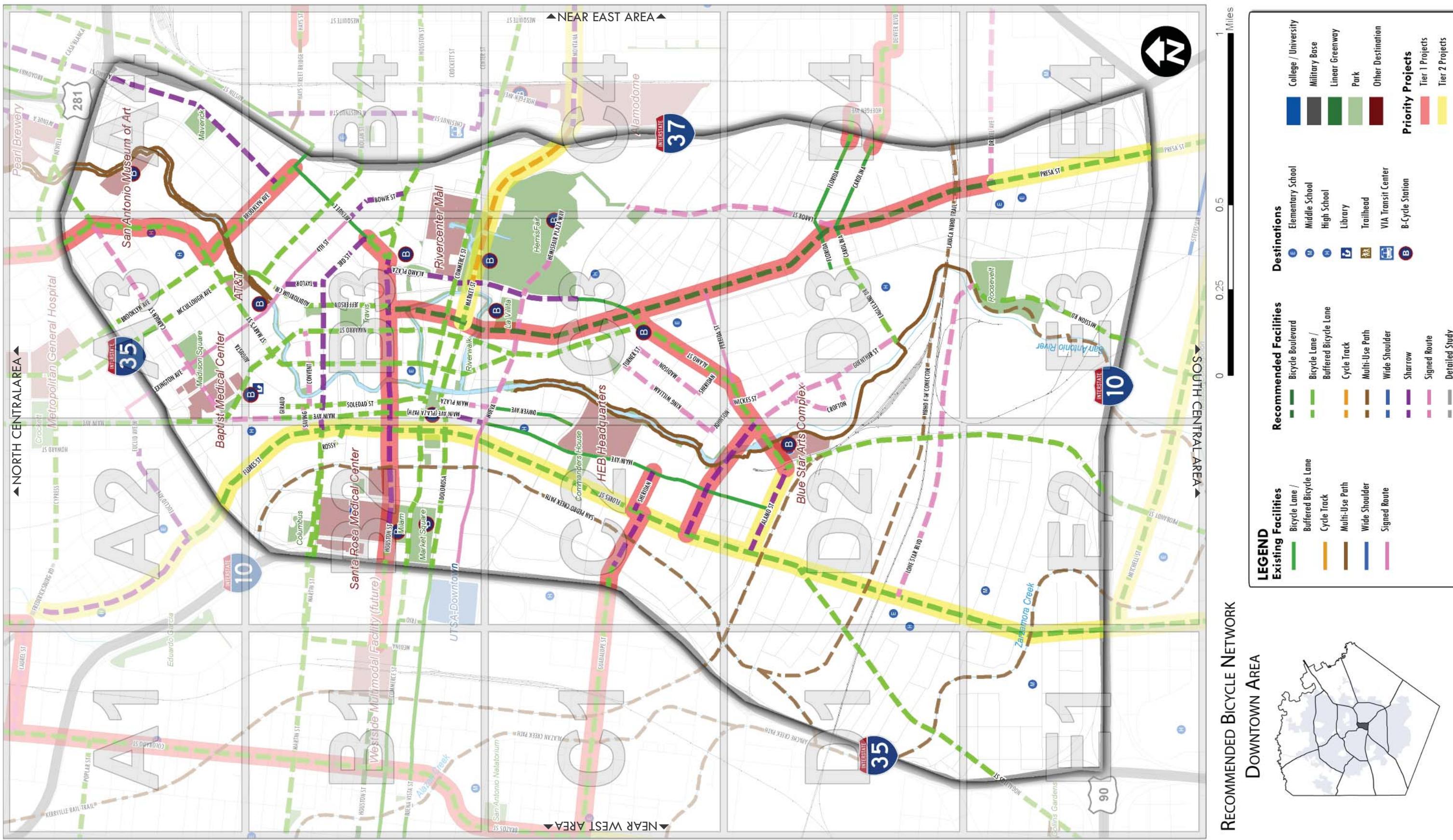
## 3 • the bicycle network

FUNDING BICYCLE PROJECTS: Downtown Area					
Map Grid	Corridor	Length (miles)	Funded Facility	Funding Source	Future Recommended Facility Type (if different than funded)
C3	ALAMO ST, from PRESA ST to PROBANDT ST	0.65	ROUTE	ATD	BICYCLE LANE
D3	PEREIDA ST, from S ALAMO ST to S PRESA ST	0.28	ROUTE	ATD	-
C3	PRESA ST, from ALAMO ST to PEREIDA ST	0.22	ROUTE	ATD	BICYCLE BOULEVARD

PROPOSED PRIORITY BICYCLE PROJECTS: Downtown Area						
Map Grid	Corridor	Length (miles)	Rec Facility Description	Proposed Action	Preliminary Cost Range <sup>(1)</sup>	Partners for Implementation
<b>Tier 1 Priority Projects</b>						
B3	AVENUE E, from 3RD ST to HOUSTON ST	0.09	BIKE LANE	RESTRIP	\$10,000-\$20,000	
A3	BROOKLYN AVE, from ST MARY'S ST to AVENUE E	0.37	BIKE LANE	RESTRIP	\$65,000-\$75,000	
C2	GUADALUPE ST, from IH 10 ACCESS RD to FLORES ST	0.23	BIKE LANE; SHARROWS	ROAD DIET	\$25,000-\$35,000	TXDOT
C2	GUENTHER ST, from FLORES ST to PEREIDA ST	0.38	SHARROW	ADD MARKINGS	\$35,000-\$45,000	
B2	HOUSTON ST, from SAN SABA to AVENUE E	0.83	SHARROW	ADD MARKINGS	\$55,000-\$65,000	
B3	PRESA ST, from HOUSTON ST to LOWELL	1.66	BICYCLE BOULEVARD	ADD MARKINGS; TRAFFIC CALMING	\$400,000-\$600,000	
C2	SHERIDAN, from FLORES ST to MAIN AVE	0.13	SHARROW	ADD MARKINGS	\$20,000-\$30,000	
A3	ST MARY'S ST, from IH 35 to BROOKLYN AVE	0.48	BIKE LANE	RESTRIP	\$75,000-\$90,000	
<b>Tier 2 Priority Projects</b>						
D2	ALAMO ST, from FLORES ST to PROBANDT ST	0.27	SHARROW	ADD MARKINGS; RESTRIP	\$30,000 - \$40,000	TXDOT
A2	FLORES ST, from EUCLID AVE to THEO AVE	3.48	BIKE LANE	DETAILED STUDY; COMPLETE STREET CANDIDATE	to be determined	
B3	MARKET ST, from PRESA ST to ALAMO ST	0.12	BIKE LANE	BUS & BIKE LANE	\$50,000-\$100,000	
B3	MARKET ST, from ALAMO ST to IH 37 / MONTANA	0.55	CYCLETACK	NEW CONSTRUCTION; DETAILED STUDY	to be determined	
E4	PRESA ST, from LOWELL ST to IH 10	0.46	BIKE LANE	ROAD DIET	\$50,000-\$100,000	

(1) The potential cost range shown is a preliminary order of magnitude estimate of probable construction costs and was prepared prior to any detailed corridor evaluation or design. This estimate is intended only to provide an order of magnitude cost for projection of potential future funding requirements. All such estimates should be reviewed and updated periodically to reflect the most current cost information. Costs are based on 2010-2011 and will vary as more detailed corridor-specific assessments occur and do not include inflation.





**Priority Projects in the Far East Area:**

Based on the prioritization criteria, there are no projects prioritized for the Far East Area at the time of adoption of Bike Plan 2011. Periodic review of the bicycle network and project list should be reviewed and projects prioritized, which may yield priorities in this area. However, this should not preclude any opportunities to install bicycle facilities in this area in conjunction with other projects that may emerge.

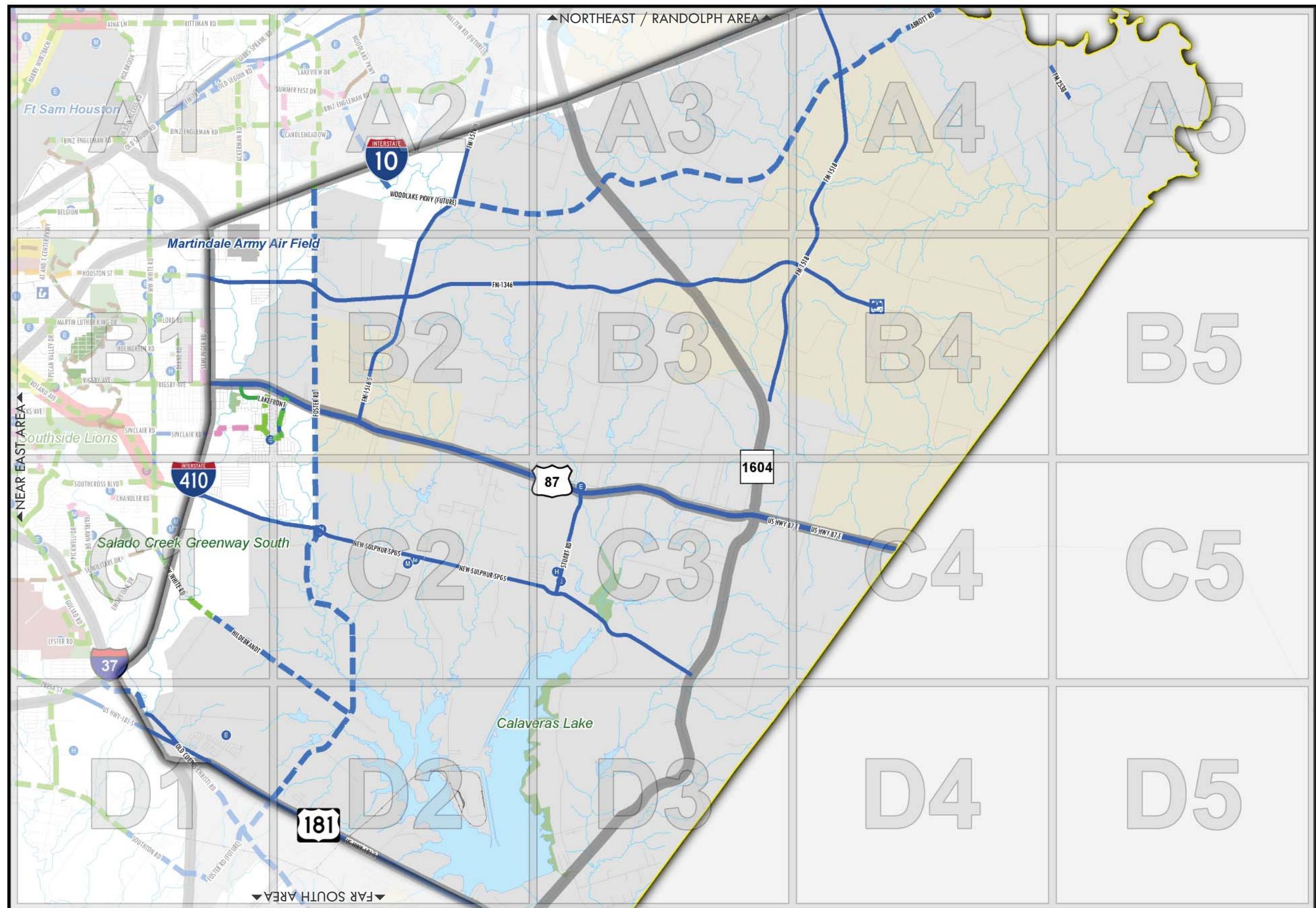
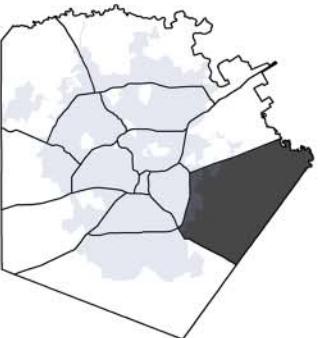
BICYCLE PROJECTS IN OTHER JURISDICTIONS: Far East Area					
Map Grid*	Corridor	Length (miles)	Jurisdiction	Recommended Facility	Proposed Action
A2	FOSTER RD, from IH 10 to FM 1346	1.60	BEXAR CO	SHOULDER	ADD PAVEMENT
B2	FOSTER RD, from FM 1346 to NEW SULPHUR SPRINGS	3.96	SAN ANTONIO, CHINA GROVE	SHOULDER	ADD PAVEMENT
C2	FOSTER RD, from NEW SULPHUR SPRINGS to US 181	5.45	BEXAR CO	SHOULDER	ADD PAVEMENT
C1	HILDEBRANDT, from CACIAS RD to FOSTER RD	2.74	BEXAR CO	SHOULDER	NEW CONSTRUCTION
D1	OLD CORPUS CHRISTI RD, from US HWY 181 S to I 37	0.36	BEXAR CO	SHOULDER	ADD PAVEMENT
A2	ABBOTT RD, from FUTURE ALIGNMENT FROM WOODLAKE DR to FM 2538	3.85	ST HEDWIG, BEXAR CO	SHOULDER	NEW CONSTRUCTION



### RECOMMENDED BICYCLE NETWORK FAR EAST AREA



0 0.5 1 2 Miles



\* Map Grid identifies the northern- or western-most point of the segment (or at the "from" point). Some segments may cross into other grids.



# SAN ANTONIO BIKE PLAN 2011 + IMPLEMENTATION STRATEGY

## 3 • the bicycle network

### Priority Projects in the Far South Area:

Based on the prioritization criteria, there are no projects prioritized for the Far South Area at the time of adoption of Bike Plan 2011. Periodic review of the bicycle network and project list should be reviewed and projects prioritized, which may yield priorities in this area. However, this should not preclude any opportunities to install bicycle facilities in this area in conjunction with other projects that may emerge.

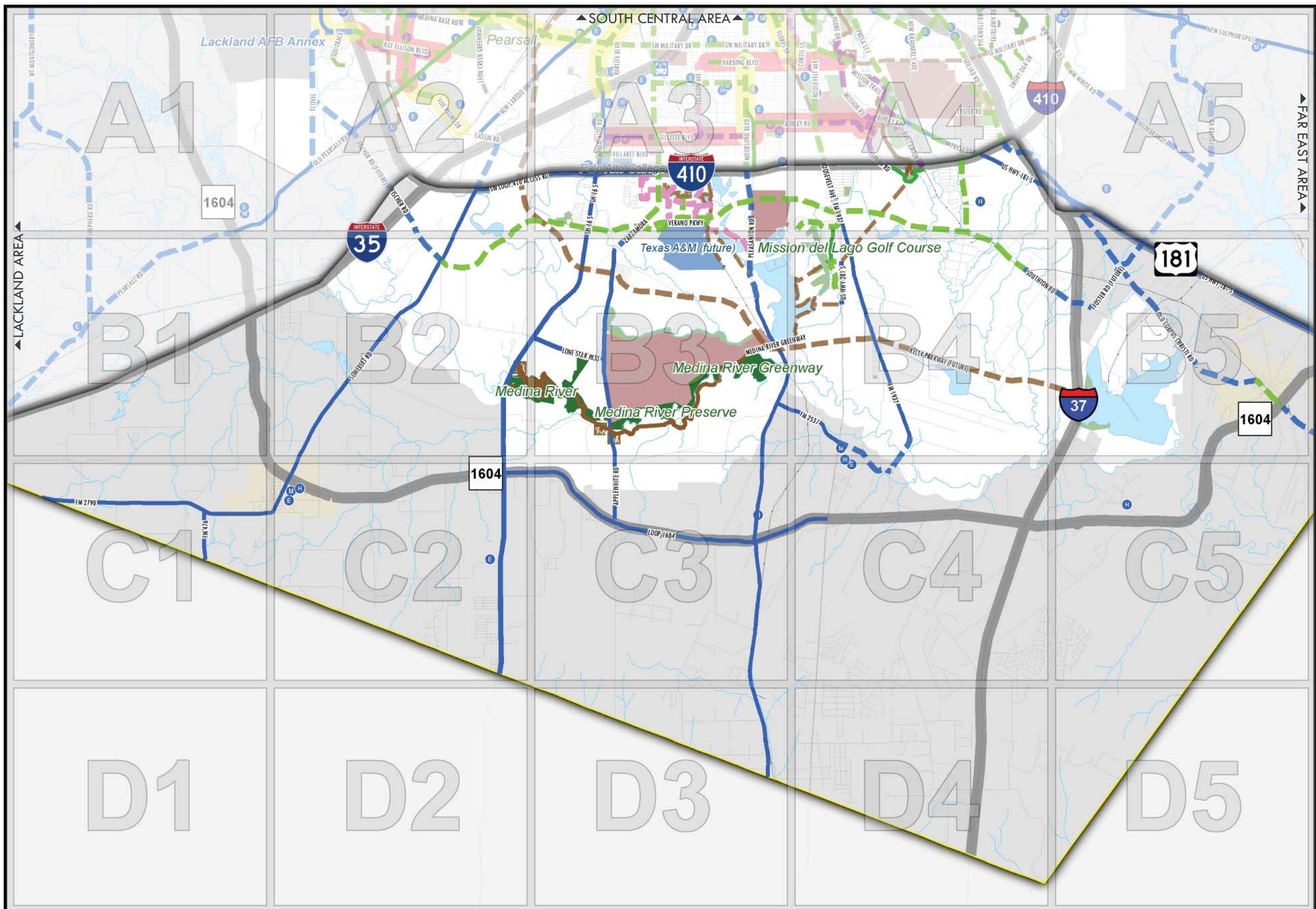
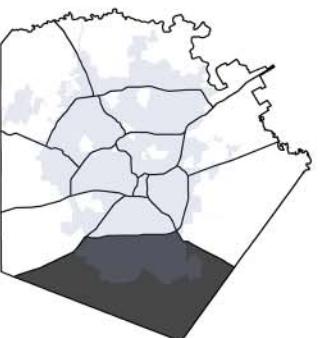
FUNDED BICYCLE PROJECTS: Far South Area					
Map Grid*	Corridor	Length (miles)	Funded Facility	Funding Source	Future Recommended Facility Type ( <i>if different than funded</i> )
A4	MEDINA RIVER GREENWAY, from NORTH OF NEAL RD to US HWY 281	5.6	PATH	Sales Tax (Greenway Trails)	-
A3	Various bicycle facilities in the Verano Development	14.2	BIKE LANES, PATHS, ROUTES	Private Development	-

BICYCLE PROJECTS IN OTHER JURISDICTIONS: Far South Area					
Map Grid*	Corridor	Length (miles)	Jurisdiction	Recommended Facility	Proposed Action
B2	E-W CONNECTOR - FISCHER TO SOUTHTON, from FISHER to SOUTHTON	11.12	BEXAR CO	BIKE LANE, PATH	NEW CONSTRUCTION
A2	FISCHER RD, from QUINTANA RD to SOMERSET RD	1.74	BEXAR CO	SHOULDER	NEW CONSTRUCTION
A5	OLD CORPUS CHRISTI RD, from I 37 ACCESS RD to RICHTER RD	3.5	BEXAR CO	SHOULDER	NEW CONSTRUCTION
B5	OLD CORPUS CHRISTI RD, from RICHTER RD to LA GLORIA RD	2.98	CITY OF ELMENDORF	SHOULDER, BIKE LANE	ADD PAVEMENT
B5	OLD CORPUS CHRISTI RD, from LA GLORIA RD to BEXAR COUNTY LINE	1.13	BEXAR CO	SHOULDER	ADD PAVEMENT
B3	PLEASANTON RD, from MAUERMANN RD to BEXAR COUNTY LINE	9.84	BEXAR CO	SHOULDER	ADD PAVEMENT
A4	SOUTHTON RD, from LOOP 410 to RAILROAD CROSSING	2.82	BEXAR CO	BIKE LANE	ADD PAVEMENT
B5	SOUTHTON RD, from IH 37 to FOSTER RD (FUTURE)	0.35	BEXAR CO	SHOULDER	ADD PAVEMENT
B5	FOSTER RD (FUTURE), from US 181 to SOUTHTON RD	1.68	BEXAR CO	SHOULDER	NEW CONSTRUCTION
A4	FM 1937, from VALLEY RD to MARTINEZ LOSOYA	0.79	TXDOT	SHOULDER	ADD PAVEMENT
A4	GOLIAD RD, from SE LOOP 410 to ROSILLO CREEK	0.05	TXDOT	SHOULDER	ADD PAVEMENT
B4	MARTINEZ LOSOYA, from US HWY 281 to FM 3499	1.27	TXDOT	SHOULDER	ADD PAVEMENT
A4	ROOSEVELT AVE/FM 1937, from SE LOOP 410 to FM 1973/US HWY 281 S	1.08	TXDOT	SHOULDER	ADD PAVEMENT

### RECOMMENDED BICYCLE NETWORK FAR SOUTH AREA



0 0.5 1 2 Miles



\* Map Grid identifies the northern- or western-most point of the segment (or at the "from" point). Some segments may cross into other grids.



# SAN ANTONIO BIKE PLAN 2011 + IMPLEMENTATION STRATEGY

## 3 • the bicycle network

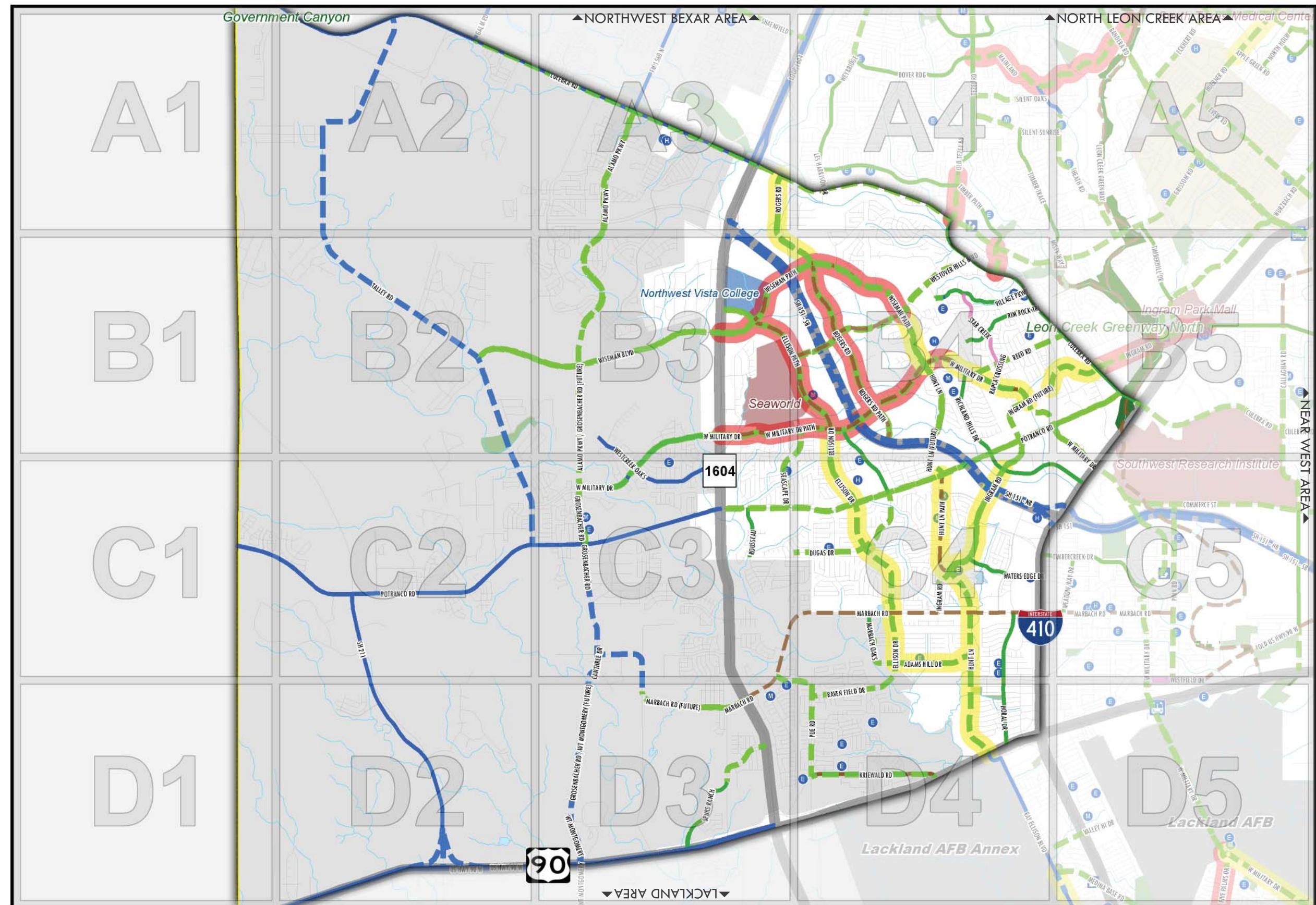
FUNDDED BICYCLE PROJECTS: Far West Area					
Map Grid*	Corridor	Length (miles)	Funded Facility	Funding Source	Future Recommended Facility Type (if different than funded)
B4	DUGAS DR, from W MILITARY DR to ARROWHEAD TRL	2.29	BIKE LANE	ATD	-
C4	ELLISON DR, from POTRANCO RD to QUIET PLAIN DR	2.44	BIKE LANE	ATD	-
C3	ROUSSEAU, from POTRANCO RD to MANOR CREEK RD	0.59	BIKE LANE	ATD	-
B4	STAR CREEK, from VILLAGE PARKWAY to REED RD	0.98	ROUTE	ATD	-
C4	WATERS EDGE DR, from INGRAM RD to LOOP 410	0.87	BIKE LANE	ATD	-

BICYCLE PROJECTS IN OTHER JURISDICTIONS: Far West Area					
Map Grid*	Corridor	Length (miles)	Jurisdiction	Recommended Facility	Proposed Action
A3	ALAMO PKWY, from CULEBRA RD to DEAD END	5.75	BEXAR CO	BIKE LANE	RESTRYPE
B3	ALAMO PKWY / GROSENBAKER RD (FUTURE), from ALAMO PKWY DEAD END to W MILITARY DR / GROSENBAKER DEAD END	1.81	BEXAR CO	BIKE LANE	NEW CONSTRUCTION
C3	CANTHREE DR, from GROSENBAKER RD to DEAD END	.22	BEXAR CO	SHOULDER	RESTRYPE
A2	CULEBRA RD, from KALLISON LN to HARRISON DR	4.48	TXDOT	BIKE LANE	ADD STRIPING & MARKINGS
C4	ELLISON DR, from ADAMS HILL DR to QUIET PLAIN DR	0.42	BEXAR CO	BIKE LANE	RESTRYPE
C3	GROSENBAKER RD, from W MILITARY DR to POTRANCO RD	1.36	BEXAR CO	BUFFERED BL	ROAD DIET; RESTRYPE
C3	GROSENBAKER RD, from POTRANCO RD to MARBACH RD (FUTURE)	2.22	BEXAR CO	SHOULDER	ADD PAVEMENT
D3	GROSENBAKER RD / WT MONTGOMERY (FUTURE), from CANTHREE DR to WT MONTGOMERY	1.79	VARIABLES	SHOULDER	NEW CONSTRUCTION
C4	INGRAM RD (FUTURE), from INGRAM RD to POTRANCO RD	0.90	VARIABLES	BIKE LANE	
D4	KRIEWALD RD, from PUE RD to US HWY 90	1.46	BEXAR CO	BIKE LANE	ROAD DIET
C4	MARBACH OAKS, from MARBACH BEND to ELLISON DR	0.51	BEXAR CO	BIKE LANE	NEW CONSTRUCTION
D3	MARBACH RD, from DEAD END to CITY LIMIT	2.56	BEXAR CO	BIKE LANE	NEW CONSTRUCTION
D3	MARBACH RD (FUTURE), from GROSENBAKER RD to EXISTING MARBACH RD DEAD END	0.71	BEXAR CO	BIKE LANE	NEW CONSTRUCTION
C3	POTRANCO RD, from LOOP 1604 to SH 151	9.86	TXDOT	BIKE LANE	
D3	PUE RD, from MARBACH RD to KRIEWALD RD	1.54	BEXAR CO	BIKE LANE	RESTRYPE
D4	RAVEN FIELD DR, from PUE RD to QUIET PLAIN DR	0.75	BEXAR CO	BIKE LANE	RESTRYPE
A3	SH 151 SV RD, from LOOP 1604 to LOOP 410	11.03	TXDOT	SHOULDER	
D2	SH 211, at US HWY 90 (ramps)	1.9	TXDOT	SHOULDER	
D3	SPURS RANCH, from CAGNON RD to LOOP 1604	0.71	BEXAR CO	BIKE LANE	RESTRYPE
A2	TALLEY RD, from CULEBRA to POTRANCO	7.59	BEXAR CO	SHOULDER	ADD PAVEMENT
C3	W MILITARY DR, from GROSENBAKER RD to LOOP 1604	3.39	BEXAR CO	BIKE LANE	RESTRYPE
B4	W MILITARY DR, at SH 151 (bridge)	0.15	TXDOT	BIKE LANE, PATH	DETAILED STUDY
B4	WESTOVER HILLS BLVD, at SH 151 (bridge)	0.15	TXDOT	BIKE LANE	
B2	WISEMAN BLVD, from TALLEY RD to LOOP 1604	5.92	BEXAR CO	BIKE LANE	DETAILED STUDY
D3	WT MONTGOMERY, from FREEDOM WAY to US HWY 90	0.94	BEXAR CO	SHOULDER	RESTRYPE

PROPOSED PRIORITY BICYCLE PROJECTS: Far West Area						
Map Grid*	Corridor	Length (miles)	Rec Facility Description	Proposed Action	Preliminary Cost Range <sup>(1)</sup>	Partners for Implementation
<b>Tier 1 Priority Projects</b>						
B3	ELLISON DR, from WISEMAN BLVD to MILITARY	1.7	BUFFERED BL	RESTRYPE	\$135,000-\$150,000	Public Works
B4	ROGERS RD, from WISEMAN to W MILITARY DR	1.9	BIKE LANE	CFD	\$135,000-\$150,000	Public Works
B3	W MILITARY DR, from LOOP 1604 to SEQUOIA HEIGHT	5.69	BIKE LANE	DETAILED STUDY	to be determined	Public Works; TXDOT
B3	WISEMAN BLVD, from LOOP 1604 to WESTOVER HILLS BLVD	4.75	BIKE LANE	RESTRYPE; NEW CONSTRUCTION	\$475,000-\$525,000	Public Works; TXDOT

Tier 2 Priority Projects						
C4	ADAMS HILL DR, from ELLISON DR to HUNT LN	0.90	BIKE LANE	RESTRYPE	\$50,000-\$100,000	Public Works
B4	ELLISON DR, from MILITARY DR to POTRANCO RD	1.90	BIKE LANE	RESTRYPE	\$95,000-\$150,000	Public Works
B4	HUNT LN, from WESTOVER HILLS BLVD to W MILITARY DR	1.33	BIKE LANE	DETAILED STUDY	to be determined	Public Works
C4	HUNT LN PATH, from POTRANCO RD to INGRAM RD	1.19	PATH		\$900,000-\$1,000,000	Public Works
C4	HUNT LN, from INGRAM RD to US HWY 90 W	2.3	BIKE LANE	RESTRYPE; STUDY FOR ROAD DIET	\$170,000-\$190,000	Public Works
B5	INGRAM RD, from DEAD END to CULEBRA RD	0.73	BIKE LANE	RESTRYPE	\$40,000-\$55,000	Public Works
C4	INGRAM RD, from RICHLAND HILLS DR to SH 151	0.47	BIKE LANE	RESTRYPE	\$30,000-\$45,000	Public Works
C4	INGRAM RD, from SH 151 to SH LAKESIDE PKWY	1.01	BIKE LANE	DETAILED STUDY	to be determined	Public Works; TXDOT
C4	INGRAM RD, from LAKESIDE PKWY to HUNT LN	1.39	BUFFERED BL	ROAD DIET; DETAILED STUDY	to be determined	Public Works
A3	ROGERS RD, from CULEBRA RD to WISEMAN BLVD	1.87	BIKE LANE	RESTRYPE; NEW CONSTRUCTION	\$100,000-\$125,000	Public Works
B4	W MILITARY DR, from SEQUOIA HEIGHT to DEAD END	1.05	BIKE LANE	NEW CONSTRUCTION	\$50,000 to \$75,000	Public Works

(1) The potential cost range shown is a preliminary order of magnitude estimate of probable construction costs and was prepared prior to any detailed corridor evaluation or design. This estimate is intended only to provide an order of magnitude cost for projection of potential future funding requirements. All such estimates should be reviewed and updated periodically to reflect the most current cost information. Costs are based on 2010-2011 and will vary as more detailed corridor-specific assessments occur and do not include inflation.

**RECOMMENDED BICYCLE NETWORK  
FAR WEST AREA**


\* Map Grid identifies the northern- or western-most point of the segment (or at the "from" point). Some segments may cross into other grids.



# SAN ANTONIO BIKE PLAN 2011 + IMPLEMENTATION STRATEGY

## 3 • the bicycle network

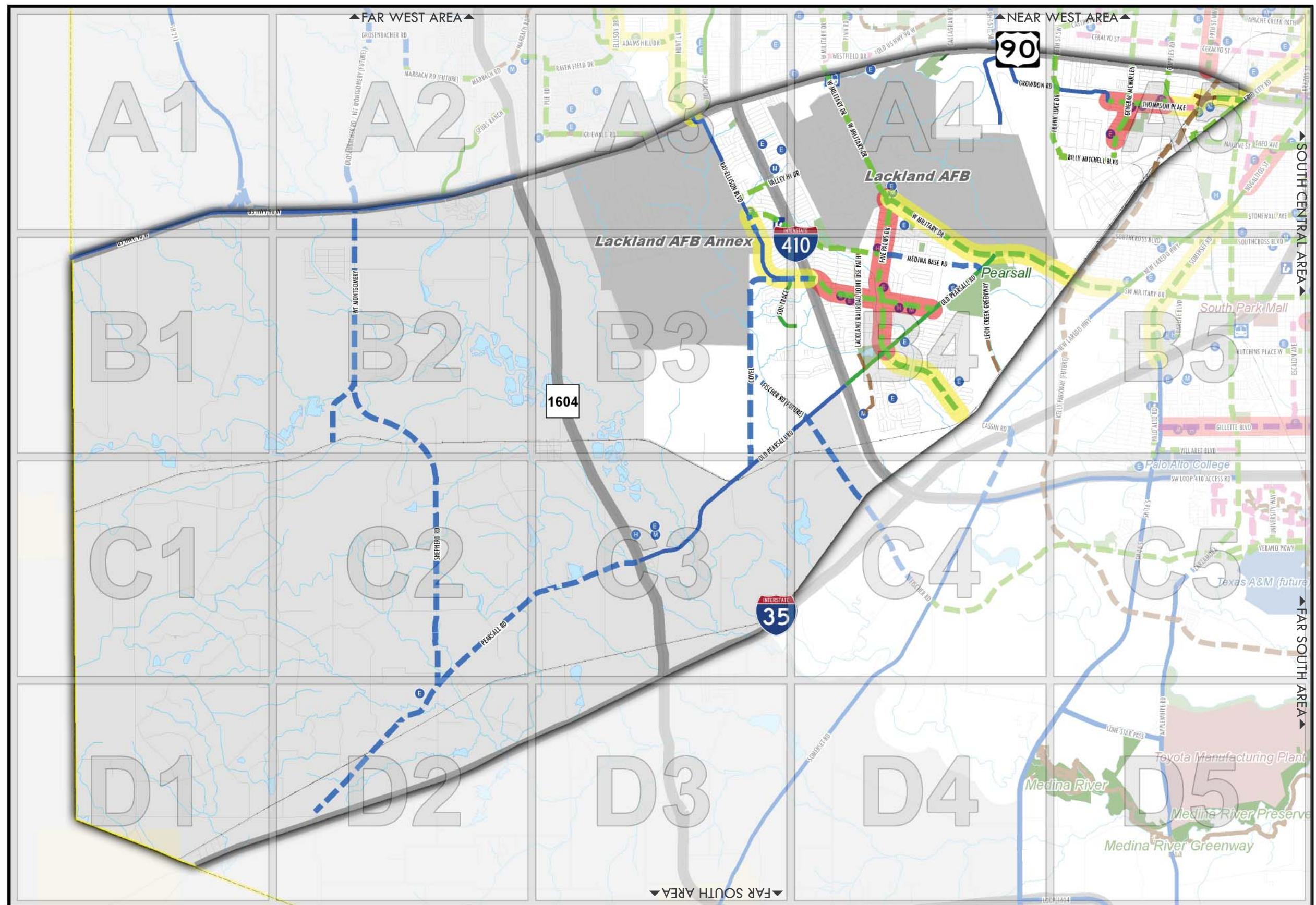
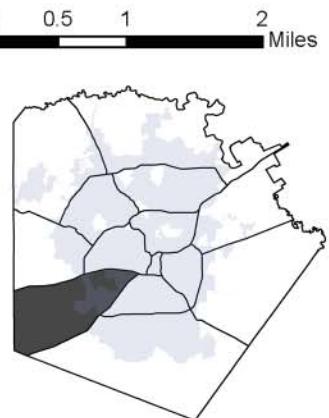
FUNDDED BICYCLE PROJECTS: Lackland Area					
Map Grid*	Corridor	Length (miles)	Funded Facility	Funding Source	Future Recommended Facility Type (if different than funded)
B3	SOL TRACE, from RAY ELLISON BLVD to DEAD END	0.89	BIKE LANE	ATD	-
B4	LEON CREEK GREENWAY, from PEARSALL PARK to RAILROAD TRACKS	1.26	PATH	Sales Tax (Greenway Trails)	-

BICYCLE PROJECTS IN OTHER JURISDICTIONS: Lackland Area					
Map Grid*	Corridor	Length (miles)	Jurisdiction	Recommended Facility	Proposed Action
A5	GENERAL McMULLEN, from PATTON BLVD to MENEFEE BLVD	0.39	TXDOT	BUFFERED BIKE LANE	ROAD DIET
A5	KIRK PLACE, from NEIMEYER ST to FRIOT CITY RD	0.37	TXDOT	BIKE LANE	DETAILED STUDY
A5	KIRK PLACE TO THOMPSON PLACE PATH, from KIRK PLACE to THOMPSON PLACE	0.17	TXDOT	PATH	
B4	LACKLAND RAILROAD JOINT USE PATH, from MEDINA BASE RD to LOOP 410	2.37	Lackland AFB	PATH	
C3	PEARSALL RD, from LOOP 1604 to KEARNEY RD	1.42	TXDOT	SHOULDER	
	PEARSALL RD, from KEARNEY RD to LUCKEY RD	4.5	BEXAR CO	SHOULDER	ADD PAVEMENT
B2	SHEPHERD RD, from WT MONTGOMERY (FUTURE REALIGNMENT) to PEARSALL	1.04	BEXAR CO	SHOULDER	NEW CONSTRUCTION
B4	SW MILITARY DR, from OLD PEARSALL RD to NEW LAREDO HWY	1.90	TXDOT	BIKE LANE	RESTRIPE; DETAILED STUDY
A4	W MILITARY DR, from US HWY 90 to BERQUIST DR	0.31	TXDOT; LACKLAND AFB	BIKE LANE	DETAILED STUDY
A4	W MILITARY DR, from BERQUIST DR to BUCKHORN PL	2.96	Lackland AFB	BIKE LANE	DETAILED STUDY
A4	W MILITARY DR, from BUCKHORN PL to OLD PEARSALL RD	1.71	TXDOT; LACKLAND AFB	BIKE LANE	RESTRIPE
A2	WT MONTGOMERY, from US HWY 90 to MACDONA LACOSTE RD	3.46	BEXAR CO	SHOULDER	ADD PAVEMENT
B2	WT MONTGOMERY (FUTURE REALIGNMENT), from WT MONTGOMERY NEAR FITZHUGH RD to SHEPHERD RD	1.96	BEXAR CO	SHOULDER	NEW CONSTRUCTION

PROPOSED PRIORITY BICYCLE PROJECTS: Lackland Area						
Map Grid*	Corridor	Length (miles)	Rec Facility Description	Proposed Action	Preliminary Cost Range <sup>(1)</sup>	Partners for Implementation
<b>Tier 1 Priority Projects</b>						
A4	FIVE PALMS DR, from W MILITARY DR to OLD PEARSALL	2.23	BIKE LANE	ADD PAVEMENT, RESTRIPE	\$475,000-\$550,000	Public Works
A5	GENERAL McMULLEN, from THOMPSON PL to CALGARY AVE	0.56	BUFFERED BL	ROAD DIET	\$50,000-\$150,000	Public Works
B4	RAY ELLISON BLVD, from SW LOOP 410 to OLD PEARSALL	1.11	BIKE LANE	ADD PAVEMENT; NEW CONSTRUCTION	\$100,000-\$125,000	Public Works
A5	THOMPSON PLACE, from GROWDON RD to CUPPLES RD	0.8	BIKE LANE	ROAD DIET	\$80,000-\$120,000	Public Works
<b>Tier 2 Priority Projects</b>						
B4	FIVE PALMS DR, from OLD PEARSALL RD to PORT VICTORIA	1.43	BIKE LANE	RESTRIPE	\$120,000-\$150,000	Public Works
A5	FRIOT CITY RD, from KIRK PLACE to US HWY 90	0.15	BIKE LANE	ROAD DIET	\$15,000-\$30,000	Public Works
A5	KIRK PLACE, from NEIMEYER ST to FRIOT CITY RD	0.37	BIKE LANE	DETAILED STUDY	to be determined	TXDOT
A5	KIRK PLACE TO THOMPSON PLACE PATH, from KIRK PLACE to THOMPSON PLACE	0.17	PATH	NEW CONSTRUCTION	\$100,000-\$200,000	TXDOT
A3	RAY ELLISON BLVD, from MEDINA BASE RD to LOOP 410	1.47	SHOULDER	RESTRIPE; ADD PAVEMENT	\$200,000-\$300,000	Public Works
B4	SW MILITARY DR, from OLD PEARSALL RD to NEW LAREDO HWY	1.90	BIKE LANE	RESTRIPE; DETAILED STUDY	to be determined	TXDOT
A5	THOMPSON PLACE, from CUPPLES RD to DEAD END	0.42	ROUTE	SIGNS	\$10,000-\$15,000	Public Works
A4	W MILITARY DR, from BUCKHORN PL to OLD PEARSALL RD	1.71	BIKE LANE	RESTRIPE	\$130,000-\$170,000	TXDOT; LACKLAND AFB

(1) The potential cost range shown is a preliminary order of magnitude estimate of probable construction costs and was prepared prior to any detailed corridor evaluation or design. This estimate is intended only to provide an order of magnitude cost for projection of potential future funding requirements. All such estimates should be reviewed and updated periodically to reflect the most current cost information. Costs are based on 2010-2011 and will vary as more detailed corridor-specific assessments occur and do not include inflation.

### RECOMMENDED BICYCLE NETWORK LACKLAND AREA



\* Map Grid identifies the northern- or western-most point of the segment (or at the "from" point). Some segments may cross into other grids.



# SAN ANTONIO BIKE PLAN 2011 + IMPLEMENTATION STRATEGY

## 3 • the bicycle network

FUNDED BICYCLE PROJECTS: Near East Area					
Map Grid*	Corridor	Length (miles)	Funded Facility	Funding Source	Future Recommended Facility Type (if different than funded)
B4	DIANE RD, from RICE RD to RIGSBY AVE	0.75	BIKE LANE	ATD	-
D3	PICKWELL DR, from TIPPERARY to SE MILITARY DR	1.05	BIKE LANE	ATD	-
A3	SALADO CREEK GREENWAY SOUTH, from BINZ-ENGLEMAN RD / FT SAM HOUSTON to SOUTHSIDE LIONS PARK	8.83	PATH	Sales Tax (Greenway Trails)	-
B4	WILLENBROCK, from BENHAM to RIGSBY	0.64	ROUTE	ATD	-

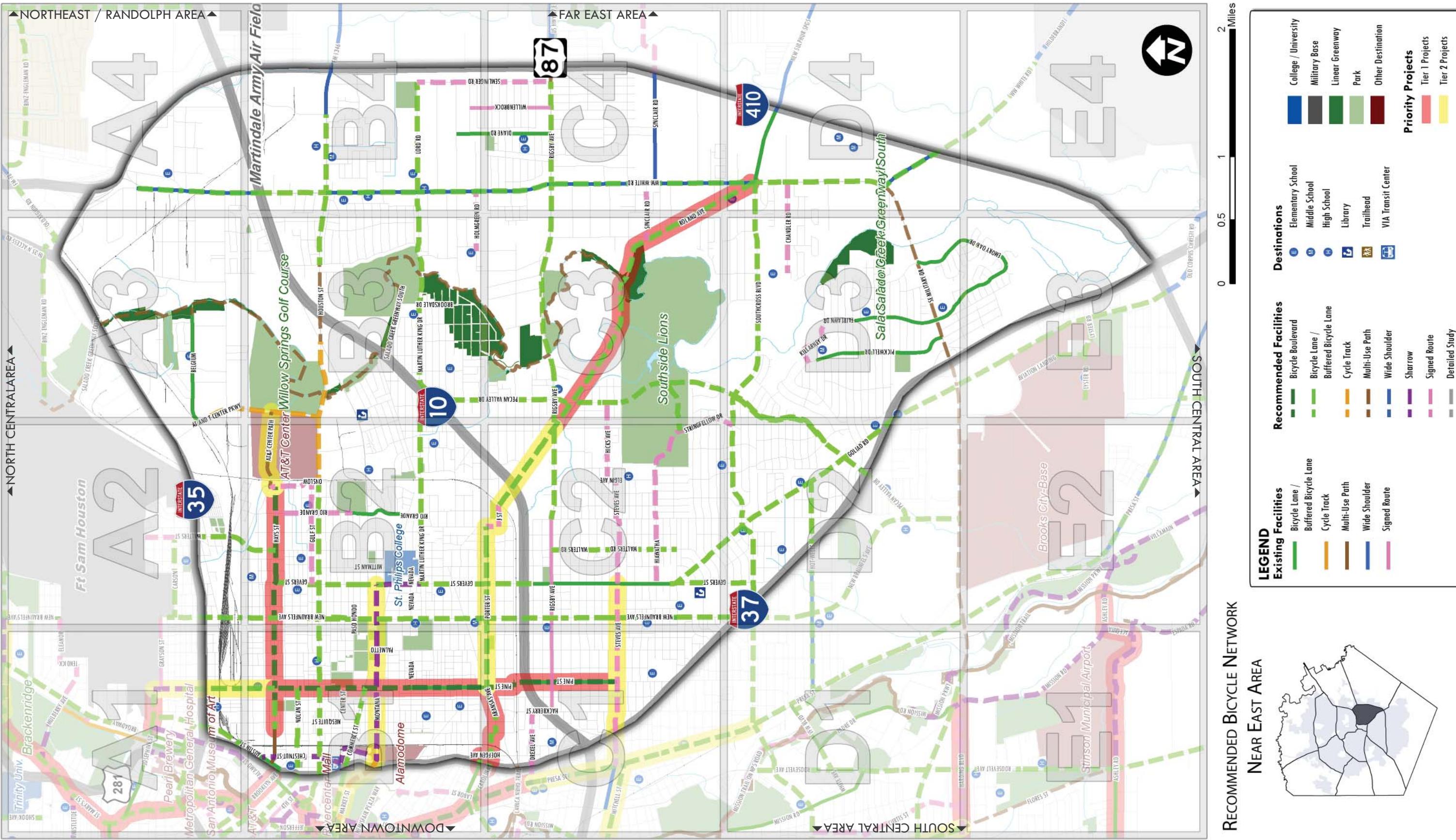
  

BICYCLE PROJECTS IN OTHER JURISDICTIONS: Near East Area					
Map Grid*	Corridor	Length (miles)	Jurisdiction	Recommended Facility	Proposed Action
B1	COMMERCE ST, from SYCAMORE to HOEGEN AVE	0.06	TXDOT	BIKE LANE	BUS BIKE LANE
B4	HOUSTON ST, from S WW WHITE RD to POP GUNN DR	0.61	TXDOT	BIKE LANE	RESTRIPE
B4	HOUSTON ST, from POP GUNN DR to LOOP 410	0.36	TXDOT	SHOULDER	
B3	IH 10 E ACCESS RD, from MARTIN LUTHER KING DR to S WW WHITE RD	0.17	TXDOT	BIKE LANE	
C3	RIGSBY AVE, from ROLAND AVE to SEMLINGER RD	2.74	TXDOT	BIKE LANE	
C3	RIGSBY AVE, from SEMLINGER RD to LOOP 410	0.23	TXDOT	PATH	NEW CONSTRUCTION
D3	SE MILITARY DR, from S WW WHITE RD to IH 37	1.46	TXDOT	PATH	
A4	WW WHITE RD, from SEALE RD to SE MILITARY DR	5.91	TXDOT	BIKE LANE, SHOULDER	RESTRIPE

PROPOSED PRIORITY BICYCLE PROJECTS: Near East Area						
Map Grid*	Corridor	Length (miles)	Rec Facility Description	Proposed Action	Preliminary Cost Range <sup>(1)</sup>	Partners for Implementation
<b>Tier 1 Priority Projects</b>						
C1	ARANSAS AVE, from DENVER BLVD to PORTER ST	0.25	BIKE LANE	RESTRIPE	\$20,000-\$40,000	Public Works
C1	CAROLINA, from IH 37 to CHERRY ST	0.29	BIKE LANE	RESTRIPE	\$30,000-\$60,000	Public Works
C1	CHERRY, from CAROLINA to DENVER	0.04	BIKE LANE	RESTRIPE	\$5,000-\$10,000	Public Works
C1	DENVER BLVD, from CHERRY ST to ARANSAS AVE	0.12	BIKE LANE	RESTRIPE	\$10,000-\$20,000	Public Works
B1	FLORIDA, from IH 37 ACCESS RD to HOEGEN AVE	0.09	BIKE LANE	RESTRIPE	\$5,000-\$10,000	Public Works
B1	HAYS ST, from HAYS STREET BRIDGE to OLIVE ST	0.23	BIKE LANE	RESTRIPE	\$30,000-\$40,000	Public Works
B1	HAYS ST, from OLIVE ST to ONSLOW	1.91	DETAILED STUDY: BICYCLE BOULEVARD	TRAFFIC CALMING; ADD MARKINGS AND SIGNS	\$450,000-\$750,000	Public Works
B1	PINE ST, from HAYS ST to STEVES AVE	2.7	DETAILED STUDY: BICYCLE BOULEVARD	TRAFFIC CALMING; ADD MARKINGS AND SIGNS	\$650,000-\$1,000,000	Public Works
C3	ROLAND AVE, from RIGSBY AVE to S WW WHITE RD	2.65	BIKE LANE	RESTRIPE; ADD PAVEMENT	\$375,000-\$400,000	Public Works
C1	WESTFALL AVE, from PINE ST to PINE ST	0.04	BICYCLE BOULEVARD	TRAFFIC CALMING; ADD MARKINGS AND SIGNS	\$10,000-\$15,000	Public Works
<b>Tier 2 Priority Projects</b>						
B2	AT&T CENTER PATH, from ONSLOW to AT&T CENTER PKWY	0.61	PATH	NEW CONSTRUCTION	\$400,000-\$600,000	Public Works; AT&T Center
C2	CLARK AVE, from PORTER ST to J ST	0.10	ROUTE	SIGNS	\$5,000-\$10,000	Public Works
C2	J ST, from CLARK AVE to ROLAND AVE	0.16	ROUTE	SIGNS	\$8,000-\$12,000	Public Works
B1	MONTANA, from IH 37 / MARKET ST to IH 37 ACCESS RD	0.03	CYCLETRACK	ROAD DIET	to be determined	Public Works
B1	MONTANA, from IH 37 to GEVERS ST	1.39	SHARROW	ADD MARKINGS	\$85,000-\$110,000	Public Works
B2	ONSLOW, from DRAINAGE CHANNEL to HAYS ST	0.04	ROUTE	SIGNS	\$2,000-\$4,000	Public Works
A1	PINE ST, from IH 35 to HAYS ST	0.58	BIKE LANE	RESTRIPE	\$60,000-\$70,000	Public Works
C1	PORTER ST, from ARANSAS AVE to CLARK AVE	1.26	BIKE LANE	RESTRIPE	\$125,000-\$150,000	Public Works
C2	ROLAND AVE, from TWOHIG AVE to RIGSBY AVE	0.76	BIKE LANE	RESTRIPE; ADD PAVEMENT	\$75,000-\$150,000	Public Works
C1	STEVES AVE, from PRESA ST to GEVERS ST	1.44	ROUTE	SIGNS	\$30,000-\$50,000	Public Works

(1) The potential cost range shown is a preliminary order of magnitude estimate of probable construction costs and was prepared prior to any detailed corridor evaluation or design. This estimate is intended only to provide an order of magnitude cost for projection of potential future funding requirements. All such estimates should be reviewed and updated periodically to reflect the most current cost information. Costs are based on 2010-2011 and will vary as more detailed corridor-specific assessments occur and do not include inflation.

\* Map Grid identifies the northern- or western-most point of the segment (or at the "from" point). Some segments may cross into other grids.





# SAN ANTONIO BIKE PLAN 2011 + IMPLEMENTATION STRATEGY

## 3 • the bicycle network

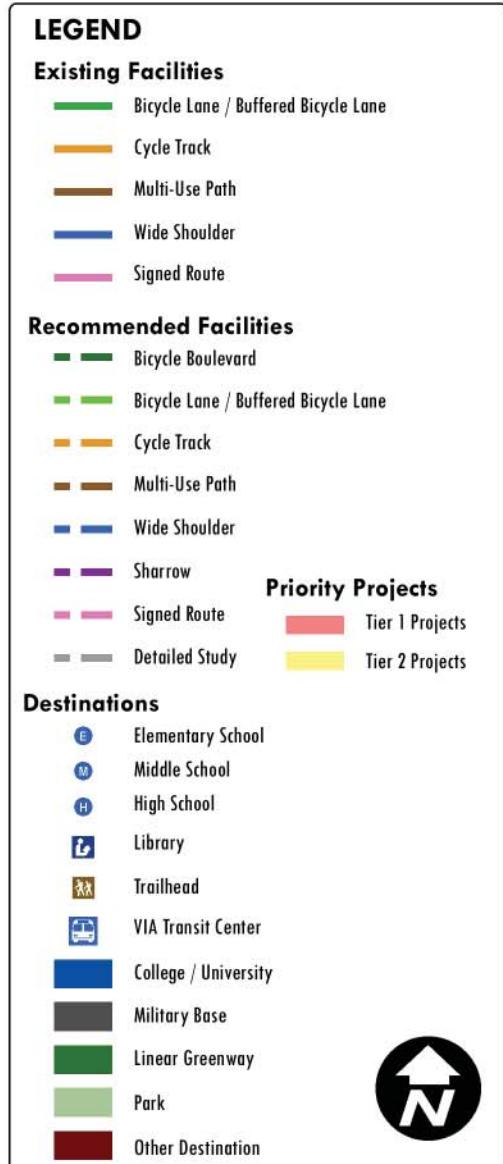
FUNDED BICYCLE PROJECTS: Near West Area					
Map Grid*	Corridor	Length (miles)	Funded Facility	Funding Source	Future Recommended Facility Type (if different than funded)
C4	19TH ST NW, from BUENA VISTA to CASTROVILLE	0.52	BIKE LANE	ATD	BICYCLE BOULEVARD
A3	CALLAGHAN RD, from BANDERA RD to INGRAM RD	1.44	PATH	2007 Bond	-
B2	CALLAGHAN RD, from CULEBRA RD to COMMERCE ST	1.04	BIKE LANE	2007 Bond	-
C4	GUADALUPE ST, from CASTROVILLE RD / SW 19TH ST to BRAZOS	1.38	BIKE LANE	ATD	-
C4	HAMILTON AVE, from LOMBRANO to MARTIN ST	0.75	BIKE LANE	ATD	-
C4	HAMILTON AVE, from BUENA VISTA to GUADALUPE ST	0.52	BIKE LANE	ATD	-
C1	LEON CREEK GREENWAY, from LOOP 410 to LEVI STRAUSS PARK	4.61	PATH	Sales Tax (Greenway Trails)	-
D1	MARBACH RD, from RAWHIDE LN to W MILITARY DR	0.39	PATH	2007 Bond	-
C4	POPLAR ST, from NW 24TH to COLORADO ST	1.91	ROUTE	ATD	BIKE LANE
C5	TRINITY ST, from HOUSTON ST to LAREDO ST	1.09	BIKE LANE	ATD	-
B4	WILSON BLVD, from BABCOCK RD to WOODLAWN AVE	1.21	BIKE LANE	ATD	-

BICYCLE PROJECTS IN OTHER JURISDICTIONS: Near West Area					
Map Grid*	Corridor	Length (miles)	Jurisdiction	Recommended Facility	Proposed Action
A3	BABCOCK RD, from HILLCREST DR to BALCONES HEIGHTS RD	0.20	BALCONES HEIGHTS	DETAILED STUDY	DETAILED STUDY
A2	BANDERA RD, from HUEBNER RD to LEON VALLEY CITY LIMITS	4.41	TXDOT; LEON VALLEY	BIKE LANE	NEW CONSTRUCTION
A3	BANDERA RD, from LEON VALLEY CITY LIMITS to CULEBRA	3.71	TXDOT	BIKE LANE	NEW CONSTRUCTION; RESTRIPE
A4	CROSSROADS BLVD, from CROSSROADS BLVD to DEWHURST RD	0.24	BALCONES HEIGHTS	BIKE LANE	
B2	CULEBRA RD, from LOOP 410 to AVE G	0.65	TXDOT	BIKE LANE	NEW CONSTRUCTION
A4	FREDERICKSBURG RD, from LOOP 410 to BALCONES HEIGHTS CITY LIMITS	0.09	TXDOT	DETAILED STUDY	DETAILED STUDY
A4	FREDERICKSBURG RD, through CITY OF BALCONES HEIGHTS	0.80	TXDOT; BALCONES HEIGHTS	DETAILED STUDY	DETAILED STUDY
A4	FREDERICKSBURG RD, from BALCONES HEIGHTS CITY LIMITS to MARY LOUISE	1.78	TXDOT	DETAILED STUDY	DETAILED STUDY
A4	HILLCREST DR, from FREDERICKSBURG RD to BABCOCK RD	0.63	BALCONES HEIGHTS	BIKE LANE	RESTRIPE
D5	NOGALITOS ST, from US HWY 90 to CUMBERLAND BLVD	0.33	TXDOT	BIKE LANE	DETAILED STUDY; ROAD DIET
C1	SH 151 SERVICE ROADS, from LOOP 410 to US 90	9.07	TXDOT	SHOULDER	RESTRIPE
C1	W MILITARY DR, at LOOP 410 (under/over pass)	0.07	TXDOT	BIKE LANE	DETAILED STUDY
D2	W MILITARY DR, at US HWY 90 SERVICE RD (under/over pass)	0.13	TXDOT	BIKE LANE	DETAILED STUDY

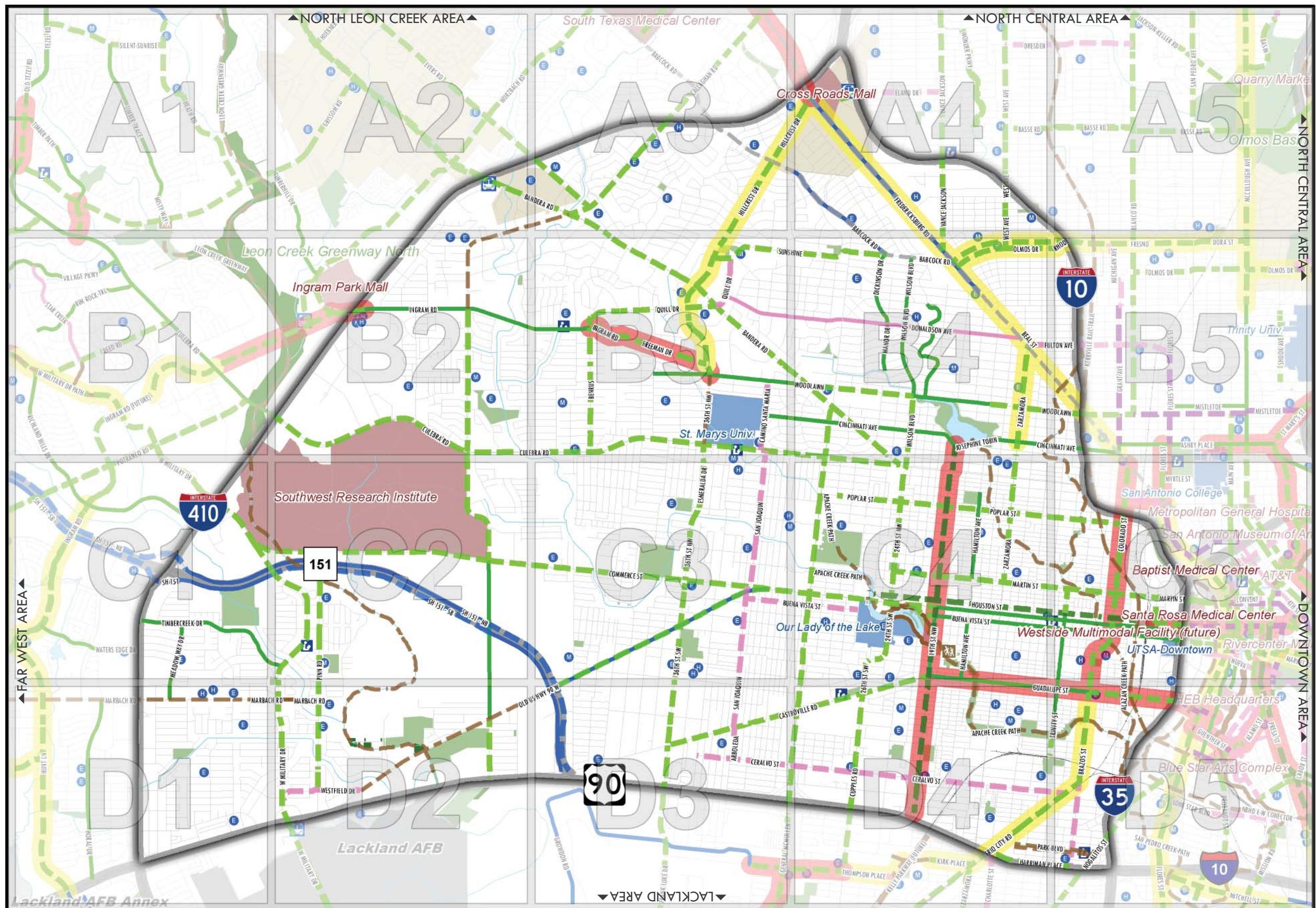
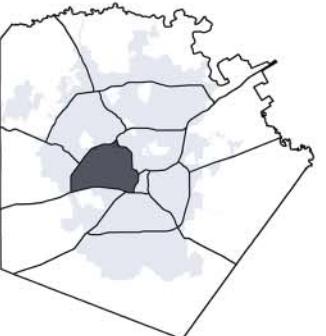
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PROPOSED PRIORITY BICYCLE PROJECTS: Near West Area						
Map Grid*	Corridor	Length (miles)	Rec Facility Description	Proposed Action	Preliminary Cost Range <sup>(1)</sup>	Partners for Implementation
<b>Tier 1 Priority Projects</b>						
C4	19TH ST NW, from CULEBRA to BUENA VISTA	1.26	BICYCLE BOULEVARD	TRAFFIC CALMING; ADD MARKINGS AND SIGNS	\$300,000-\$400,000	Public Works
C4	19TH ST NW, from CASTROVILLE / GUADALUPE to BRADY	1.18	BICYCLE BOULEVARD	TRAFFIC CALMING; ADD MARKINGS AND SIGNS	\$300,000-\$400,000	Public Works
B3	36TH ST NW, from FREEMAN DR to WOODLAWN	0.10	BIKE LANE	NEW CONSTRUCTION	\$10,000-\$20,000	Public Works
C5	BRAZOS ST, from DURANGO BLVD to GUADALUPE ST	0.30	BIKE LANE	ROAD DIET	\$40,000-\$55,000	Public Works
B3	BROADVIEW DR, from INGRAM RD to FREEMAN DR	0.05	BIKE LANE	RESTRIPE	\$5,000-\$10,000	Public Works
C5	COLORADO ST, from IH 10 to DURANGO BLVD	1.29	BIKE LANE	ROAD DIET	\$100,000-\$150,000	Public Works
A4	FREDERICKSBURG RD, from LOOP 410 to HILLCREST	0.14	DETAILED STUDY	DETAILED STUDY	to be determined	Public Works, TXDOT, Balcones Heights
B3	FREEMAN DR, from W BROADVIEW DR to NW 36TH ST	0.77	BIKE LANE	RESTRIPE; ADD PAVEMENT	\$65,000-\$80,000	Public Works
B4	GLENMORE, from CINCINNATI to CULEBRA	0.22	BICYCLE BOULEVARD	TRAFFIC CALMING; ADD MARKINGS AND SIGNS	\$50,000-\$75,000	Public Works
D5	GUADALUPE ST, from BRAZOS to IH 10	0.74	BIKE LANE, BUFFERED BIKE LANE	ROAD DIET	\$90,000-\$115,000	Public Works
C5	HOUSTON ST, from MEDINA / WESTSIDE MULTIMODAL FACILITY to SAN SABA	0.30	BIKE LANE	RESTRIPE	\$25,000-\$35,000	Public Works
B2	INGRAM RD, from LOOP 410 to END OF EXISTING BIKE LANE	0.15	BIKE LANE	DETAILED STUDY	to be determined	Public Works
B3	INGRAM RD, from BENRUS to W BROADVIEW DR	0.27	BIKE LANE	RESTRIPE	\$25,000-\$35,000	Public Works
<b>Tier 2 Priority Projects</b>						
B3	36TH ST NW, from WILLARD DR to FREEMAN DR	0.36	BIKE LANE	NEW CONSTRUCTION	\$25,000-\$50,000	Public Works
D5	BRAZOS ST, from GUADALUPE ST to FRIO CITY RD	0.78	BIKE LANE	RESTRIPE	\$75,000-\$90,000	Public Works
A4	FREDERICKSBURG RD, from HILLCREST DR to CINCINNATI AVE	4.02	DETAILED STUDY	DETAILED STUDY	to be determined	TXDOT, Public Works
B4	FRESNO, from FREDERICKSBURG RD to IH 10	1.01	BIKE LANE	DETAILED STUDY; COMPLETE STREET CANDIDATE	to be determined	Public Works
D4	FRIO CITY RD, from US HWY 90 to BRAZOS	1.0	BIKE LANE	ROAD DIET	\$75,000-\$150,000	Public Works
A4	HILLCREST DR, from FREDERICKSBURG RD to WILLARD	2.28	BIKE LANE	RESTRIPE; NEW CONSTRUCTION	\$120,000-\$175,000	Public Works, Balcones Heights
B4	OLMOS DR, from FREDERICKSBURG RD to RHODE	0.89	BIKE LANE	RESTRIPE	\$85,000-\$100,000	Public Works
B5	RHODE, from W OLMOS DR to FRESNO	0.09	BIKE LANE	RESTRIPE	\$8,000-\$12,000	Public Works
B4	ZARZAMORA, from GRAMERCY / FREDERICKSBURG to CINCINNATI AVE	0.82	BIKE LANE; POTENTIAL COMPLETE STREET	RESTRIPE	\$50,000-\$110,000	Public Works

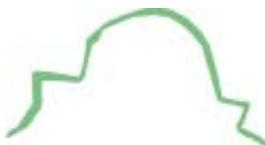
### RECOMMENDED BICYCLE NETWORK NEAR WEST AREA



0 0.5 1 2 Miles



\* Map Grid identifies the northern- or western-most point of the segment (or at the "from" point). Some segments may cross into other grids.



# SAN ANTONIO BIKE PLAN 2011 + IMPLEMENTATION STRATEGY

## 3 • the bicycle network

### PROPOSED PRIORITY BICYCLE PROJECTS: North 281 Corridor Area

Map Grid*	Corridor	Length (miles)	Rec Facility Description	Proposed Action	Preliminary Cost Range <sup>(1)</sup>	Partners for Implementation
<b>Tier 1 Priority Projects</b>						
C4	NACOGDOCHES RD, from WURZBACH PKWY to BITTERS RD	1.41	BIKE LANE	DETAILED STUDY	to be determined	Public Works
C2	NW MILITARY HWY, from BRAESVIEW to LEMONWOOD DR	1.62	BIKE LANE	RESTRIPING	\$100,000-\$200,000	Public Works; TXDOT; Castle Hills
C4	STARCREST DR, from BARRINGTON to LOOP 410	0.50	BUFFERED BL	ROAD DIET	\$75,000-\$100,000	Public Works
<b>Tier 2 Priority Projects</b>						
C4	BARRINGTON, from STARCREST DR to OVERTON	0.35	BIKE LANE	RESTRIPING	\$25,000-\$35,000	Public Works
C4	BARRINGTON, from OVERTON to KINGS PT	0.33	SHARROW	ADD MARKINGS	\$10,000-\$20,000	Public Works
B3	BROOK HOLLOW, from HEIMER RD to MORNING DOVE	0.70	BIKE LANE	RESTRIPING	\$60,000-\$80,000	Public Works
B3	CARLTON OAKS, from MORNING DOVE to JONES MALTSBERGER RD	0.35	BIKE LANE	RESTRIPING	\$30,000-\$40,000	Public Works
C4	COMSTOCK, from KINGS PT to PERRIN BEITEL	0.04	ROUTE	SIGNS	\$2,000-\$4,000	Public Works
C2	CONTESSA DR, from DOWNSHIRE to CORONET	0.18	ROUTE	SIGNS	\$6,000-\$10,000	Public Works
C2	CORONET, from CONTESSA DR to MCCULLOUGH AVE	0.11	ROUTE	SIGNS	\$6,000-\$10,000	Public Works
C2	DOWNSHIRE, from CONTESSA DR to MCCULLOUGH AVE	0.11	ROUTE	SIGNS	\$6,000-\$10,000	Public Works
B3	HENDERSON PASS, from THOUSAND OAKS to BROOK HOLLOW	1.24	BIKE LANE	ROAD DIET	\$115,000-\$130,000	Public Works
D4	HIDDEN DR, from VILLAGE DR to STARCREST DR	0.28	BIKE LANE	RESTRIPING	\$35,000-\$45,000	Public Works
D2	HONEYSUCKLE LN, from LEMONWOOD DR to LOOP 410 SV RD	0.15	BIKE LANE	RESTRIPING	\$15,000-\$25,000	CASTLE HILLS
C4	KINGS PT, from COMSTOCK to BARRINGTON	0.04	ROUTE		\$2,000-\$4,000	Public Works
C2	LEMONWOOD DR, from HONEYSUCKLE LN to NW MILITARY HWY	0.36	ROUTE	SIGNS	\$20,000-\$30,000	CASTLE HILLS
C2	MCCULLOUGH AVE, from RAMSEY to DOWNSHIRE	0.12	ROUTE	SIGNS	\$6,000-\$10,000	Public Works
C2	MCCULLOUGH AVE, from CORONET to LOOP 410	0.19	BIKE LANE	DETAILED STUDY	to be determined	Public Works; TXDOT
B3	MORNING DOVE LN, from BROOK HOLLOW to CARLTON OAKS	0.05	ROUTE	SIGNS	\$2,000-\$4,000	Public Works
C4	NACOGDOCHES RD, from THOUSAND OAKS to WURZBACH PKWY	1.22	BIKE LANE	DETAILED STUDY	to be determined	Public Works
D4	NORTHEAST BAPTIST HOSPITAL PARKING LOT, from SALADO CREEK LINEAR CREEK to VILLAGE DR	0.25	ROUTE	SIGNS	\$10,000-\$15,000	Northeast Baptist Hospital
C2	RAMSEY, from BLANCO to JAMES MALTSBERGER	1.65	BIKE LANE	RESTRIPING; ROAD DIET	\$185,000-\$215,000	Public Works
D4	VILLAGE DR, from HIDDEN DR to HOSPITAL PARKING LOT ENTRANCE AT 8680 BLOCK	0.10	BIKE LANE	RESTRIPING	\$8,000-\$12,000	Public Works

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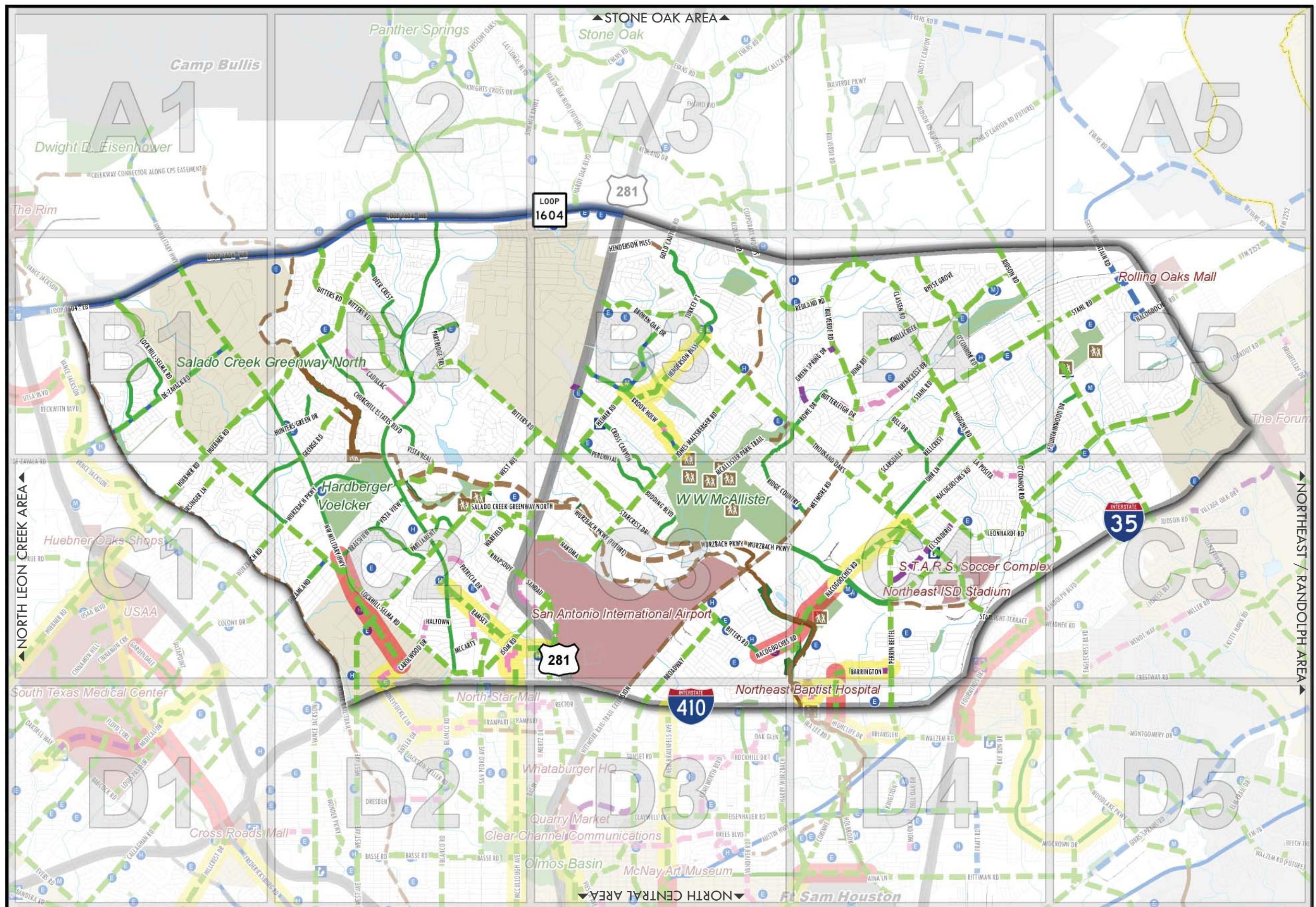
### FUNDED BICYCLE PROJECTS: North 281 Corridor Area

Map Grid*	Corridor	Length (miles)	Funded Facility	Funding Source	Future Recommended Facility Type (if different than funded)
B4	BELLCREST, from BELL DR to HIGGINS RD	0.72	ROUTE	ATD	BIKE LANE
C2	BRAESVIEW, from NW MILITARY HWY to VISTA VIEW	0.62	BIKE LANE	ATD	-
B2	CADILLAC, from BLANCO RD to DEAD END	1.07	ROUTE	ATD	-
B2	GEORGE RD, from CEDAR CANYON to NW MILITARY HWY	0.82	BIKE LANE	ATD	-
C2	PATRICIA DR, from VISTA VIEW to WEST AVE	0.76	BIKE LANE	ATD	-
C3	SCARSDALE, from BELL DR to THOUSAND OAKS	1.19	ROUTE	ATD	BIKE LANE
B2	VISTA REAL, from BLANCO RD to VIDORRA VISTA	0.74	BIKE LANE	ATD	-
B3	JONES MALTSBERGER RD, from REDLAND RD to THOUSAND OAKS	1.29	PATH	2007 BOND	-
B2	NW MILITARY HWY, from HUEBNER to WURZBACH PKWY	1.32	BIKE LANE	TXDOT	-
C2	SALADO CREEK GREENWAY, from BLANCO RD to WETMORE RD	6.42	PATH	Sales Tax (Greenway Trails)	-
C2	WURZBACH PKWY (FUTURE), from BLANCO RD to STARCREST	4.48	PATH	Sales Tax (Greenway Trails)	-

### BICYCLE PROJECTS IN OTHER JURISDICTIONS: North 281 Corridor Area

Map Grid*	Corridor	Length (miles)	Jurisdiction	Recommended Facility	Proposed Action
C2	BLANCO RD, from LOCKHILL-SELMA RD to LOOP 410	0.19	TXDOT	BIKE LANE	NEW CONSTRUCTION
C2	CAROLWOOD DR, from LOCKHILL-SELMA RD to NW MILITARY HWY	0.38	CASTLE HILLS	ROUTE	SIGNS
C4	CROSSWINDS WAY, at IH 35 (underpass/overpass)	0.03	TXDOT	BIKE LANE	DETAILED STUDY
B1	DE ZAVALA RD, from LOCKHILL-SELMA RD to NW MILITARY HWY	0.87	SHAVANO PARK	BIKE LANE	ADD STRIPING & MARKINGS
D2	HONEYSUCKLE LN, from LEMONWOOD DR to LOOP 410 SV RD	0.15	CASTLE HILLS	BIKE LANE	RESTRIPING
C3	ISOM RD, at HWY 281 (underpass/overpass)	0.07	TXDOT	BIKE LANE	RESTRIPING
C3	JONES MALTSBERGER RD, from LOOP 410 ACCESS to LOOP 410 ACCESS	0.05	TXDOT	BIKE LANE	
C5	JUDSON RD, from INDEPENDENCE AVE to IH 35 N ACCESS RD	0.72	TXDOT	BIKE LANE	RESTRIPING
C2	LEMONWOOD DR, from HONEYSUCKLE LN to NW MILITARY HWY	0.36	CASTLE HILLS	ROUTE	SIGNS
B1	LOCKHILL-SELMA, at LOOP 1604 (underpass/overpass)	0.09	TXDOT	BIKE LANE	
B5	NACOGDOCHES RD, from STAHL RD to N LOOP 1604	0.25	TXDOT	BIKE LANE	
C4	NACOGDOCHES RD, from HIGGINS RD to THOUSAND OAKS	1.32	TXDOT	BIKE LANE	
B1	NW MILITARY HWY, from LOOP 1604 to HUEBNER	2.02	TXDOT; SHAVANO PARK	BIKE LANE	
C2	NW MILITARY HWY, from BRAESVIEW to LEMONWOOD DR	1.62	TXDOT; CASTLE HILLS	BIKE LANE	RESTRIPING
C4	PERRIN BEITEL, from THOUSAND OAKS to LOOP 410	2.46	TXDOT	BIKE LANE	
C2	RHAPSODY, from SAN PEDRO to HWY 281 ACCESS RD.	0.04	TXDOT	BIKE LANE	
C2	SANDAU, at HWY 281 (underpass/overpass)	0.03	TXDOT	BIKE LANE	
C4	THOUSAND OAKS, at IH 35 (underpass/overpass)	0.03	TXDOT	BIKE LANE	
C2	WEST AVE, from LOCKHILL-SELMA to LOOP 410	1.35	CASTLE HILLS	BIKE LANE	
B3	WINDING WAY, from TOWER to HWY 281	0.07	HILL COUNTRY VILLAGE	SHARROW	
C3	WURZBACH PKWY, from NE ENTRANCE RD to WETMORE RD	1.93	TXDOT	PATH	
C4	WURZBACH PKWY, from PERRIN BEITEL to QUARRY PARK	1.34	TXDOT	PATH	
C2	WURZBACH PKWY (FUTURE), from BLANCO RD to STARCREST / WURZBACH EXISTING	4.48	TXDOT	PATH	NEW CONSTRUCTION

**RECOMMENDED BICYCLE NETWORK**  
NORTH US 281 AREA



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# SAN ANTONIO BIKE PLAN 2011 + IMPLEMENTATION STRATEGY

## 3 • the bicycle network

FUNDED BICYCLE PROJECTS: North Central Corridor Area					
Map Grid*	Corridor	Length (miles)	Funded Facility	Funding Source	Future Recommended Facility Type (if different than funded)
D2	ASHBY PLACE, from FLORES ST to ST MARY'S ST	0.9	BIKE LANE	ATD	-
C3	NEW BRAUNFELS AVE, from BURR RD to PERSHING AVE	0.49	BIKE LANE	ATD	-
D4	WALTERS ST, from FT SAM HOUSTON to IH 35	0.37	BIKE LANE	2007 Bond	-
A4	SALADO CREEK GREENWAY NORTH, at NE LOOP 410 (underpass)	0.27	PATH	Sales Tax (Greenway Trails)	-

### BICYCLE PROJECTS IN OTHER JURISDICTIONS: North Central Corridor Area

Map Grid*	Corridor	Length (miles)	Jurisdiction	Recommended Facility	Proposed Action
B3	ALAMO HEIGHTS BLVD, from TUXEDO to JONES MALTSBERGER	1.03	ALAMO HEIGHTS	BIKE LANE	RESTRYPE
A2	ANTLER DR, from JACKSON-KELLER RD to HONEYSUCKLE LN	0.30	CASTLE HILLS	ROUTE	SIGNS
B3	AUSTIN HWY, from BROADWAY to NEW BRAUNFELS AVE	0.46	TXDOT	BUFFERED BL	ROAD DIET
B3	BASSE RD, from US HWY 281 to JONES MALTSBERGER RD	0.24	TXDOT	BIKE LANE	ADD PAVEMENT
C4	BINZ-ENGLEMAN RD, from SALADO CREEK to IH 35	1.2	Ft Sam Houston; TXDOT	BIKE LANE	DETAIL STUDY
B3	BROADWAY, from ALAMO HEIGHTS CITY LIMIT to AUSTIN HWY	1.28	ALAMO HEIGHTS	BIKE LANE	DETAIL STUDY; RESTRYPE
B3	BROADWAY, from AUSTIN HIGHWAY to JOSEPHINE	2.55	TXDOT	BUFFERED BL	ROAD DIET
D3	CARSON, from NEW BRAUNFELS to WALTERS ST	0.63	Ft Sam Houston	BIKE LANE	RESTRYPE
A2	CAS HILLS DR, from LOU JON CIR to BLANCO RD	0.36	CASTLE HILLS	ROUTE	SIGNS
D3	CASA BLANCA, from AVENUE A to BROADWAY	0.14	TXDOT	BIKE LANE	ROAD DIET
B3	CASTANO AVE, from ALAMO HEIGHTS BLVD to NEW BRAUNFELS	0.55	ALAMO HEIGHTS	ROUTE	SIGNS; TRAFFIC CALMING
B3	CLAYWELL DR, from BROADWAY to N NEW BRAUNFELS AVE	0.44	ALAMO HEIGHTS	BIKE LANE	DETAILED STUDY
B3	CRESCENT ST, from GREELY ST to ESTES AVE	0.25	ALAMO HEIGHTS	ROUTE	SIGNS
B3	ESTES AVE, from CRESCENT ST to PATTERSON AVE	0.04	ALAMO HEIGHTS	ROUTE	
B3	GREELY ST, from VIESCA AVE to CRESCENT ST	0.08	ALAMO HEIGHTS	ROUTE	
A2	HONEYSUCKLE LN, from LOOP 410 SV RD to ANTLER DR	0.73	CASTLE HILLS; TXDOT	BIKE LANE; ROUTE	RESTRYPE
A1	KERRVILLE RAIL-TRAIL, from LOOP 410 to PROBANDT	8.24	TXDOT	PATH	
A2	LOU JON CIR, from HONEYSUCKLE LN to CAS HILLS DR	0.05	CASTLE HILLS	ROUTE	
B2	MCCULLOUGH AVE, from WEST SIDE DR to HILDEBRAND AVE	0.99	OLMOS PARK	BIKE LANE	RESTRYPE
B3	NEW BRAUNFELS AVE, from AUSTIN HWY to BURR RD	1.08	ALAMO HGTS, TERRELL HLS	BIKE LANE	RESTRYPE
C2	OLMOS DR, from HOWARD ST to US HWY 281 N	1.16	OLMOS PARK	BIKE LANE; SHARROW	RESTRYPE
C3	OLMOS DR, from OLMOS CREEK to CRESCENT ST	0.27	ALAMO HEIGHTS	SHARROW	ADD MARKINGS
C3	PATTERSON AVE, from ESTES AVE to BROADWAY	0.78	ALAMO HEIGHTS	BIKE LANE	RESTRYPE
C5	PETROLEUM DR, from HOLBROOK to IH 35	0.43	Ft Sam Houston	BIKE LANE	WIDEN PAVEMENT
C3	TERRELL RD, from NEW BRAUNFELS AVE. to BROADWAY ST.	0.19	INCORPORATED CITY	ROUTE	SIGNS
B4	VANDIVER RD, from RITTIMAN to GARRATY RD	0.74	INCORPORATED CITY	ROUTE	
B3	VIESCA AVE, from ALAMO HEIGHTS BLVD to GREELY ST	0.30	INCORPORATED CITY	ROUTE	
A1	WEST AVE, from LOOP 410 to JACKSON KELLER RD	0.15	INCORPORATED CITY	BIKE LANE	ROAD DIET
A3	WETMORE RAIL-TRAIL EXTENSION, from LOOP 410 to BASSE	2.07	RAIL AUTHORITY	PATH	RAIL-TRAIL
C2	WOODLAWN, from IH 10 W to FREDERICKSBURG RD	0.05	TXDOT	BIKE LANE	

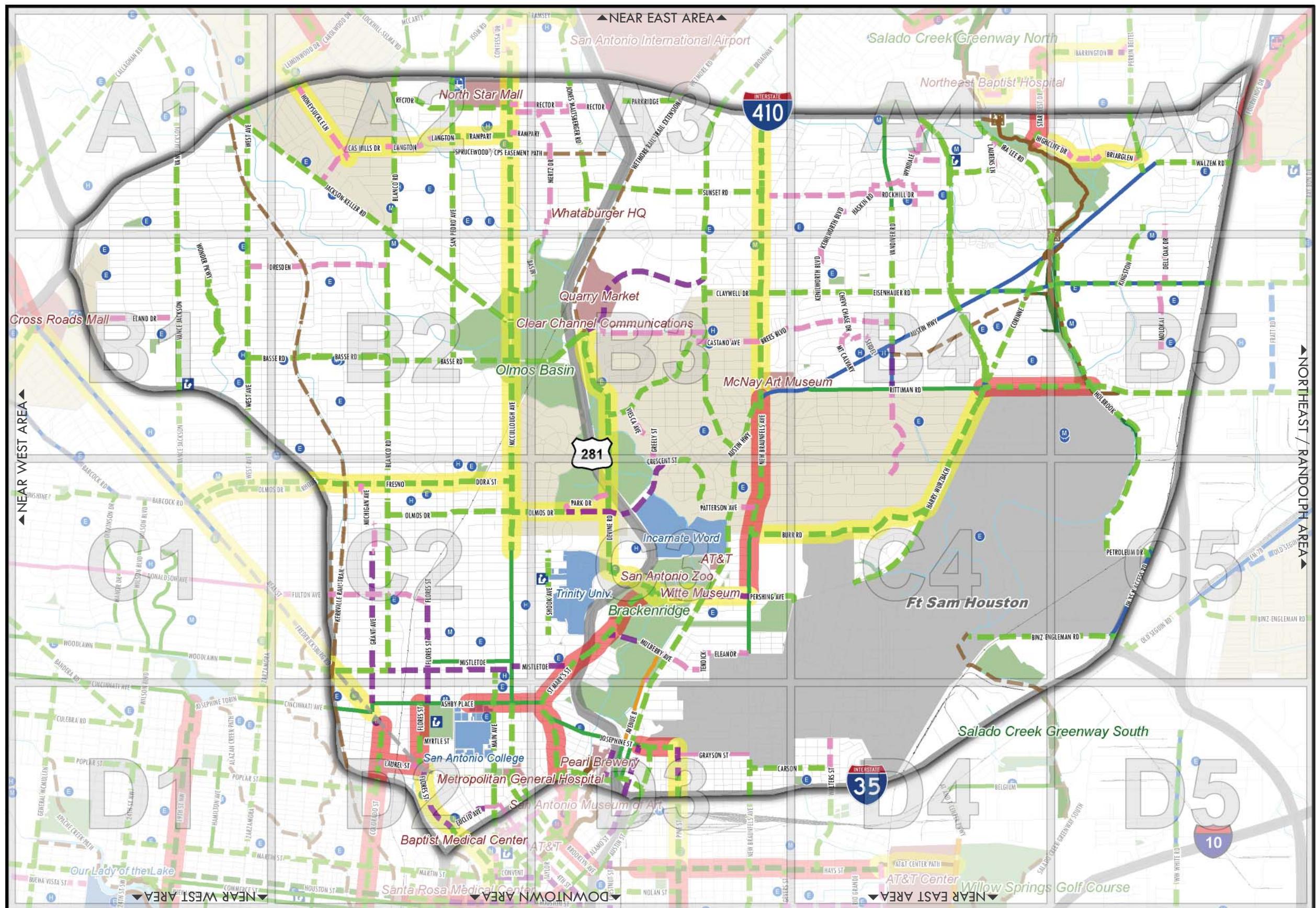
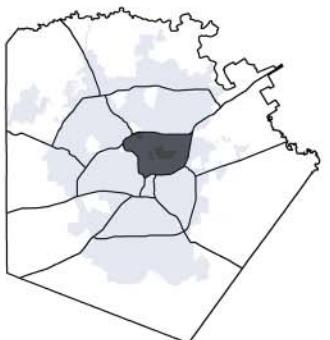
PROPOSED PRIORITY BICYCLE PROJECTS: North Central Corridor Area						
Map Grid*	Corridor	Length (miles)	Rec Facility Description	Proposed Action	Preliminary Cost Range <sup>(1)</sup>	Partners for Implementation
<b>Tier 1 Priority Projects</b>						
D2	COLORADO ST, from FREDERICKSBURG RD to IH 10	0.45	BIKE LANE	ROAD DIET	\$75,000-\$100,000	Public Works
D2	FLORES ST, from W ASHBY PLACE to FREDERICKSBURG RD	0.50	BIKE LANE	ROAD DIET; COMPLETE STREET CANDIDATE	to be determined	Public Works
D3	JOSEPHINE ST, from ALAMO ST to PINE ST	0.30	BIKE LANE	RESTRYPE	\$25,000-\$40,000	Public Works
D2	LAUREL ST, from COLORADO ST to FREDERICKSBURG RD	0.31	ROUTE	SIGNS	\$12,000-\$18,000	Public Works
B3	NEW BRAUNFELS AVE, from AUSTIN HWY to BURR RD	1.08	BIKE LANE	RESTRYPE	\$120,000-\$150,000	Alamo Heights, Terrell Hills
B4	RITTIMAN RD, from HARRY WURZBACH to SALADO CREEK	0.85	BIKE LANE	NEW CONSTRUCTION	\$70,000-\$90,000	Public Works
C3	ST MARY'S ST, from TULETA to IH 35	1.89	BIKE LANE	ROAD DIET; RESTRYPE	\$150,000-\$280,000	Public Works; TXDOT
A4	STARCREST DR, from LOOP 410 to SALADO CREEK	0.17	BIKE LANE	RESTRYPE	\$10,000-\$25,000	Public Works
<b>Tier 2 Priority Projects</b>						
A5	BRIARGLEN, from DEAD END to PERRIN BEITEL	0.38	ROUTE	SIGNS	\$12,000-\$18,000	Public Works
C4	BURR RD, from HARRY WURZBACH to NEW BRAUNFELS	1.45	BIKE LANE	RESTRYPE	\$130,000-\$160,000	Public Works
A2	CAS HILLS DR, from LOU JON CIR to BLANCO RD	0.36	ROUTE	SIGNS	\$12,000-\$18,000	Castle Hills
B3	DEVINE RD, from ALAMO HEIGHTS BLVD to TULETA	1.22	BIKE LANE	ADD PAVEMENT	\$200,000-\$400,000	Public Works
C2	DORA ST, from SAN PEDRO AVE to MCCULLOUGH AVE	0.46	BIKE LANE	ROAD DIET; DETAILED STUDY	to be determined	Public Works
D2	FLORES ST, from FREDERICKSBURG RD to EUCLID AVE	0.53	SHARROW	ROAD DIET	\$10,000-\$15,000	Public Works
C2	FRESNO, from IH 10 to SAN PEDRO AVE	1.10	BIKE LANE	DETAILED STUDY; COMPLETE STREET CANDIDATE	to be determined	Public Works
B4	HARRY WURZBACH, from RITTIMAN RD to BURR	1.21	BIKE LANE	ADD PAVEMENT	\$350,000-\$400,000	Public Works
A5	HIGHCLIFF DR, from STARCREST DR to CREEK	0.47	ROUTE	SIGNS	\$15,000-\$20,000	Public Works
A5	HIGHCLIFF TO BRIARGLEN BRIDGE, from HIGHCLIFF to BRIARGLEN	0.03	BRIDGE	NEW CONSTRUCTION	\$220,000-\$250,000	Public Works, Parks & Recreation
A2	HONEYSUCKLE LN, from LOOP 410 to ANTLER DR	0.73	BIKE LANE; ROUTE	RESTRYPE; SIGNS	\$25,000-\$30,000	Castle Hills; TXDOT
B3	JONES MALTSBERGER, from BASSE to ALAMO HEIGHTS BLVD	0.71	BIKE LANE	ADD PAVEMENT	\$55,000-\$75,000	Public Works
A2	LANGTON, from BLANCO RD to DRAINAGE CHANNEL	0.23	ROUTE	SIGNS	\$5,000-\$10,000	Public Works
A2	LANGTON BRIDGE, over DRAINAGE CHANNEL	0.01	BRIDGE	NEW CONSTRUCTION	\$220,000-\$250,000	Public Works
A2	LANGTON, from DRAINAGE CHANNEL to SAN PEDRO AVE	0.23	ROUTE	SIGNS	\$5,000-\$10,000	Public Works
A2	LOU JON CIR, from HONEYSUCKLE LN to CAS HILLS DR	0.05	ROUTE	SIGNS	\$3,000-\$5,000	Castle Hills
A2	MCCULLOUGH AVE, from LOOP 410 to HILDEBRAND AVE	3.74	BIKE LANE	DETAILED STUDY; ROAD DIET	to be determined	Public Works; TXDOT
A3	NEW BRAUNFELS AVE, from LOOP 410 to AUSTIN HWY	2.23	BIKE LANE	RESTRYPE; ROAD DIET	\$150,000-\$350,000	Public Works
C2	OLMOS DR, from MCCULLOUGH AVE to DEVINE RD	0.43	BIKE LANE; SHARROW	RESTRYPE; ADD MARKINGS	\$70,000-\$80,000	Olmos Park
C3	PERSHING AVE, from BROADWAY ST to NEW BRAUNFELS	0.35	SHARROW	ADD MARKINGS	\$25,000-\$30,000	Public Works
D3	PINE ST, from JOSEPHINE ST to MCADOO	0.23	SHARROW	ADD MARKINGS	\$18,000-\$25,000	Public Works
D3	PINE ST, from MCADOO to IH 35	0.15	BIKE LANE	RESTRYPE	\$12,000-\$18,000	Public Works
A2	RAMPART, from SAN PEDRO to MCCULLOUGH AVE	0.45	BIKE LANE	DETAILED STUDY	\$25,000-\$30,000	Public Works
C3	TULETA, from DEVINE RD to BROADWAY	0.91	BIKE LANE	RESTRYPE	\$85,000-\$95,000	Public Works

(1) The potential cost range shown is a preliminary order of magnitude estimate of probable construction costs and was prepared prior to any detailed corridor evaluation or design. This estimate is intended only to provide an order of magnitude cost for projection of potential future funding requirements. All such estimates should be reviewed and updated periodically to reflect the most current cost information. Costs are based on 2010-2011 and will vary as more detailed corridor-specific assessments occur and do not include inflation.

**RECOMMENDED BICYCLE NETWORK**  
NORTH CENTRAL AREA



0 0.5 1 2 Miles



\* Map Grid identifies the northern- or western-most point of the segment (or at the "from" point). Some segments may cross into other grids.



# SAN ANTONIO BIKE PLAN 2011 + IMPLEMENTATION STRATEGY

## 3 • the bicycle network

PROPOSED PRIORITY BICYCLE PROJECTS: North Leon Creek Area						
Map Grid*	Corridor	Length (miles)	Rec Facility Description	Proposed Action	Preliminary Cost Range <sup>(1)</sup>	Partners for Implementation
<b>Tier 1 Priority Projects</b>						
A3	BABCOCK RD, from LOOP 1604 to LEON CREEK	2.17	BIKE LANE	NEW CONSTRUCTION	\$325,000-\$500,000	TXDOT; Public Works
C4	FREDERICKSBURG RD, from MEDICAL DR to LOOP 410	1.68	DETAILED STUDY	DETAILED STUDY	to be determined	TXDOT
D3	INGRAM RD, from CULEBRA to LOOP 410	1.26	BIKE LANE	DETAILED STUDY	to be determined	Public Works
C2	MAINLAND, from TEZEL RD to LEON CREEK TRAIL HEAD	2.35	BIKE LANE	ROAD DIET	\$120,000-\$175,000	Public Works
C4	MEDICAL DR, from BABCOCK RD to FREDERICKSBURG	1.42	SHARROW	ADD MARKINGS	\$30,000-\$50,000	Public Works
B3	PRUE RD, from COUNTRY DAWN to SPRING TIME	0.43	BIKE LANE	DETAILED STUDY	to be determined	Public Works
C2	TEZEL RD, from EMERALD SPRING to GRISSOM RD	0.53	BIKE LANE	DETAILED STUDY	to be determined	Public Works
D2	TIMBER PATH, from GRISSOM RD to CULEBRA	0.31	BIKE LANE	RESTRIPE	\$35,000-\$45,000	Public Works
A3	UTSA BLVD, from BABCOCK RD to IH-10	2.36	PATH	NEW CONSTRUCTION	\$1,500,000-\$2,500,000	UTSA; TXDOT
A3	UTSA BLVD, from IH-10 to VANCE JACKSON	0.55	BUFFERED BIKE LANE	ROAD DIET	\$50,000-\$100,000	Public Works
B3	WHITBY RD, from LEON CREEK TRAIL HEAD to ABE LINCOLN	0.40	ROUTE	SIGNS	\$10,000-\$15,000	Public Works
<b>Tier 2 Priority Projects</b>						
B3	ABE LINCOLN RD, from HORN BLVD to ECKHERT RD	1.45	BIKE LANE	WIDEN PAVEMENT	\$250,000-\$400,000	Public Works
B3	BABCOCK RD, from LEON CREEK to PRUE RD	1.68	DETAILED STUDY	DETAILED STUDY	to be determined	Public Works
B4	FREDERICKSBURG RD, from HUEBNER to MEDICAL DR	2.06	DETAILED STUDY	DETAILED STUDY	to be determined	TXDOT
A2	HAUSMAN RD, from FM 1604 to BABCOCK RD	1.21	BIKE LANE	NEW CONSTRUCTION	\$250,000-\$350,000	Public Works
B4	HUEBNER RD, from VANCE JACKSON to LEON VALLEY CITY LIMIT	3.68	BIKE LANE	DETAILED STUDY	to be determined	TXDOT; Public Works
C3	MEDICAL DR, from LAMB RD to BABCOCK RD	0.34	BIKE LANE	RESTRIPE	\$35,000-\$40,000	Public Works
C4	MEDICAL DR, from FREDERICKSBURG to IH-10	1.17	BIKE LANE	RESTRIPE	\$75,000-\$110,000	Public Works
B3	PRUE RD, from SPRING TIME to BABCOCK	0.35	BIKE LANE	DETAILED STUDY	to be determined	Public Works
A4	VANCE JACKSON, from UTSA BLVD to HUEBNER RD	2.42	BIKE LANE	DETAILED STUDY	to be determined	Public Works

(1) The potential cost range shown is a preliminary order of magnitude estimate of probable construction costs and was prepared prior to any detailed corridor evaluation or design. This estimate is intended only to provide an order of magnitude cost for projection of potential future funding requirements. All such estimates should be reviewed and updated periodically to reflect the most current cost information. Costs are based on 2010-2011 and will vary as more detailed corridor-specific assessments occur and do not include inflation.

FUNDED BICYCLE PROJECTS: North Leon Creek Area					
Map Grid*	Corridor	Length (miles)	Funded Facility	Funding Source	Future Recommended Facility Type (if different than funded)
C3	APPLE GREEN RD, from HUEBNER RD to JOHN CHAPMAN	0.42	BIKE LANE	ATD	-
B2	CAMINO VILLA, from BANDERA RD to BRAUN RD	0.63	BIKE LANE	ATD	-
B3	CEDAR PARK, from BAMBERGER WAY to PRUE RD	1.22	BIKE LANE	ATD	-
C2	CORAL SPGS, from MAINLAND to LOW BID LN / HEATH CIR	0.44	ROUTE	ATD	-
B4	DATAPOINT, from WURZBACH RD to FREDERICKSBURG RD	1.16	BIKE LANE	ATD	-
C4	FAIRHAVEN ST, from DATAPOINT to MEDICAL DR	0.33	BIKE LANE	ATD	-
B4	GARDENDALE, from BLUEMEL to DATAPOINT	0.63	BIKE LANE	ATD	-
A3	HUNTSMAN RD, from W HAUSMAN RD to BAMBERGER WAY	0.84	BIKE LANE	ATD	-
C3	NORTH HOLW, from ECKHERT RD to APPLE GREEN	0.61	BIKE LANE	ATD	-
C3	NORTH KNOLL, from NORTH HOLLOW to OAKDELL WAY	0.46	BIKE LANE	ATD	-
C2	OLD TEZEL RD, from GUILBEAU RD to GUILBEAU RD	1.18	BIKE LANE	ATD	-
C2	SILENT OAKS, from TEZEL RD to CORAL SPRINGS	0.86	ROUTE	ATD	-
B3	PRUE RD, from AUTUMN BLUFF to COUNTRY DAWN	0.76	PATH	2007 Bond	-
A3	LEON CREEK GREENWAY, from N LOOP 1604 W to LOOP 410	9.02	PATH	Sales Tax (Greenway Trails)	-
D3	LEON CREEK GREENWAY, from LEON CREEK to CATHEDRAL ROCK PARK	0.74	PATH	Sales Tax (Greenway Trails)	-

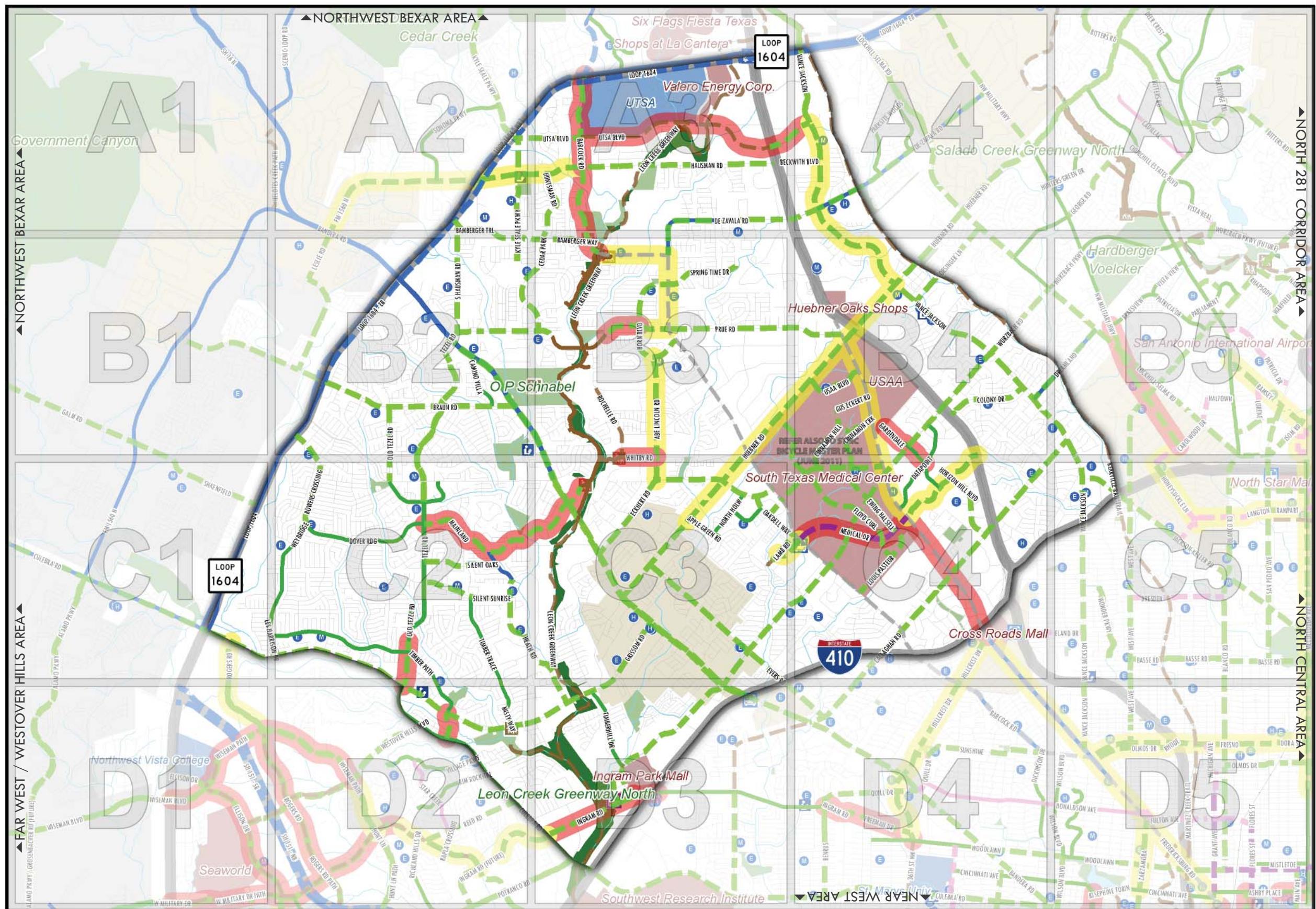
BICYCLE PROJECTS IN OTHER JURISDICTIONS: North Leon Creek Area					
Map Grid*	Corridor	Length (miles)	Jurisdiction	Recommended Facility	Proposed Action
B2	BANDERA RD, from PRUE RD / TEZEL RD to LEON VALLEY CITY LIMIT (SOUTH)	11.72	TXDOT; LEON VALLEY, SAN ANTONIO	BIKE LANE	ADD STRIPING & MARKINGS; DETAILED STUDY
C2	CULEBRA RD, from LES HARRISON DR to TEZEL RD	1.56	TXDOT	BIKE LANE	RESTRIPE
C3	ECKHERT RD, from BANDERA RD to HUEBNER RD	1.86	TXDOT	BIKE LANE	DETAILED STUDY
C3	EVERS RD, from HUEBNER RD to CALLAGHAN RD	2.69	LEON VALLEY	BIKE LANE	DETAILED STUDY
B4	FREDERICKSBURG RD, from IH-10 to LOOP 410	4.02	TXDOT	DETAILED STUDY	DETAILED STUDY
D2	GRISSOM RD, from TEZEL RD to BANDERA RD	3.51	TXDOT	BIKE LANE	RESTRIPE
B4	HUEBNER RD, from VANCE JACKSON to BABCOCK RD	2.61	TXDOT	BIKE LANE	DETAILED STUDY; NEW CONSTRUCTION
C3	HUEBNER RD, from LEON VALLEY CITY LIMIT to BANDERA RD	1.15	LEON VALLEY	BIKE LANE	DETAILED STUDY; NEW CONSTRUCTION
A4	KERRVILLE RAIL-TRAIL, from RAYMOND to LOOP 410	9.18	TXDOT	PATH	NEW CONSTRUCTION
B2	LOOP 1604, from BANDERA RD to IH 10	10.58	TXDOT	SHOULDER	RESTRIPE
A3	UTSA BLVD, from EDWARD XIMENES to IH-10	1.5	TXDOT; UTSA	PATH	NEW CONSTRUCTION
C3	WURZBACH RD, from BANDERA RD to INGRAM RD	1.93	LEON VALLEY; SAN ANTONIO	BIKE LANE	DETAILED STUDY



SAN ANTONIO BIKE PLAN 2011 + IMPLEMENTATION STRATEGY

- 3 • the bicycle network

## RECOMMENDED BICYCLE NETWORK NORTH LEON CREEK AREA



\* Map Grid identifies the northern- or western-most point of the segment (or at the “from” point). Some segments may cross into other grids.

# SAN ANTONIO BIKE PLAN 2011 + IMPLEMENTATION STRATEGY

## 3 • the bicycle network

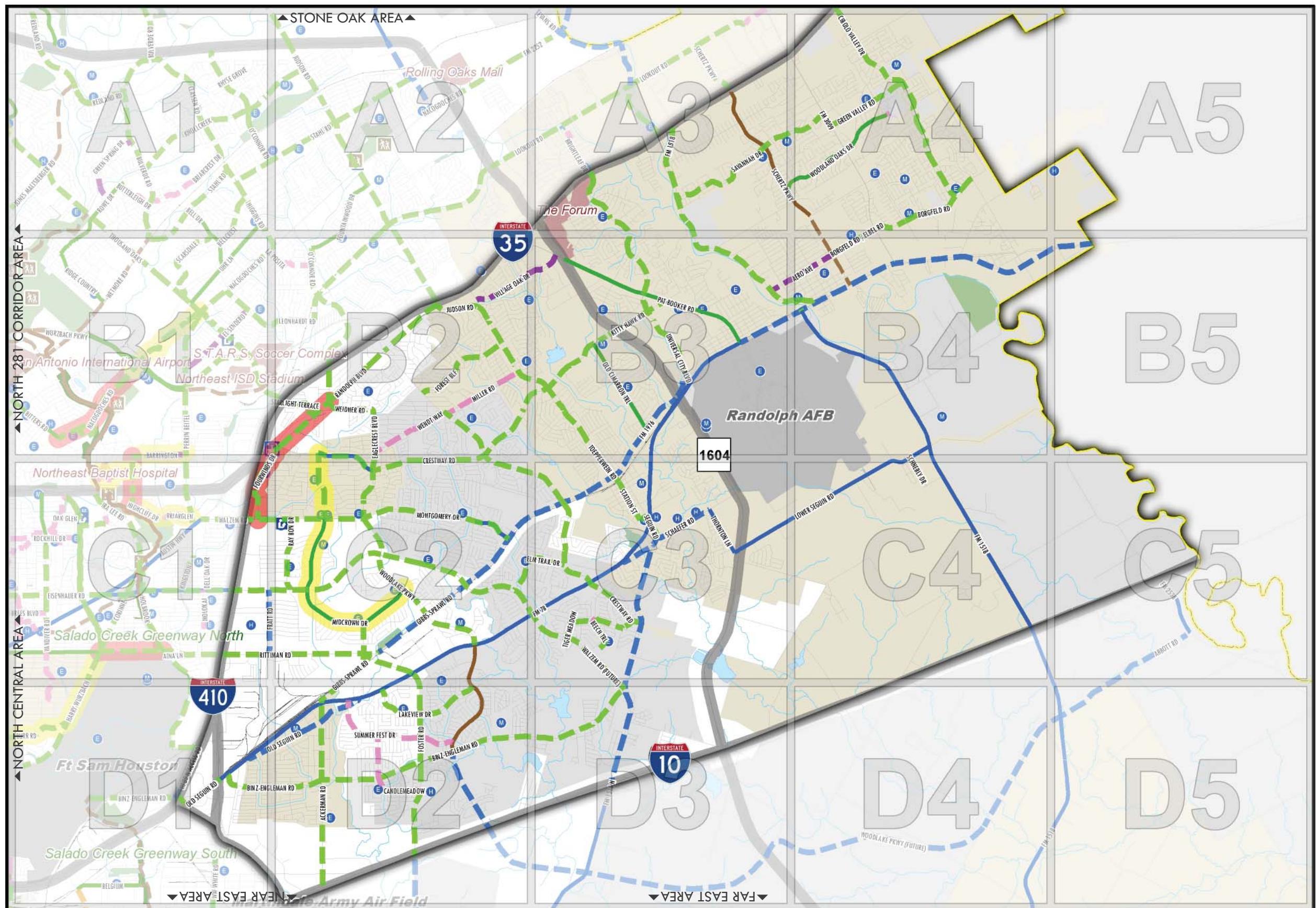
PROPOSED PRIORITY BICYCLE PROJECTS: Northeast / Randolph Area						
Map Grid*	Corridor	Length (miles)	Rec Facility Description	Proposed Action	Preliminary Cost Range <sup>(1)</sup>	Partners for Implementation
<b>Tier 1 Priority Projects</b>						
C1	FOURWINDS DR, from RANDOLPH BLVD to WALZEM RD	1.02	BIKE LANE	RESTRYPE	\$75,000-\$100,000	WINDCREST; VIA
B2	RANDOLPH BLVD, from WEIDNER RD to FOURWINDS DR	1.0	BIKE LANE	RESTRYPE; NEW CONST.	\$90,000-\$100,000	VIA
<b>Tier 2 Priority Projects</b>						
B2	MIDCROWN DR, from CRESTWAY RD to WALZEM RD	0.90	BIKE LANE	RESTRYPE	\$75,000-\$125,000	WINDCREST
FUNDED BICYCLE PROJECTS: Northeast / Randolph Area						
Map Grid*	Corridor	Length (miles)	Funded Facility	Funding Source	Future Recommended Facility Type (if different than funded)	
C2	MIDCROWN DR, from WALZEM RD to WOODLAKE PARKWAY	2.7	BIKE LANE	ATD	-	
BICYCLE PROJECTS IN OTHER JURISDICTIONS: Northeast / Randolph Area						
Map Grid*	Corridor	Length (miles)	Jurisdiction	Recommended Facility	Proposed Action	
D2	ACKERMAN RD, from OLD SEGUIN RD to IH 10	2.19	Kirby	BIKE LANE	ADD STRIPING & MARKINGS	
B3	AERO AVE, from FM 1518 to SCHERTZ PKWY	0.95	Schertz	SHARROW	ADD MARKINGS	
C3	BEECH TRL, from TIGER MEADOW to CHERYL MEADOW	0.71	Bexar Co	BIKE LANE	RESTRYPE	
D2	BINZ-ENGLEMAN RD, from FOSTER RD to FM 1516	3.03	Bexar Co	BIKE LANE	ADD PAVEMENT	
D1	BINZ-ENGLEMAN RD, from FM 78 to ACKERMAN RD	1.38	Kirby	BIKE LANE	DETAIL STUDY	
A4	BORGFELD RD / ELBEL RD, from FM 3009 to BENTWOOD RANCH	2.2	Schertz; Cibolo	BIKE LANE	ROAD DIET; ADD PAVEMENT	
D2	CANDLEMEADOW, from BINZ-ENGLEMAN RD to FOSTER RD	0.64	Bexar Co	ROUTE	SIGNS	
C3	CANOGA MEADOW, from MORNING GROVE to BEECH TRL	0.08	Bexar Co	ROUTE	SIGNS	
A4	CIBOLO VALLEY DR, from IH 35 to BORGFELD RD	3.13	Cibolo	BIKE LANE	CFD; RESTRYPE; ROAD DIET	
B2	CRESTWAY RD, from MIDCROWN to GIBBS-SPRAWL RD	3.62	Bexar Co; Windcrest	BIKE LANE	ROAD DIET; ADD MARKINGS	
C3	CRESTWAY RD (FUTURE), from CITY LIMITS to CRESTWAY RD	0.34	Bexar Co	BIKE LANE	NEW CONSTRUCTION	
C3	CRESTWAY RD, from STREET END to FM 1516	1.18	Bexar Co; Converse	BIKE LANE; BUFFERED BIKE LANE	ROAD DIET	
B2	EAGLECREST BLVD, from CITY LIMIT to WALZEM RD	1.44	Bexar Co; Windcrest	BIKE LANE	CFD; ROAD DIET; STUDY	
C2	ELM TRAIL DR, from WALZEM RD to CRESTWAY RD	0.92	Bexar Co	BIKE LANE	RESTRYPE; NEW ROAD	
C3	FM 1516 N, from UPPER SEGUIN RD to IH 10	3.44	TXDOT	SHOULDER	ADD PAVEMENT	
A3	FM 1518, from IH 35 to CITY LIMIT	3.78	TXDOT	BIKE LANE	NEW CONSTRUCTION	
B3	FM 1976, from LOOP 1604 to GIBBS-SPRAWL RD	1.79	TXDOT	SHOULDER	ADD PAVEMENT	
A4	FM 3009, from SAVANNAH DR to GREEN VALLEY RD	0.18	TXDOT; Schertz, Cibolo, Universal City	BIKE LANE	RESTRYPE / ADD PAVEMENT	
B3	FM 78, from PAT BOOKER RD to MPO BOUNDARY	5.09	TXDOT	SHOULDER		
D1	FM 78, at LOOP 410	0.08	TXDOT	BIKE LANE	NEW CONSTRUCTION	
B2	FOREST BLF, from MILLER RD to TOEPPERWEIN RD	1.33	Live Oak	BIKE LANE	RESTRYPE	
C2	FOSTER RD, from FM 78 to IH 10	2.51	Bexar Co	BIKE LANE	RESTRYPE; NEW CONSTRUCTION	

Continued on table to the right

BICYCLE PROJECTS IN OTHER JURISDICTIONS: Northeast / Randolph Area					
Map Grid*	Corridor	Length (miles)	Jurisdiction	Recommended Facility	Proposed Action
C1	FOURWINDS DR, from RANDOLPH BLVD to WALZEM RD	1.02	Windcrest	BIKE LANE	RESTRYPE
C3	GIBBS-SPRAWL RD, from FM 1976 to WALZEM RD	2.07	TXDOT	SHOULDER	ADD PAVEMENT
C2	GIBBS-SPRAWL RD, from CASTLE CROSS to OLD SEGUIN RD	1.03	TXDOT; Kirby	BIKE LANE	
A4	GREEN VALLEY RD, from FM 3009 to GREEN VALLEY LOOP	1.12	Schertz; Bexar Co; Cibolo	BIKE LANE	ADD PAVEMENT / RESTRYPE
B2	HUGHES AVE, from KILLINGSWORTH to WENDT WAY	0.04	Bexar Co	ROUTE	
D1	IH 35 N SV RD, from BINZ-ENGLEMAN RD to IH 35 N SV RD	0.13	TXDOT	BIKE LANE	
C3	IRONMILL CRK, from CRESTWAY RD to MORNING GROVE	0.17	Bexar Co	BIKE LANE	RESTRYPE
B2	JUDSON RD, from IH 35 to TOEPPERWEIN RD	0.59	Live Oak	BIKE LANE	RESTRYPE
B2	KILLINGSWORTH, from EAGLECREST BLVD to HUGHES AVE	0.60	Bexar Co	ROUTE	
B2	KITTY HAWK RD, from O'CONNOR RD to PAT BOOKER RD	3.27	Bexar Co; Converse; Univ Cty	BIKE LANE	NEW CONSTRUCTION
D2	LAKEVIEW DR, from FM 78 to WOODLAKE PKWY	1.53	Bexar Co	BIKE LANE	
B3	LINDBERGH BLVD, from UNIVERSAL CITY BLVD to LOOP 1604	0.35	TXDOT	SHOULDER	ADD PAVEMENT
B2	MIDCROWN DR, from CRESTWAY RD to WALZEM RD	0.90	Windcrest	BIKE LANE	
B2	MILLER RD, from O'CONNOR RD to TOEPPERWEIN RD	1.11	Live Oak, Converse	ROUTE	CONSTRUCT NEW ROAD; SIGNS
B2	MILLER RD, from NEW WORLD DR to KITTY HAWK RD	0.76	Bexar Co	BIKE LANE	ROAD DIET
C2	MONTGOMERY DR, from EAGLECREST to GIBBS-SPRAWL RD	2.06	Bexar Co	BIKE LANE	
C3	MORNING GROVE, from CANOGA MEADOW to IRONMILL CRK	0.39	Bexar Co	BIKE LANE	RESTRYPE
B2	O'CONNOR RD, from WENDT WAY to MILLER RD	0.07	Bexar Co; Live Oak	BIKE LANE	
D1	OLD SEGUIN RD, from LOOP 410 to IH 35	0.50	TXDOT	BIKE LANE	NEW CONSTRUCTION
D1	OLD SEGUIN RD, from FM 78 to FM 78	1.70	Kirby	SHOULDER	
A3	OLYMPIA PKWY, from IH 35 to ULYSSES	0.54	Selma	BIKE LANE	
C3	ROCKET LN, from LOWER SEGUIN RD to LOOP 1604	0.20	Converse	SHOULDER	
A3	SAVANNAH DR, from FM 1518 to FM 3009	2.4	Selma; Schertz	BIKE LANE	RESTRYPE
C3	SCHAEEFER RD, from FM 1516 to LOWER SEGUIN RD	0.61	Converse	SHOULDER	
A4	SCHERTZ PKWY, from LIVE OAK RD to FM 78	1.06	Schertz	PATH	
C3	SCHOOL ST, from STATION ST to S SEGUIN RD	0.10	Converse	BIKE LANE	
C3	SEGUIN RD, from SCHOOL ST to FM 1516	0.33	TXDOT	BIKE LANE	
C3	STATION ST, from GIBBS-SPRAWL RD to SCHOOL ST	0.58	Converse	BIKE LANE	
C3	TIGER MEADOW, from BEECH TRL to WALZEM RD	0.24	Bexar Co	BIKE LANE	
B2	TOEPPERWEIN RD, from JUDSON RD to GIBBS-SPRAWL RD	3.09	Live Oak, Converse, TXDOT	BIKE LANE	DETAILED STUDY
A3	UNIVERSAL CITY BLVD, from ULYSSES to RAILROAD	2.77	Universal City	BIKE LANE	DETAILED STUDY
C3	UPPER SEGUIN RD, from FM 78 to FM 1516	0.46	Converse	SHOULDER	
B2	VILLAGE OAK DR, from TOEPPERWEIN RD to PAT BOOKER RD	1.27	Live Oak	SHARROW	
C1	WALZEM RD, from IH 35 to FERRY SAGE / DEAD END	4.85	TXDOT; Bexar Co	BIKE LANE	RESTRYPE
C2	WALZEM RD (FUTURE), from DEAD END to BINZ-ENGLEMAN RD	1.28	Bexar Co	BIKE LANE	NEW CONSTRUCTION
B2	WEIDNER RD, at IH 35 (underpass/overpass)	0.02	TXDOT	BIKE LANE	
B2	WEIDNER RD, from RANDOLPH BLVD to CITY LIMITS	0.68	Bexar Co	BIKE LANE	DETAILED STUDY
B2	WENDT WAY, from HUGHES AVE to O'CONNOR RD	0.44	BEXAR CO	ROUTE	
C2	WOODLAKE PKWY, from FM 78 to BINZ-ENGLEMAN	1.64	BEXAR CO	PATH	
A4	WOODLAND OAKS DR, from FM 1516 to PERSIMMON DR	1.79	Schertz; Bexar Co	BIKE LANE; ROUTE	RESTRYPE; SIGNS

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**RECOMMENDED BICYCLE NETWORK  
NORTHEAST AREA**



\* Map Grid identifies the northern- or western-most point of the segment (or at the "from" point). Some segments may cross into other grids.



# SAN ANTONIO BIKE PLAN 2011 + IMPLEMENTATION STRATEGY

## 3 • the bicycle network

PROPOSED PRIORITY BICYCLE PROJECTS: Northwest Bexar Area						
Map Grid*	Corridor	Length (miles)	Rec Facility Description	Proposed Action	Preliminary Cost Range <sup>(1)</sup>	Partners for Implementation
<b>Tier 1 Priority Projects</b>						
-	-	-	-	-	-	-
<b>Tier 2 Priority Projects</b>						
C3	FM 1560 N, from BANDERA RD to FM 1604	2.09	BIKE LANE	NEW CONSTRUCTION	\$475,000-\$550,000	TXDOT; Helotes

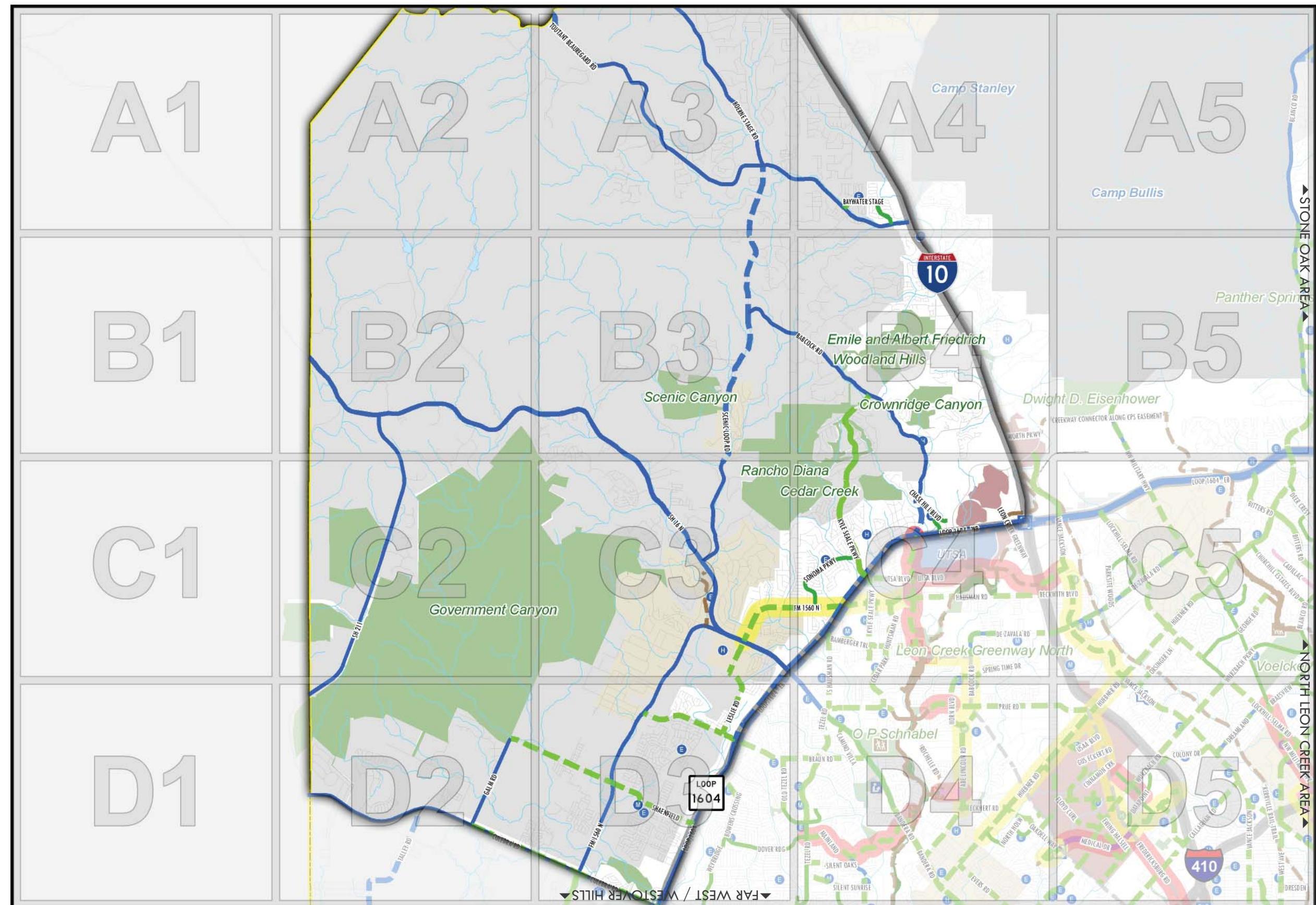
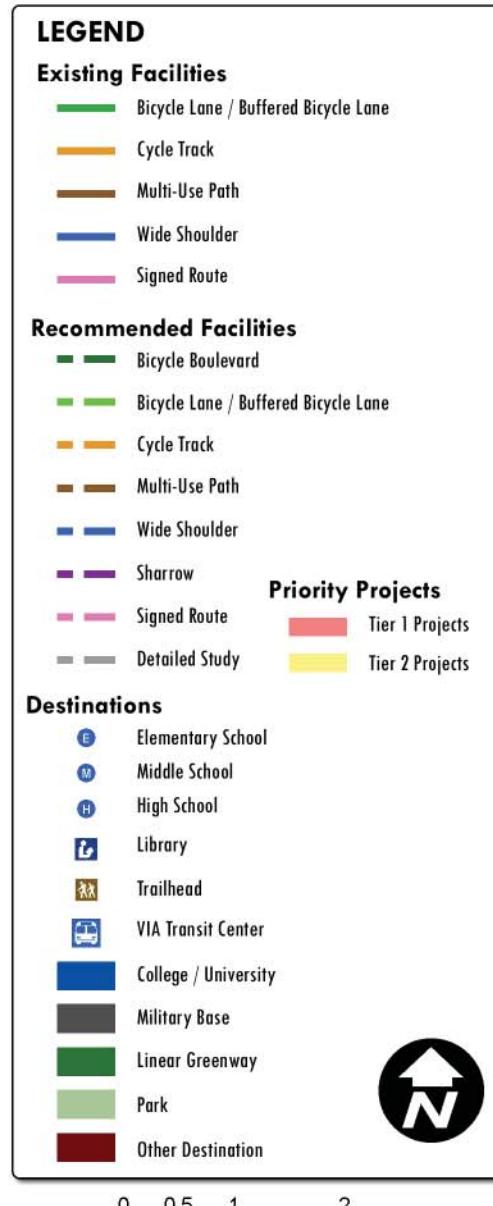
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FUNDED BICYCLE PROJECTS: Northwest Bexar Area					
Map Grid*	Corridor	Length (miles)	Funded Facility	Funding Source	Future Recommended Facility Type (if different than funded)
B4	BAYWATER STAGE, from CITY LIMIT to BOERNE STAGE RD	0.91	BIKE LANE	ATD	-
C3	SONOMA PKWY, from W HAUSMAN RD to KYLE SEALE PKWY	1.67	BIKE LANE	ATD	-

BICYCLE PROJECTS IN OTHER JURISDICTIONS: Northwest Bexar Area					
Map Grid*	Corridor	Length (miles)	Jurisdiction	Recommended Facility	Proposed Action
D3	BRAUN RD, from FM 1560 to LESLIE	1.47	Bexar Co	BIKE LANE	ADD PAVEMENT
C3	FM 1560 N, from BANDERA RD to FM 1604	2.09	TXDOT	BIKE LANE	NEW CONSTRUCTION
D3	GALM RD, from GOVERNMENT CANYON PARK to FM 1560	1.92	Bexar Co	BIKE LANE	ADD PAVEMENT
C3	HELOTES CREEK PATH, from FM 1560 to Old Town Helotes	1.03	Helotes	PATH	
C3	LESLIE RD, from BANDERA RD to RAINBOW RIDGE	0.60	Helotes	BIKE LANE	
C4	LOOP 1604 - WB, from BABCOCK RD to BRAUN RD	4.79	TXDOT	SHOULDER	RESTRYPE
B3	SCENIC LOOP RD, from TOUTANT BEAUREGARD RD to GREY FOREST CITY LIMIT	3.89	Bexar Co	SHOULDER	ADD PAVEMENT
B3	SCENIC LOOP RD, from CITY LIMIT (NORTH) to CITY LIMIT (SOUTH)	1.25	Grey Forest	SHOULDER	ADD PAVEMENT
C3	SCENIC LOOP RD, from CITY LIMIT to MADLARA RANCH RD / MENCHACA RD	0.24	Bexar Co	SHOULDER	ADD PAVEMENT
D3	SHAENFIELD, from FM 1560 to LOOP 1604	1.62	Bexar Co	BIKE LANE	ADD PAVEMENT
B3	TOUTANT BEAUREGARD RD, from BEXAR COUNTY LINE to KARSCH RD	1.20	Bexar Co	SHOULDER	



## RECOMMENDED BICYCLE NETWORK NORTHWEST BEXAR AREA



\* Map Grid identifies the northern- or western-most point of the segment (or at the "from" point). Some segments may cross into other grids.



# SAN ANTONIO BIKE PLAN 2011 + IMPLEMENTATION STRATEGY

## 3 • the bicycle network

PROPOSED PRIORITY BICYCLE PROJECTS: South Central Area						
Map Grid*	Corridor	Length (miles)	Rec Facility Description	Proposed Action	Preliminary Cost Range <sup>(1)</sup>	Partners for Implementation
<b>Tier 1 Priority Projects</b>						
C4	ACEQUIA, from MISSION RD to ASHLEY RD	0.24	SHARROW	ADD MARKINGS	\$15,000-\$30,000	Public Works
C4	ASHLEY RD, from ROOSEVELT AVE to MISSION TRAIL	1.43	SHARROW	ADD MARKINGS	\$35,000-\$50,000	Public Works
C3	HARDING BLVD, from PLEASANTON RD to MISSION RD	1.89	ROUTE	SIGNS	\$40,000-\$65,000	Public Works
B3	NOGALITOS ST, from DIVISION to THEO AVE	0.74	BIKE LANE	ROAD DIET; NEW CONSTRUCTION	to be determined	TXDOT
<b>Tier 2 Priority Projects</b>						
B3	FLORES ST, from E THEO AVE to HARDING BLVD	2.66	BIKE LANE	DETAILED STUDY; COMPLETE STREET CANDIDATE	to be determined	Public Works
A3	MITCHELL ST, from FLORES ST to S PRESA ST	1.5	BIKE LANE	RESTRYPE	\$125,000-\$175,000	Public Works
C3	MOURSUND BLVD, from PLEASANTON to E GILLETTE BLVD	0.53	BIKE LANE	NEW CONSTRUCTION	\$50,000-\$75,000	Public Works
C3	PLEASANTON RD, from HARDING BLVD to MOURSUND BLVD	0.94	BIKE LANE	NEW CONSTRUCTION	\$150,000-\$200,000	Public Works
B3	POTEET JOURDANTON FWY / PALO ALTO RD, from SOMERSET to IH 35	0.69	BIKE LANE	RESTRYPE	\$50,000-\$80,000	TXDOT
A4	PRESA ST, from IH 10 to SOUTHCROSS BLVD	1.36	BIKE LANE	ROAD DIET; RESTRYPE	\$100,000-\$150,000	Public Works
B2	SOMERSET RD, from ZARZAMORA to PALO ALTO RD	1.82	BIKE LANE	ROAD DIET	\$100,000-\$150,000	Public Works

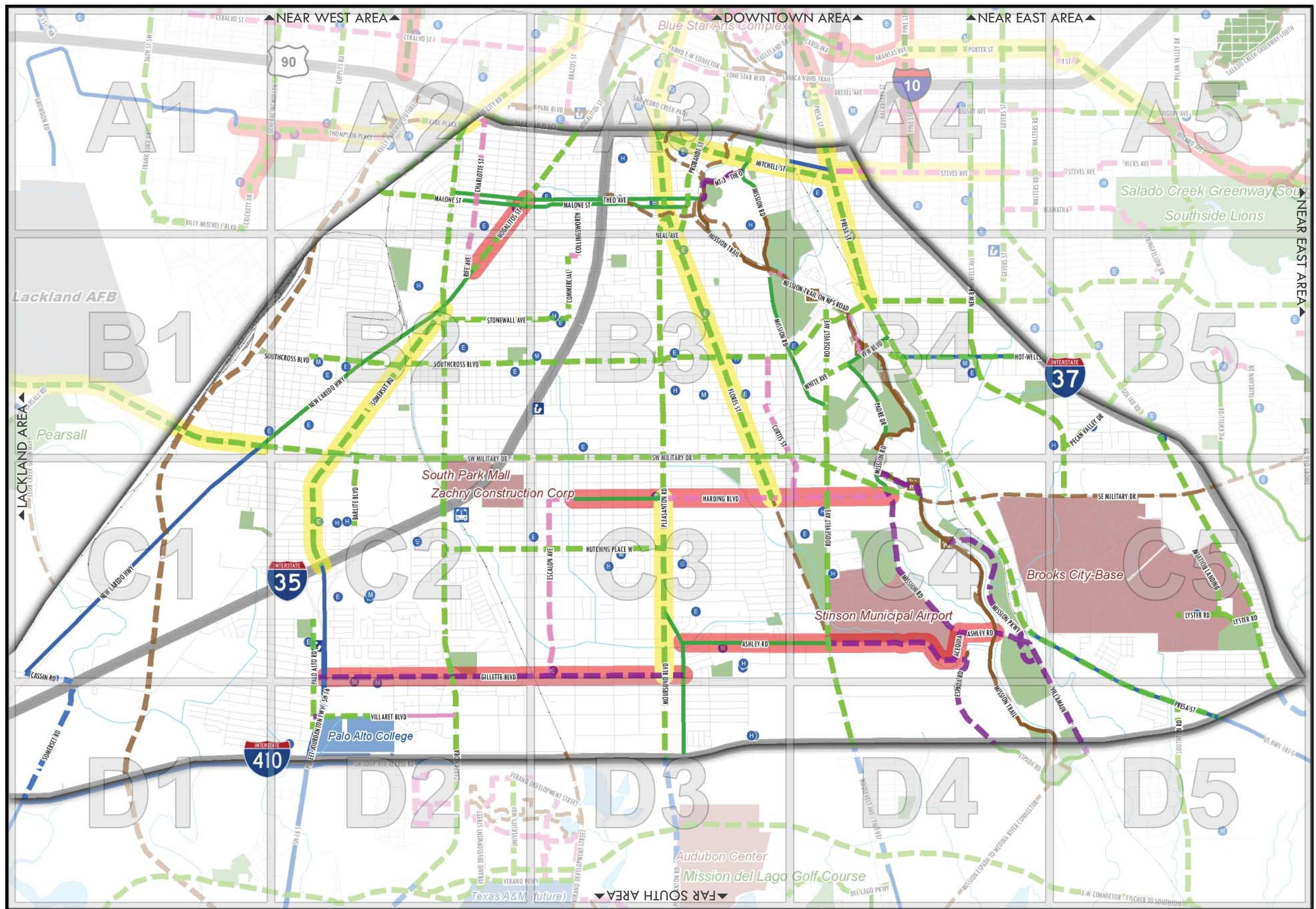
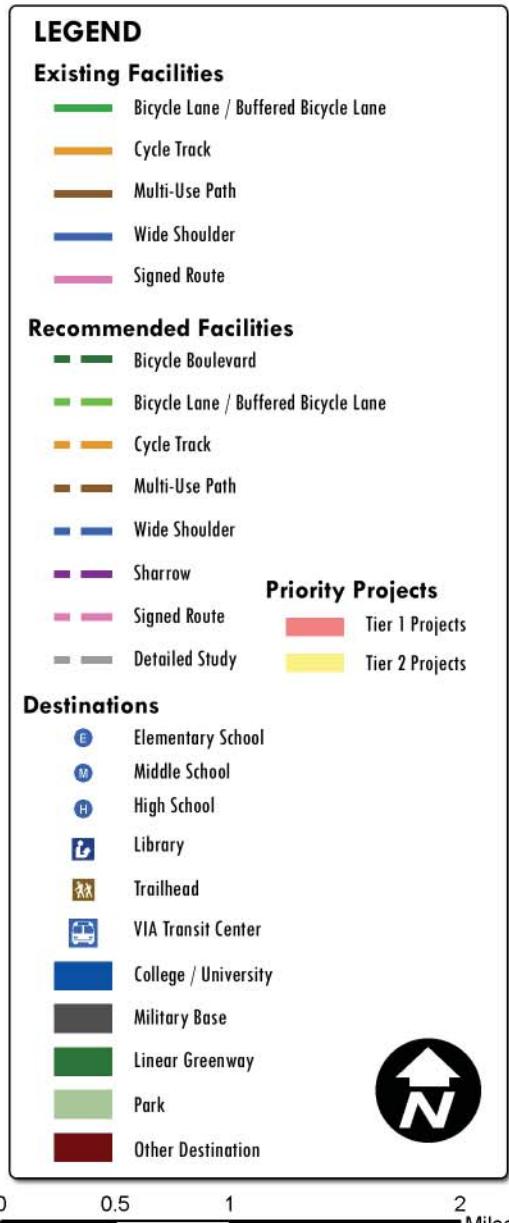
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BICYCLE PROJECTS IN OTHER JURISDICTIONS: South Central Area					
Map Grid*	Corridor	Length (miles)	Jurisdiction	Recommended Facility	Proposed Action
B3	NOGALITOS ST, from DIVISION to US HWY 90	1.46	TXDOT	BIKE LANE	NEW CONSTRUCTION; ROAD DIET
C2	PALO ALTO RD, from FAIR MEADOWS to ARAGON	0.92	TXDOT	BIKE LANE	ROAD DIET
B3	POTEET JOURDANTON FWY, from SOMERSET to IH 35	0.69	TXDOT	BIKE LANE	RESTRYPE
C4	PRESA ST, from SE MILITARY DR to US HWY 181	2.99	TXDOT	BIKE LANE	ADD STRIPING & MARKINGS
B4	ROOSEVELT AVE, from SAN ANTONIO RIVER to SE LOOP 410	3.78	TXDOT	BIKE LANE	RESTRYPE; ADD PAVEMENT
A3	SAN ANTONIO RIVER TRAIL - MISSION REACH from DOWNTOWN to MISSION ESPADA	8.89	San Antonio River Authority	PATH	Currently under construction
B2	MILITARY DR (SW & SE), from NEW LAREDO HWY to MISSION PKWY	5.55	TXDOT	BIKE LANE	DETAILED STUDY
C4	SE MILITARY DR, from MISSION PKWY to IH 37	2.47	TXDOT	PATH	NEW CONSTRUCTION

FUNDED BICYCLE PROJECTS: South Central Area					
Map Grid*	Corridor	Length (miles)	Funded Facility	Funding Source	Future Recommended Facility Type (if different than funded)
C4	ASHLEY RD, from PLEASANTON RD to S FLORES ST	1.22	BIKE LANE	ATD	-
C2	GILLETTE BLVD, from POTEET JOURDANTON FWY to PLEASANTON RD	2.99	ROUTE	ATD	SHARROW
C3	HARDING BLVD, from COMMERCIAL AVE to PLEASANTON RD	0.75	BIKE LANE	ATD	-
A3	SAN ANTONIO RIVER TRAIL - MISSION REACH from DOWNTOWN to MISSION ESPADA	8.89	PATH	SARA, San Antonio River Improvement Project	-



**RECOMMENDED BICYCLE NETWORK**  
SOUTH CENTRAL AREA



\* Map Grid identifies the northern- or western-most point of the segment (or at the "from" point). Some segments may cross into other grids.



# SAN ANTONIO BIKE PLAN 2011 + IMPLEMENTATION STRATEGY

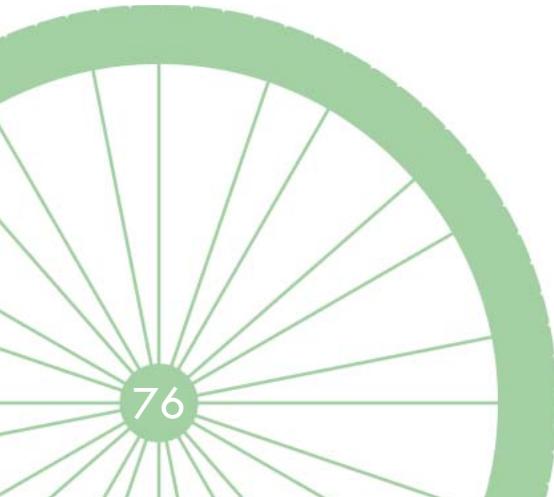
## 3 • the bicycle network

### Priority Projects in the Stone Oak Area:

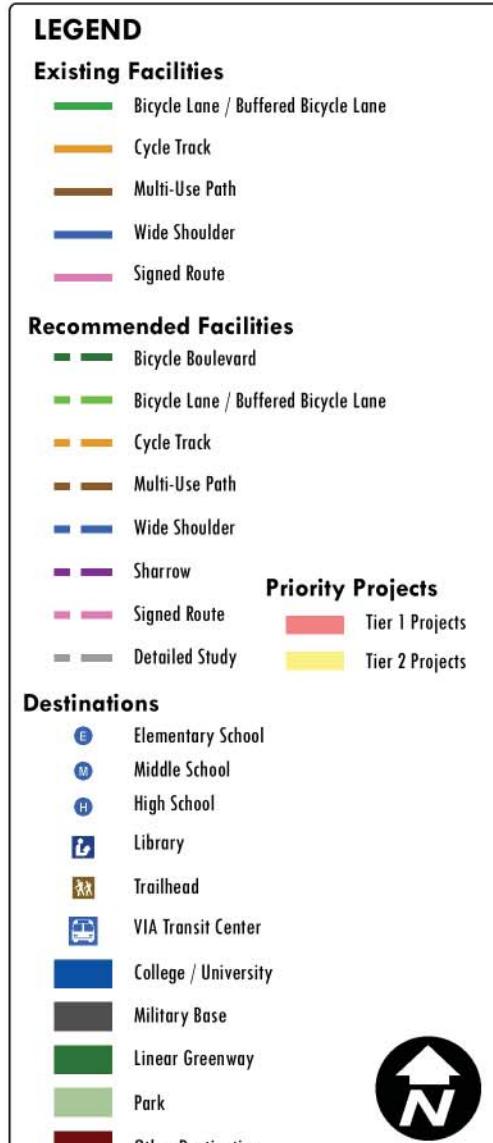
Based on the prioritization criteria, there are no projects prioritized for the Stone Oak Area at the time of adoption of Bike Plan 2011. Periodic review of the bicycle network and project list should be reviewed and projects prioritized, which may yield priorities in this area. However, this should not preclude any opportunities to install bicycle facilities in this area in conjunction with other projects that may emerge.

FUNDED BICYCLE PROJECTS: Stone Oak Area					
Map Grid*	Corridor	Length (miles)	Funded Facility	Funding Source	Future Recommended Facility Type ( <i>if different than funded</i> )
C2	BLANCO RD, from OAK ESTATES DR to WILDERNESS OAK	2.19	BIKE LANE	TXDOT	-
C2	BLANCO RD, from WILDERNESS OAK to HUEBNER RD	1.10	BIKE LANE	TXDOT	-
C2	BULVERDE PKWY, from BULVERDE RD to LIATRIS LN	0.45	BIKE LANE	ATD	-
C3	BULVERDE RD, from MARSHALL RD to EVANS RD	1.27	BIKE LANE	2007 Bond	-
C3	BULVERDE RD, from EVANS RD to LOOP 1604	3.25	BIKE LANE	2007 Bond	-
C3	ROAN PARK, from SCHOOL ENTRANCE to EVANS RD	0.51	BIKE LANE	ATD	-

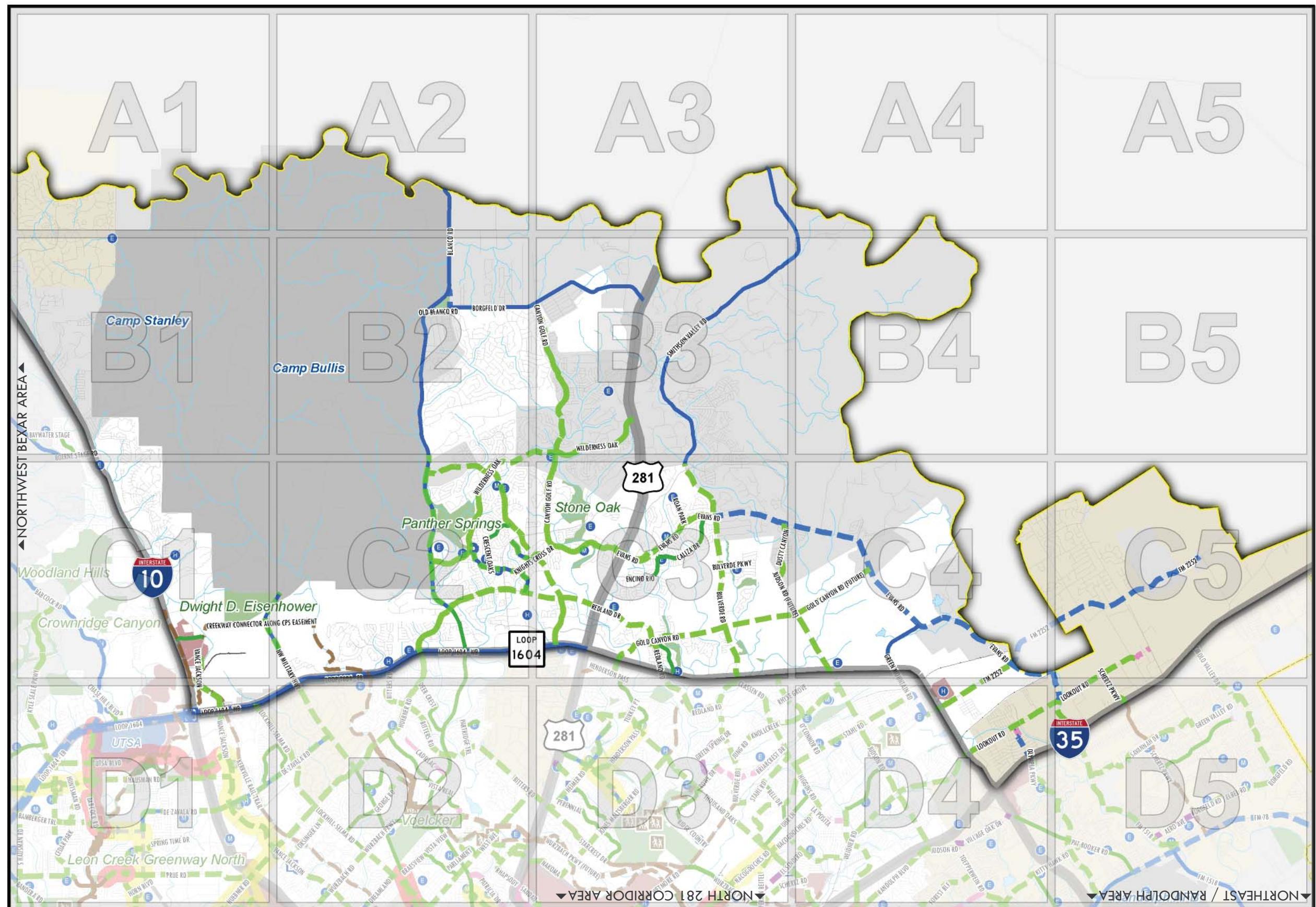
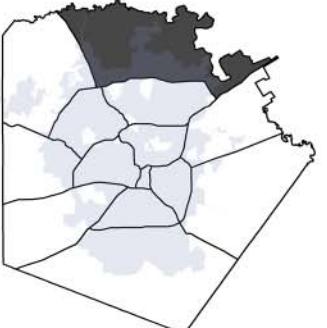
BICYCLE PROJECTS IN OTHER JURISDICTIONS: Stone Oak Area					
Map Grid*	Corridor	Length (miles)	Jurisdiction	Recommended Facility	Proposed Action
D4	AMBERLY CT, from LOOKOUT RD to ELLERSTON BLVD	0.04	INCORPORATED CITY	SHOULDER	ADD PAVEMENT
C2	BLANCO RD, from OAK ESTATES DR to HUEBNER RD	3.29	TXDOT	BIKE LANE	ADD MARKINGS & SIGNS
D4	BRIGHTLEAF DR, from ROSESPUR PARK to IH 35 N ACCESS RD	0.47	INCORPORATED CITY	SHOULDER	ADD PAVEMENT
D4	BRISBANE DR, from ELLERSTON BLVD to ROSESPUR PARK	0.18	INCORPORATED CITY	ROUTE	SIGNS
C3	BULVERDE RD, from MARSHALL RD to EVANS RD	1.27	BEXAR CO	BIKE LANE	NEW CONSTRUCTION
B3	CANYON GOLF RD, from BORGFELD DR to CITY LIMIT	6.19	BEXAR CO	BIKE LANE	ROAD DIET
C3	DUSTY CANYON, from LOOP 1604 to DEAD END / SEMORA OAK	1.72	BEXAR CO	BIKE LANE	RESTRIPE
D4	ELLERSTON BLVD, from AMBERLY CT to BRISBANE DR	0.03	INCORPORATED CITY	SHOULDER	
C3	EVANS RD, from BULVERDE RD to CIBOLO CANYON	1.45	BEXAR CO	SHOULDER	ADD PAVEMENT
C4	EVANS RD, from GREEN MOUNTAIN to CITY LIMIT	3.11	BEXAR CO	SHOULDER	ADD PAVEMENT
C4	EVANS RD, from SELMA CITY LIMIT to LOOKOUT RD	0.58	Selma	SHOULDER	ADD PAVEMENT
C4	EVANS RD, from LOOKOUT RD to IH 35	0.82	Selma	BIKE LANE	ADD PAVEMENT
D4	FM 2252, from LOOP 1604 to OLD NACOGDOCHES RD	6.18	TXDOT	BIKE LANE; SHOULDER	ADD PAVEMENT
D4	LOOKOUT RD, from LOOP 1604 to FM 3009	1.24	Selma, Schertz	BIKE LANE	ADD PAVEMENT
D1	LOOP 1604, at IH 10	0.31	TXDOT	SHOULDER	
D4	NACOGDOCHES RD, at LOOP 1604 (underpass/overpass)	0.08	TXDOT	BIKE LANE	
B2	OLD BLANCO RD, from BLANCO RD to BLANCO RD	0.85	BEXAR CO	SHOULDER	ADD PAVEMENT
D4	ROSESPUR PARK, from BRIGHTLEAF DR to BRISBANE DR	0.04	Selma	SHOULDER	
D5	SCHERTZ PKWY, from LOOKOUT RD to IH 35	0.76	Schertz; TXDOT (at IH 35)	BIKE LANE	ADD PAVEMENT; RESTRIPE
C5	TRI-COUNTY PKWY, from N EVANS RD to FM 3009	0.35	INCORPORATED CITY	ROUTE	
D1	VANCE JACKSON OVER 1604 (FUTURE), from LOOP 1604 WB to LOOP 1604 EB	0.04	TXDOT	PATH	NEW CONSTRUCTION
C2	WILDERNESS OAK, from CITY LIMIT to US HWY 281	5.62	BEXAR CO	BUFFERED BL	ROAD DIET



**RECOMMENDED BICYCLE NETWORK  
STONE OAK AREA**



0 0.5 1 2 Miles



\* Map Grid identifies the northern- or western-most point of the segment (or at the "from" point). Some segments may cross into other grids.

## METHODS FOR BICYCLE NETWORK IMPLEMENTATION

There are a variety of methods for creating new bicycle facilities. Based on facility type, traffic conditions, and availability of right-of-way, the method for constructing the facility will vary. As with any planning process, public engagement and input is a critical component of any process of designing new bicycle facilities. Involve neighborhood associations, area stakeholders, and residents or businesses located along the corridor in the process of building the network.

### New Construction

Where new construction is anticipated, bicycle facilities should always be considered at the inception of all projects and incorporated from project scoping through each design phase. Because roadways are built in phases, this method also requires that an interim facility be provided until all segments of the roadway are completed. This applies to both new roads built with public funds such as those identified in the Metropolitan Transportation Plan as well as those built with private funds in master developments. Any deviation from designing and constructing streets with appropriate bicycle facilities shall require design exceptions, with input from the region bicycle coordinators, and should be permitted only if alternative facilities can be provided.

### Retrofitting Existing Roadways

In many cases, however, roadways are not candidates for new construction, and roadways must be retrofitted to include bicycle facilities. This method of “retrofitting” existing roadways allocates a portion of existing roadway pavement to bicyclists. In many cases throughout the region, vehicular lanes are either overly wide, or there are more travel lanes for motorized vehicles than traffic volumes warrant. In these cases, restriping or a road diet would create space for a bicycle facility such as a bicycle lane or buffered bicycle lane. Upcoming transportation projects represent one of the most important considerations in implementing the recommendations of this Plan. All resurfacing, repaving and improvement projects should be evaluated to determine whether it is possible to provide the bicycle facility recommendations included in this Plan as part of the planned project. This is true for the full range of projects,

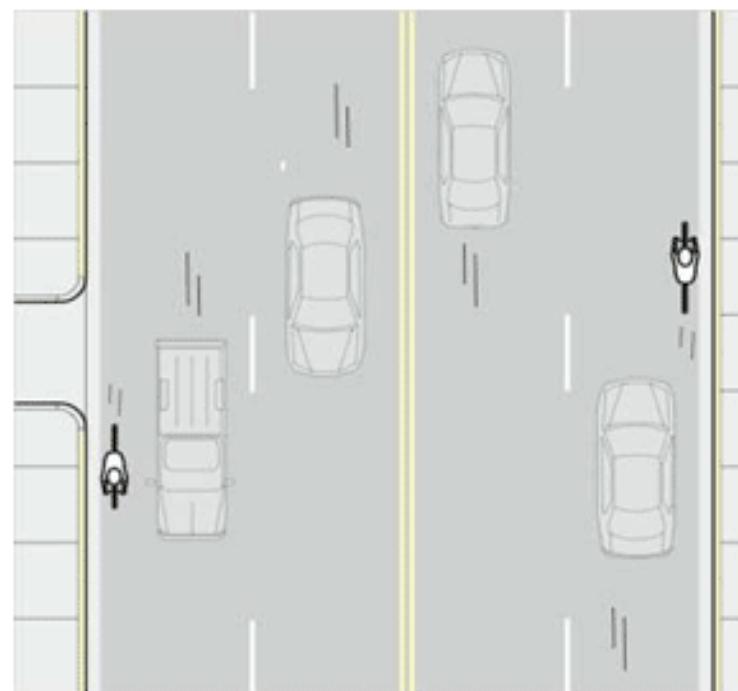
from large scale projects such as the full reconstruction of Hausman Road to basic repaving and resurfacing projects undertaken by the TXDOT San Antonio District Office, Bexar County and the City of San Antonio. Incorporating bicycle facility projects into planned street improvement projects is a more efficient means of creating facilities than retrofitting roads or pursuing bicycle projects as stand-alone projects. The City, TXDOT District Office, and Bexar County currently coordinate regarding their respective repaving schedules and opportunities. Bicycle considerations should be included as part of this coordination process. Bicycle issues, and specifically the implementation of this Plan, should be included on the agenda of all coordination meetings between the City and the TXDOT San Antonio District Office.

The reallocation of existing roadway space can be achieved by either reducing the number of through vehicle lanes (road diet) or by narrowing the lanes (lane diet). A road diet is a type of roadway conversion project where travel lanes are removed from a roadway and the space is utilized for other uses and travel modes, including bicycle facilities. Potential road diet candidates are evaluated based on traffic volumes and flow, turning volumes, stops frequently and the presence

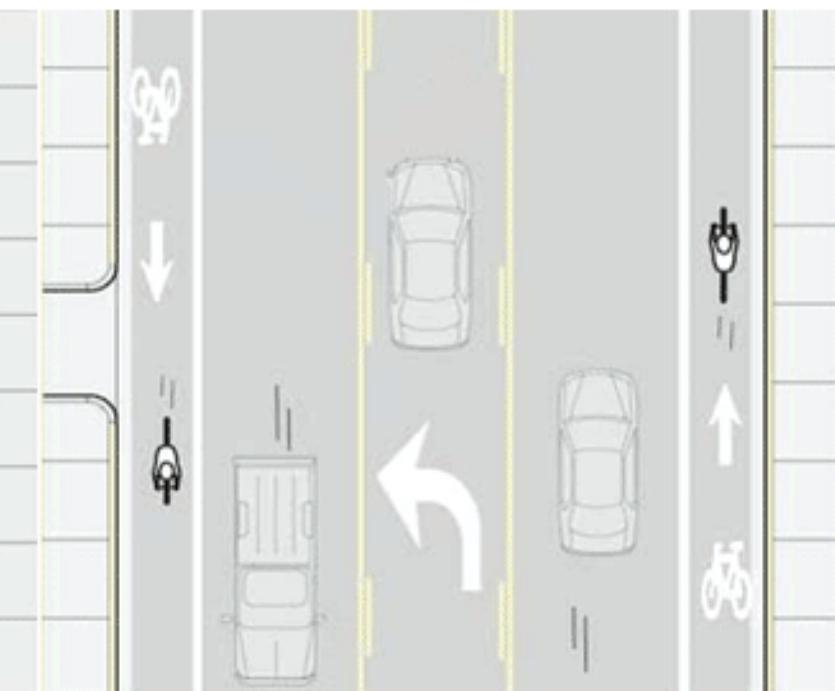
of slow-moving vehicles such as buses or trucks, and roadway function.

Given the right combination of these factors, a motorized vehicle travel lane can be removed and a bicycle facility installed in its place without reducing the level of service for motorized vehicles less than level C. Where lane striping is removed and lanes are “restriped” to be narrower, a lane diet has been implemented. Lane diet candidates are also based on traffic speed and volume as well as the traffic type and roadway function. Minimum lane widths vary among the various implementing agencies. Ten feet is the most narrow travel lane the City of San Antonio will permit, TXDOT has a minimum lane width of 11 feet, and Bexar County has a minimum lane width of 12 feet. Additionally, VIA Transit needs at least 11 feet for its bus corridors. Another component in determining whether a roadway is a restripe candidate is the amount of pavement that will remain for the bicycle facility. AASHTO Guidelines for Bicycle Facilities says 4' is the minimum bicycle lane width, but on high-speed roadways, a wider bicycle facility is preferred and recommended.

**Four Motor Lanes without Bike Lanes**



**Three Motor Lanes with Bike Lanes**



An illustration of a road diet treatment to install a bicycle lane.

Image Source: U.S. Department of Transportation, [http://www.planning.dot.gov/Peer/Chicago/chicago\\_2008.asp](http://www.planning.dot.gov/Peer/Chicago/chicago_2008.asp)

### 2010 Road Diet & Restripe Study

In 2010, the San Antonio-Bexar County MPO hired Sprinkle Consulting to study a set of arterial and collector roadways to identify restripe and road diet opportunities as a method of installing bicycle lanes. This study was a significant component in identifying implementation opportunities for Bike Plan 2011. Despite the recommendations of the Sprinkle Consulting report or Bike Plan 2011, implementing jurisdictions should study the corridor in greater detail in order to analyze options and trade-offs at the time of implementation.

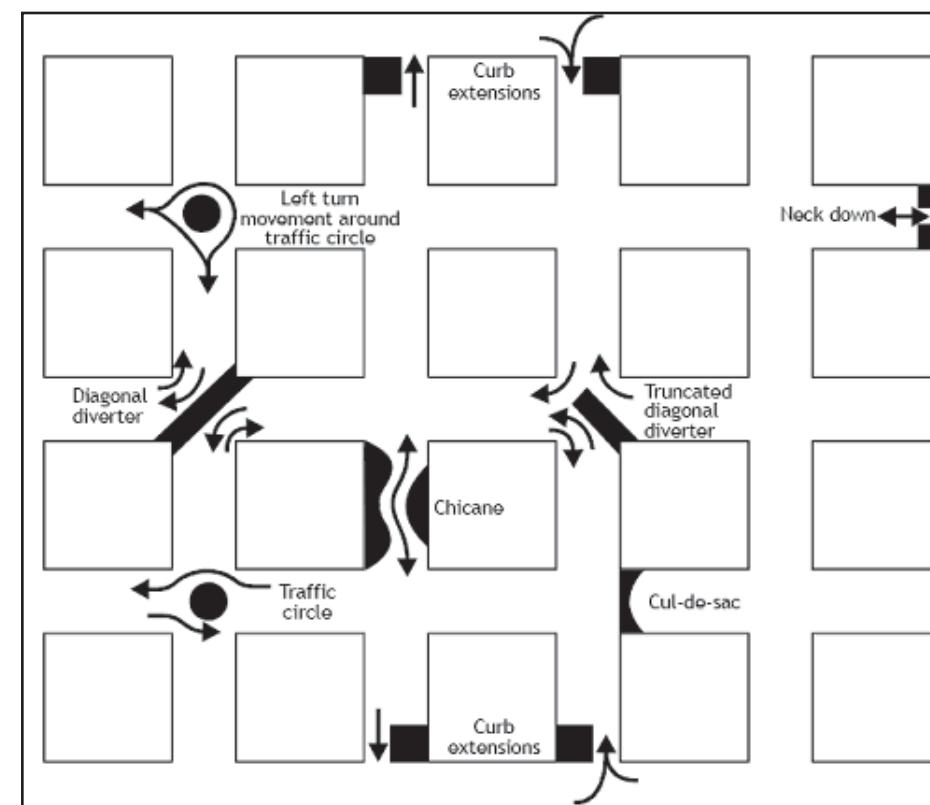
### Traffic Calming

Along streets where it is not possible to install a bicycle facility, traffic calming should be considered as a way to improve the bicycling environment by reducing motorized vehicles speeds. The Federal Highway Administration identifies a variety of traffic calming devices such as speed cushions, traffic circles, chicanes, semi-diverters, curb extensions, roundabouts, bulb-outs, center islands, and median barriers. Traffic calming devices are also an important ingredient in bicycle boulevards, which reduce vehicular speeds and prioritize the bicyclist.



A before and after illustration of a restripe of Fredericksburg Road

Image Source: Sprinkle Consulting, Inc., San Antonio-Bexar County MPO Road Diet Analysis, March 10, 2010



Traffic calming devices.

Image Source: Federal Highway Administration



A chicane on a one-way street helps slow vehicular traffic to help make the environment better for bicyclists

Image Source: Bicycle Transportation Alliance, Bicycle Boulevard Toolkit, [www.bta4bikes.org](http://www.bta4bikes.org)





## IV. METHODS FOR NETWORK MAINTENANCE

Maintenance of bicycle facilities is as important as building them. Utilizing materials to reduce regular maintenance, giving attention to regular sweeping of the facilities, and ensuring that the surface is smooth are all elements that make the facilities attractive and useable. The quality of the material used for striping on roadways can heavily influence the cost of maintaining bicycle facilities as it affects the frequency it needs to be done. In a region that doesn't get a lot of rain to help wash off dirt and debris that contributes to wear of pavement markings, the quality of the material to mark the pavement is important. Regular paint will begin to wear after six months. As technologies improve, more durable materials have become available, such as thermoplastic striping, which is more expensive to install, but has a longer lifespan. It is important to consider that bicycle facilities often consist solely of pavement markings, and as the markings wear away, the bicycle facility effectively ceases to exist.

Bicycles are more sensitive to irregularities and road debris than cars due to their smaller and lighter weight tires. Roadway features that cause minor discomfort to motorists, such as potholes and improper drain grates, can cause serious problems for cyclists. Debris such as loose gravel or overgrown vegetation may seem minor to a vehicle, but are serious hazards to bicyclists. Even some "normal" features of road design can cause an inconvenience or danger for cyclists. "Safety features" like large, closely spaced rumble strips designed to alert motorists leaving the roadway create barriers and hazards for cyclists.

In the implementation of bicycle facilities, consider the need to maintain bicycle facilities and give attention to sweeping the sides of streets where bicyclists ride. Ensure that riding surfaces are relatively smooth and integrate the repaving of bicycle facilities with the regularly repaving schedule of travel lanes. Routine maintenance operations must factor in the impacts on bicycling, and must be considered in the operation and maintenance of the bicycle network.

### Maintenance of Bicycle Facilities

Maintenance of the bicycle network is typically done through regular roadway and park maintenance, depending on the facility. The primary roadway maintenance activities include street sweeping, road restriping, and road resurfacing done by the Public Works Department. The Parks and Recreation Department maintain off-road facilities such as trails and multi-use paths.

Street sweeping is routine street maintenance that is very beneficial to bicyclists when done correctly. Currently, the City of San Anotnio does not sweep bicycle lanes as part of their routine street maintenance, and debris is subsequently swept into the bicycle lane. Rather, debris is cleared of bicycle lanes on an as-demand basis through 3-1-1. Along with this system, sweeping of bicycle lanes should be integrated into the traditional street sweeping schedule.

Similarly, standard restriping and resurfacing maintenance should include bicycle facilities that are a component of the roadway, such as bicycle lanes and shoulders. In restriping, pavement markings for bicycle facilities should also be evaluated and included in the restriping program. Care should be taken that these actions do not further hinder bicyclists. Resurfacing activity has the potential to cause temporary or permanent problems for bicyclists when excess loose gravel may be left on the roadway. Therefore, re-sweeping along newly surfaced bicycle routes should be scheduled following resurfacing.

### RECOMMENDATIONS FOR MAINTENANCE OF THE BICYCLE NETWORK

#### [Recommendation 1: At a minimum, sweep bicycle lanes on the same schedule as streets are swept.](#)

Bicycle facilities that are part of the roadway network, including bicycle lanes, shoulders, cycle tracks, should be included in the regularly scheduled maintenance of the roadway network. Ideally, bicycle lanes should be swept a minimum of two times a year.

#### [Recommendation 2: Acquire one small sweeper dedicated for sweeping bicycle lanes and other bicycle facilities on a regular basis as well as to handle 3-1-1 calls.](#)

Many bicycle corridors require more frequent maintenance due to either heavy debris or frequent use among bicyclists. Evaluate 311 calls and regional bicycle counts and use trends to identify high-demand bicycle corridors that may require more frequent street sweeping than other bicycle facilities in the network. Double the frequency of sweeping these bicycle facilities to four times a year (quarterly).

#### [Recommendation 3: Continue to use the 3-1-1 system to follow up on maintenance issues that are reported by citizens.](#)

In addition to regular maintenance of bicycle facilities, the current on-demand system of lane sweeping and facility repair should continue to remove obstacles in bicycle facilities in a timely manner. Train 3-1-1 call takers regarding bicycle related calls and ensure proper routing of calls. Establish performance measures that require tracking of 3-1-1 maintenance calls to improve responsiveness.

#### [Recommendation 4: Restripe bicycle lanes on a regular schedule.](#)

If necessary, re-paint on a different schedule from vehicle lane markings. Conduct a visual survey of all bicycle facilities at least once a year. Check for pavement separation, potholes, and loose covers.



## V. LINKING ON- AND OFF-STREET BICYCLE NETWORKS

The Bike Plan 2011 bicycle network integrates the on-street bicycle network with the off-street multi-use path network to create a comprehensive network of bicycle facilities. Therefore, coordination with departments and agencies involved with development of multi-use paths is critical to implementing and maintaining the off-street component of the entire bicycle network.

The two primary entities in San Antonio that are involved in development of trails and multi-use paths are City of San Antonio Parks and Recreation Department (SAPAR) and the San Antonio River Authority (SARA). In recent years, these two agencies have been aggressively building trail networks within parkland and along San Antonio waterways.

In 2000 and 2005, San Antonio voters approved sales tax propositions to build Greenway Trails along the Leon Creek, Salado Creek, and Medina River. In November 2010, Proposition 2 was approved for an additional \$45 million to further expand the Greenway Trails system. This program of Greenway Trails is being managed by SAPAR. Approximately 1,100 acres of property along these creeks have been acquired by the City, and 26 miles are completed and open to the public. An additional 12 miles are under construction. The vision is to one day create a “necklace” of greenways around the city by connecting these greenways.

The Greenway Trails play an important role in encouraging bicycle use among experienced and novice bicyclists. Recognizing their value, making connections to the Greenway Trails is a priority of Bike Plan 2011, including direct on- to off-street connections as well as providing wayfinding along both on- and off-street bicycle networks to assist in the connections.

SARA is the river authority for the San Antonio River and its tributaries. Among the agency's values is enhancing community appreciation for and access to the San Antonio River and its tributaries. In the agency's most recent initiatives, the San Antonio River Improvement Projects, SARA constructed a multi-use path along the San Antonio River from Brackenridge Park to Mission Espada in far-south San Antonio. Once complete, this trail will provide a significant

corridor for both recreation and commuting cyclists that both live in and visit San Antonio.

A near-term initiative of SARA is the Westside Creeks Restoration Project. The Alazán, Apache, Martínez, and San Pedro Creeks in near-west San Antonio are tributaries to the San Antonio River and under SARA's jurisdiction. While these channels are designed to provide flood control protection, they are unattractive and insensitive to the environment. The project's mission is to restore their environmental integrity, maintain the current flood control objectives, and provide increased opportunities for people to enjoy the urban creeks.

There are other opportunities to expand the off-street trail network that will support the bicycle network. The Bexar County Flood Control Program is currently working with the City of San Antonio, SARA, and the community to identify needed capital improvements to address flooding. In conjunction with this program, there is an opportunity to provide bicycle access along these corridors and connectivity between destinations.

Railroad corridors, utility corridors, and other drainage corridors are yet further opportunities to expand the linear off-street trail system. Rails-with-trails and rails-to-trails are two programs that focus on building trails along railroad lines. Likewise, utility corridors such as those of CPS Energy, and drainage corridors along the existing drainage culverts are other opportunities for trails. In order to take advantage of these corridors for linear trails, the City must work with the managing agencies and organizations. If opportunities arise, utilize wayfinding and construct trail heads to facilitate the on-street to off-street connection and link the two networks.

An important consideration to developing off-street trails is the operating hours imposed by the managing agency. Generally, San Antonio parks are open from 5 a.m. to 11 p.m., which isn't an issue for most bicyclists. However, the San Antonio Greenway Trails System have hours of “sunrise to sunset”. This can be a huge hindrance to the commuter who begins his trip at 6 a.m. before the sun rises, or during the winter months when the sun sets at 5:30 p.m. For these trail systems to be a more useful component of the bicycle network, it is important to have flexible hours of operation.



From top to bottom: The Medina River Greenway Trail in south San Antonio; the Museum Reach of the San Antonio River Trail was completed in early 2010.  
Image Source: City of San Antonio, Parks and Recreation Department



# SAN ANTONIO BIKE PLAN 2011 + IMPLEMENTATION STRATEGY

## 3 • the bicycle network —

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*City of San Antonio Greenway Trails map.*  
Source: City of San Antonio, Parks and Recreation Department

# **RECOMMENDATIONS TO CONNECT THE ON-STREET AND OFF-STREET BICYCLE NETWORKS**

## **Recommendation 1: Identify and pursue opportunities to connect on-street and off-street bicycle/pedestrian networks**

by implementing a process for infrastructure agencies (CIMS, Public Works, Parks & Recreation, Bexar County, TXDOT, SARA, etc.) to canvass each other for connection points during capital improvement project design processes.

### **Recommendation 2: Provide wayfinding between the trail and on-street networks**

Identify and create connections from the on-street bicycle network to the off-street trail network. To help facilitate these connections between the networks, create and implement a wayfinding plan that directs bicyclists between the networks. Do this in conjunction with the on-street wayfinding system and already established wayfinding to ensure a cohesive and unified plan.

**Recommendation 3: Coordinate with the appropriate agencies to build and maintain a comprehensive off-street network of trails to supplement the bicycle network.**

There are currently several initiatives and opportunities to build off-street trails through the City of San Antonio's Parks and Recreation Department, SARA, TXDOT, and Bexar County. Work with these departments and agencies to make these efforts a reality.

Additionally, identify and explore other opportunities to expand the regional off-street system of trails to supplement the bicycle network. Coordinate with VIA, TxDOT, and railroad authorities to explore rails-to-trails or rails-with-trails. Also, work with City Public Services, Bexar County Flood Control, San Antonio River Authority, and San Antonio Water Systems to explore opportunities to utilize drainage corridors for expansion of the trail network.

**Recommendation 4: Explore solutions to allow bicyclists on trails beyond current hours of operation.**

**Opportunities:** Consider expanding the hours of operation of the City's Greenway Trails to the general park hours of 5 a.m. to 11 p.m. This will enable bicycle commuting, which often occurs before dawn or after dusk.



Create a cohesive wayfinding plan that brings together the wayfinding themes of the Greenway, Trails and city's wayfinding plan.

Greenway trails and city's wayfinding plan.  
Shown above is a wayfinding sign on the  
Medina River Greenway Trail.  
Image Source: Halff Associates, Inc.