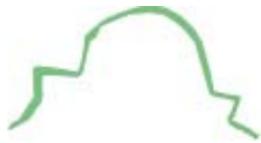


nutrition



Nothing compares to the simple pleasure of riding a bike.

~President John F. Kennedy

**WHY NOW, SAN ANTONIO? THE CASE FOR BICYCLING IN OUR CITY**

The time is now, San Antonio. Our city is ready to become one of the premier places for bicycling in the United States.

With its relatively flat topography, its network of many interconnected streets and neighborhoods, its favorable climate during much of the year, and its progressive attitude, San Antonio can become a national leader in creating a great environment for bicycle riding.

There are many reasons why this is important to San Antonio.

**It doesn't cost very much.** Dollar for dollar, bicycling is by far one of the cheapest transportation modes to support. Striped bicycle lanes cost under \$50,000 per mile, and in many cases even less, whereas a single lane of roadway can cost as much as a million dollars per mile. An entire bicycle network throughout all of San Antonio could cost less than one single multi-level freeway interchange, or less than it would take to expand our area roadway system by half of one percent, and could benefit just as much transportation.

**Bicycling can relieve traffic congestion in our City.** A bicycle lane has a similar capacity to a vehicle lane, but only takes up a third of the space. The San Antonio Bexar County Metropolitan Planning Organization predicts that by the year 2035 drivers in our area will travel 66 million miles per day at an average speed of around 28 miles per hour. If we can increase the percentage of miles travelled by bicycle, our roadway system may be able to do more with what it has.

**Bicycling is easy to do and very efficient.** Anyone, from young kids to senior citizens can easily ride a bicycle. Bicycle riding can be four times as fast as walking, and one can travel three miles in under 20 minutes. For the one-third of

our population that is too young or cannot drive, bicycling is a viable way to travel around the city.

**Bicycling can save on transportation costs.** As we look to the future, all we know for sure is that fuel for our cars and trucks will be more expensive. At \$4.00 or \$5.00 per gallon of gas, a few miles per week on a bicycle can save hundreds of dollars per year. Factor in savings for parking, insurance and vehicle maintenance and repairs the cost savings per family could be in the thousands per year. That is money that can be spent on other things, such as entertainment, shopping or education.

**Bicycling can help our population get and stay healthy.** Regular bicycle riding can produce amazing health benefits, from increasing cardiac activity to reducing weight gains that could lead to early on-set diabetes. And using a bicycle instead of a car can help improve the quality of our air in San Antonio.

**Bicycling can transform the image of San Antonio.** Healthy livable communities that are walkable and bikable are what everyone wants these days. These healthy neighborhoods are often the preferred places to live and contribute greatly to the image of San Antonio as a premier place to live.

**Even non-riders benefit.** Even non-riders in San Antonio will benefit from the implementation of a bicycle network. Road capacity can be increased for vehicles as more people ride their bicycles, and the perception of San Antonio as a highly livable city will help attract new creative industries to our area.



Image Source, from top to bottom: City of San Antonio, Office of Environmental Policy (top two); Brandon Ross, City of San Antonio, Parks & Recreation Department



## WHAT NEEDS TO BE DONE - THE REASON FOR THIS BICYCLE MASTER PLAN

So increasing bicycling in San Antonio can yield great benefits for all of us, riders and non-riders. But what will it truly take to get more of us to try it? What will it take to make more of us feel comfortable and safe riding around town? What is needed to help us ride to work and then be able to go through a typical business day? What is needed to get San Antonio riding?

That is the purpose of the 2011 Bicycle Master Plan.

San Antonio's 2011 Bicycle Master Plan and Implementation Plan, referred to in this document as Bike Plan 2011, is the "roadmap" that describes what San Antonions want, how to encourage more of us to ride, and what facilities need to be built and where. Specifically,

1. It incorporates extensive public and technical feedback from throughout the region, assisting elected officials and staff understanding what areas citizens want to see developed.
2. It builds upon previous plans and links together other ongoing efforts related to bicycling.
3. The plan guides City Council, other citizen boards, as well as City staff in collectively moving forward in a cost effective way.
4. It presents a unified vision for where we as a region want to be with bicycling in the next ten to twenty years.
5. The plan identifies where bicycle facilities are needed, so that new infrastructure development, as well renovation efforts can incorporate lanes and markings for bicycles.
6. It identifies potential costs and strategies for funding different components of the plan.
7. It identifies maintenance and staffing needs to keep bicycle facilities in good condition.
8. The plan provides guidance on education, enforcement and training to help new riders be safe and knowledgeable.

## WHO IS THE PLAN FOR?

Bicycling can take on many different meanings for the residents of San Antonio. For children, those first tentative trips by bicycle provide a sense of adventure and are important steps toward independence. Others see bicycling as a way to exercise and stay fit. Still others rely on bicycles as one of their primary means of transportation- whether by choice because they elect not to use a car, or because they are not able to afford a car.

Similarly, some bicyclists are very comfortable riding in the road intermixed with motor vehicles, while others are more cautious and prefer riding on separate paths and trails. A third important group is those who currently don't ride bicycles, but are interested.

Regardless of the underlying motivations or level of experience of its users, the City's bicycle network must provide a safe, high quality experience for all skill levels.

### **A viable transportation system provides a variety of travel choices, including the ability to travel by bicycle.**

Similarly, the transportation system must afford travelers direct, efficient routes to get to their destinations around the City, instead of requiring them to go out of their way to get from point A to point B.

This plan is for riders with all levels of expertise and for those who ride for recreation as well as those who ride with a purpose and a specific destination in mind. But more than anything else, this plan targets that significant portion of our population who is concerned about riding because of safety or comfort, or those that simply have not even considered riding. If only a fraction of drivers in San Antonio try riding a bicycle instead of driving, our city would become a much healthier and less congested place in which to live.

## HOW THIS PLAN IS ORGANIZED

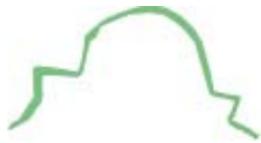
This master plan document includes six key sections, along with appendices that provide design guidance and a more detailed summary of the input that has been received throughout the planning process. The six key sections are:

1. **Introduction** - This introduction sets the stage for why this plan is important, a history of bicycle planning in the area, the vision for bicycling, the planning process used and who will implement the plan.
2. **Existing Conditions** - In this section, the current state of bicycling in San Antonio is described, including noting where key gaps and barriers occur. This section also summarizes how residents of San Antonio and Bexar County feel about bicycling and what they would like to see improved.
3. **Developing the Network** - The plan to develop a full network of bicycle facilities everywhere in Bexar County is discussed in this section. Key segments and facilities to be built initially are shown, as well as maps showing the ultimate entire network in each area of the City.
4. **Integrating the Network** - Other key components of the bicycle network, including end of trip facilities, wayfinding features, integrating bicycling and transit, and linking to off-street trails and the Greenway Trails are included in this section.
5. **Programs** - Efforts to educate new riders and promote safety, to encourage infrequent or non-riders to cycle more frequently, and needed enforcement activities can be found in this section.
6. **An Implementation Strategy** - This section summarizes the strategies that are recommended to fund and develop an accessible, direct, and connected bicycle network and increase ridership in San Antonio. It also includes target benchmarks that can be used to assess the level of progress that San Antonio is making over the next decade.



Mayor Julian Castro receives the Bicycle Friendly Community Award from the League of American Bicyclists.

Image Source: City of San Antonio, Office of Environmental Policy



## THE VISION FOR BICYCLING IN SAN ANTONIO

Nationally, bicycling is making a comeback as a viable and popular mode of transportation and is generating a huge amount of interest among not only citizens for a commuting and exercise option, but also by cities and policy makers as a way to improve their environmental impact and quality of life. Transportation system planning in the latter half of the 20th century has largely focused on the needs of automobiles, pushing the bicycle out of the transportation picture. With rising gas prices, a national obesity epidemic, a need for better air quality, and most importantly, a desire for more sustainable land uses and development patterns, bicycling is re-emerging as a viable mode of getting around and also increasing physical activity.

The overall mission and vision that guide this plan and all of its recommendations comes directly from the citizens of San Antonio and Bexar County. They have continually expressed their desire to have a comprehensive bicycle network throughout the City, as captured in the Bexar County Metropolitan Planning Organization's (MPO) update to the Metropolitan Transportation Plan (MTP), as well as in other activities undertaken over the past ten years. The City of San Antonio's 1997 Master Plan policies clearly communicate a desire for a comprehensive bicycle network of on-road bicycle facilities and off-road hike and bike trails using existing roadways and trails, as well as in new developments.

### Mission Statement

The City of San Antonio's mission statement regarding bicycles in the City is a key guiding component of this plan. In very simple terms, it states:

### *Our Mission Statement*

*Our goal is to increase bike ridership for daily travel and improve cycling safety by making our bike network accessible, direct, and continuous.*

*~City of San Antonio*

## A VISION FOR BICYCLING IN 2030

In 2030, bicycling will be a fundamental component of the complete transportation and recreation system of the San Antonio-Bexar County region. Residents and visitors of all ages and abilities know they can easily find a comfortable place to ride their bicycles – be it a multi-use path, bicycle boulevard, cycle track, bicycle lane, route, or other well-designed bikeway - in most areas of the region.

### Connectivity

Destinations such as employment centers, shopping areas, schools, parks, community facilities, and the Greenway Trails system are all **easily** accessible by bicycle. New developments support bicycle use by installing appropriate bicycle facilities on roadways and trails. Employers and businesses are accessible by bicycle, and many employers provide bicycle parking and other desired facilities such as showers and changing areas. Bicycling access to all VIA facilities will be easy, thereby making transit a convenient transportation choice.

### Culture and Commitment

Safety of bicyclists is achieved through awareness, acceptance and even appreciation of bicyclists among all community members. San Antonio will be a bicycle-friendly city where drivers and bicyclists share the road in a respectable and safe manner. Community leaders, public agencies, local employers, engineers, designers, land developers, and all persons involved with implementing this bicycle plan are committed to making bicycling a top priority for transportation and recreation.

### Health and Fitness

Bicycling is recognized as an important component for maintaining and improving the health and fitness of citizens of San Antonio. Recreational bicycling is an accessible form of exercise to residents and visitors of all ages and abilities, even as they age.

### Vibrant Streets

San Antonio's streets are vibrant and alive with a variety of activities year round. Complete Streets has become the standard - not an option - providing safe accessibility by all users. A commitment to share the road is evident in the civil relationship among cars, bicyclists, and pedestrians.



Image Source, from top to bottom: [www.completestreets.org](http://www.completestreets.org); City of San Antonio, Office of Environmental Policy; VIA Metropolitan Transit; Halff Associates, Inc.





## A LONG HISTORY OF BICYCLING IN SAN ANTONIO

Adapted from *San Antonio on Wheels*, by Hugh Hemphill

Bicycling in San Antonio isn't a recent phenomenon. In fact, San Antonians have been bicycling for a long time - since the mid-1800s! In his recent book *San Antonio on Wheels*, San Antonian Hugh Hemphill writes about the major milestones of the arrival of bicycles and ensuing bicycle craze in San Antonio.

### San Antonio's First Bicycle

The first mention of a bicycle in San Antonio is from a piece in the San Antonio Herald on May 6, 1869 about a local man Mr. Muhl, who had built a velocipede.

### San Antonio's First Bicycle Store

The first bicycle store in San Antonio was located at 302 West Commerce Street and owned by August Thiele and Jacob France. They sold "high wheelers," a style of bicycle that had one very tall wheel and another much smaller one. The first bicycle club in America, the League of American Wheelmen, was started during the era of the high wheeler. Throughout the late 19th and early 20th century, retailers that specialized in bicycles continued to emerge.

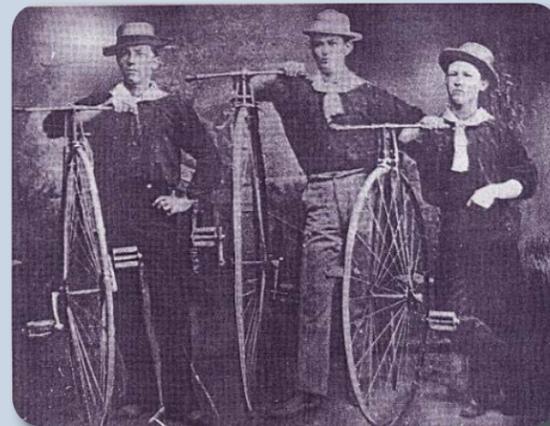
### San Antonio's First Bicycle Club

The Alamo Wheelmen was the first bicycle club in San Antonio, formed in 1891. It was a chapter of the League of American Wheelmen. They club even had its own racing team.

### Racing Emerges in San Antonio

In 1898, Frank Crothers and L.F. Birdsong opened a bicycle store at 214 1/2 W. Houston (where the Majestic Theatre now stands) and sold only one type of bicycle: the National. These were racing machines, noted for their light weight. They were costly and intended only for those seriously interested in competition. To make more money, Crothers & Birdsong sold other appliances such as typewriters, Kodak cameras, and provided film development.

Passionate competitors, Crothers & Birdsong formed a team, "The Independent Five," and traveled to various destinations around Texas to compete. In the 1890s, San Antonio was already part of the national circuit for professional racing. This attracted professionals from all over the country, such as Iowa, Michigan, California, Illinois, Colorado, Kansas, Alabama, and New York.



*San Antonio high wheelers*



*Crothers & Birdsong on a bicycling trip*

### Bicycling for the Common Citizenry

With a growing number of citizens getting around by bicycle, etiquette for bicycling was established. For example, a gentleman would not stand astride his machine during a conversation. He should also be prepared to extend any and all courtesies to members of the fairer sex including dismounting first to steady the lady's bicycle, plus hold it once more as she got on. For women, riding alone was absolutely beyond the pale. Bicycling was only ever to be done in the morning. No decent lady would ever be seen on a bicycle after midday, unless attending a bicycle tea or other related social event. And speed limit of eight miles per hour was imposed within city limits.



*A bicycle at the Alamo Plaza Post Office*

### A Hiatus and Revival for Bicycling

The arrival of the automobiles ended the bicycle craze in San Antonio and across the nation. Stores closed and racing in San Antonio ended. The cost of the bicycle dropped, as the only bicyclists included children, women, and those who could not afford seven cents to ride the streetcar. By the mid 1930s, the only bicycle store in San Antonio was Charles James' at Houston and Main.

But in the 1970s there was a resurgence in bicycling. The local bicycle club was revived as the San Antonio Wheelmen, and new bicycle shops began to open such as BikeWorld in 1971 and B & J Bicycles in 1972. Within a year the San Antonio Wheelmen had attracted some seventy members. As popularity of the sport increased, the club began campaigning for dedicated bike lanes. The first Bicycle Master Plan for San Antonio was created in 1975, and the San Antonio Wheelmen successfully lobbied for bike racks to be installed on VIA buses to allow people to move their machines across the city with greater ease. Even the police got into the act, inaugurating downtown bike patrols in 1990.



*Charles James' daughters on a tandem bike*

San Antonio has a vast history of bicycling in San Antonio upon which is a growing support and advocacy for bicycling as a form of transportation, recreation, and exercise today. San Antonians are pedaling forward at full force to become one of the most bicycle friendly cities in America. So, truly, who will hereafter say that San Antonio is not a fast place?

Source: Hugh Hemphill, author of "San Antonio On Wheels, Maverick Publishing, 2009  
Image Credits: Texas Transportation Museum, [www.txtransportationmuseum.org/BN.htm](http://www.txtransportationmuseum.org/BN.htm)



### Representation of Bicyclists in the Region

The Bicycle Mobility Advisory Committee (BMAC) is a regional representative of bicycle groups and agencies that advises the Metropolitan Planning Organization's Transportation Policy Board. The committee includes broad representation of bicyclist interests:

- 5 citizen bicyclists
- Alamo Area Council of Governments
- Bexar County
- TXDOT
- City of San Antonio Office of Environmental Policy, Public Works, and Planning Departments
- VIA Metropolitan Transit
- Greater Bexar County Council of Cities
- Representatives from the development community
- Representatives from the economic development community
- Law enforcement agencies like the SAPD Bike Patrol and VIA Police Department
- A representative from a school district
- Representatives from bicycle advocacy groups including Bike Texas, STORM, San Antonio Wheelmen, and other bicycle organizations

## BICYCLE PLANNING IN SAN ANTONIO

**The 1975 Bicycle Master Plan** - The first Bicycle Master Plan for San Antonio was created in 1975 by the City of San Antonio Department of Planning and Community Development. At this time, there were only 3 bicycle corridors identified in this plan:

- A bicycle route along Mulberry Street connecting St. Mary's University, Trinity University, San Antonio College, and Brackenridge Park;
- McAllister Park; and
- A bike trail along the San Antonio River in the historic mission area.<sup>1</sup>

The 1975 Bicycle Master Plan recommended a network of 12 corridors suitable for development of bikeways that provide access to recreational sites and employment/retail centers. Goals included a bicycle registration program to reduce thefts, a bicycle safety program, and a school bicycle program.<sup>2</sup> It was accepted by various public agencies such as the City of San Antonio Planning and Zoning Commissions and San Antonio River Authority, but it was not adopted by City Council as city policy.

**TransVision 2015** - In 1994, the San Antonio-Bexar County MPO approved a long-range transportation plan (TransVision 2015), which contained a bicycle component called The Bicycle Mobility Plan. This Plan greatly increased the projected bicycle network. Goals of the 1994 Bicycle Mobility Plan were to (1) double bicycle ridership by 2005, (2) decrease the bicycle accident rate by 15% by 2005, and (3) increase the awareness of bicycling as a valid form of transportation throughout the community. This plan also created the Bicycle Mobility Task Force (now known as the Bicycle Mobility Advisory Committee (BMAC)), identified funding for bicycling, and appointed full-time bicycle coordinators within the City of San Antonio and Bexar County.<sup>3</sup>

Following adoption of the 1994 Bicycle Mobility Plan by the MPO, the MPO funded a Community Based Bicycle Planning Study which recommended over 150 bicycle routes totaling 463 miles and added 13 new corridors to the bicycle

network. This study outlined additional criteria for selecting bicycle projects including connectivity to other modes of transportation to increase accessibility; consideration for safety issues such as traffic volumes, speed, and quality of pavement; and designing bicycle facilities that adhere to AASHTO guidelines.<sup>4</sup> Also following this plan, the San Antonio City Council approved the City Master Policy Plan that included goals that supported bicycle transportation.

**The 2001 Bicycle Suitability Study** - In 2001 the MPO funded a Bicycle Suitability Study which analyzed data on 1,000 miles of roadways in the San Antonio region. The data was processed through a Bicycle Level of Suitability Model, which considers factors such as traffic conditions, pavement width, pavement condition, and whether there is an existing bicycle facility on the roadway. The result identified 700 miles of potentially usable roadways within the region and was used to produce the first Bike Route Usability Map in 2003. This regional bicycling map has since been updated twice more and published as recently as 2009.

**2004 Bicycle Master Plan Update** - In 2004 the Bicycle Master Plan was updated as part of the update to the MPO long-range Metropolitan Transportation Plan (Mobility 2030). The Plan identified four goals: (1) institutionalize bicycling; (2) a network to increase ridership; (3) identify funding; and (4) make bicycling safer through education and enforcement. This plan also identified a 2,370-mile bicycle network that included both on- and off-street facilities and also incorporated the Master Thoroughfare Plan.

**2010 Road Diet Study Update** - In 2009 to 2010, the MPO led an effort to update the 2004 roadway suitability effort, and it also evaluated where streets could be adjusted to add bicycle facilities without a major impact on traffic capacity. The study noted the possibility of over 350 miles of roadways where bicycle lanes could be added, either through a reduction in lane width or through the removal of an underused lane of traffic.

**2010 Bicycle Travel Patterns Study** - In 2010 the MPO commissioned a major opinion survey to help determine the desires of San Antonio and Bexar County residents as they relate to current and potential bicycle use. Both the Road

Diet Study and the Bicycle Travel Patterns Study are major building blocks for this master plan and are discussed in detail in the following sections.

**The San Antonio-Bexar County MPO Safety Study** - The MPO is creating a safety database that can be used by local agencies as they plan for future improvements. Extensive information on bicycle crashes over the past three years is included, as well as citizen perceptions regarding bicycle safety issues.

**The "San Antonio Bikes" Program** - In 2009, the Office of Environmental Policy established the "San Antonio Bikes" Program whose fundamental goals are **to increase bike ridership for daily use and improve cycling safety by making the bike network accessible, direct, and continuous thereby raising the visibility of cycling as an alternative form of transportation.**

Since inception, initiatives of the program have included:

- This bicycle master plan
- the establishment of a dedicated website and Facebook fan page
- an interactive GIS-based bicycle facility map
- a City of San Antonio employee bike share program
- a municipal downtown bike share program
- the installation of bike racks downtown
- publishing and distributing a number of targeted bicycle maps
- the passage of the "Vulnerable Road Users" or "Safe Passing" ordinance as well as a local ordinance requiring proper lighting equipment for cyclists riding at night
- a bilingual "Get Cycled" bicycle safety media campaign was commissioned which resulted in over 4,000,000 media impressions over six months
- distributing and installing bicycle lights and helmets at local community events and through a partnership with the San Antonio Police Department

The City's efforts to increase and improve bicycling has resulted in national recognition by the League of American Bicyclists (LAB), who designated San Antonio as a bronze-level Bicycle Friendly Community. As of the fall of 2010, San Antonio is one of only two cities in Texas with a designation by LAB.

<sup>1</sup> San Antonio-Bexar County MPO, 2007, The State of Bicycling in SA: Presentation to the Transportation Policy Board, slide 5

<sup>2</sup> ----, slide 12

<sup>3</sup> San Antonio-Bexar County MPO, 2004, Bicycle Master Plan, p. 6

<sup>4</sup> San Antonio-Bexar County MPO, 2007, The State of Bicycling in SA: Presentation to the Transportation Policy Board, slide 13

## AREA COVERED BY BIKE PLAN 2011

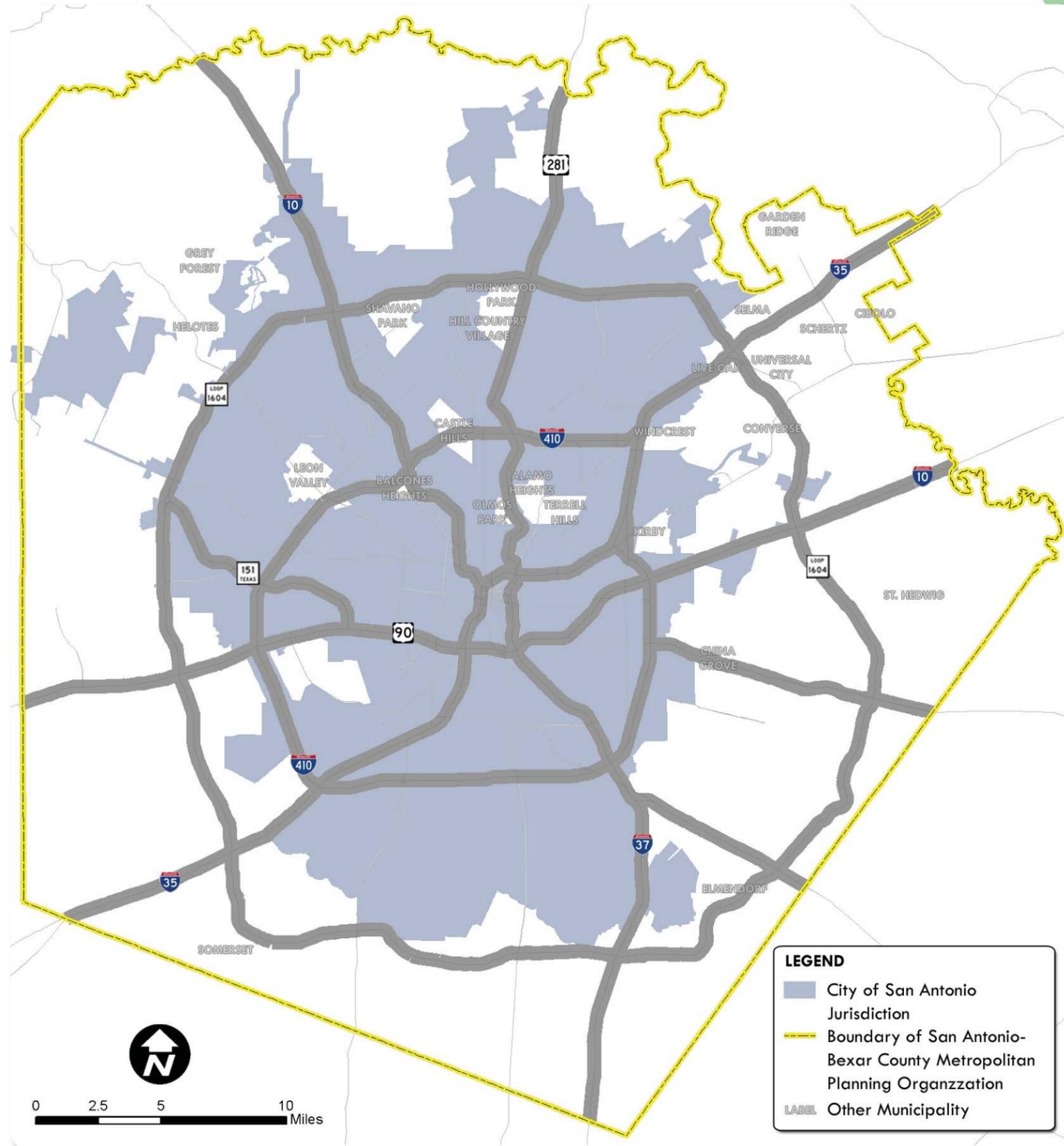
In order to achieve a truly connected and regional network, the study area for Bike Plan 2011 extended beyond the City of San Antonio jurisdiction and covers the entire San Antonio-Bexar County MPO area.

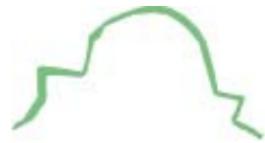
Development of the bicycle network took a “node and corridor” approach to emphasize the importance of connecting origins and destinations. The “nodal” approach to the network methodology looked specifically at circulation and mobility within an area. The “corridor” component is a regional evaluation in which connections are identified between the planning areas and bicycle districts. This two-pronged approach ensures local mobility as well as regional connectivity. This is based on the assumption that bicyclists want to get to and from the same places as they would by car. Bicyclists aren’t going anywhere differently; they’re just choosing to get there in a different way.

The plan suggests facilities and connections for other incorporated municipalities within the region. As soon as possible, each is anticipated to review, consider, adjust and implement the regional recommendations. That regional connectivity is a key component of this plan.

In addition, destination districts were identified around major regional centers that attract movement and areas where the density of development and the street network could potentially support bicycling. Those key areas are discussed in subsequent sections of this plan.

BIKE PLAN 2011 STUDY AREA





### WHO WILL IMPLEMENT THIS PLAN?

The City of San Antonio will be the primary implementing agency for Bike Plan 2011. The Office of Environmental Policy and its Sustainable Transportation Analyst will be the central department overseeing bicycle related actions and programs in San Antonio. Many other departments will have major roles, including:

- Public Works for facility development, design and implementation,
- Capital Improvements Management Services (CIMS) for major bicycle related capital improvements,
- Parks and Recreation, for implementation of trails and other off-street facilities,
- San Antonio Fire and Police Departments, to provide safety education and enforcement components of the plan,
- Development Services, to insure inclusion of bicycle facilities in new developments,
- Planning and Community Development, to incorporate bicycle network recommendations into long range planning, and
- MetroHealth, to encourage area residents to lead more active lifestyles, and bicycling will be a major component of that effort.

However, the City of San Antonio cannot implement the plan alone. Successful completion of the bicycle network will require partnerships with a number of public and private organizations and agencies throughout the region. Other partners and their roles in implementing Bike Plan 2011 include:

- San Antonio-Bexar County MPO – The agency’s role as a regional planning entity will be instrumental in bringing together municipalities and other agencies to implement a truly connected network. SA-MPO will also provide educational and encouragement programs to advance bicycle riding in the area.
- TxDOT – Many TxDOT operated roads and highways in the area are also desired bicycle corridors, and the agency will have a major role in improving bicycle connectivity in the area.
- Bexar County – Bexar County will address roadways outside of the jurisdiction of San Antonio
- Other area municipalities – Other area municipalities are key to ensuring that the regional network is connected, but will implement their own facilities and programs
- San Antonio River Authority (SARA) – SARA will continue to develop facilities along many of the waterways in the

- area, further expanding the off-street network
- VIA Metropolitan Transit – VIA already encourages bicycle/transit trips, and as its network expands and new transit options such as a Bus Rapid Transit (BRT) network are developed, VIA can make bicycle commuting feasible for an even greater portion of the area’s population.

### RELATIONSHIP TO OTHER PLANS & STUDIES

The need and desire for a strong bicycle network in San Antonio is supported by many other recent plans. These all promote the goal of creating a multi-modal transportation system that serves all citizens of San Antonio and Bexar County, and that enhances a more sustainable way of life with strong communities and neighborhoods. An analysis of these other efforts are stated below:

#### Master Plan Policies

The City’s Master Plan Policies document was adopted in 1997 to provide guidance in the evaluation of future decisions on land use, infrastructure improvements, transportation, and other issues. Two key topic areas directly addresses bicycling: Neighborhoods and Urban Design.

1. The Neighborhood topic area strives to create strong, viable, sustainable neighborhoods, with a specific goal to improve accessibility to and within the downtown area by bicycle.
2. The Urban Design element establishes goals and policies to protect and create good urban design. Goal 3 of this section focuses on the park and open space system and the component of paths in serving bicyclists. Goal 5 addresses the role of the transportation system and establishes goals and policies for integrating bicyclists into the transportation system to create and maintain the urban character.

#### SA 2020

Initiated by the Mayor’s office in 2010, SA 2020 creates a vision of where the citizens of San Antonio want to be in 2020. SA 2020 includes recommendations for many areas, including arts and culture, downtown development, economic competitiveness, education, family well-being, health and fitness, environmental sustainability, neighborhoods and growth management and transportation. The vision includes

more walkable neighborhoods, a significant reduction in youth and adult obesity, and, in the area of transportation, specifically says:

*In 2020, San Antonio’s transportation systems will be focused on moving people and commerce efficiently. San Antonio is served by an environmentally friendly transportation system where everyone is able to walk, ride, drive or wheel in a safe, convenient, and affordable manner to their desired destinations. Frequent and reliable mass transit services connect communities, and transportation infrastructure meets community needs.*

#### Mission Verde Sustainability Plan

The Mission Verde Sustainability Plan (MVSP) was adopted in 2009 to address the challenge of meeting the city’s needs today without compromising those of future generations of San Antonio. The plan focuses on the economic side of sustainability, and its intent is to “invest in energy saving initiatives that would save the consumer and the community money, and serve as a catalyst for job creation and innovation.”<sup>5</sup> Among the initiatives of the Mission Verde plan is to create an integrated and efficient multi-modal transportation system. The plan also supports real estate development that is mixed-use, mixed income, walkable, and transit-oriented. These goals and policies, while they don’t speak directly to bicycling, are supported by and help reinforce those efforts to increase bicycling.

#### Neighborhood, Community, Sector, and Master Development Plans

The City of San Antonio has been engaged in a variety of planning exercises for smaller areas that often identify bicycle facilities as a needed component of the transportation network in the defined area. These plans were reviewed and recommendations were incorporated into the regional bicycle network. Plans reviewed include:

- Inner City Reinvestment Plans:
  - Eastside Reinvestment Plan Area (Dignowity Hill)
  - Southside Reinvestment Plan Area (Roosevelt Corridor / Mission Drive-In TIRZ)
  - Westside Reinvestment Plan Area (Westside TIRZ)
- Neighborhood Plans
- Sector Plans
- Master Development Plans that have been filed or are currently under construction

<sup>5</sup> City of San Antonio, Mission Verde: Building a 21st Century Economy, 2009, pp. 3-4



### **Mobility 2035 Plan (MPO)**

During the process of updating Bike Plan 2011, the regional metropolitan planning organization updated the regional metropolitan transportation plan, Mobility 2035. This plan includes a component for bicycle transportation and identifies goals and a bicycle network list consisting of both on- and off-street improvements for bicycle facilities. Mobility 2035 has been used to frame many of the recommendations of Bike Plan 2011. The regional vision for bicycling, as stated in Mobility 2035 is:

*San Antonio and Bexar County recognize bicycling as a clean, healthy and affordable form of transportation and recreation. A comprehensive on-road and off-road bicycle network will make our community a place where bicycling will be desirable for trips of all kinds by all segments of the population.*

### **Complete Streets Policy**

A street that is designed and operated to enable safe access for all users, including, but not limited to, pedestrians, bicyclists, motorists, and mass transit riders of all ages and abilities. All users should be able to safely move along and across a complete street.<sup>6</sup> In March 2009, the San Antonio Bexar County Transportation Policy Board adopted a complete streets resolution, and currently the City of San Antonio is working on policies and guidelines to incorporate the complete streets philosophy into its planning and infrastructure development process.

The City of San Antonio, Planning and Community Development (DPCD) is a partner on the Communities Putting Prevention to Work (CPPW) grant, to create and implement a “Complete Streets” policy. The policy is aimed at lowering childhood obesity rates through increased physical activity, the built environment, increased social networks and encouraging behavioral change.

The purpose of Complete Streets is to enhance choice of mobility; facilitate physical activity for daily needs and recreation; and improve the quality of life, health and safety for all members of the community.

### **SmartWaySA: VIA Long Range Plan**

San Antonio is currently the largest metropolitan area in the nation to be served by a bus-only public transportation system. VIA seeks to move beyond buses to become a truly regional, multimodal transit agency, and the blueprint to accomplish this will come through the Long Range Comprehensive Transportation Plan.

The Long Range Plan will provide a comprehensive transportation vision for the community for the next 25 years. This plan will outline a network of integrated high-capacity transit corridors with a range of transit mode alternatives from bus service and bus rapid transit to light rail and modern streetcars. The Long Range Plan is being advanced by an intensive public outreach effort called “SmartWaySA.” This process began in September 2009 with a series of workshops designed to introduce the Long Range Plan concept and to solicit input from the citizens. Throughout the planning, additional meetings were held to gather input and to update the community on the plan’s progress. January 2011 marked the most recent round of open houses where VIA took the draft system plan to the community. The draft system plan identified where the new bus service improvements would be, where high capacity transit systems like rail might work best and where new passenger facilities should be developed. Equally as important, it should be noted that the Long Range Plan will be updated every 3-5 years in accordance with the San Antonio-Bexar County Metropolitan Planning Organization’s long range plan.

### **Safety Study (MPO)**

In 2009, the MPO conducted an analysis of crash data. The MPO prepared data for this planning effort that identified trends in bicycle-related crashes and “hot spots” for crashes. This information helped shape safety education and enforcement recommendations and is a component in prioritizing improvements to the bicycle network. Locations with high bicycle crash occurrences are considered in developing project priorities.

### **Road Diet & Restripe Study (MPO)**

In 2010, a road diet and restripe analysis was completed for the MPO by Sprinkle Consulting, Inc. As part of this analysis, a set of arterial and collector roadways were studied and identified as being restripe or road diet opportunities as a method of installing bicycle lanes. This study was a significant component in identifying facility opportunities for Bike Plan 2011. Still, jurisdictions should study the corridor more closely and analyze options and trade-offs at the time of implementation.

### **Greenway Trails Project**

In 2000 and 2005, the citizens of San Antonio approved sales tax initiatives to fund the Greenway Trails program, a system of linear trails along Leon Creek, Salado Creek, and Medina River. In 2010, voters approved the continuation of this funding in the amount of \$45 million to construct connections and extensions to the existing off-street trail network and build trails along waterways.

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.

### **Bicycle Travel Patterns Study (MPO)**

*(adapted from ETC Institute, 2010, San Antonio Regional Bicycling Travel Patterns Survey: Final Report)*

In 2010, the MPO hired ETC Institute to administer a regional bicycling travel patterns survey of San Antonio residents to gather data about and better understand bicycle travel in the region. Survey findings are discussed in detail in Chapter 2.

### **South Texas Medical Center Bicycle Master Plan**

In 2011, the Medical Center Alliance and San Antonio Medical Foundation commissioned a study to introduce bicycle traffic to the South Texas Medical Center (STMC). The study evaluated road and traffic conditions, intersections, and trail opportunities, and it recommends a 12-mile connected bicycle network within the STMC area. In the spirit of cooperation, this plan should be used to help implement building the bicycle network in San Antonio.

<sup>6</sup> Adapted from the definition established by Complete the Streets. (2005). Complete the Streets. Retrieved February 13, 2009 from <http://www.completestreets.org/>.



## THE CASE FOR BICYCLING IN SAN ANTONIO

As noted at the beginning of this chapter, there are many benefits to be gained from actively increasing bicycling in San Antonio. As cities across the country grow, bicycling is becoming an important quality-of-life factor that people and businesses consider when choosing where to locate. Being able to ride from one place to another safely and conveniently stamps that community as one that is committed to providing its residents with an enhanced quality of life.

### There is a significant potential bicycling population in San Antonio and Bexar County

San Antonio is fortunate to have an enthusiastic and large existing cycling community. The 2010 statistically valid Bicycle Travel Patterns survey calculated that over 325,000 residents of San Antonio had ridden a bicycle at least once in the past 30 days. Half of those, or approximately 167,000 were adults.

In Bexar County, there are approximately 391,000 youth between the ages of 5 and 19. This school-aged population makes up 23% of the people who live in Bexar County.<sup>7</sup> For adult-aged students, there are over 35 colleges and institutes for higher learning located in the city limits. Travel to and from school accounts for a significant portion of a student's daily trips. Providing safe, convenient and comfortable pedestrian and bicycle routes to schools as an alternative is important for students of all ages. By making these trips on foot or by bike, students can make physical activity part of their routines. Even when opportunities exist, these non-motorized trips are not the norm across the country.

<sup>7</sup> U.S. Census Bureau, 2010 Census, DP-1 Profile of General Population and Housing Characteristics: 2010 Demographic Profile Data

**San Antonio has near ideal conditions for bicycling**  
Cyclists in San Antonio enjoy a mild climate and gentle topography and landscape, which makes bicycling a viable year-round transportation and recreation option.

### Bicycling is economical and inexpensive

A motor vehicle is the second-highest household expense, after housing itself.<sup>8</sup> The American Automobile Association estimates that the average American spends nearly \$8,000 per year to own and operate an automobile, while bicyclists typically spend less than \$200 per year.<sup>9</sup> With \$5 (or even higher) a gallon gasoline probably inevitable in the near future, area residents will be searching for alternatives. Other costs associated with operating an automobile include insurance, repairs, and the replacement of items such as tires and batteries. The option of using a bicycling can improve the mobility of residents without access to a car and may allow some households to get by with fewer motor vehicles.

### Bicycling is easy for riders of all ages

With the exception of the very young and the very elderly, most of us can learn to ride a bicycle. It doesn't take much to learn, and with lessons in how to negotiate streets and to ride safely, almost anyone can ride in San Antonio. Bicycling provides intangible benefits for both the individual and the City as a whole, whether they are riding for recreation or necessity. It may be an activity enjoyed as a family, a way to relieve stress after work, or a way to incorporate daily exercise into busy lifestyles.

<sup>8</sup> Surface Transportation Policy Project. "Housing and Transportation," Online, [www.transact.org/library/factsheets/housing.asp#\\_ednref1](http://www.transact.org/library/factsheets/housing.asp#_ednref1), February 23, 2004

<sup>9</sup> As estimated by the League of American Bicyclists

78% of bicyclists nationally ride for exercise or recreation.<sup>10</sup> In San Antonio, 93% of bicyclists ride recreationally. The increasing popularity of recreational bicycling is unmistakable in San Antonio as more bicyclists are seen on the streets each year.

The City has several cycling clubs and groups that promote bicycling in and around the City. Many of the groups organize group rides and even post their routes (both on- and off-road) publicly on the internet. Often the routes include descriptions of the terrain and pavement conditions so that others may make informed decisions about local cycling opportunities. Some of the groups also conduct community outreach efforts by teaching safe cycling skills and tips for adults and children. One group shows step-by-step instructions on how to load bikes onto the front racks of local transit buses. While many of the groups promote recreational riding, their members' presence on area roads and trails increases awareness of all cyclists.

### Bicycling is very efficient

Bicycling uses only a third of the energy of walking to go the same distance, and can get you there three times as quickly. For example, someone might cover three miles on a bicycle in 20 minutes, while they might only feel comfortable walking a half mile or so.

### Serving those that cycle by choice or by necessity

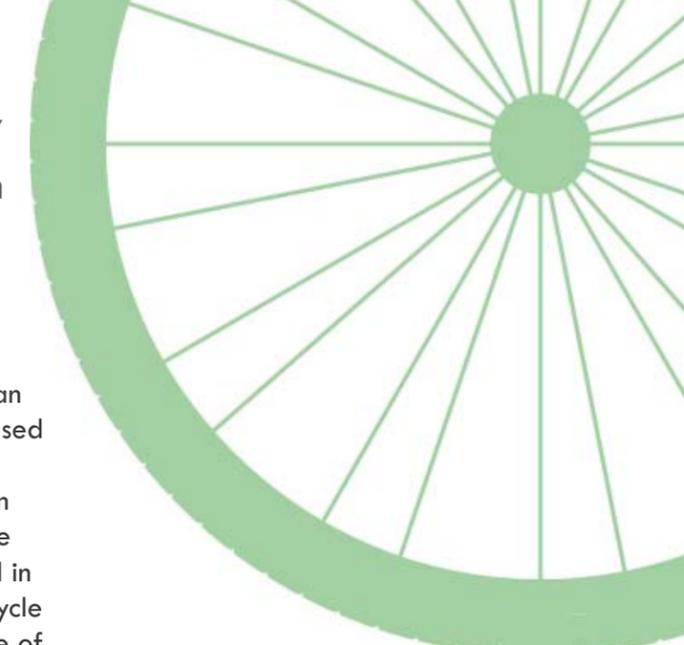
In addition to recreational riders, there are a growing number of residents that cycle for transportation out of either choice or necessity. For young people, walking and bicycling afford a sense of independence, and for seniors, these activities are an effective means to stay active both physically and socially. According to the U.S. Census, approximately 28 percent of the San Antonio population is under the age of 18 and just over 10 percent of the population is 65 years or older. These are two largely non-driving sectors of the population that could directly benefit from improvements to the bicycle transportation network.

### Increased bicycling can reduce traffic congestion in San Antonio

Daily vehicle miles of travel (VMT) in Bexar County are projected to increase from 39 million in 2005 to over 65

<sup>10</sup> Bureau of Transportation Statistics, 2003





million per day by 2035. Area employment will grow from 750,000 jobs to more than 1.2 million jobs. If only 5% of those daily miles travelled (around 3 million miles) or 5% of those travelling to work or school (around 60,000 employees or students) choose to bicycle instead of going by car, area roadways would show a tangible reduction in congestion. Many of those bicycle trips can be made on side streets that are already available and where congestion will typically not be a problem.

### Health benefits

The health benefits of regular physical activity are far-reaching, including reduced risk of coronary heart disease, stroke and other chronic diseases, lower health care costs and improved quality of life for people of all ages. Thirty-five percent of American adults do not achieve the U.S. Surgeon General's recommended 150 minutes a week of moderate-intensity physical activity.<sup>11</sup> In Texas, nearly 30 percent of adults do not achieve any leisure-time physical activity at all. Bicycling to the store, school or work is a time-efficient, low-cost way of attaining the recommended weekly allowance of physical activity. Health studies have shown up to a 50% reduction in Type 2 diabetes among people who engage in moderate physical activity – such as bicycling to work – on a regular basis.<sup>12</sup>

Incorporating bicycling and walking into daily routines is important for the health of San Antonio's youth. Nearly two-thirds of adults (63.3%) and one-third of school-age children (30.2%) are overweight or obese, according to the Texas Department of State Health Services.<sup>13</sup> Over 9 million young

<sup>11</sup> Center for Disease Control State Indicator Report on Physical Activity, 2010

<sup>12</sup> Journal of the American Medical Association, October 1999, based on a study by the Harvard School of Public Health

<sup>13</sup> Texas Department of State Health Services, Behavioral Risk Factor Surveillance System

adults — 27 percent of all Americans ages 17-24 — weigh too much to join the military, according to a report released in 2010 by Mission: Readiness, a nonprofit group of 130 retired admirals, generals and senior military leaders that promotes health and education for American children.

### Economic benefits

Bicycling can also help bring tourist dollars into the city. Active vacations and recreational tourism are one of the

fastest growing sectors of the tourist industry. Bicycling also allows tourists to travel quickly to sites around San Antonio and enables the city to better tap into the buying power of the 26 million tourists who visit San Antonio annually, and who often limit their visits to the Riverwalk downtown. It is in the City's interest to maximize the economic benefits from ongoing investments in expanding the San Antonio River Trail, Mission Trail, and Greenway Trails.

In addition to tourism impacts, studies have shown that proximity to greenways and trails can have a positive effect on property values. A study by the Center for Urban Policy and the Environment focusing on the Indianapolis, Indiana housing market found that "proximity to greenways generally has positive, statistically significant effects on property values and that, when summed across the City, these effects may be in the millions of dollars."<sup>14</sup> In a 2002 survey of recent home buyers sponsored by the National Association of Realtors and the National Association of Home Builders, trails

ranked as the second most important community amenity out of a list of 18 choices.<sup>15</sup> Recent and continued expansions of the Greenway Trails are completing links in what will be a world class regional trail network, connecting neighborhoods and forming a core of San Antonio's future bicycle network.

<sup>14</sup> Greg Lindsey, Public Choices and Property Values: Evidence from Greenways in Indianapolis, Center for Urban Policy and the Environment, December 2003, 1

<sup>15</sup> Consumer's Survey on Smart Choices for Home Buyers, National Association of Realtors and the National Association of Home Builders, April 2002

Implementing bicycle infrastructure projects such as bike lanes and bike boulevards has a positive effect on local job creation. It is likely that any infrastructure project will foster local jobs, but it appears that bicycle and pedestrian projects may be more beneficial to the local economy. Based on a study conducted by the University of Massachusetts-Amherst, bicycle and pedestrian infrastructure projects can create more jobs than road repairs and resurfacing.<sup>16</sup> The study evaluated data on infrastructure projects completed in Baltimore, Maryland. The conclusion was that because bicycle and pedestrian projects can be more labor-intensive, more of the money is spent on labor than on materials. As explained by the author,

*"In this case study we find that investments in bicycle and pedestrian infrastructure create the most employment for a given level of expenditure. While road construction projects create approximately 7 jobs per \$1 million spending, pedestrian projects create over 11 jobs for the same level of spending, and bicycle projects create up to 14 jobs."*

### Attracting top quality employers to San Antonio

Companies today are very location mobile. Many large employers are recognizing that their ability to recruit top employees depends significantly on local culture and amenities. In many industries, the competition for workers is on a global scale and people are choosing employers not just on salary and traditional benefits, but on external criteria such as lifestyle and quality-of-life issues. With modest investments in bicycle infrastructure and programs, San Antonio can capitalize on its mild climate and landscape by making it a primary selling point for prospective companies and employees.

### Improved traffic safety for all roadway users

As the number of bicyclists increases, motorists will be more accustomed to driving alongside them, and inexperienced

<sup>16</sup> Heidi-Garret Peltier, Estimating the Employment Impacts of Pedestrian, Bicycle and Road Infrastructure. Political Economy Research Institute University of Massachusetts Amherst . Decem2010

*A report by the U.S. Centers for Disease Control and Prevention published in 2001 indicated that nationally, only 16 percent of children 5 to 18 years of age walk or bike to school, when a generation ago, nearly 90 percent of students walked or bicycled to school.<sup>1</sup> While there are many reasons why students are not walking or bicycling to school, it is undeniable that by opting to take cars when it is possible to walk or bike, students miss out on the health benefits of active travel.*

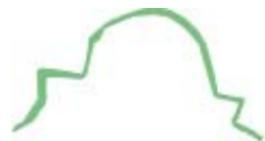
<sup>1</sup> Kids Walk-to-School: Then and Now—Barrier and Solutions. U.S. Centers for Disease Control and Prevention, accessed January 4, 2011

*Today the national bicycling industry contributes an estimated \$133 billion a year to the U.S. economy. It supports nearly 1.1 million jobs and generates \$17.7 billion in federal, state, and local taxes. Another \$46.9 billion is spent on meals, transportation, lodging, gifts and entertainment during bike trips and tours.*

~The Economic Benefits of Bicycle Infrastructure Investments, League of American Bicyclists



Tourists take a tour on a pedicab through the King William District.  
Image Source: Texas Transportation Museum, [www.txtransportationmuseum.org/BA.htm](http://www.txtransportationmuseum.org/BA.htm)



Often it is possible to improve and expand the bicycle network without adding any new pavement. Also, up to 12 bicycles can be parked in the space needed for one car, and without as much maneuvering space.

bicyclists will have good examples to emulate.

One way to increase the number of cyclists riding properly on the road is to mark and maintain bicycle facilities and pathways using pavement markings and signs. Many motorists like bicycle lanes because they make driving with bicyclists less confusing – they know where bicyclists are expected to be and it can be easier to pass them. Bicycle lanes also provide for better sight distances for motorists entering the street from side streets or driveways.

Improving intersections, completing bicycle paths, and providing more paved shoulder space and bike lanes will provide convenient transportation options for the growing city population. By retrofitting existing roads to accommodate bicycles, it is sometimes possible to maximize the carrying capacity of roadways without expanding pavement and other impervious surfaces. The retrofit of selected roadways to include bicycle facilities can also help neighborhoods achieve broader traffic calming goals in working towards a balanced transportation system for all modes.

### Environmental and air quality benefits

Carbon dioxide accounts for over 80 percent of total greenhouse gas emissions in the United States, and transportation sources account for nearly one-third of that total.<sup>17</sup> Substituting bicycling trips for short auto trips will reduce the amount of pollutants generated by automobiles in the city. A reduction of 5% of the 65 million vehicle miles travelled every day will not only help congestion, but can reduce carbon dioxide emissions by approximately 35 million pounds daily, improving air quality in San Antonio.

Furthermore, as a vehicle, the bicycle is very efficient in its use of public space. For example 10 to 12 bicycles can fit into one automobile parking space.<sup>18</sup>

Often it is possible to improve and expand the bicycle network without an increase in pavement and other impervious surfaces. Many strategies only require a new striping pattern on the roadway. In some cases the

route already functions well for bicyclists, and the only recommended changes are new signs in coordination with education and encouragement programs.

### Maximizing transit investments

VIA is currently making long range plans for public transit in San Antonio through its SmartWaySA planning process. Pairing bicycle facility improvements with transit gives people more transportation choices and expands the reach of existing transit lines. Assuming the average person will walk about a quarter-mile, or a five to ten minute walk, it has been accepted practice to assume that transit centers and stops will serve those who live or work within approximately a quarter-mile radius of their location.

Bicycles, like any vehicle, increase the efficiency and speed at which the traveler is moving. Transportation planners generally estimate that people will opt to bicycle up to three miles for their trips; possibly less, if the trips include a leg on mass transit. **Even if the transit rider will only bike up to one mile to the closest transit stop, it can increase the catchment area for that transit stop significantly.** It is important also to note that San Antonio residents may be more likely to bike (to transit centers and other destinations) than residents of other cities as the terrain within this city is relatively flat and smooth, which is ideal for bicycle commuting.

Bicycles can also be part of the solution to what transportation planners call the “last mile” problem. This term refers to the situation where a person’s place of work is located a mile or so away from the closest transit stop, and out of convenient walking distance for most people. It is not uncommon for commuters in this situation to choose to drive the entire trip, rather than take transit for the first leg and try to walk the last mile to work. One solution for commuters with a “last mile” mile problem is to use a bicycle to travel the last mile. VIA facilitates and encourages the use of bicycles to extend transit trips by providing bicycle racks on the front of each vehicle.

Another way to encourage commuters to bike the “last mile” is to provide a bike share or rental at or near the transit centers closest to their place of work. This way, the commuter can leave the transit vehicle, and pick up a bike for the last leg of their trip. They commuter would then use the borrowed bike to return back to the transit center

in the evening, and board the transit vehicle for the ride home. Bike rental membership programs, such as Capital BikeShare of Washington, D.C. can be very convenient for commuters. Generally the programs require an annual membership fee, which is often less than the cost of a new bike. The membership includes access to bikes at transit centers throughout the city, without the hassle of maintaining or storing a personal bike. Some of the bike rental stations even provide free use of showers and locker rooms, if the commuters prefer to freshen up. In March 2011, The City of San Antonio launched B-Cycle, a new bicycle share system, with stations planned near transit centers and other major gathering areas.



City staff and San Antonio citizens try out B-Cycle, the City’s bike share program that was launched in March 2011. Source: City of San Antonio



<sup>17</sup> National Household Travel Survey News Brief, “The ‘Carbon Footprint’ of daily travel”, March 2009

<sup>18</sup> Pedestrian and Bicycle Information Center, “Bicycle Parking: Costs”, Available online: <http://www.bicyclinginfo.org/engineering/parking.cfm>



## ELEMENTS OF THE PLAN

The following four elements collectively support and work toward achieving the Master Plan's overarching goals identified above:

(1) Bicycle Facilities Network; (2) Network Support Facilities; (3) Program Recommendations; and (4) Implementation. The specific goals and objectives of these elements support the overall vision and goals of Bike Plan 2011 of increasing bicycling and maintaining safety among bicyclists.

### 1. Bicycle Facilities Network

This element 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 a 1,768 mile network of bicycle facilities, including 861 miles of bicycle lanes, 12 miles of bicycle boulevards, 228 miles of multi-use paths and cycle tracks, and 500+ additional miles of wide shoulders and signed routes.**

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

**GOAL: 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

### 2. Network Support Facilities

A comprehensive bicycle network is made up of more than just bicycle facilities on which to ride. The network also includes end-of-trip facilities such as bicycle parking and shower/changing facilities. Without the necessary end-of-trip facilities, bicycling will not be a feasible mode of transportation, no matter how many miles of facilities exist. Furthermore, facilitating the transition between on- and off-street network and complementing bicycle trips with mass transit are other elements that help make bicycling more feasible and the bicycle network more usable.

**GOAL: Develop a system of ingrated support facilities that improve the usability of the bicycle network.**

Objectives:

- I. Provide a comprehensive wayfinding system to facilitate network navigation by bicyclists
- II. Provide end-trip facilities that support bicycling
- III. Improve intersections for safe accommodation by bicyclists
- IV. Integrate bicycling with the mass transit network

### 3. Bicycle Programs

A safe and well-connected bicycle network alone cannot significantly increase bicycling. Bicycle facilities don't make people better cyclists or make motorists understand how to drive around bicyclists. Education and encouragement are crucial elements to increasing bicycling while maintaining a safe environment to do so. We must equip all road users with the knowledge and skills of sharing the road if we are to expect bicyclists and motor vehicles to do so. Bicyclists, both inexperienced and experienced, and motorists alike must be educated of the rights, rules, and responsibilities of bicyclists in order to safely operate their bicycles. Promoting expansion of bicycle education in schools is encouraged. Youth who learn to ride safely are more likely to embrace cycling as they mature.

Like education, encouragement and promotion of bicycling are important elements of getting San Antonians on bicycles. Promotion is another form of education that informs of the benefits of bicycling. While similar to education, promotion focuses on *attracting* people to riding. Promotional programs should not only be for the general public, but also target certain populations and audiences of San Antonio, such as recreational cyclists, youth, or new bicyclists to give a few examples.

Consistent enforcement of the rules for bicyclists and motorists as they pertain to bicyclists is a critical component of creating a safe and bicycle-friendly environment. This element focuses on enforcement efforts of those laws in a consistent fashion, and ensuring that law enforcement officers are properly trained in bicycle laws. This component will overlap significantly with the education component and efforts to educate bicyclists and motorists of those laws.

**GOAL: Provide educational, encouragement, and enforcement programs that support bicycling in San Antonio.**

Objectives:

- I. **EDUCATE** all road users of all ages and abilities of their rules, rights, and responsibilities.
- II. **ENCOURAGE** bicycling as a form of transportation and exercise.
- III. Consistently **ENFORCE** bicycle and motorist laws of the road.



**4. Implementation**

Funding and staffing are the key elements of implementation. This includes not only identifying and prioritizing dedicated funding and appointing staff persons; it also includes ongoing cooperation within and among City departments, other public agencies, and bicycle stakeholders to leverage resources that will strengthen implementation efforts. Furthermore, monitoring progress of implementation will help San Antonio periodically assess progress, identify new opportunities, and re-evaluate priorities and goals.

**GOAL: Dedicate funding, political commitment, and partnerships to implement the facilities and programs in this plan.**

Objectives:

- I. Increase staffing and funding in appropriate areas of the City to implement the goals and objectives of Bike Plan 2011.
- II. Institutionalize bicycle planning through new or revised policies, code amendments, operating procedures, and citizen advisory committees.
- III. Engage and coordinate with other departments, agencies, and organizations to leverage resources and strengthen implementation efforts.
- IV. Periodically monitor implementation progress and update the bicycle master plan on a regular basis.

**BIKE PLAN 2011 & THE BICYCLE FRIENDLY FIVE E'S**

The League of American Bicyclists (LAB) recognizes communities that actively support bicycling as a "Bicycle Friendly Community" based on criteria they have created. San Antonio was recognized as a Bronze level Bicycle Friendly Community in 2010. For this process, the LAB evaluates communities on the engineering, education, encouragement, enforcement, and evaluation efforts in the municipality and region. These *Five E's* are "designed to yield a holistic picture of your community's work to promote bicycling."



In recognition of the comprehensive approach that the LAB takes, the framework and goals of Bike Plan 2011 reflect that of the Bicycle Friendly Community Program in order to become a more bicycle friendly region, and meet the necessary requirements to be more highly recognized as a Bicycle Friendly Community. Below is an over view of the Five E's.

**ENGINEERING**

Communities are asked about what is on the ground; what has been built to promote cycling in the community. For example, questions in this category inquire about the existence and content of a bicycle master plan, the accommodation of cyclists on public roads, and the existence of both well-designed bike lanes and multi-use paths in the community. Reviewers also look at the availability of secure bike parking and the condition and connectivity of both the off-road and on-road network.

**EDUCATION**

The questions in this category are designed to determine the amount of education there is available for both cyclists and motorists. Education includes teaching cyclists of all ages how to ride safely in any area for multi-use paths to congested city streets as well as teaching motorists how to share the road safely with cyclists. Some things that reviewers look at are the availability of cycling education for adults and children, the number of League Cycling Instructors in the community, and other ways that safety information is distributed to both cyclists and motorists in the community including bike maps, tip sheets, and as a part of driver's education manuals and courses.

**ENCOURAGEMENT**

This category concentrates on how the community promotes and encourages bicycling. This can be done through Bike Month and Bike to Work Week events as well as producing community bike maps, route finding signage, community bike rides, commuter incentive programs, and having a Safe Routes to School program. In addition, some questions focus on other things that have been built to promote cycling or a cycling culture such as off-road facilities, BMX parks, velodromes, and the existence of both road and mountain bicycling clubs.

**ENFORCEMENT**

The enforcement category contains questions that measure the connections between the cycling and law enforcement communities. Questions address whether or not the law enforcement community has a liaison with the cycling community, if there are bicycle divisions of the law enforcement or public safety communities, if the community uses targeted enforcement to encourage cyclists and motorists to share the road safely, and the existence of bicycling related laws such as those requiring helmet or the use of sidepaths.

**EVALUATION & PLANNING**

Here the community is judged on the systems that they have in place to evaluate current programs and plan for the future. Questions are focused on measuring the amount of cycling taking place in the community, the crash and fatality rates, and ways that the community works to improve these numbers. Communities are asked about whether or not they have a bike plan, how much of it has been implemented and what the next steps for improvement are.

Source: League of American Bicyclists, Bicycle Friendly Community, *What are the Five E's?*, [http://www.bikeleague.org/programs/bicyclefriendlyamerica/communities/bfc\\_five-Es.php](http://www.bikeleague.org/programs/bicyclefriendlyamerica/communities/bfc_five-Es.php)





## PLANNING PROCESS

### Pre-Planning: Understanding Issues and Opportunities

Early in the process, the planning team spent a significant amount of time interviewing key stakeholders, agencies, the public, and other interested parties about the issues they encounter with regards to bicycling. This included the Walk 'n' Roll Fest in May at HemisFair Park, the BMAC Bike Night in July and October 2010, the MS 150 Expo and the 2010 Community Summit in early October. At these gatherings, bicyclists shared valuable information about some of the barriers to bicycling such as quality of the bicycle facilities, challenging areas to ride, and their priorities for bicycling in the region. They also helped identify what areas of the city were the best generators for bicycling, like USAA, Downtown, the Medical Center, and around colleges and universities,

The planning team also identified and met with an advisory committee to further inform the planning process. The Bicycle Mobility Advisory Committee, which was formed in 1996, served as the plan advisory committee as well since its membership has broad representation of agencies and interests from across the region. A workshop in May 2010 focused on their priorities and goals for bicycling, and helped identify important stakeholders to engage throughout the planning process.



Early kick off meetings with the planning team and city and agency staff helped identify various objectives and near-term projects related to bicycling, and to discuss issues with implementing bicycle facilities and programs in the past.

In May, a series of kick-off meetings was held with various departments and agencies that would be instrumental in implementing Bike Plan 2011. These meetings provided valuable information about the implementation processes that are used now and highlighted opportunities to improve implementation as we move forward.

Finally, equipped with information gathered by the public, stakeholders, interest groups, regional bicycle coordinators, and staff, extensive field work was conducted in June and July 2010, verifying information, evaluating corridors, and studying the development pattern to identify opportunities to strengthen the bicycle network.

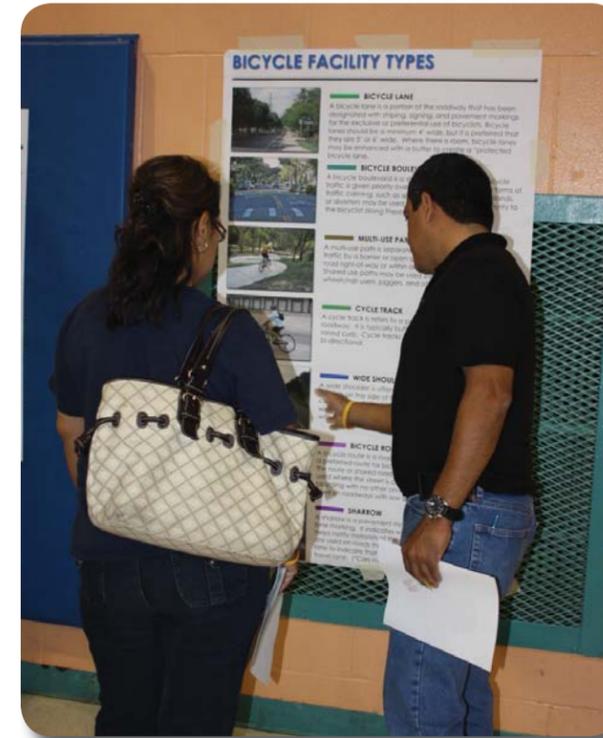
### Recommendations: Review and Refinement Public Meetings

In October 2010, draft recommendations for the bicycle network were prepared and presented to the public at four public meetings held at various locations throughout the City of San Antonio. At the meetings, the public had the opportunity to view boards and maps of the recommended network and provide comments and their input. A short presentation was given that discussed the history and current efforts to improve bicycling and described the components of the master plan and recommended network. A questionnaire was also distributed that asked meeting attendees of their priorities for implementation of the network.

In addition to gathering public comment, the planning team spent time with BMAC, regional bicycle coordinators, and City staff to discuss the recommendations, including project feasibility, timing, and prioritization.

### Final Recommendations and Report Drafting

In early 2011, recommendations developed, prioritizations were being identified, and the Bike Plan 2011 report was written that communicated the vision, goals, and recommendations to improve bicycling in the San Antonio region. In the spring of 2011, a series of meetings with city staff, bicycle coordinators, and BMAC were conducted to review final recommendations for the bicycle network, bicycle programs, and implementation strategy.



(Top to bottom) Citizens review the recommended bicycle facility types; An attendee at Bike Night takes a test drive on Community Walk to leave her comments on bicycling in San Antonio.

