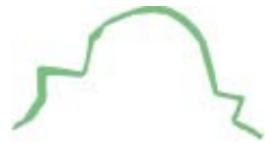




support facilities



**NETWORK  
SUPPORT**  
end-trip  
wayfinding  
linkages

*“[Bicyclists] are burning calories, not fossil fuel, they are taking up much less space, they are seeing the world at 10 miles per hour instead of 20 or 30. And even though there are occasionally cranky or rude cyclists, they are no greater a percentage than cranky or rude motorists.”*

*~Congressman Earl Blumenauer, Oregon*

**IMPROVING NETWORK USABILITY**

In addition to a network of on- and off- street bicycle infrastructure, a comprehensive system of bicycle facilities must include end-of-trip facilities that support bicycle use such as bicycle parking and shower/changing facilities; a comprehensive wayfinding system to navigate the network; and transportation modal integration elements to that ensures a truly multi-modal transportation system for the San Antonio region. These elements improve the usability of the bicycle network.

**Wayfinding** - Wayfinding helps bicyclists navigate the bicycle network with signage, pavement markings, and maps. Wayfinding helps existing and would-be bicyclists plan their trip, and navigate the network to connect to their destination.

**End-Trip Facilities** - End trip facilities include bicycle parking and shower/changing facilities. The availability of these facilities have the power to influence an individual's decision of whether or not to ride their bike.

**Intersection Improvements** - Installing well-designed facilities in intersections can help bicyclists travel the network. Communities across the nation and world are exploring innovative design treatments of intersections to make these barriers a friendlier place for bicyclists.

**Integrating Bicycling with Transit** - Transit can facilitate bicycle use by giving bicyclists an option to shorten an otherwise long trip, or avoid undesirable portions of their trip, such as crossing barriers, making difficult connections, or traveling segments with steep terrain, or with weather changes and equipment failures.

The three most common strategies for integrating bicycles and transit are bicycle **access** to the transit center; ability to **transport** the bicycle on transit; and **parking** at the transit center.

**Connecting the On- and Off-Street Networks** - The recommended bicycle network integrates the on-street bicycle network with the off-street multi-use path network to create a comprehensive network of bicycle facilities. In order to create this system, coordination with departments and agencies is critical to develop and maintain the off-street component of the entire bicycle network as well as integrate wayfinding elements to and from trailheads.



**NETWORK SUPPORT FACILITIES  
GOAL & OBJECTIVES**

**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

## I. WAYFINDING

Wayfinding includes any signage, pavement markings, or materials that bicyclists use to navigate the bicycle network, either along the route or in planning their route. Signage is a useful communication tool to help bicyclist navigate the bicycle network as well as bring awareness to motorists. Just as cars rely on notification of upcoming streets or exit ramps, so do bicyclists rely on being informed of routes. Wayfinding along the route includes directional signage to nearby destinations such as downtown, Pearl Brewery, Medical District, or indication of a connection between the on- and off-street systems.

A comprehensive set of bicycle route wayfinding signs should be developed to connect destinations in San Antonio and indicate to bicyclists that particular advantages exist to using certain routes compared with alternatives. The bicycle route signs, as shown below to the right, should be created as a part of a comprehensive wayfinding system for the larger region and oriented to key destinations.

- Key Regional Destinations could include USAA, UTSA, Downtown, Greenway Trails and San Antonio River trails, military bases, and transit center locations.
- Key Local Destinations could include schools, parks, libraries, community centers, shopping centers, and colleges.

An optional treatment for signed bicycle routes is custom pavement markings to enhance wayfinding. The “bike dot” used in Seattle is a good example.

Maps are another important wayfinding tool, which can be provided to bicyclists as they are now, as well as posted at critical junctures in the bicycle network. Maps also have the potential to be widely distributed across the region, making them a valuable tool in helping people prepare their bicycle trip.

Wayfinding is also a critical component of detouring bicycle traffic. Just as cars are detoured during roadway construction, so must bicyclists be led through alternative routes when the normal route is inaccessible. Appropriate detour signage should be used where bicycle facilities merge with motor vehicle travel lanes. Roadway construction should include steps to prevent added risk to cyclists from debris and reduced roadway space through simple improvements to temporary construction closures. The Texas Manual on Unified Traffic Control Devices (TX-MUTCD) requires that bicycles be safely accommodated during temporary traffic control on

bicycle routes. Refer also to the City of Portland’s Bikeway Design and Engineering Guidelines and Oregon’s Temporary Traffic Control Handbook outline specific guidelines on preserving bicycle access during construction.

### WAYFINDING RECOMMENDATIONS

**Recommendation 1: Establish design guidelines for a destination-oriented bicycle wayfinding system.**

Identify local and regional destinations and establish a consistent wayfinding signage program to implement throughout the region.

**Recommendation 2: Install bicycle information kiosks and network maps in key locations throughout the region.**

Kiosk would ideally be located at major destinations, trail heads, and other critical junctures in the bicycle network. These would include the downtown area, Greenway Trails’ trailheads, transit centers, and other critical junctures in the bicycle network.

**Recommendation 3: Regularly update the regional bicycle map and distribute.**

The MPO has published 3 editions of a regional bicycle map based on suitability and comfort for bicycling. Funding for this map has historically come from the STEP program. Continue to seek and obtain funding for this map and distribute widely across the region.

**Recommendation 4: Establish guidelines for bicycle detours in the event of construction or street closures.**

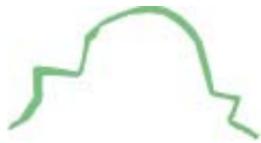
Work with TXDOT, Bexar County, and the City’s CIMS and Public Works Departments to establish standards for roadway construction detours that do not obstruct existing bicycle facilities. In the event that a bicycle route is detoured, provide a bicycle detour along streets that are appropriate for bicyclists.

**Recommendation 5: Integrate the bicycle network into department and agency maps across the region.**

Work with TXDOT, Bexar County, appropriate city departments, the SA-BC MPO, VIA, the Convention and Visitors Bureau, area universities and colleges, and other agencies and organizations to incorporate the bicycle network and facilities onto their maps. All maps that show major destinations should indicate connections by bike, bus, and walking. In addition, bicycle maps should illustrate area destinations as provided by departments, agencies, and organizations.



Images, from top left, clockwise: The City of San Antonio has ordered bicycle wayfinding signage to append to bicycle route signs; The City of San Antonio and Bexar County MPO worked with Alamo Colleges and SA-BC MPO to create bicycle route maps around each of their college locations; Bicycle parking sign installed at the City’s Central Library (images provided by the City of San Antonio, Office of Environmental Policy).



## II. END-TRIP FACILITIES

The availability of end-trip facilities has the power to influence an individual's decision of whether or not to commute by bicycle. End-trip facilities such as bicycle parking and showers and changing facilities help make bicycling a viable mode of transportation.

### Bicycle Parking

Bicycle parking is a key component to making a bicycle network functional. Every single roadway in the region could have an excellent bicycle facility, but nobody would use them without a safe place to secure their bicycle at their destination. End-trip facilities include not only bicycle parking, but shower and changing facilities, repair services, and other services that support the bicycle system and make bicycling more convenient. Even car-sharing and transit are important end-trip or mid-trip services that can support bicycle use. By providing a comprehensive system of end-trip services, bicycle use can be further promoted as a convenient way to travel.

The City of San Antonio's current Unified Development Code (UDC) establishes standards for bicycle parking for new developments, including the number of bicycle parking spaces and location of them relative to the building. The current UDC stipulates that bicycle spaces shall, at a minimum, equal 10% of the number of the minimum required vehicle spaces required for a given use. The UDC also requires that bicycle parking be provided within 50' of the primary building entrance, at least every 150' along the length of the façade in developments with multiple tenants that have separate entrances, and not located behind any wall, shrubbery, or other visual obstruction. However, this latter bicycle parking requirement is included only in the Urban Development "UD" District.

Still, a majority of destinations in San Antonio do not have bicycle parking as they were built prior to the requirement. Therefore, the buildings need to be retrofitted for bicycle parking. Cities across the nation proactively respond to the bicycle parking needs in their city by providing short-term bicycle parking in the public right-of-way, or to building and property owners who request bicycle parking. In order to increase the quantity and availability of bicycle parking throughout the city, the City of San Antonio and other entities should proactively respond to the bicycle parking needs of the city by assist existing developments with installing bicycle parking.

### Types of Bicycle Parking

Bicycle parking can generally be classified into two categories: short-term and long-term. Short-term parking is meant to accommodate visitors who are expected to need to store their bicycle for just a few hours. It is typically found at retail shops, public facilities, office buildings, or restaurants. The inverted "U" rack is the typical short-term bicycle parking facility. In general, though, bicycle racks should be able to secure the bike completely (not just one wheel) and be useable by bikes of a variety of sizes and types. An important element of short-term parking is the convenience and visibility of these racks. What good is bicycle parking if it's located in a place that is not visible? Not only do bicyclist not realize where it is, but it becomes a prime candidate for thieves. Additionally, installing bicycle racks too close to other elements will make them unusable. Bicycle parking needs to be sited and installed in a clearly visible and accessible area that doesn't interfere with pedestrian traffic or street furniture. However, locating bicycle parking in areas with high pedestrian activity will certainly discourage would-be thieves! As indicated earlier, San Antonio requires that developments in the Urban Development District locate bicycle racks within 50' of the main entrance.

Long-term parking is meant to accommodate bicyclists who are expected to park for a full day or overnight or longer. Users of long-term parking would accommodate such destinations as schools, employment centers, high-density residential areas, airports, and transit centers. Long-term parking would provide secure storage for the bike as well as for bicycle accessories. For long-term parking, the convenience factor of locating the long-term parking is not as important as the need for increased security and protection from theft and the weather. Examples of long-term parking include enclosed areas inside buildings or parking garages or bicycle lockers. Additionally, many communities supporting the development of "bike stations" at centrally located areas that provide not only long-term parking, but other bike services such as rentals, bike service, and changing facilities.

### Shower and Changing Facilities

Nobody in San Antonio needs to be told this, but it gets hot in Texas. Shower and changing facilities can help make

bicycling a feasible choice for getting to work by providing a place to clean up. Additionally, these facilities serve fitness-minded employees who can exercise during lunch hours. There are several methods among public agencies and private developments to incorporate shower and changing facilities, such as in City of San Antonio buildings, through the development code, in coordination with gyms, or by attracting the development of a bikestation.

Through the development code, new developments or significant building renovations can be encouraged to install shower and changing facilities through incentives, such as trade-offs with parking requirements. Moreover, the City of San Antonio can begin incorporate shower and changing facilities into their office buildings for City employees.

Gyms and fitness centers are an obvious facility for cleaning up after a bicycle ride. However, membership costs typically cover many more services than a bicyclist simply looking for a shower and place to change is willing to pay for. Area gyms and other fitness facilities may be willing to work with the City to create bicycle commuter memberships. For example, several gyms in downtown Seattle offer "shower-only" memberships at a discounted price.

Bikestations are another way of providing more than just shower and changing services to bicyclists. These facilities that are emerging on the West Coast, offer not only bicycle parking and changing facilities, but also provide maintenance services and bicycle rentals. Bikestations would be most ideally located in downtown, or dense areas where the dense employment and residential base would support the use of a bikestation.

#### UC-Berkley Rec Sports Club Commuter Membership

The University of California-Berkley Rec Sports Club offers "Bicycle Commuter Memberships" to bicyclists that include access to locker rooms only. This gives bicycle commuters an option for shower and changing facilities. The membership is only \$15 per month and permits access during certain hours of the work week. This membership type is open to everyone.





Various types of bicycle parking, from top left, counter-clockwise: short-term parking on a sidewalk; bike lockers; a bike parking cage; covered bicycle parking.  
 Image Source, from top left, counter-clockwise: pedbikeinfo.org, Dan Burden; pedbikeinfo.org, Rob Rae; pedbikeinfo.org, Dan Burden; treehugger.com.

**RECOMMENDATIONS FOR PROVIDING END-TRIP FACILITIES**

**Recommendation 1: Establish a Bicycle Parking Program to quickly provide bicycle parking at existing destinations throughout the city.**

Throughout the city there are many destinations that were constructed before bicycle parking was required. With relatively little investment, bicycle parking program is an expedient way to provide needed bicycle parking. Various programs have been implemented by cities across the country, ranging from providing parking in the public right-of-way to providing bicycle parking to private building owners either free or at wholesale pricing. Since San Antonio has a significant need for bicycle parking, a combination of these programs is recommended.

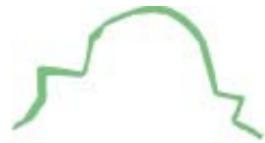
**Recommendation 2: Provide development incentives to provide end-trip facilities.**

The Unified Development Code currently sets minimum standards for end-trip facilities for bicyclists, which is limited to short-term bicycle parking. Amend the UDC to provide incentives to developers for providing end-trip facilities that go above and beyond the minimum. These incentives can also be extended to existing developments who retrofit their buildings for end-trip facilities such as showers and changing areas.

**Recommendation 3: Provide long-term bicycle parking at regional destinations throughout the City.**

Many regional destinations such as downtown, VIA transit centers, San Antonio International Airport, military bases, colleges and universities, the Medical Center, to name a few, are areas where long-term parking is needed for bicyclists who expect to park for a full day, overnight, or longer. Study the demand for long-term parking at these regional destinations, and based on findings, provide long-term bicycle parking.

With installation of long-term bicycle parking, it is recommended that bike lockers utilize a universal reservation or payment system. Very soon, VIA will use Smart Card technology for their bus fare system



**Bicycle Parking Programs**

There are various programs being used by cities across the country to provide bicycle parking. Several cities, including Portland, New York City, and Los Angeles, have bicycle parking programs that install short-term bicycle parking (Portland also does long-term) in the public right-of-way, such as sidewalks. They have developed location criteria and an application process for their programs.

Another example of a bicycle parking program is the City of Austin’s Bicycle Parking Program, which provides short-term bicycle parking to private property owners. The program started as a grant to purchase inverted-U racks to give to commercial buildings that were built before the development code required bicycle parking. Since the start of the program in 1990s, the City has installed over 4,000 bicycle racks across the city. In 2010, the program changed to a wholesale program where the City purchases the bicycle racks and makes them available for sale to the public.

that could be integrated for the payment of fares for long-term bicycle parking. Using the same proxy card technology will simplify the process for bicyclists wishing to complement their transportation with transit.

**Recommendation 4: Review and as necessary amend City’s Unified Development Code for end-trip facilities.**

Currently, the City’s UDC establishes minimum parking requirements for certain land uses across the city, and has prescriptive language for bicycle parking placement for certain areas. A more thorough review of the UDC will indicate possible improvements to the development standards for the number and location of bicycle parking.

Also, the city should consider creating design guidelines for the placement, number, design, and operation of bicycle parking for both private property as well as City property and right-of-way.

There are also opportunities to provide incentives to encourage construction of shower and changing facilities in new developments or significant redevelopments by considering trade-offs such as with off-street parking requirements.

**Recommendation 5: Ensure provision of bicycle parking at special events throughout the city.**

Accommodating bicyclists at special events can relieve traffic congestion as well as signal the City’s commitment to supporting alternative transportation. Currently, the City of San Antonio rewards event organizers that provide alternative transportation to the event through the “Green Events” Ordinance. For example, luminaria 2011 bike valet was provided by collaborating with a local bike shop.

**Recommendation 6: Provide long-term parking and shower and changing facilities at public facilities and office buildings.**

In order to encourage private property owners and developers to provide end-trip facilities such as long-term parking and shower and changing facilities, public agencies like the City of San Antonio, MPO, AACOG, TXDOT, VIA, and Bexar County need to step up and

set an example by taking the initiative to provide these facilities in their own buildings and facilities for their employees. For example, the City of Austin retrofitted 9 of their city office buildings with shower and changing facilities to be used by City employees.

**Recommendation 7: Explore the feasibility of a “bikestation” at a regional center in San Antonio.**

A “bikestation” could be a great way to provide services to bicyclists in San Antonio while also bring attention to the opportunity for bicycling in the region. The ideal location for a bikestation would be a dense area with a significant employment and residential base to support the services of a bikestation, such as Downtown or the Medical Center/USAA area. Study the feasibility for a bikestation in these areas.



*Bike racks at the Alamodome  
Image Source: City of San Antonio, Office of Environmental Policy*



### III. ACCOMMODATING BICYCLES AT INTERSECTIONS

Intersections present a plethora of challenges to bicyclists. The design of intersections is of grave importance to the safety of bicyclists.

Bicycle facilities often end and merge with travel lanes. This is more often the case when a two lane road with a bicycle lane will expand to accommodate extra turning lanes, causing the bicycle lane to end and merge with traffic. Another intersection design that impacts bicyclists is the right-turn only lane. Bicyclists often find themselves in that right-turn only lane, or having to navigate across the flow to get out of the way if they are traveling straight through the intersection. Yet another challenge at intersections is when a bicyclist needs to make a left turn at an intersection, (s)he must navigate away from the bicycle facility and steer across auto traffic. All of these scenarios can be addressed by intersection design that accommodates bicyclists.

Another common issue is bicycle detection at intersections with actuated signals. If systems are not set up or functioning properly, bicyclists may have to push pedestrian buttons or resort to running the red light without other means to actuate the signal to give them right of way. Many intersections in San Antonio utilize loop detection technology or video detection technology, but may not always detect bicyclists.

A Federally funded project through the MPO modified intersections across the region to detect bicycles with VIVDs cameras (video cameras used for vehicle detection). These cameras were installed with projects where the bicycle lane crossed intersections, such as at Theo Avenue, Malone Avenue, and Woodlawn Avenue. Approximately 25 to 30 intersections across the City are set up with video detection.

Video detection will not always notice a cyclist, but they can be calibrated to do so. Another type of detection technology is “induction loops” that are installed in the pavement and senses both bicyclists’ and motor vehicles’ metal. In using this technology, one important consideration is having bicyclists positioned correctly within the “detection zone,” whether it’s by camera or in the pavement. The use of pavement markings can help indicate to bicyclists where they should stand to trigger the signal change.

#### RECOMMENDATIONS FOR ACCOMMODATING BICYCLES AT INTERSECTIONS:

**Recommendation 1: Research signal detection methods that are bicycle-friendly, and as necessary make changes to signal detection at intersections along bicycle corridors.**

Detection technology ranges widely. Traditionally, cities have used “induction loops” at intersections, which detects vehicles and bikes. The City of San Antonio has several intersections equipped with video detection. Regardless of the technology used, all signals should be installed and programmed with the proper sensitivity to detect bicycles. In addition to installing detection technology, install pavement markers to indicate to bicyclists where the “detection zone” is to trigger the signal change.

**Recommendation 2: Establish design standards for accommodating bicycles at intersections.**

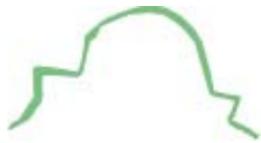
Review the UDC and make amendments for design guidelines for intersections to better accommodate bicycles by carrying the bicycle lane all the way up to the intersection. Another design consideration is how a bicycle lane co-exists with a right-turn lane. Many communities have begun to use bike boxes as a way to improve the intersection for bicycles. Consider doing a pilot study of bike boxes at certain intersections and studying their effectiveness in San Antonio.



*Various intersection treatments, from top to bottom: a bike box lets bicyclists come to the front of the intersection and pass through the intersection in front of the vehicles; a right turn lane and bicycle lane co-exist at an intersection that lets the turning traffic continue; a bicycle detector pavement marking indicates to the bicyclist where to stand.*

*Image source, from top to bottom: pedbikeimages.org, Laura Sandt; Federal Highway Administration; Federal Highway Administration*





### IV. INTEGRATING BICYCLING AND TRANSIT

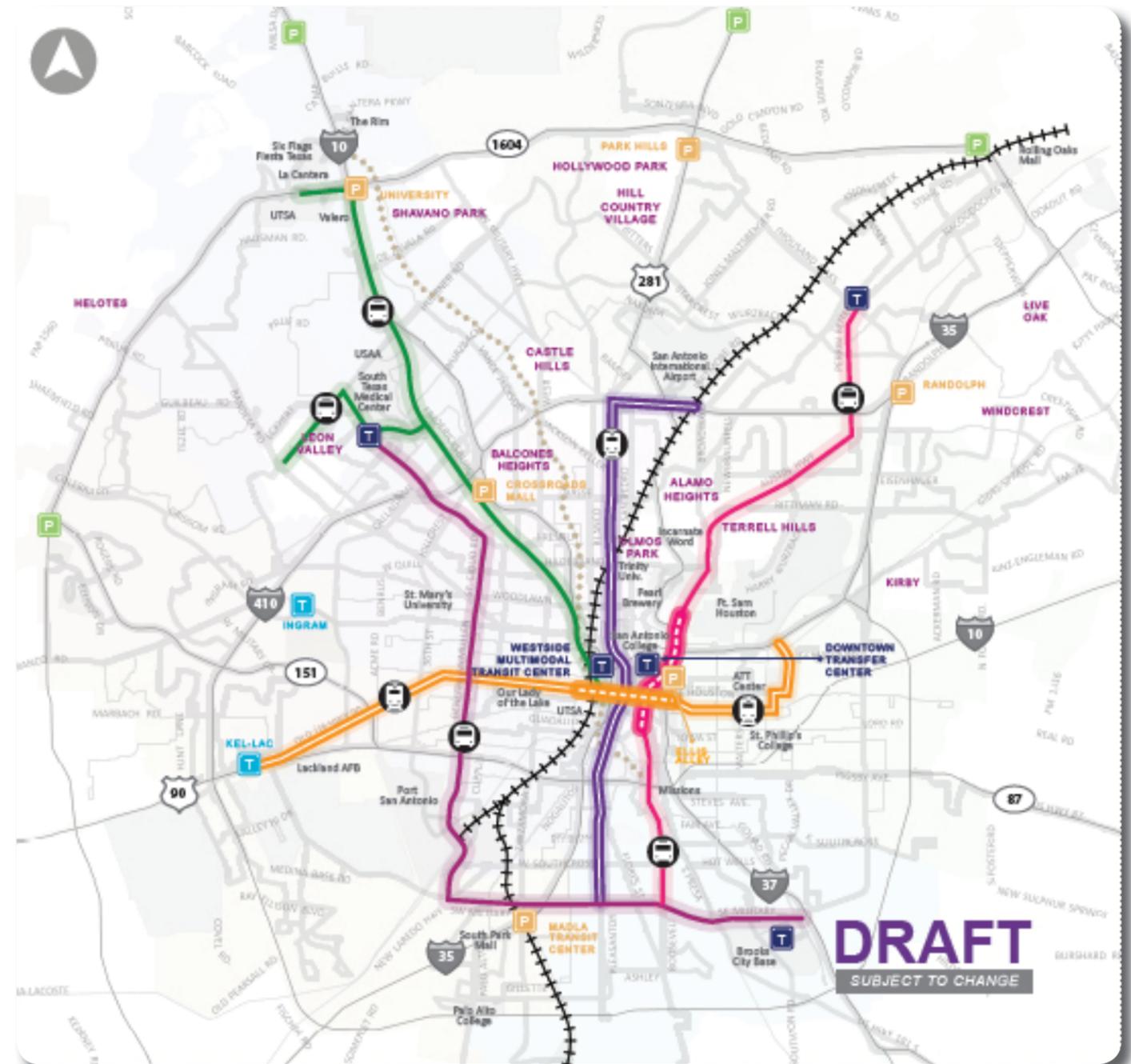
Transit can facilitate bicycle use by giving bicyclists an option to shorten an otherwise long trip, or avoid undesirable portions of their trip, such as crossing barriers, making difficult connections, or traveling segments with steep terrain, or with weather changes and equipment failures. One of the most common barriers to bicycle commuting is distance, even among experienced cyclists. The VIA transit system can help overcome that challenge; VIA has 7,881 bus stops, 10 transit center locations, and serves over 98% of Bexar County (2,156 miles of bus routes), all of which can be integrated with bicycling. Additionally, as mass transit options are broadened, considerations for bicycle parking and access to transit will continually need to be examined and applied.

This planning process to integrate bicycle and bus trips used detailed bus boarding data collected by VIA which was used to identify the major transit corridors in the region. The creation and prioritization of the bicycle network emphasizes connections to these major transit corridors. The transit corridors identified for this plan include:

- Fredericksburg Road
- Zarzamora
- Broadway Street
- Austin Highway
- New Braunfels (south of Ft. Sam Houston)
- Military Drive (in south San Antonio)
- San Pedro Avenue

Recent policy statements made by federal transportation agencies provide further justification for bicycle facilities near transit. In March 2010, the U.S. DOT issued a policy statement supporting the development of fully integrated active transportation networks, recognizing that “the establishment of well-connected walking and bicycling networks is an important component for livable communities” and that “their design should be a part of Federal-aid project developments.”<sup>1</sup> In addition, the Federal Transit Administration (FTA) developed a proposed policy in November 2009 that would extend eligibility of Federal transit funds to include pedestrian and bicycle improvements. The proposed policy designated a 3-mile “catchment” area

1 U.S. DOT, Federal Highway Administration, [http://www.fhwa.dot.gov/environment/bikeped/policy\\_accom.htm](http://www.fhwa.dot.gov/environment/bikeped/policy_accom.htm)



High Capacity Transit Corridors identified in VIA's Draft Long Range System Plan. High Capacity Transit is a mode of transit technology with capacity designed to accommodate large amounts of patrons, such as light rail, streetcar, and bus rapid transit. Source: VIA, SmartWay SA, System Plan Map



around transit stops where bicycle facilities would be considered to have “a de facto functional relationship to public transportation.”<sup>2</sup> These policies promote bicycle facilities as an integral component of the transportation network and make additional funds available for improvements.

The three most common strategies for integrating bicycles and transit are bicycle **access** to the transit system; ability to **transport** the bicycle on transit; and **parking** at the transit center.

### **Bicycle Access to Transit**

Bicycles can increase the effective service area of transit. According to bicyclinginfo.org, people will generally bicycle three to four times as far as they will walk, which could extend the catchment area of a bus stop or train station from a half mile to two miles (although the FTA has identified the catchment area as being a 3-mile radius around a stop). In developing the bicycle network, access to transit is a major regional destination, and considered an element for prioritizing and identifying near-term projects.

Many VIA transit centers are not currently located in areas with marked bicycle lanes. However, recent and proposed projects call for a direct connection to the Leon Creek Greenway from the Ingram Transit Center, a bike share station at the Ellis Alley Park and Ride, and improved access for cyclists in the design of the new Westside Multimodal Center.

### **Bicycle Access on Transit**

All of VIA’s buses are equipped with exterior racks that hold two bicycles. Current practice dictates that if the rack is full, the cyclist has to wait for the next bus. Depending on route frequency, this can deter passengers from making trips using a bicycle. Approximately 12% of all respondents to the Bicycle Travel Patterns Survey stated that buses with fully occupied bike racks are a deterrent to bicycling more. Additionally, 59% of all survey respondents stated that adding bike capacity to buses is an important improvement that needs to be made. In early 2011, VIA conducted the first ever bike count to try to determine which routes and times may have higher bicycle demand and where additional

bicycle capacity is needed, or locations where additional bicycle parking is necessary. Analysis of count data will help to identify heavily utilized routes and optimum location of improvements.

A three-bike capacity rack is available for transit vehicles, but transit agencies that have it in use have experienced mixed results, as the racks tend to be tighter, and there are safety concerns with its loading and unloading and blocking the bus headlights. VIA does allow folding bicycles to be brought on board (in the folded position) and may consider allowing bicycles on board buses during certain non-peak times based on available space. Additionally, bikes will be loaded on board the 60 foot Bus Rapid Transit vehicles that are anticipated to go into service along Fredericksburg Road at the end of 2012.

### **Bicycle Parking at Transit Centers**

Bicycle parking at transit centers is another necessary component for bicyclists riding transit. Currently, VIA has bicycle racks for short-term use at all transit centers. Additionally, bike racks are located at 75 Super stop locations. These are stops that serve more than one route, have heavy transfer or ridership activity, and are typically located near a large employment center or other generator such as a college or shopping area.

Bicycle lockers are being discussed and planned for at both the Westside Multimodal Transit Center and South Texas Medical Center Transit Center. Transparency, maintenance, and management are all concerns associated with providing bicycle lockers.

While providing a bicycle rack is considered the minimum requirement, the preferred bicycle parking option at transit centers and other generators would be long-term facilities, such as bike lockers or other facilities that provide additional security and protection from the elements.

## **INTEGRATING BICYCLING AND TRANSIT**

### **RECOMMENDATIONS**

#### **Recommendation 1: Work with VIA to increase short-term bicycle parking and provide long-term bicycle parking at transit stops.**

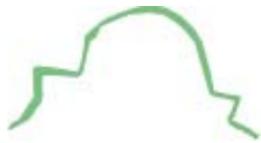
Long-term parking should be provided at all current and future transit centers. The City of San Antonio should coordinate with VIA to establish criteria for identifying other bus stops that need bicycle parking and assist the agency in identifying funding and other methods for obtaining right-of-way.

With installation of long-term bicycle parking, bike lockers should utilize the same reservation or payment system that VIA already uses for their transit fare. Using the same proxy card technology will simplify the process for bicyclists wishing to integrate transit into their transportation.



All VIA buses are equipped with racks that hold 2 bicycles.

<sup>2</sup> U.S. DOT, DOT Livability, <http://www.dot.gov/livability/accomplishments.html>



**Recommendation 2: Increase bicycle access to all current and future transit centers by prioritizing infrastructure that connects to transit centers.**

VIA and other agency partners should work together to provide additional connections and signage or amenities to assist passengers to access the bicycle network, trail facilities, or transit routes. Prioritize bicycle facility infrastructure improvements that serve transit centers and busy super stops.

The City of San Antonio should also coordinate with VIA to publicize bicycle-transit links through VIA's website and route-finding system, on VIA transit maps and signs, on the Regional Bike Map, and other trail maps such as the Greenway Trails and San Antonio River Improvement project maps.

**Recommendation 3: Work with VIA to develop a region-wide Safe Routes to Transit Program**

Integrating bicycle trips and transit is a significant way to support bicycling as a viable mode of transportation. In November 2009, the Federal Transit Authority proposed a policy that would extend eligibility of Federal transit funds to include bicycle improvements within a 3-mile "catchment" area around transit stops. The available funding presents the opportunity to improve bicycle connections directly to transit centers.

VIA does not historically construct or maintain roadways and sidewalks, therefore, implementation of this recommendation falls largely upon the City of San Antonio and other municipalities and entities that maintain roadways. One exception would be the development of new transit centers.

**Recommendation 4: Work with VIA to increase education and training for bus operators and provide educational materials for bicyclists using transit.**

To further improve the environment for bicycling, VIA is a necessary partner agency in educating transit operators and bicyclists. VIA should continue to educate VIA bus drivers about operating buses around bicycles.

In addition, the City of San Antonio and VIA should

work together to provide education and encouragement materials to promote the use of commuting by bicycle and bus. This would include media and publications advertising opportunities to use the VIA system by accessing stops by bike, videos and how-to brochures on loading bicycles on VIA buses, and safety information about proper riding techniques around buses and other transit vehicles.

**Recommendation 5: Based on demand and ability, provide adequate bicycle carrying capacity on VIA buses and transit vehicles.**

Work with VIA to study the demand and feasibility to increase bicycle carrying capacity on VIA buses, and based on findings, implement policy changes or retrofit equipment. Continue the process of counting bicycles on buses multiple times a year. As mass transit in San Antonio expands, VIA and the City should continue to ensure some bicycle capacity on all mass transit vehicles, including bus rapid transit, urban rail, and commuter rail.

**Recommendation 6: Work with VIA to integrate bicycle transportation in the planning, design, and operation of existing, new, and redeveloped transit facilities.** (See DRAFT SmartWay SA map.)

As mass transit options are broadened in the future, the City should work with VIA or any operating transit agency to continuously examine and apply the goals and objectives for integrating bicycles with mass transit.

