

APPENDIX C

Peer Review

PEER CITIES REVIEW

A review of bicycle planning and facilities in other selected cities provides a useful context for Chattanooga's own initiatives and aspirations. Chattanooga's record of high quality urban design, progressive transportation planning and green industry prompted the selection of peer review cities that have remarkable records of their own with regard to bicycle planning. Selected cities are innovators in the field, and have not only implemented but, in some cases, initiated best practices in bike planning. Cities are located in the Southeast and throughout the United States.

It becomes clear in the following reviews that there are some characteristics common to high-quality bicycle programs nationwide. Insight into successful, city-specific bicycle programs, design guidelines, and other details, can be useful in evaluating the most appropriate strategies for Chattanooga.

ASHEVILLE, NORTH CAROLINA

Their Plan

Asheville has a *Bicycle Thoroughfare Plan*, and the MPO has developed a regional *Pedestrian & Bicycle Thoroughfare Plan*. Asheville has a separate *Pedestrian Thoroughfare Plan*, and their Greenways Commission, within the Parks Department, has developed a greenways master plan.

The MPO plan was coordinated with several existing plans, including the Trust for Public Land's multi-modal *Western North Carolina Mobility Plan*. A specific objective of the MPO plan is to help guide the Long Range Transportation Plan and establish priorities for the Transportation Improvements Program.

Design Standards

Both of the bike plans contain general design principles, although no design guidelines have been formally adopted. Most guidance is taken from NCDOT's 1994 *Bike Facilities Planning & Design Guidelines*. Per the state guidelines, wide outside lanes are preferred over bike lanes, and are generally incorporated into most state highway projects identified in the *Bicycle Thoroughfare Plan*.

Cross-sections in Asheville's street classification system integrate bicycle facilities.

Transit Interface

All buses have bike racks. Bike racks are also located at park-and-ride lots.

Ordinances & Incentives

The City of Asheville's bicycle parking ordinance applies in the Urban Overlay District. It requires bicycle parking at a rate of five percent to the number of required automobile parking spaces, in all zoning districts except those with single and two-family dwellings.

Other bike racks are installed in public areas by the city.

Staffing, Program & Public Involvement

Presently, bicycle and pedestrian planning is the responsibility of a transportation planner located within the Transportation Services Division of the Engineering Department. The planner also performs this function for the MPO.

A recently-vacated MPO Pedestrian & Bicycle Coordinator position is being evaluated. The position, which has existed for three or four years, may be reclassified to cover transit as well as bike/pedestrian functions.

Recently, the Bikeways Task Force and Pedestrian Task Force merged. This is a large, informal committee of interested citizens from Asheville and the region, which meets at least quarterly. In addition to providing input on various issues, the committee works on promotion and education, including "Strive Not to Drive" week.

Education & Encouragement

"Strive Not to Drive" week in the spring promotes non-motorized and transit travel, and includes typical activities such as a bike rodeo and Bike-to-Work week, along with more creative events such as a bike-themed film festival (*The Bicycle Thief*, etc.).

UNC at Asheville (with about 5,000 students) has a bicycle committee. The city provides bicycle orientation and safety programs for freshmen.

The Asheville Police Department provides bicycle safety courses for children.

The city website includes laws and ordinances, a bike map, educational facts, and other information.

Enforcement & Accident Monitoring

Although some crash data is maintained, it has not had a major role in bike facilities planning.

Usership Data & Statistics

Some bike usership data has been collected with regard to bike/transit use. It has not had a major role in bike facilities planning.

Existing Facilities

Asheville has about five miles of bike lanes, and 60 or 70 miles of wide outside lanes - mainly on state roads. There are about ten miles of greenway trails.

Maintenance

The city's website includes a bicycle improvements request form. This is used more as a way for cyclists to communicate concerns to program staff than a formal mechanism for making spot improvements.

Otherwise, bikeway maintenance is wrapped into routine roadway maintenance.

Funding

In addition to typical federal transportation funds, North Carolina DOT has a state-generated Enhancements funding program.

NCDOT also maintains a bicycle spot improvements program for state roads, although funding is limited. In Asheville, most bicycle facilities are on state roads and qualify for this program.

AUSTIN, TEXAS

Their Plan

Austin's Bicycle Plan was developed in two parts. Part One was completed in 1996 and contains policy and design standards. Part Two addressed specific project recommendations and was adopted in 1998. The plan is street-based, although some trail routes are included where connectivity cannot be achieved with on-street facilities. Pedestrian facilities are not addressed in the plan.

Design Standards

The Plan includes design standards compatible with AASHTO and FHWA standards. Pavement markings for shared outside lanes are included. For routes on local streets with speeding problems or unusually high volumes, traffic calming techniques are recommended.

Plan policy requires that all roadways be designed to accommodate bicycles per FHWA standards unless expressly prohibited. All arterials are identified as bike routes and cannot be exempted from design standards without an amendment to the Plan. Although all roads must accommodate bikes, bike-friendly traffic signal detectors and increased clearance intervals for bicycles are typically accommodated only on those roads designated as bikeways. In addition, all roadway projects in city parks must accommodate bicycles; the most appropriate facilities type is evaluated on a case-by-case basis.

The city has numerous older bike lanes that may have been installed as individual projects without the benefit of a master plan. These lanes may be retained, redesigned, or eliminated, according to the plan, during routine maintenance and repaving of the roadways.

Typical MUTCD signage may be augmented where bicycle volumes are high and roadway suitability is low. Such a response may be temporary until better facilities can be provided.

Transit Interface

The entire bus fleet has bike racks. The Plan places priority on providing bike lanes to, and bicycle parking facilities at, transit stops and commuter stations.

Ordinances & Incentives

Austin's Bicycle Ordinance requires that bicycle dealers provide each buyer with a copy of the city's bicycle ordinance, in a format approved by the Chief of Police.

The city code requires bicycle parking for all retail and commercial sites at a ratio of about five percent to the number of required vehicular parking spaces. Since the existing bike parking ordinance permits substandard racks, staff often encourages applicants to request waivers to the design standards. A new ordinance will address the design problems, and require parking located within a more favorable distance of building entrances.

Bike program staff continually review all traffic codes to identify impacts on bicycling.

Austin offers 80:20 matching funds to private downtown developers for retrofit of existing buildings with showers and locker facilities. No such facilities are required for new construction.

Staffing, Program & Public Involvement

The Public Works Department has employed a Bicycle & Pedestrian Coordinator since 1994, and hired an Engineering Technician for the program in 1999. A Bicycle Planner and a Pedestrian Planner position exist, but funds for hiring are frozen at this time.

Program staff coordinates the integration of bicycle planning into all roadway and trail projects per the Plan. The program has installed over 1,500 racks throughout the city. Program staff also administer and track spot repairs and sweeping.

Appointed by the City Council, an Urban Transportation Commission hears bicycle concerns, along with other transportation-related issues; a Bicycle Subcommittee of the commission was established in 1999.

There is also a Bicycle Advisory Committee that was established in 1994. Although program staff does work with the committee, it is not affiliated with the city. The committee has a history of working both with and against the city on various issues.

The city has a Yellow Bike program with ten bikes for city employees. The bicycles are used for work-related trips between various buildings and agencies. Yellow Bike participants have also assisted with installation of bike racks through the Bike Program.

Education & Encouragement

Program staff focus on the physical environment rather than education and promotion. However, they maintain an excellent website with comprehensive information about projects and programs, advocacy, safety tips, and other information. City bicycle maps and other brochures can be downloaded; hard copies are available from the city or local bike shops.

Austin's Health Department has a comprehensive children's bicycle education program, directed toward 4th and 5th graders.

The University of Texas, with 50,000 students, offered popular defensive riding classes to ticketed cyclists, but the program was discontinued due to lack of funds.

Enforcement & Accident Monitoring

Austin has a chronic problem with parking in bicycle lanes. To minimize the burden on the Police Department, and maximize enforcement, Bike Program staff have become official parking enforcement officers. They are legally authorized to issue tickets for bike ordinance-related parking violations. Once issued, tickets are handled conventionally by the municipal courts.

Program staff have made some efforts at raising awareness in the Police Department of bicycle-related rules and rights. A memo regarding high priority enforcement measures has been circulated within the department.

Accident data are maintained by the Police Department. The Health Department tracks bike-related admissions to hospitals. The public is encouraged to report accidents to the Bike/Pedestrian Program staff.

Usership Data & Statistics

A system is under development to acquire and analyze usership and accident data.

Existing Facilities

Austin has over 100 miles of on-street facilities. It also has 18 miles of paved multi-use trail and 14 miles of unpaved multi-use trails.

Maintenance

The public can call the Bicycle/Pedestrian Service Line with a specific request or concern. Bike Program staff refer the request to the appropriate agency and follow up with a notice to the requestee of actions taken. A spot sweeping program is also being developed.

Pavement markings and striping are replaced on the same schedule as other street markings.

Funding

A recent local bond measure will ensure \$5 million per year for the next five years for bicycle and pedestrian projects. In addition, a transportation users fee is incorporated into local utility bills, a portion of which is directed to bike/pedestrian programs and projects.

The MPO has a dedicated fund for bike facilities and Austin receives the maximum permitted annually.

DENVER, COLORADO

Their Plan

Denver's City Council authorized the development of an on/off-street bicycle system in 1971. The first plan was completed in 1979, revised in 1987, and updated in 2001. The plan does not address pedestrian facilities, and there is not a separate trails master plan.

Design Standards

The Plan adopts AASHTO standards for street-based facilities, but does include more specific standards for trails. Denver pioneered the use of pavement markings for shared outside lanes. Routes are signed and numbered, with an emphasis on directional information.

Transit Interface

Bike racks are on all city and regional buses. There are lockers for 218 bikes at fifteen park-and-ride lots. Lockers can be leased at no charge with a \$25 deposit.

Bicycles are permitted on light rail trains except during peak periods, and lockers are provided at all light rail stations. A bike station is planned for Union Terminal. The station will include monitored valet parking, on-duty mechanics, bike rentals, changing rooms, bathrooms, and perhaps a coffee kiosk/pushcart. A bikeway is planned to connect Cherry Creek Trail users to the terminal.

Ordinances & Incentives

Bike parking must equal 5% of required motor vehicle parking at commercial and retail developments. Car parking can be reduced up to 5% if it is replaced by bicycle parking at a 1:6 ratio. Any bike rack design other than the inverted-U requires approval by the Transportation Division.

Denver's first bicycle traffic ordinance was adopted in 1899!

Staffing & Public Involvement

The Transportation Engineering & Design Division of Public Works employs an engineer as Pedestrian & Bicycle Coordinator and two planners. Program staff coordinate and promote programs and projects; review plans for compliance with the bicycle plan, and manage planning and design studies.

Denver's mayor appoints a Bicycle Advisory Committee, which reviews all projects with bicycle impacts and makes recommendations. The committee is made up of citizens and city department representatives.

The bicycle plan recommends the creation of a new bike advocacy group that is independent of the city.

Education & Encouragement

Program staff focuses on the physical environment, although their website does provide maps, cycling tips, an events calendar, and other information. Bicycling organizations provide supplemental educational services.

Enforcement & Accident Monitoring

Cyclists can register bikes on-line with the Police Department. The Public Works Department recently completed a 1998-2000 accident report that includes statistics for all modes. The report is location-oriented and does not focus on specific crash types or contributing factors.

Usership Data & Statistics

One percent of downtown commuters use bicycles. Other statistics include traffic counts on specific roads or trails.

Existing Facilities

Denver is comprised of over 100 miles of street-based facilities and 130 miles of multi-use trails.

Maintenance

Program staff maintain a Spot Improvements Hotline for rapid response to inexpensive maintenance needs. Problems are routed to the responsible agency. Otherwise, on-street maintenance is wrapped into regular roadway maintenance; trail maintenance is the responsibility of the Parks Department.

Funding

A local funding program results in one dollar per resident annually dedicated to bicycle projects. The resulting half million dollars is used to match federal funds.

GAINESVILLE, FLORIDA

Their Plan

A Bicycle Master Plan was completed in 2001. The plan was developed with the cooperation of the city, MPO, and regional planning council; its geographic scope is the entire county. The plan addresses recreation and transportation functions, and includes on and off-street bike facilities.

The bike plan refines elements of the city's long-range transportation plan, which has a stated goal of expanding transportation choices community-wide. The plan does not address pedestrian facilities.

Design Standards

The plan does not include design standards. The Florida Department of Transportation (FDOT) has a well-regarded *Bicycle Facilities Planning & Design Manual*.

Transit Interface

Bike racks are on the entire bus fleet, and get heavy use on university-area routes.

Most park-and-ride lots have bike racks.

An old depot on a rail trail near downtown is being evaluated for adaptive-use as modal transfer station, and may include showers and other accommodations for cyclists.

Ordinances & Incentives

Gainesville's Code of Ordinances integrates bicycle parking requirements into motor vehicle parking requirements. For most commercial uses, bicycle parking spaces are required at a rate of five to ten percent of the required motor vehicle parking spaces. The rate at dormitories is fifty percent; at middle schools: two hundred percent.

The ordinance also specifies required proximity to entrances for bike racks. Public Works maintains a list of approved rack and locker designs.

Staffing, Program & Public Involvement

The Pedestrian & Bicycle Program is located in the Transportation Services Division of the Public Works Department. On staff is a planner who serves as the Pedestrian & Bicycle Coordinator for both the city and the MPO. Various division staff members share engineering responsibilities. There is also a lower-level staff person assigned to bicycle and pedestrian education and encouragement programs.

The coordinator and other engineering staff review roadway improvement projects and development plans for compliance with bicycle requirements.

Program staff serve as support for the Pedestrian & Bicycle Advisory Board. Committee members are selected through an application process to the city, MPO, and regional planning council. The committee provides feedback back to these three agencies on projects and plans, along with other bike/pedestrian-related initiatives.

The city, MPO, and regional planning council are assisted by the pedestrian and bicycle planning staff in the district office of FDOT.

Education & Encouragement

The Bicycle/Pedestrian Program provides educational services and presentations to schools, universities, churches, and other community groups. Specific events include Bike-to-Work Week, and Bike/Hike/Bus Week.

Gainesville's Health Department offers incentives and discounts for the purchase of bicycles and other fitness equipment.

Enforcement & Accident Monitoring

The Pedestrian & Bicycle Advisory Board is encouraging the Gainesville Police Department to heighten enforcement of bicycle-related laws (targeting cyclists).

The University of Florida Police Department currently offers bicycle safety classes in lieu of bike-related traffic fines to its 40,000 students. These are very popular, and demand can

sometimes exceed supply. The Pedestrian & Bicycle Advisory Board is working with the city Police Department to develop a similar program and class.

Bicycle accident data are collected by the city and county police departments; the FDOT district office manages the data. The data are used by the city's Transportation Division to help guide priorities in its annual Transportation Needs Plan. A bike safety study is underway for a specific roadway where bicycle fatalities have occurred.

Usership Data & Statistics

The regional planning council maintained bike counts until 1999, when it was determined that the task was not cost effective. At last count, there was declining bicycle use on streets near the university. In the past six years, through a concerted planning effort, annual bus ridership has increased from one million to six million. Staff determined that some cyclists have shifted modes from bike to bus.

Existing Facilities

Most roadways in Gainesville incorporate bicycle facilities. There are about 40 miles of trails.

Maintenance

The Pedestrian & Bicycle Advisory Board is forming a committee to address improvements and maintenance needs, and develop a spot improvements program.

Funding

Funding for most bicycle projects is incorporated into the budgets of larger transportation projects.

FDOT offers State Road Facilities funds, which are not specifically for bicycles, but are used for many roadway improvement projects. In Gainesville, most such projects have a bicycle/pedestrian component.

City government obligates general funds for bicycle and transportation projects.

The state land use plan severely restricts development if existing infrastructure is not in compliance with established needs standards. The standards do allow exceptions in some geographic areas. In Gainesville, the city manages a Transportation Concurrency Exception program. This strategy allows otherwise-restricted development to occur if the developer pays for new infrastructure. The infrastructure these developers pay for is usually pedestrian and bicycle-related. Gainesville's policy is not to add traffic lanes to roadways.

Another state mandate requires large public universities to pay local communities mitigation funds for bicycle and pedestrian infrastructure improvements. One million dollars has come from the University of Florida to-date through this program.

MADISON, WISCONSIN

Their Plan

The Bicycle Transportation Plan for the Madison Urban Area and Dane County was completed in 2000. It is an update of the 1991 plan, and includes multi-use trails. It complements and refines bicycle elements of the 1997 Dane County Land Use & Transportation Plan. Both plans were developed by the Madison Area Metropolitan Planning Organization.

Madison has a separate pedestrian plan. The city parks master plan also covers multi-use trails.

The campus master plan for the University of Wisconsin (40,000 students) includes a strong bicycle element.

Design Standards

The Plan includes design standards based on AASHTO and MUTCD. The standards refine and clarify the more general national standards, and in some cases offer alternate standards, based on local experience. The standards also recommend traffic calming techniques where appropriate.

Madison is moving away from the use of wide curb lanes for bikes, and toward standard application of bike lanes on arterials and collectors. Wide shoulders are provided on rural roads.

Route signage is used, but wayfinding signage is limited. The city is looking at a numbered route system that would not be destination-specific.

Transit Interface

Bicycle racks are available on most bus routes. Uncovered racks are also available at most new bus transfer points.

Rideshare, Etc. is a partnership between regional transit agencies, and offers information for bicycle commuters.

Commuter rail and high-speed rail studies are underway. Bike Program staff have been involved in planning processes. Trail facilities are being considered within rail rights-of-way.

Ordinances & Incentives

A 1998 ordinance requires bicycle parking based on use and square footage. It specifies rack location, space, and rack design criteria.

The Subdivision Ordinance, while not prohibiting cul-de-sacs and other conventional suburban land planning, does encourage development patterns and street designs that facilitate non-motorized transportation.

Staffing & Public Involvement

Madison's Traffic Engineering Division employs a Pedestrian & Bicycle Coordinator and a Pedestrian & Bicycle Safety Coordinator. Staff is responsible for facilities planning, policy development, project review, crash analysis, public relations and education. Bicycle planning is integrated into all transportation planning, and the entire engineering staff works on bicycle issues.

Program staff also manage a Bicycle Improvements Program, which provides an easy way for the public to notify staff of needs, hazards, project ideas, or other input.

The University of Wisconsin employs a full-time Pedestrian & Bicycle Coordinator.

The Pedestrian, Bicycle & Motor Vehicle Commission includes citizens and representatives from the Common Council. The Commission provides recommendations to the Common Council and city agencies regarding bicycle policies, programs, and facilities.

Education & Encouragement

The city's bicycle program staff support, inform and assist other organizations with education and encouragement programs. Maps, brochures, project updates, plans, bike route detour maps, and other information are available on the city website.

Several local, regional and state bicycling groups provide education and other community services. Projects include Bike to Work Week, and maintenance of an extensive website that includes events, news, weather, advocacy initiatives, and other information.

The Wisconsin Department of Transportation provides extensive bicyclist education and training to the public.

Enforcement & Accident Monitoring

Bicycle registration is required, and can be accomplished on-line. A four-year license costs \$8. In addition to theft deterrence and recovery, registration provides Bike Program staff with statistics used for planning and education.

Program staff use Police Department accident statistics to evaluate crash types, age distribution, location, and other contributing factors, which inform design and program decisions.

Usership Data & Statistics

WisDOT maintains statewide ridership data. Madison's ridership is significantly higher than the state's 3% modal share. The city maintains continuous counts on University Avenue, where daily bicycle trips are 6,200 annually; 7,000 in the summer. The University of Wisconsin records that 25% of all student trips are by bike, 11% of faculty commuter trips.

Existing Facilities

Madison includes 49 miles of bike lanes and approximately 25 miles of multi-use trails. Total bikeway system mileage (all facility types) is 125 miles.

Maintenance

The Bicycle Improvements Program addresses immediate maintenance and safety concerns. On-going maintenance is

wrapped into routine infrastructure maintenance.

Funding

WisDOT maintains several state funding programs for which bicycle facilities qualify, including the Transportation Demand Management monies. Most such programs require a 20% local match. The Wisconsin Department of Natural Resources offers state funds for recreational trails. The Dane County Parks Department manages a land conservation fund, which can be used to acquire trail corridors.

Local funding comes from the general fund. Many bicycle elements are wrapped into other planning and construction projects.

RALEIGH, NORTH CAROLINA

Their Plan

Raleigh developed a bike plan in 1991, which was adopted as part of the city's general plan. The plan is street-based and does not include pedestrian facilities. Raleigh has a separate trails plan.

Design Standards

The bike plan does not include design guidelines.

In the past, Raleigh built multi-use, sidewalk-style trails parallel to roadways. All such existing trails have now been re-designated for pedestrian use only. On roads with few intersections and high pedestrian use, such pedestrian-ways may still be built.

North Carolina DOT specifies design standards in their 1994 *Bike Facilities Planning & Design Guidelines*, which are used by the city of Raleigh. The facility type recommended for state roadways is wide outside lanes rather than bike lanes. As a result, most on-street bicycle facilities in Raleigh are wide outside lanes. The active bicycling community, largely made up of high-skilled road cyclists, supports wide outside lanes over bike lanes. Transportation department staff would like to see greater emphasis placed on bike lanes, to increase safety for general cyclists, and encourage proper cycling behavior.

Raleigh's roadway cross sections usually result in 13-foot wide outside lanes, rather than the preferred 14-foot lane.

Transit Interface

There are three different bus service agencies in the Raleigh area. The Triangle Transit Authority has bike racks on all buses; Raleigh Transit is phasing in racks on buses; the university transit agency does not have racks on buses.

Park-and-Ride lots in Raleigh are oriented toward remote motor vehicle parking at the

university, and do not include bike racks or lockers.

Ordinances & Incentives

Codes require bicycle parking at a percentage based on required motor vehicle parking.

Staffing, Program & Public Involvement

An engineer in the city Transportation Department is assigned to bicycle and pedestrian planning (along with other responsibilities) and is designated as the Bike/Pedestrian Coordinator. Staff focuses on design and engineering issues, not education or encouragement.

Planning Department staff also review development projects for compliance with bicycle facilities requirements. Greenways are the responsibility of the Parks Department.

There is not presently a city bicycle advisory committee, although a task force did exist during the development of the bike plan. Local bicycle clubs are active in advocating for their interests.

The MPO has established a Bicycle/Pedestrian Task Force to develop a regional bike/pedestrian plan. The committee includes both staff and community members.

Education & Encouragement

City staff focus on design and engineering issues, rather than education or encouragement. The city does publish a bike route map, with funding assistance from NCDOT.

The Police Department offers educational programs to local schools, such as bike rodeos.

Enforcement & Accident Monitoring

The Transportation Division gets all of its accident data from the Police Department and NCDOT. Bicycle and pedestrian crashes are flagged and have been used as a factor in selecting projects.

Usership Data & Statistics

No user data is maintained.

Existing Facilities

There is an unknown but substantial number of miles of wide outside lanes. There are two roadways with bike lanes, totaling about three miles.

There are about 40 miles of existing greenway trails in the city of Raleigh. A new bicycle/pedestrian bridge, in conjunction with three miles of new greenway trail, is planned to span an interstate.

Maintenance

Bikeway maintenance is wrapped into routine roadway maintenance.

Funding

In addition to typical federal transportation funds, NCDOT has a state-generated enhancements-style funding program.

NCDOT also maintains a spot bicycle improvements program for state roads.

SEATTLE, WASHINGTON

Their Plan

Seattle does not have a bicycle-specific plan. Bicycle considerations have been incorporated into the Comprehensive Plan, completed in the early 1990s, and the 1997-98 Strategic Transportation Plan. Both plans are updated every two years.

Urban trail planning began in the early 1970s and the system is nearly completed. The Urban Trails Plan is simply a one-page map showing desired trail locations and is part of the Comprehensive Plan.

Design Standards

Bicycle facilities design standards are strictly based on AASHTO, which has been adopted as an appendix to the Transportation Department's design manual. Seattle also has a "Standard Plans" manual, which refines or augments various transportation design specifications. Although not specific to bicycles, the manual's standards incorporate bicycles as user mode and design consideration.

Having determined that transportation cyclists will not be directed where to ride, Seattle does not typically sign routes. The city route map shows the suitability of all roadways for bicycle travel. Spot routing or signage is used where extra guidance is needed, such as on bridges or on on-street segments of otherwise continuous trail corridors. Since the city is completely built-out, the goal of having all roadways meet AASHTO is not achievable. They have pioneered the use "road diets" to shift a larger share of limited right-of-way to bicycle and pedestrian uses.

Transit Interface

The entire bus fleet has had bike racks since 1994. Racks are also installed on vanpool vehicles upon request; they are currently on 150 vans, 40% of the fleet.

The city coordinates with all regional transportation agencies. Bicycle parking

facilities exist at all park-and-ride lots, transit centers and transit hubs.

Ordinances & Incentives

The building code requires bicycle parking. The number of required bicycle parking spaces is a ratio to the number of required vehicular parking spaces, which varies according to land use. Developers often add more than the required parking based on market demand. Amendments to the code are planned which will increase bike parking requirements.

The Comprehensive Plan resulted in incentives for higher density development, and public money is concentrated in high-density areas. The resulting compact development makes bicycling and walking convenient and practical travel modes.

Staffing and Public Involvement

The Seattle Bicycle & Pedestrian Program is located within the Seattle Transportation Department. The staff of six divides its time between pedestrian and bicycle issues. Program staff manage the integration of bicycle concerns in all planning and development processes. In addition, they manage the city's spot repair program, install bicycle racks (1,400 since 1994), maintain statistics, and provide information to the public.

The Seattle Bicycle Advisory Board was established in 1977. Appointed by the Mayor and approved by the City Council, the board advises on all projects with implications for bicycles. There is a separate pedestrian board.

Education & Encouragement

City Program staff focus on the physical environment. In the 1980s, Program staff coordinated with the Cascades Bicycle Club to hire a full-time education coordinator and provide public educational services. The club now has a staff of five and provides educational programs in schools and elsewhere, without any city funding.

Other independent bicycling organizations also provide public services. The bicycle Alliance of

Washington, for example, manages the Bike Buddy Program, in which experienced commuters mentor new riders.

The city website does include route maps, ordinances, events, etiquette, and statistics related to car vs. bike travel times or ease of finding parking.

Enforcement & Accident Monitoring

Program staff has educated the Police Department to focus enforcement efforts on the three issues that account for the more than half of all bicycle accidents: disregard for traffic control devices, riding counterflow, and riding at night without lights.

Program staff analyzes Police Department accident statistics to improve safety and fix chronic problem areas.

Usership Data and Statistics

Thirty-six percent of residents are recreational riders. Eight percent walk or ride to work, increasing to twenty-five percent in some neighborhoods. The city is home to 4000-8000 bike commuters daily (season and weather dependant).

Existing Facilities

Seattle contains 14 miles of bike lanes, 90 miles of shared outside lanes, and 28 miles of multi-use trails. A 2.5-3-mile bike boulevard is planned. It will link two discontinuous segments of a trail.

Maintenance

The Program's Bicycle Spot Improvements Program covers inexpensive repairs such as signage and striping, and adjustments to traffic signal detectors. All lanes are repainted annually as part of routine roadway repainting. Seattle uses paint for lane markings rather than thermoplastic tape, which can be slippery.

Funding

A recent \$200 million levee will provide \$5 million to the program over the next seven years. Seattle has a record of spending one local dollar for every three federal dollars spent on bike/pedestrian projects. Typically, bike facilities are wrapped into the budgets of larger projects, such as drainage or roadway improvements.

TUCSON, ARIZONA

Their Plan

The City of Tucson is developing a bicycle plan that is about 90% complete. Tucson has an existing trails plan, although the bicycle plan will address some transportation-oriented trails.

The Pima Association of Governments (PAG), which includes Tucson, just completed a *Regional Plan for Bicycling* in 2000. The PAG plan includes both on and off-street facilities and was coordinated with the regional trails plan.

Neither the city nor the regional plan addresses pedestrian issues.

Design Standards

Tucson's plan may include some design standards. The PAG plan follows AASHTO guidelines. Tucson's current practice is for bicycle lanes to also serve as emergency/breakdown lanes. Accordingly, they do not use the conventional bicycle or diamond pavement markings in the lanes, and instead rely only on striping and signage to identify them for bicycle use. This practice has not appeared to create major problems and will be adopted as part of the new plan.

Shared outside lanes are provided on local and minor collector streets; bike lanes are provided on major collectors and arterials. A few of the major bike routes are numbered.

Transit Interface

Bike racks are provided on the entire city bus fleet. Lockers are provided at park-and-ride lots. The transit agency's Rideshare Program produces the city's bike map.

Ordinances & Incentives

A bicycle parking ordinance exists but does not address placement of the facilities, rack design, or other issues. The ordinance will be revised per the new bike plan.

A recent change to the Arizona State Bicycle Code requires vehicles to give cyclists three feet of clearance when passing.

Staffing & Public Involvement

The city of Tucson has a Bicycle Coordinator and a Pedestrian Coordinator, both housed within the Department of Transportation's Alternative Modes Section. Staff integrate bicycle considerations into plans and projects, and manage the Bicycle & Pedestrian Spot Improvements Program.

The Pima Association of Governments has a Bicycle & Pedestrian Coordinator.

There is a combined city and county Bicycle Advisory Committee (BAC) appointed by the Mayor and Council. The committee includes representatives of local, regional and state agencies, as well as citizens. Working with the Tucson Citizens' Transportation Advisory Committee, the BAC was instrumental in obtaining funds for the city's two staff positions. Other efforts have related to local and state ordinances, education, and creation of the city's spot improvements program.

Education & Enforcement

Both PAG and city websites contain limited bicycle-related information. Most information from the city's Bicycle Program is duplicated on the BAC's more comprehensive website. The site includes maps, ordinances, events, programs, project updates, initiatives, and other information. The city produces a bicycle commuter handbook and guide.

The BAC has created grant-sponsored public service announcements for television on roadway safety, and has developed an educational video for drivers.

The Tucson Fire Department manages a SafeKids program, which includes bicycle safety educational materials.

The University of Arizona, with 35,000 students, manages a bicycle registration program.

Enforcement & Accident Monitoring

The Tucson Police Department maintains bicycle accident statistics. The PAG Bike/Pedestrian Coordinator uses the data to help prioritize projects.

Usership Data & Statistics

Tucson does not maintain usership data. PAG is beginning to maintain usership data for specific bicycle projects.

Existing Facilities

Tucson has 500 miles of on-street facilities and 50 miles of multi-use trails.

The Diamondback Bridge is currently under construction. The bicycle/pedestrian-only facility will span a major arterial and connect a trail system to downtown Tucson. Also a public art project, the bridge looks like a snake.

Maintenance

Tucson's Bike Program staff manage a Spot Improvements Program. All on-street bike facilities are swept every 2.5 to 3 weeks.

Funding

Tucson dedicates \$1 million annually to the Spot Improvements Program.

PAG's 1998-2020 Metro Transit Plan includes \$266 million for bicycle and pedestrian improvements. Funding would provide 610 miles of bikeways, and 70 bridge and intersection retrofits.

OTHER CITIES

Charlotte-Mecklenberg, North Carolina

Charlotte has just completed a Bicycle Transportation Plan. The plan recommends 208 miles of bike lanes, 278 miles of wide outside lanes, 85 miles of shoulders, and 57 miles of signed shared facilities.

In addition, the plan recommends the creation of a full-time Bicycle/Pedestrian Coordinator position and a Bicycle Advisory Committee. The plan addresses design issues but does not include design guidelines. In addition, the plan recommends that the Bike/Pedestrian Coordinator update the bike plan every three years.

Charlotte's bike program website includes a bike map, riding tips, bike-related laws and ordinances, and encourages the public to contact program staff with comments, concerns and questions.

Athens, Georgia

Athens' Transportation & Public Works Department is currently updating the city's Bicycle Master Plan. The MPO has also completed a Bicycle & Pedestrian Plan.

Athens was the first city in Georgia to implement a bike-and-ride program in their public transit system. Bike racks on buses and racks at major transit stops are part of the program.