

CHAPTER 6: IMPLEMENTATION STRATEGIES

Achieving the goals of the *Bikeways & Trails Facility Plan* requires the coordination of staff time with available funding and public input. While the City of Albuquerque can directly implement infrastructure investments, implementation of education, outreach, enforcement, and evaluation programs will necessarily involve numerous community partners.

This implementation plan is an important component of the overall planning effort. It helps ensure a structured approach to project development that involves the bicycling community, the general public, elected officials, city staff, partner organizations, and funding agencies. Additionally, the implementation plan serves as a measure of Albuquerque's progress on achieving these goals through the completion of particular projects, education, encouragement, and measurement with each passing year. As a result, implementation should be seen as an ongoing process rather than a finite task. This chapter provides guidance on strategies to implement recommended projects and programs.

A. Bikeway & Trail Facility Development Approach

1. Administrative Organization & Coordination

This plan seeks to create linkages between the Planning Department, Parks & Recreation (P&R) and the Department of Municipal Development (DMD) regarding planning of future projects and programming funding for facility improvements and projects. This will happen by communication and coordination about the design of trails and on-street bikeways. Bikeway and trails activities will also need to be coordinated with other agencies. The interdepartmental and cross-agency coordination would ideally take place at key milestones during the planning, design, and implementation of projects and programs.

Ideally coordination would take place to:

- Coordinate funding requests
- Annually update the Map and proposed projects list
- Adhere to Design Guidelines
- Train the Technical Review Committee
- Organize trainings
- Conduct interagency meeting and bikeways issues
- Update this Plan (at ~~5~~10 year intervals)

One of the issues for the bicycle and trail network in Albuquerque is that responsibilities for the system are divided among various departments, primarily P&R and DMD, but also the Planning Department, City Council and Cultural Services, requiring significant and on-going coordination and cooperation. Other communities have the same dynamic.

The Planning Team performed a comparative review of other jurisdictions' administrative organization and operations for their bicycle and trails programs. Looking to other successful communities can inform future organizational and/or operational restructuring in Albuquerque. The main finding of this review is that all of the communities surveyed also spread the responsibility for planning, design, construction, and maintenance among Public Works, Parks & Recreation, County Public Works and/or Parks & Recreation, and Regional Council of Governments. Our current organization of responsibilities is

generally consistent with other communities. These findings support this Plan's recommendations to focus on consistent and ongoing coordination among all the key departments and agencies who engage in bikeways and trails work.

A final thing to note is that both Minneapolis and Nashville/Davidson County have regionally focused boards or commissions within their Parks & Recreation Departments that address the recreational and experiential component of trails, along with other park and recreational topics.

Administrative Policies, Objectives, and Strategies

~~Following are proposed policies, objectives, and strategies to outline how City Departments can work together more efficiently for the benefit of trail users and cyclists. They provide an approach to implement Goal 7 of the *Bikeways & Trails Facility Plan*.~~

~~Streamline administrative practices and coordination (Goal 7):~~

- ~~1. **Policy:** Organize and coordinate implementation of this Plan among City Departments and other agencies to produce well-designed facilities and a connected network of trails and bikeways that are safe, comfortable, and enjoyable for the public to use.~~

~~This section outlines a more specific approach to implement the *Bikeways & Trails Facility Plan Goal 7, Streamline administrative practices and coordination, and specifically Policy 7.c: "Organize and coordinate implementation of this Plan among City Departments and other agencies to produce well-designed facilities and a connected network of trails and bikeways that are comfortable and enjoyable for the public to use."*~~

Objective 1: Provide full-time staff positions dedicated to trails and bikeways with appropriate office budgets to promote bicycling and trail use within Albuquerque.

Objective 2 (Planning): Create linkages between Planning Department, Parks & Recreation, and DMD regarding planning of future projects and programming funding for facility improvements and projects.

- ~~1. **Strategy:** DMD and Parks & Recreation, with assistance from the Planning Department, will coordinate requests for trails and bikeways funding. DMD will assist Planning and Parks & Recreation in the federal application process, and the three departments will coordinate representation at MRCOG.~~
- ~~2. **Strategy:** The Planning Department, in coordination with DMD and Parks & Recreation, will take the lead on developing funding mechanisms and implementing the 50-Mile Activity Loop.~~
- ~~3. **Strategy:** DMD and P&R, with assistance from the Planning Department will maintain an accurate list of major bikeway and trail projects currently programmed, to be updated on a biannual basis reflecting the status of programming, funding, design, and construction. This list will be the basis of the discussion and outcome of the two preceding strategies.~~
- ~~4. **Strategy:** DMD and Parks & Recreation, with assistance from the Planning Department, will conduct an annual update of the existing and proposed facilities map.~~

Objective 3 (Design): Foster linkages among critical departments within the City (primarily Parks & Recreation, DMD, and Planning) to communicate and coordinate activities related to design of trails and on-street bikeways.

- ~~1. **Strategy:** Adhere to the Design Guidelines adopted as part of this Plan when implementing projects unless strict adherence is not feasible. Any deviation must be documented by the project manager, including a rationale for the deviation.~~

2. **Strategy:** Create a Technical Review Staff Coordination Committee (TRCSCC) to include a few key staff members (P&R, DMD, and Planning Department) with expertise in design of trail and bike facilities. TRCSCC would review major projects on a project-by-project basis, and will be particularly focused on the project scoping and pre-design phases. This review would be in addition to and in anticipation of the Design Review Committee (DRC), which reviews and approves construction plans to ensure compliance with the Design Standards. Other experts would be included on a case-by case basis as necessary, e.g., ADA specialist, Traffic Engineer, Park Management, AMAFCA, etc. Where there are potentially difficult design issues, a pre-design meeting of the TRCSCC would be appropriate and input from Citizen Advisory Groups will be sought. TRCSCC's recommendations will be documented by the Project Manager.
3. **Strategy:** Parks & Recreation and DMD will jointly organize periodic trainings for personnel, rotating among topic areas. Trainings will be kept to a manageable size but provide space for representation from citizen advisory groups. Coordination with MRCOG regarding topic areas is essential. Potential topics include:
 - a. Multi-use trail design issues and innovations: for engineers, landscape architects, and others involved in trail design, including both in-house and non-City professionals.
 - b. On-street bikeway design, including intersections, and techniques for trail crossings of arterials: for traffic safety personnel, engineers, and others involved in bikeway design.
 - c. Maintenance practices, issues and techniques: maintenance staff.

Objective 4: Coordinate bikeway and trails activities with other agencies.

4. **Strategy:** DMD and Parks & Recreation (with assistance from Planning Department) will conduct a biennial (every 2 years) meeting among agencies involved in planning and implementation issues regarding bikeways and trails (construction, right of way, maintenance, funding, education, etc.) to include at least: the City (DMD, P&R, Planning Department, Open Space Division, Park Management, Bike Safety Program) NMDOT, Bernalillo County, AMAFCA, MRCOG, MRGCD, Rio Rancho, and representatives of Citizens Advisory Groups and other advocacy groups. Topics will include: presentation of status reports regarding funding and programming, new facilities, new standards, and how to resolve recurring issues. A summary of the meeting and outcomes will be transmitted to participants and the Mayor and City Council and be posted on the City's website.
5. **Strategy:** DMD and Parks & Recreation in partnership with the Planning Department will update this Plan every 10 years 4 years.

Objective 5: The City (DMD, Parks & Recreation, and Planning) will utilize the input of Citizen Advisory Groups in an effective manner.

2. Bicycle & Trail Coordinator

Albuquerque currently has **full-time Trail Planner Coordinator** and a **grant-funded Bicycle Encouragement Planner Coordinator positions**. There are also a number of Community Recreation Coordinators in Parks & Recreation whose work includes bicycle education programs. The 1993 *Trails & Bikeways Facility Plan* recommended both Bicycle/Pedestrian Coordinator and Trail Coordinator positions to take on the major responsibilities of implementing the elements with the plan. Likewise, the work plan of these staff should be aligned with the Implementation Plan in order to coordinate current bicycle and trail planning efforts and to assist with implementation of the many projects and programs recommended in this Plan. **The work should be divided between the Municipal Development and**

Parks & Recreation departments, bridging the gap between bicycling and trail use as transportation and as recreation.

In addition to existing bicycle ~~safety~~ education activities, **job duties for these staff positions may include:**

- Monitor the design and construction of bikeways and trails, including those constructed in conjunction with private development projects.
- Ensure bicycle facilities identified in specific plans are designed appropriately and constructed expeditiously.
- Staff GABAC and GARTC meetings.
- Continue the implementation of existing programs and projects.
- Coordinate implementation of the recommended projects and programs listed in this Plan.
- Identify new projects and programs that would improve the City's environment for bicycling.
- Collect data and monitor trends in bicycle & trail use in the City.
- Coordinate evaluation of projects and programs.
- Pursue funding sources for project and program implementation.

3. Role & Structure of Advisory Committees

Albuquerque has two advisory committees related to bicycle and trails issues. Both are created by ordinance: the Greater Albuquerque Bicycling Advisory Committee (GABAC), and the Greater Albuquerque Recreational Trails Committee (GARTC). The two-committee structure allows multiple perspectives regarding the trail system. City Parks & Recreation (P&R) staffs GARTC and the Department of Municipal Development (DMD) staffs GABAC. The purpose of this section is to consider new ideas on how to structure Albuquerque's advisory committees related to bicycle and trails programs, planning, and implementation.

Issues

~~Several members in leadership positions in the committees have described Albuquerque's two-committee structure as flawed. Committee members have expressed dissatisfaction with Albuquerque's two-committee structure. Some of their criticisms include: P&R doesn't attend GABAC; DMD doesn't attend GARTC; and GARTC doesn't have bicycle riders officially represented. Members are frustrated and ask: "What is our function? Our comments are too late in the process to be useful." Staff considers the two-committee structure duplicative and recommendations from each group are sometimes conflicting. Staffing both committees is very time-consuming. Also, City staff reports that both committees are very dissatisfied and that it is hard to fill positions, for a variety of possible reasons. The point of contact with other agencies and jurisdictions is unclear and varied (sometimes through GABAC/DMD; sometimes through GARTC/P&R).~~

~~Comments from the public included these: The committees aren't listened to, there is no structure, "catch as catch can" on whether they are able to provide input at the correct point in the process; there is minimal website presence for the committees; APD, NMDOT, and other agencies need to come to GABAC; and GARTC needs to be able to provide input on design. Another major challenge both advisory groups mention frequently in their meetings is the application of the **Open Meetings Act** to their work. The requirement to conduct business and discussions in publicly advertised, open meetings~~

~~makes it challenging to accomplish work between monthly meetings. GARTC has created subcommittees to study certain issues in more detail, and then report back to the entire committee.~~

~~The Working Group reviewed the issues and draft concepts related to the structure of the committees with GABAC and GARTC in May and June, 2014. Those concepts are described below. Although there is a general sense that the current two-committee structure is not working very well, both committees agreed the issue needs more thought. There is generally a sense that one combined committee bringing together citizens, staff and guest presenters might be more efficient, but there are concerns that the voices of pedestrians, ADA advocates and equestrian issues might be overwhelmed and left out of the discussion. There is broad support for reaching out to Bernalillo County to join a combined committee since the trails and bikeways system is a regional network. Following is an overview of how other communities address citizen advisory groups. Committee members have expressed frustration with Albuquerque's two-committee structure. Some of their criticisms include: P&R doesn't attend GABAC and DMD doesn't attend GARTC. GARTC doesn't include representation of the broad cycling community and GABAC is not representative of the wide range of cyclists' types, abilities and confidence levels. Responsibilities between the Committees are unclear and they believe their comments on projects are too late in the process to be useful. Staff considers the two-committee structure duplicative (the same presentations have to go to two committees) and that the committees are very time-consuming given their departmental ~~resouces~~resources. Also, City staff reports that both committees are dissatisfied and that it is hard to fill positions, possibly for a variety of reasons. The point of contact with other agencies and jurisdictions is unclear and varied (sometimes through GABAC/DMD; sometimes through GARTC/P&R).~~

GABAC/GARTC/Public Input

~~Several alternatives (status quo, a Bicycle Pedestrian Advisory Committee, and a City/County or Regional combined advisory committee) were presented for feedback from GABAC and GARTC and shared at public meetings on the BTFP in July 2014. These are some of the major themes that were voiced:~~

- ~~1. Many committee members understand the advantages of consolidating into one committee and there is general agreement the current system is not working very well. Major advantages of combining would be that there is a central place for discussing projects of common interest and limited staff resources would be used more effectively;~~
- ~~2. There is strong interest in creating a regional committee (as opposed to Albuquerque-only) since the bikeways and trail network is a regional system. This might either be City/County, or be more broadly regional, housed at MRCOG;~~
- ~~3. There are concerns that by combining all interest groups into one committee, the minority points of view will be lost;~~
- ~~4. There is a concern that recreational interests will be overwhelmed by the commuter/high-speed bicycle interests;~~
- ~~5. There is an acknowledgement that currently neither committee is truly working on pedestrian issues (e.g., sidewalks and creating a "walkable community");~~
- ~~6. There is a widely shared interest in having meaningful staff participation from various critical agencies in addition to the regular participation of DMD, P&R, MRCOG. These agencies could~~

include APD, NMDOT, Planning Department, Open Space Division, City Council, Risk Management, Bernalillo County, and others.

Overview of Other Communities' Bike/Pedestrian/Trails Programs

Tucson/Pima County

Tucson and Pima County transportation departments share staffing duties for the Tucson Pima County Bicycle Advisory Committee (TPCBAC). The TPCBAC is a huge committee, with representatives from local governments and agencies as well as representation from the Wards (equivalent to Council Districts), and representatives from unincorporated Pima County (which has a number of representatives). Most of the governmental reps are *ex officio* (i.e., non voting).

The TPCBAC meets once per month, but the real work occurs in the Executive Committee (5 members). The Executive Committee is made up of chair of each of 5 subcommittees: Facilities; Downtown and University; Law Enforcement, Education and Outreach; and Mountain bike/BMX. The Executive Committee and the full TPCBAC each meet once a month. Some of the subcommittee meetings are less frequent. From reviewing some of the agendas and minutes, it appears the TPCBAC deals with everything—ranging from bike boulevards to safety education to forest access. Tucson established a pedestrian advisory committee in 2013 due to a number of fatalities, and the bike/ped coordinator is concerned about how staffing will be handled.

The Pima Association of Governments (PAG) functions like MRCOG in regard to bicycle/ pedestrian issues: a count program, analysis of crash data, etc. There is a “Bike/Pedestrian subcommittee” at PAG that advocates for trails. It includes a variety of types of users, including an equestrian representative.

City of Minneapolis

The Bike/Pedestrian program is located in the Public Works Department. Two committees advise the Department: a Bicycle Advisory Committee (BAC) and a Pedestrian Advisory Committee (PAC). Staff members serve on the BAC. There are 13 citizen members representing the Wards, three Minneapolis Parks & Recreation Board (MPRB) members, and 12 agency and City department members (voting, except for the City Attorney). There are four staff for the Bike/Ped program. They coordinate closely with MPRB. MPRB has a completely separate staff, including trails specialists.

There are lots of other bike/ped/trails people in region (Hennepin County, etc.) and likely numerous other advisory groups. There is not really a group that meets regularly and discusses projects (funding and priorities). It happens on a project by project basis. There is a Met Council that includes the 7 counties (like MRCOG) and deals with federal funding allocations. Projects are implemented by City, County, and MPRB. The MPRB forms ad hoc committees for new or major renovation capital projects consisting of citizens, key neighborhood reps, interest groups, etc. There are also task forces that deal with discrete proposals.

Moreno Valley, CA

Moreno Valley has a Recreational Trails Board (RTB) that considers matters pertaining to single use and multi use recreational trails, including bicycle, jogging and equestrian trails within or

affecting the City. The nine member Board meets every other month. They are based in Parks and Community Services. Membership is by application, not based on type of trail user or council district. People are asked to provide their area of interest/goals, and the town council decides. According to staff, it has worked well. It seems the RTB is mainly trying to get people to adopt trails, and it also sponsors a regular, "Hike to the Top" foothills hike. They have a map of multi-use trails that are decomposed granite. The Public Works department consults with this committee on the design of asphalt trails.

League of American Bicyclists Recommendations

Regarding the particular issue of how other communities approach the structure of advisory committees, there is a recent publication by the League of American Bicyclists regarding Bicycle Pedestrian Advisory Committees that provides a good overview of the issues:

[http://www.advocacyadvance.org/site_images/content/bpac_best_practices\(web\).pdf](http://www.advocacyadvance.org/site_images/content/bpac_best_practices(web).pdf)

Pertinent to Albuquerque's situation, this article suggests:

the transportation agency be clear about the staff's role as liaison; the staff is responsible to the transportation agency, not the BPAC;

separating bike and pedestrians into different committees, if possible—it is difficult to find a balance otherwise

many issues noted by our Working Group: The committee should represent diversity of community (with targeted recruitment, particularly of females and minorities), have a very strong application process, conduct interviews, have term limits, make very clear the expectations for participation, provide orientation to new members, mentor new members, define the chair's responsibilities, and develop an annual work plan.

Advisory Committee Options for Albuquerque

The City explored three different approaches to addressing some of the issues and concerns raised above:

1. Status quo: Continue two committees – GABAC/GARTC – staffed by DMD/P&R. Potential improvements to the process: 1) Clarify the role of the committees and integrate the advisory committee role in a more standardized manner into the planning and design process; 2) identify outside agency representatives as regular liaisons; 3) Improve recruitment and selection process for new members, advertise vacancies, develop a nomination process or other improved process for filling positions, conduct interviews, assure diversity and broad representation, have term limits and fill vacant positions quickly; 4) Provide trainings for advisory committees, provide packets with orientation materials for new members; 5) Improve meeting effectiveness, abide by rules of conduct for public meetings, utilize subcommittees to address particular areas of interest; 6) require staff from both Departments attend others' meetings to enhance coordination of activities; and 7) Provide more staff assistance in developing coherent drafts that articulate committee comments and positions on the issues they consider.
2. Bicycle and Trails Advisory Committee: A combined group of about 12 members balanced between cyclists and other trail users (equestrians, people with disabilities, pedestrians, hikers,

runners, skaters). Cyclists could be broken down into types to represent riders with different concerns: e.g., young, active elderly, commuter, off road, tourer, and possibly a bike shop business owner. Geographic, gender and ethnic diversity would be sought. This committee would be a Big Tent and consider and provide advice on the broad range of issues affecting implementation of the bikeways and trails network as outlined in the BTFP. Several areas of distinctly different interests might be handled by sub-committees that meet less frequently than every month. Two obvious subcommittees might be: 1) on-street cycling staffed by DMD or another transportation engineering agency (to cover the design of bike lanes and routes, connectivity, etc.) and; 2) unpaved trails staffed by P&R or Open Space Division (including, perhaps, being charged with developing a plan specific to these types of trails and trail users). Reports from these committees could be provided to the full group in summary form. Ideally, this would be a regional committee and the major topics that affect the urban bikeway and trails network would be addressed by the full committee. The City of Albuquerque is discussing potential for cooperation with MRCOG and Bernalillo County.

3. **Albuquerque or Regional or City/County Bike and Pedestrian Advisory Committee:** Create one committee with representation by geographic regions which reflects the diversity of the community – age, gender, and type of travel. Consider: inclusion of representation from major established advocacy groups and ex officio agency representatives. This is the structure most communities utilize in some form. For general guidance, see the Advocacy Advance publication: *Best Practices for Bicycle and Pedestrian Advisory Committees* at: [http://www.advocacyadvance.org/site_images/content/bpac_best_practices\(web\).pdf](http://www.advocacyadvance.org/site_images/content/bpac_best_practices(web).pdf)

Considerations regarding moving to single committee structure

In Albuquerque, this structure could leave out some users of the unpaved trail network, such as equestrians and hikers. There have been several suggestions about how to address this issue: create a standing subcommittee of the Open Space Advisory Board (or include equestrian representation on that Board and the P&R Advisory Board) and establish a process for regular communications with related land management agencies such as the MRGCD, US Forest Service, BernCo, etc.

Pedestrian issues: The BTFP recognizes the need for Albuquerque to develop a Pedestrian Plan. The issues specific to sidewalk inventory upgrades, safety and general walkability of the City are not currently being addressed by either of the existing committees. The City should make an effort to formalize its approach to obtaining citizen input on pedestrian issues. Several GARTC members suggested that it's not ideal to combine a pedestrian and bike committee. Many cities have a separate Pedestrian Committee and this approach should be considered in Albuquerque's future planning efforts – perhaps incorporated into the Complete Streets initiative.

Staffing: If Albuquerque moves to a single committee structure, the question arises as to how to staff the committee. Here are some options for input from the advisory committees. Any of these options will need to be reviewed by the City and other affected agencies:

1. **Planning Department.** If staffed by the Planning Department, participation and support of DMD and P&R would be essential. Responsibility for staffing the subcommittees (on-street cycling and unpaved trails subcommittees respectively) might be one way to insure that this occurs.

2. DMD. By way of example, in Minneapolis, the transportation department staffs the bicycle and pedestrian committees. The Parks Board, which is an independent organization which builds and maintains most of the extensive trail system, has 3 board members represented on the bike committee.
3. Parks & Recreation. The Bike Safety and Education program, trail maintenance, and many of the trail design functions are currently housed in P&R. DMD would need to commit to a strong involvement and presence.
4. Joint City/County. Would require exploration with the County to determine appropriate staffing. This is the Tucson-Pima County structure.
5. MRCOG. Would require coordination with MRCOG to assess feasibility and how to structure.

The Working Group will continue to consult with GABAC and GARTC and obtain input from the public and other agencies regarding the structure of the Advisory Groups.

4. Policies for Bikeway & Trail Development

The following objectives and policies were developed as part of the 2000 Comprehensive On-Street Bicycle Plan. They were intended to be completed by 2020, and still remain applicable to guide bikeway & trail development in the City. This section outlines a more specific approach to implement the *Bikeways & Trails Facility Plan Goal 1 & 2: "Improve the cycling and pedestrian experience."* and *"Develop a continuous, interconnected, and comprehensive system of bikeways and trails."*

Objective 1: Develop and Promote Albuquerque as a Bicycle-Friendly Community

1. Achieve the League of American Bicyclists' Bicycle Friendly Communities award designation and Bicycling Magazine's Top Ten Best Cities for Cycling award by institutionalizing bicycling as a legitimate form of transportation in all planning and programming efforts and public awareness campaigns.
Measurement: Report the results of the survey and identify solutions to rectify deficiencies reported by the award. Review the LAB recommendations annually to determine among the most appropriate and necessary actions to implement this plan.
2. Provide full-time staff positions dedicated to bicycle transportation and appropriate office budgets to promote bicycling within Albuquerque.
3. Support the establishment of designated personnel and appropriate office budgets in other Albuquerque Metropolitan Planning Area jurisdictions to address bicycling concerns.
4. Maintain the dedicated local funding source for construction and maintenance of bikeways and establish specific budget line items in the Albuquerque budget to support the provision of on-street and off-street bicycle networks and programs.
5. Institutionalize bicycling as a legitimate form of transportation through bicycle-friendly roadway design practices and through consistent, routine training of City of Albuquerque, MRCOG, and other jurisdiction staff. Maintain bicycle transportation planning and design. Work with the University of New Mexico and New Mexico State University to develop curricula for bicycle-friendly transportation system design.
6. Support the efforts of the Greater Albuquerque Bicycling Advisory Committee (GABAC) and the Greater Albuquerque Recreational Trails Committee (GARTC) to promote bicycling and improve

bicycle ~~safety hazard and injury reduction~~ through effective responses to GABAC and GARTC concerns. Provide staff liaisons from the City, Bernalillo and Sandoval Counties, and other area departments of transportation to attend GABAC and GARTC meetings and to work on GABAC and GARTC issues on a routine basis.

Objective 2: Develop and Maintain a Continuous, Interconnected and Balanced Bikeway and Multi-Use Trail Network

1. Develop an interconnected network of bikeways on 1) local streets (bike routes and Bicycle Boulevards), 2) arterial streets (bike lanes), 3) along limited access arterials (separated multi-use trails), and 4) along arroyos, drains or utility easements. Encourage developers of walled subdivisions to provide connectivity between their developments and adjacent bikeways.
2. Link existing and proposed trails to form a connected network.
3. Improve bicycle connections between schools (elementary through college) and neighborhoods to encourage bicycling by children, teenagers and young adults.
4. Provide bicycle facilities at half-mile spacing intervals on average throughout the city. Increase on-street bikeway mileage from the current 365 to 500 by the year 2020 and 650 by the year 2030. Increase multi-use trail mileage from the current 175 to 200 in the year 2020 and 240 in the year 2030.

Measurement: Prepare ~~a biennial~~ an annual report of the bicycle facilities that have been constructed.

5. Give increased priority to achieving connectivity of the bikeway network when planning and programming all roadway and bikeway improvements as appropriate.
6. Plan, program, and implement special provisions for crossings of high-volume, multi-lane streets. Review successful treatments utilized within other communities for difficult crossings.
7. Concentrate bicycle improvements for a five-mile radius (“hub and spoke”) around major employment centers, schools, parks, and other activity centers.
8. Coordinate and develop interconnected bikeway improvements and standards between the City and adjacent jurisdictions, including Bernalillo County, Sandoval County, Los Ranchos, Rio Rancho, Corrales, and KAFB.
9. Monitor the implementation of elements within the *Bikeways and Trails* ~~Master-Facility~~ Plan and update the Plan at ~~five-four~~ year intervals.

Objective 3: Use Bicycle and Pedestrian Friendly Standards and Procedures for On-Street Bicycle Facilities and Multi-Use Trails

1. Restripe ~~all~~ collector and arterial roadways (where ~~practical~~ designated on the Bikeways Map and per NACTO and AASHTO guidelines) to provide bike lanes, or minimum outside lane width of 14 feet.
2. Provide a striped bicycle lane or shoulder as described in chapter 23, section 5, subsection N of the City’s Development Process Manual, in conjunction with NACTO and AASHTO bicycle facility design guidelines, on all new, rehabilitated or reconstructed roadways, as indicated in the Master-Facility Plan.

3. Provide striped lanes/shoulders of at least five feet wide, from face of curb where curb and gutter exist, on all new or reconstructed bridges, underpasses, and overpasses, [where not otherwise constrained or to the extent feasible](#).
4. [Selectively](#) plan and design for bicycle travel with all intersection improvements - include 5-foot bike lanes or minimum curb lane widths of 15 feet through intersections.
5. Include a through phase for all traffic signal timing plans at signalized intersections on roadways having designated bicycle networks.
6. Modify existing or install new traffic signal detection equipment (i.e., inductive loop, video detection, or pushbutton) to make all traffic signals bicyclist-responsive [within need-based areas and as resources permit](#).
7. Implement other design considerations, per the current versions of the [NACTO Urban Bikeway Design Guide](#), the AASHTO Guide for the Development of Bicycle Facilities, the “Design Guidelines” section of this plan and other appropriate design reference guidelines.
8. Evaluate and adjust traffic signal timing of the vehicle phase change and clearance interval to provide adequate time for bicycles at signalized intersections on designated bicycle networks.
9. On all trails, develop strategies and use design techniques on available right-of-way to minimize conflict of use.

Objective 4: Provide ~~a High Standard of an Elevated Emphasis on~~ Maintenance along Roadways & Trails

1. With On-Street Bikeway and Multi-Use Trails, improve and fully fund the street maintenance and sweeping program. Establish the highest priority for allocation of street sweeping resources to sweeping all [bike routes and bike lanes in response to 311 requests and at least once per month and bike routes on local streets](#) a minimum of four times a year. Multi-use trail sweeping should be performed on a regular basis and as requested.

Measurement: Request the annual data on frequency of scheduled sweeping for the on-street bikeway and multi-use trail network, ~~along with the number and location of spot sweeping requests based on 311 call volume~~. Establish a database to track trends and provide data that can be used refine scheduled sweeping and maintenance budget request.

2. Establish weed and vegetation control procedures to reduce the occurrence of noxious weeds (i.e., puncture vine) and plants that block sight lines or grow within two feet of [trails or within](#) bicycle facilities.
3. [Effectively M](#)aintain street surfaces on designated bikeway and multi-use trails ~~to a high standard~~, including elimination of lip between paved surface and gutter, elimination of manhole/water valves in bike lanes and maintenance of bicycle-[safe](#)friendly railroad crossings, drain grates, and cattle guards. Avoid use of chip seal/coating wherever practicable.
4. Maintain bicycle facility pavement markings and signing. Missing or defective pavement markings and signs shall be replaced or repaired in a timely manner. Retro-reflectivity of pavement markings and signs shall be in accordance with current MUTCD requirements.
5. Maintain arterial and collector street surfaces, including those not designated as bikeways, on a routine basis to reduce hazards (e.g., potholes, debris) for bicyclists who use these facilities.

6. Establish timely responsiveness to maintenance requests from citizens through the use of the City's 311 Citizen Contact Center or website or other means for citizens to report concerns.
~~Establish an agency goal of 48 hours to address these requests.~~
Measurement: Monitor response time for the maintenance requests and provide follow-up on the type of response. Report annually the number and type of request being made.
7. Maintain bicycle routes and lanes ~~to high standards~~ through construction projects, referring to Chapter 6, "Temporary Traffic Control," of the MUTCD ~~and maximize maintaining~~ curb lane widths (i.e., provide lane widths of 14 feet or greater) through construction projects on roadways ~~that do not have bike lanes that would otherwise contain a bike lane or bike route~~. Where this is not feasible, provide appropriate bicycle friendly and reasonably direct detours and detour signing, ~~per NACTO, AASHTO, and/or other City standards~~.
8. Encourage a bottle deposit program in order to reduce littering of roadways and bike facilities with broken glass.

Objective 5: Implement a Comprehensive Program to Increase Public Awareness of Bicycling

1. Develop and use video and audio Public Service Announcements (PSAs) and other means, such as billboards, to promote general public awareness and acceptance of bicycling and to promote bicycle ~~safety~~ education. Target use of PSAs on television/local radio stations for specific community events, especially during the annual Bike Month.
2. Provide specific line item agency funding to support public bicycling awareness programs and "Share the Road" campaigns.
3. Encourage wide-spread support and participation by bicycle shops, bicycle clubs, the GABAC, GARTC, and other bicycle interest groups in efforts to promote public awareness of bicycling.
Measurement: Monitor membership and/or participation and growth.
4. Increase public outreach efforts, including video and audio PSAs to educate motorists on bicyclists' rights and responsibilities. Encourage the inclusion of bicycling-related questions in motor vehicle driving license tests as a means to raise awareness of bicyclists' rights and responsibilities.
5. Heighten public awareness of bicycle planning efforts and ensure on-going citizen participation and support for bikeway development. Provide periodic news releases for bicycle planning and bicycle system development and actively solicit public input.
6. Work with major employers throughout the Albuquerque to encourage commuting by bicycle among their employees and to increase motorists' awareness to share the road.

Objective 6: Educate All Bicyclists on Legal, ~~Safe,~~ and Predictable Behavior

1. Develop, distribute, and update annually a bicycle map of the Albuquerque including the communities of Albuquerque, Los Ranchos, Rio Rancho, KAFB and metropolitan areas of Bernalillo County.
2. Distribute a user-friendly Bicycle Commuter Handbook, which includes commuting, ~~and safety~~ and safety tips and laws related to bicycling.
3. ~~Develop and f~~ully support a bicycle education program in Albuquerque's elementary and secondary schools as part of current physical education requirements.

4. Encourage and support head injury awareness and helmet use through awareness of state laws, educational brochures, and programs.
5. Provide full support for the ~~Bicycle/Pedestrian Safety Education Program~~ B&PSEP staff in their work on bicycle education and in developing and overseeing a program for bicyclist education.
6. Continue development and use of video and audio PSAs, as well as short instructional safety videos to promote proper and legal bicyclist behavior.
7. Continue and expand Police Bicycle Patrols and dedicate a distinct percentage of their time to educational efforts on proper bicycling behavior.
8. Provide specific line item funding to support bicyclist education.

Measurement: Report the annual budget that is used for bicyclist education.

Objective 7: Promote Trail Use and Bicycling as a Non-Polluting, Cost-Effective and Healthy Mode of Transportation and Recreation

1. Continue and expand marketing efforts to promote bicycling as an alternate mode of transportation, especially through cooperative efforts with a regional Travel Reduction/Rideshare Program. Work with businesses to provide bicycle commuting information to employers and employees and to learn how bikeways to and from their locations can be improved.
2. Provide outreach and personal travel cost information that shows how bicycle transportation can be beneficial to both employees and students.
3. Prioritize implementation of multi-use trails, which contribute key linkages to the on-street bikeway network, including interim trail improvements where needed and spot safety trail improvements.
4. Promote air quality benefits of bicycling through public outreach efforts to major public and private sector employers, such as the University of New Mexico (UNM), KAFB, Sandia National Laboratories, Intel, and area schools.
5. Develop and support cash incentive programs to promote bicycling, such as parking cash-out allowances (i.e., cash payments to bicyclists in lieu of employer-provided parking) for City, UNM, KAFB, and other employees who work for public or private sector employers.
6. Develop and implement bicycle parking ordinances where they do not currently exist. Monitor and fine-tune existing local bicycle parking ordinances based in part on bicyclist and business feedback and recommendations.
7. Continue and expand the interface between bikes and buses, including such features as bicycle racks on all buses and bicycle racks and lockers at park-and-ride lots. Promote bike/bus programs through ABQ Ride literature and PSAs.
8. Develop and implement specific incentive programs to encourage existing businesses and other entities to provide facilities for bicycling, such as bicycle racks, bicycle lockers, changing areas, showers, clothes lockers, and guaranteed ride home programs.
9. Develop and distribute to employers short videos that promote bicycle commuting, demonstrate bicycle commuting tips, show legal and safe predictable safe and lawful riding techniques, and promote bicycling awareness and acceptance.
10. Promote organized bicycle events and racing on city streets as a means of increasing public awareness of bicycling as a viable sport for public viewing and participation.

11. Promote the health benefits of cycling as a way of reducing stress, increasing daily physical activity, minimizing the risk of coronary heart disease, and controlling weight effectively.

Objective 8: Develop and Implement a Traffic Law Enforcement Program for Bicyclists and Motorists and Linked with Education Program Efforts

1. Update or develop materials for use by law enforcement personnel to support education and enforcement efforts.
2. Commit appropriate police time (bicycle and motor vehicle patrols) to target bicyclist and motorist enforcement efforts.
3. Develop and implement a consistent, balanced traffic law education program for law enforcement personnel for improving motorist and bicyclist compliance with traffic laws.

Objective 9: Develop and Maintain Databases Useful for Bicycle Planning, Prioritization of Bicycle Improvements and [Accident-Crash](#) Prevention

1. Periodically conduct community-wide public opinion surveys to: 1) determine reasons why people do or do not ride bicycles; 2) develop bicycle trip patterns and purposes; and 3) gain input on bicycle projects and programs that could improve bicycling in Albuquerque.
2. Routinely conduct and update bicycle counts to estimate usage levels and to help determine progress toward achieving future bicycle mode split goals. Conduct before and after bicycle counts for roadways that are reconstructed or restriped to have bicycle lanes and for other improvements to bikeways to gauge the effect of prioritized improvements.
3. Maintain and update the bikeway and multi-use trail network inventory developed as part of the planning process. Maintain and update the bicycle [accident-crash](#) database. Use the database to identify high [accident-crash](#) locations and/or high [accident-crash](#) severity locations to help prioritize bicycle project and program improvements. Review each bicycle collision/[accident-crash](#) ~~in a timely manner to identify system deficiencies and potential improvements. in order to assess site conditions to determine if the incident location could be targeted for system improvement.~~

5. Procedures for [Trail](#) Design, Development, & Review

The Design Development and Review Process was developed by the Parks and Recreation Department and is intended to be used for public as well as private trail development.

Private trails are to be constructed to City Trails Standards even if proposed to be maintained by a private entity in the unlikely case that the City may have to maintain the trail in the future. Private trails available for public use shall be included on the Trails Map. Private trails located within gated communities and maintained by a Home Owners Association shall not be included on the Trails Map.

All trails shall be reviewed and approved by the Parks Management Division and Trails Planner prior to review and approval for construction by the Design Review Committee (DRC).

[Trail System Implementation Approach](#)

[The Comprehensive Plan identified a range of “Possible Techniques” for implementation of multi-purpose network of open areas and trail corridors, which is provided in Policy II.B.1.f. The](#)

implementation techniques relate to the planning and design of arroyo corridors and irrigation ditches and also include funding and safety measures. As the City explores new trail corridors, we should:

1. Incorporate a multiple use concept for suitable arroyos and irrigation ditches into corridor, sector, and site development plans.
2. Control development that would inhibit drainage or open space purposes of arroyos.
3. Obtain adequate right-of-way for multiple-use of designated arroyos in developing areas and coordinate design between the public and private sectors through subdivision and site development plan processes.
4. Require planning and construction of pedestrian, equestrian, and bicycle crossings where designated arroyos and ditches intersect major streets and highways as a component of transportation projects.
5. Identify trail corridors through rank three corridor and sector development plans to be dedicated by the Subdivision Ordinance. Fund trails and associated public amenities through Capital Implementation Program bond issues, and other financing methods.
6. Investigate use of ditch/acequia easements or rights-of-way for open space purposes. Coordinate planning efforts with property owners adjacent to irrigation ditch system and the Middle Rio Grande Conservancy District.
7. Work with all public agencies and the State legislature to ensure that vacated irrigation ditch rights-of-way or easements are retained as part of the Major Public Open Space network.
8. Institute **safety barrier protection** measures along irrigation ditches before inclusion in any multi-purpose network.
9. Work with the private sector to establish motorized recreational vehicle areas separate from the pedestrian, equestrian, and bicycle-oriented trail corridors and Major Public Open Space network.

Developer Requirements/Future Trail Segment Construction

Future proposed trails shown on the Bikeways and Trails Map and future Major and Minor Arterials and Collectors shall be built by developer at time of development.

Based on the latest population projections, the City can expect a significant increase in population, especially on the West side of Albuquerque. The recently released “Paseo del Norte High Capacity Transit Study Alternatives Analysis Report” dated August 2014 is proposing major changes in the way the residents of Albuquerque will travel around the City. A Bus Rapid Transit System such as the “Potential BRT Corridors” suggested in the Study could result in an increase in bicycle commuting as a way of supplementing a BRT mode for access to the Major Employment Centers as well as to Parks, Open Space, Trails, Libraries, Community Centers and other public facilities. Although the Bikeways and Trails Facilities Plan will precede any adoption of a BRT program for the City, the Bikeways and Trails Plan may be updated in the near future to include bicycle commuting w/BRT and recreational access as part of a Transportation System. With more research and information, the City can develop policies that require coordination between City departments to assure access to bike facilities and trails. In the meantime, City policy remains that if a trail and/or bicycle facility is shown on the Trails Plan as proposed where a property is being developed, the development will be required to construct and maintain said facility. This policy is consistent with the 1993 Trails and Bikeways Facilities Plan policies.

As it is not possible to foresee the exact location of future development, new development within these developing areas shall also be subject to the following requirements:

Future development areas within the City boundary without a proposed roadway system shall be ~~identified in a future study and be shown on the Bikeways and Trails map in either shading or textured as considered to be~~ “Growth Areas.” These Growth Areas are envisioned to develop within the next 10 years as the City population and land area expand – particularly on the west side and in the southwest area. It is not possible to foresee the exact location of future streets; therefore, new development within this “Growth Area” shall be subject to the following requirements as roadways are approved and developed, regardless of whether they are identified on the Bikeways and Trails map:

1. The 1993 *Bikeways and Trails Facilities Plan* requires trail dedication and platted access for proposed trails shown on the Trails Map as part of the Development Review and Approval Process. This requirement shall remain with the adoption of this 2015 *Bikeways & Trails Facility Plan*.
2. Future development requests with major ~~or~~ arterials, minor arterials, or collector streets shall include provisions for off-street trails in addition to required sidewalks within the right-of-way. Major Arterials shall have minimum 10’ wide trail in addition to standard sidewalk on both sides of the roadway to reduce pedestrian and bicycle crossings of the streets. Local streets shall not be required to provide a separate bicycle facility. When new Development is proposed to provide a trail or trail corridor, a platted public access easement (“Neighborhood Pathway”) shall be granted to the City.
3. All public and private development shall be built to the minimum design standards, as adopted in the *Bikeways & Trails Facility Plan* and/or the Development Process Manual. Facilities that cannot meet these minimum standards shall demonstrate the need for a design variance and present the request to the Advisory Group, DMD Engineering Division, and the Bike and Trail Coordinators, as appropriate. DMD Engineering Division shall make the final determination.
4. It is the City Parks & Recreation Department’s policy that trails “in-lieu of sidewalk” will no longer be accepted. The design requirements for trails and sidewalks, as well as the patterns of use, are different and sometimes conflicting. Therefore, where trails are identified on the proposed facility map, they should be provided in addition to a sidewalk that meets City standards. Existing facilities that do not meet the design standards of a multi-use trail (as defined in Chapter 7) shall be considered asphalt sidewalks.
5. Where a proposed future trail is shown on the map to be on or to cross the property, the trail shall be built by the Developer to City Standards (as defined in Chapter 7) and dedicated to the City for public trail use. The Parks and Recreation Department must accept a trail for it to be included in the Trail System and on the Trails Map.
6. If a developer chooses to include trails within a subdivision, but a trail is not identified on the Bikeways and Trails Facilities Plan, it is still to be developed to City Standards (as defined in Chapter 7). If a proposed trail is built, but not accepted by City Parks and Recreation Department due to the trail not meeting the minimum requirements of the Design Manual and any other City Standard Specifications, or if the Department determines that the trail does not meet needs of the overall trail system, a trail maintenance agreement will be created to identify the owner or

developer that will take maintenance responsibility for the trail. The City will therefore be relieved of liability for that particular trail or trail section.

7. If a trail cannot be built by the Developer at the time of development review and approval, due to development phasing or other necessary delay, a trail easement for public use shall be dedicated to the City.

4-8. Where trails are provided, a sidewalk may be on only one side of the street if the other side of the street is constructed with a minimum 3' wide soft surface stabilized crusher fines path adjacent the minimum 10' paved trail surface.

5-9. Trails designation and approval shall occur at the Development Review Board (DRB) and design shall be reviewed and approved by the Parks Management Division prior to the Design Review Committee (DRC). All paved trails are to be designed to accommodate different types of users – including cyclists (upright, recumbent, and children), pedestrians (walkers, runners, people using wheelchairs, people with baby strollers, people walking dogs), skaters, equestrians, and people with physical challenges.

6-10. Trails should be designed to meet the current ADA standards to the maximum extent feasible. Situations that warrant exceptions to this requirement include, but are not limited to, various constraints posed by space limitations, roadway design practices, slope, and terrain. At such time as new ADA standards are adopted by the U.S. Access Board, the City shall conform to those new standards.

7-11. The City will only maintain trails and bikeways that are approved for acceptance by the Parks & Recreation Department to be part of the Trail system, are situated built within the public right-of-way, and are built to City standards.

Documents to Revisit

- State of New Mexico Annotated Code
- City of Albuquerque Code of Ordinances
- City of Albuquerque Zoning Code
- Development Process Manual

B. Legislative Recommendations

The State of New Mexico Code, City's Code of Ordinances, Zoning Code, and the Development Process Manual (DPM) were reviewed where they address the design and use of bicycle and trail facilities. In most cases these documents provide adequate information for developers, users, and law enforcement. However, to meet the goals set forth in this plan the following changes are recommended: Include an additional method for the hand signaling of a right-turn movement, add parking restriction in bicycle lanes and marked bicycle boxes, improve reporting of bicycle crashes by law enforcement, remove bicycle front fork size restriction, and consider redefining the way a bike lane width is referenced in the DPM when it is updated.

These three documents have extensive sections that pertain to the design and use of bicycle and trail facilities. In most cases these documents provide adequate information for developers, users and police; however to meet the goals set forth in the *Bikeways & Trails Facility Plan*, the following changes are recommended:

1. New Mexico State Motor Vehicle Code

New Mexico Code Chapter 66 contains statutes describing legal uses of roadways for all system users (e.g., cyclists as well as motorists). The following statute describes legal hand and arm signals:

§66-7-327. Method of giving hand and arm signals: All signals herein required given by hand and arm shall be given from the left side of the vehicle in the following manner and such signal shall indicate as follows:

- A. left turn: hand and arm extended horizontally;
- B. right turn: hand and arm extended upward; and
- C. stop or decrease speed: hand and arm extended downward.

Proposed Change: Amend subsection B to allow bicyclists to signal a right turn by extending their right hand and arm horizontally. Example language can be found in Oregon’s statute ORS 811.395.2.A, which reads, “To indicate a right turn, either of the following:

1. Hand and arm extended upward from the left side of the vehicle. A person who is operating a bicycle is not in violation of this paragraph if the person signals a right turn by extending the person’s right hand and arm horizontally.
2. Activation of front and rear turn signal lights on the right side of the vehicle.”

Discussion: While enclosure within a motor vehicle prohibits the use of the right hand for signaling in many situations, a cyclist has the potential freedom to signal turning movements with either the left or right hand. In addition to having this potential freedom, many youth educators recommend that signaling a right hand turn with the right arm can be less confusing for youthful riders.

The city can work with legislative advocates to amend the existing state law during a future legislative phase. The Bernalillo County Sheriff’s Office has been active in advocating for this change.

2. Traffic Code, Albuquerque Code of Ordinances

In general, there are some items about driver behavior towards bicyclists/pedestrians that should be added to the general traffic regulations, not buried IMO

§8-5-1-1 Stopping, Standing or Parking Prohibited – No Signs Required

No person shall stop, stand or park a vehicle except when necessary to avoid conflict with other traffic or in compliance with the law or the directions of a police officer or traffic control device, in any of the following places:

Discussion: Bicycle lanes are travel lanes. It can potentially increase conflicts for cyclists using a lane to have to weave in and out of motor vehicle traffic to avoid cars parked in the bike lane. The DPM, in section N.3.c.2., also states the following:

“Bike lanes are traffic lanes, therefore, automobile parking or motor vehicle use of a bike lane as a driving or passing lane should be prohibited.”

Yet elsewhere in the DPM, Appendix A, Section a, is a statement that indicate that in bike lanes “vehicle parking and cross flows by pedestrians and motorists [are] permitted.”

Recommendation: Add the following:

- (O) In a marked bicycle lane
- (P) In a marked bicycle box

§8-5-1-15 Parking Not to Obstruct Traffic

No person shall park a vehicle upon a street, other than an alley, in such a manner or under such conditions as to leave available less than ten feet of the width of the roadway for free movement of vehicular traffic.

Discussion: This section of the traffic code does not specifically address bicycle lanes as vehicular travel lanes. As discussed in above for §8-5-1-1, bicycle lanes should specifically be mentioned as a travel lane.

Recommendation: Add the following: “Bike lanes are traffic lanes, therefore, automobile parking or motor vehicle use of a bike lane as a driving or passing lane is prohibited.”

§8-2-9-1 and 8-2-9-2 Accidents, Reports

Discussion: Bicycle crashes are under-reported and a complete record of bicycle related crashes in the City will be a valuable tool for future planning, identification of roadway conflicts and identification of areas in need of better enforcement of traffic laws.

Recommendation: Each of the items in these two sections should be re-worded to clearly include bicycle crashes.

3. Zoning Code, Albuquerque Code of Ordinances

§14-16-3-1 Off-Street Parking, Parking for Bicycles

An applicant for a building permit for construction of a new building or building addition of 200 square feet or more shall provide parking in accordance with the general requirements of this section. In addition, new buildings and building additions over 2500 square feet constructed after November 1, 2002 shall also be required to comply with all parking design requirements set forth in this section.

(B) Parking for bicycles shall be provided on-site or on a site within 300 feet of the use, measured along the shortest public right-of-way, as follows:

- (1) Residential use, five or more dwelling units or mobile homes per lot: one bicycle space per two dwelling units.
- (2) Dormitory, fraternity or sorority house: one bicycle space for each six persons in residence.
- (3) Nonresidential uses: one bicycle space per each 20 parking spaces required for automobiles and light trucks, but not less than two spaces per premises, unless otherwise specified below:
 - (a) Drive-in theater, mortuary, or motel or hotel rental unit: None.
 - (b) School elementary and middle: one bicycle space for each 20 students.
 - (c) School high, commercial, and trade: one bicycle space for each 50 students.

Discussion: The trigger for requiring bicycle parking is new construction or an addition over 200 square feet in multi-family residential and non-residential developments. Bicycle parking requirements are

based on the total number of vehicle spaces required for each different land use type, which is described in §14-16-3-1(A). There are additional requirements for schools, which are likely to have a higher number of cyclists. The existing bicycle parking code does not include requirements for long-term parking.

Recommendation: Add parking requirements for long-term bicycle parking, where applicable. The following rates are provided for consideration from the 2010 Bicycle Parking Guidelines produced by the Association of Pedestrian and Bicycle Professionals. The minimum requirement for long term and short term parking is 2 spaces each. [The General Parking Regulations should also be revised to add more specificity in the type of rack and spatial dimensions of bicycle parking areas according to the APBP guidelines.](#)

[Standard Bicycle Parking Rates:](#)

Civic/Cultural – Non-assembly (library, government buildings, etc.): 1 space for each 10 employees, long-term parking; 1 space per 10,000 SF building area, short term parking

Civic/Cultural – Assembly (Church, stadium, park, etc.): 1 space for each 20 employees, long-term parking; short term parking for 2% maximum expected daily attendance.

Health Care/Hospital: 1 space for each 20 employees, long-term parking; 1 space per 20,000 SF building area, short term parking.

Rail/bus terminals and stations/airport: spaces for 5% of projected am peak period of ridership, long term parking; spaces for 1.5% of projected am peak period daily ridership.

Retail – food sales: 1 space for each 12,000 SF of building area, long term parking; 1 space for each 2,000 SF of building area, short term parking.

Retail – general: 1 space for each 12,000 SF of building area, long term parking; 1 space for each 5,000 SF of building area, short term parking.

Office: 1 space for each 10,000 SF of building area, long term parking; 1 space for each 20,000 SF of building area, short term parking.

Auto-related (automobile sales, rental and delivery, automobile repair, servicing, and cleaning): 1 space for each 12,000 SF of building area, long term parking; 1 space for each 20,000 SF of building area, short term parking.

Manufacturing and Production: 1 space for each 15,000 SF of building area, long term parking; the number of short term parking spaces required is prescribed by the Planning Director.

4. Albuquerque Development Process Manual (DPM)

[The City aims to create a Unified Development Ordinance \(UDO\) that will modernize and update the standards provided in the Development Process Manual \(DPM\). This effort will take place over the next several years, and the portions that relate to trails and bikeways should consider the standards and practices developed in this Facility Plan. Generally, the current DPM or a future UDO should update the standards for bicycle facilities to align with and reflect modern best practices, such as provided in this document and the NACTO Bike Guide.](#)

Volume II, Chapter 23, Section 1, Governing Regulations: This list of City regulatory documents pertaining to street design should be modified to reference the *Bikeways & Trails Facility Plan, Chapter 7, Design Manual*, for the design and specifications of bikeway and trails.

Volume II, Chapter 23, Section 5, Miscellaneous Street Design Criteria, N.1.2.a. Development of Bike Lanes on New or Reconstructed Roadways: Cross section diagrams show the bike lane measured from edge-line of the outside lane to the face of the curb. The language in the manual indicates the measurement should be from the painted edgeline to the edge of gutter asphalt pavement. The ~~diagrams~~ **Figure 2** should be updated to match the text.

Discussion: The guidance given is contradictory and should be consistent to ensure the desired outcome.

Volume II, Chapter 23, Section 3, Engineering Design Criteria: The list of guidance documents should be amended to reflect more current documents and best practices. The list should include documents listed in Chapter 7 of this Plan, including:

- AASHTO Policy on Geometric Design of Streets and Highways, 2012
- Manual on Uniform Traffic Control Devices (MUTCD), 2003
- Public Rights-of-Way Accessibility Guidelines (PROWAG), 2007
- ADA Final Guidelines for Outdoor Developed Areas, 2013
- National Association of City Transportation Officials (NACTO) *Urban Bikeway Design Guide*, 2014.

C. Maintenance & Operations Recommendations

1. Trails Maintenance Practices & Policies

Current Practices

The current Park Management maintenance protocol is to:

Maintain a clear 3' recovery zone on both sides of trails, spraying for weeds both sides of trails, mowing both sides of trail to keep weeds and grasses at a manageable height, sweeping trails on an as-needed basis. Asphalt repairs include filling in cracks and remove and replace sections of trail as needed. This is limited due to funding and staffing, major repairs need to be contracted when funding is available. Painting and replacing bollards as needed, sign replacement and installation as needed, pruning of trees and shrubs that encroach into bike trails; this is on an as needed basis.

In practice, however, this procedure may not be effective, and more detailed written procedures for systematic evaluations, routing and preventive work, as well as spot repairs are needed. And these will have little meaning unless there are adequate staff and resources to perform the work. Park Management's work is largely driven by 311 complaints; and there is a backlog of complaints, some of which are duplicative. Staffing for trail maintenance has not significantly increased since 1993 when there were 39 miles of trails; now, Park Management maintains about 150-Miles of paved trails. In 2014, responsibility for the maintenance of the medians was transferred from Park Management to Solid Waste. It is hoped that by separating the functions, the City can develop a sustainable and effective trails maintenance program. Park Management is implementing the YARDI system. This will help with scheduled maintenance and made the 311 dispatching system much more efficient.

Bernalillo County, Open Space Division, and NMDOT also maintain paved trails in the Albuquerque area. In addition, AMAFCA, MRGCD, ~~COA Street Maintenance~~, and ~~Weed and Litter~~ other agencies may perform work along trail corridors. There is sometimes informal coordination and occasional opportunities for cooperation, but there is no regular coordination among crews working in the same area.

One of the most common complaints is weed control, especially Puncture Vine (goat heads). Effective weed control is highly dependent on timing. Limited manpower limits the ability to apply herbicides at the optimum time. City Open Space [Division](#), which has a full time worker to manage a portion of the Paseo del Bosque Trail, has managed to reduce the goat head population because of his ability to stay on top of the problem.

Trail Maintenance Recommendations

Best Management Practices

PM should establish maintenance standards and a schedule for inspections and maintenance activities and move away from the 311 driven maintenance approach. Maintenance programs can be divided into three levels depending upon the frequency of services needed:

- Yearly evaluation to address items such as crack repair, sign replacement, painting, repairs (fencing, gates, benches, etc.) drain clearing and facility evaluation.

- Regular maintenance: Weed control (spraying and manual), mowing, sweeping, pruning, trash removal, empty trash cans and dog waste dispensers.
- As needed: Flood or rain damage repair (silt clean-up, culvert clean out, etc.), bollard repair, graffiti removal, snow/ice removal, irrigation repairs, other immediate [safety-hazard remediation](#) issues.

The City should work toward appropriate funding for trail maintenance with a goal to meet national standards for best management practices. To meet these standards requires adequate staffing, equipment, and supplies. PM is currently funded at about 60% of the national standard for maintaining each mile of asphalt trail. PM is upgrading its equipment to obtain smaller, more maneuverable equipment more suited to working on the trails without causing damage or disturbing desirable vegetation.

Division of Maintenance Responsibilities and Need for Collaboration

The number of agencies responsible for different sections of the trail network, or who have partial responsibility for maintenance of a trail corridor such as graffiti removal and weed control (in the broader corridor outside the narrowly defined trail corridor), or for at-grade crossing of streets, makes coordination of maintenance difficult.

In general, Park Management is responsible for off-street trails and trails within neighborhood or regional park facilities, including trails along AMAFCA channels. Bernalillo County is responsible for trails outside of the City limits. The Open Space Division is responsible for trail within Major Public Open Space and trails along open space arroyos. Other agencies which have trail or bikeways maintenance duties include: Street Maintenance ([on-street only](#)), [Traffic Engineering \(signs and pavement markings\)](#), NMDOT, the National Park Service, neighborhood associations, and private parties (such as homeowner’s associations). In some cases, one agency is responsible for the day-to-day duties and another for the long term care of the trail itself; or one agency is responsible for the trail and another for the upkeep of the wider right-of-way.

[Governmental agencies responsible for trails are delineated in the *Trails and Bikeway Facility Plan*. Presently Park Management is responsible for off-street trails and trails within neighborhood or regional park facilities, including trails along AMAFCA channels. Bernalillo County Parks and recreation is responsible for trails outside of the City limits. The Open Space Division is responsible for trails within Major Public Open Space and trails along open space arroyos. These governmental agencies responsible for trails are delineated in the Bikeways & Trails Facility Plan Maintenance map \(Note: this is a general map and may not reflect all of the details regarding some segments of trail; and there are areas that need clarification\).](#)

[The number of responsible agencies makes coordination of maintenance difficult.](#) Possible solutions to some of the difficulties created by overlapping responsibilities include:

- [Creating a government agency whose primary responsibility is to maintain and promote trails in the region. However, a new level of government may be met with skepticism.](#)
- [Promoting the creation of a regional non-profit trails organization to maintain and support trails.](#)
- Work should continue among agencies to clarify and coordinate maintenance responsibilities.
- The City should pursue opportunities to share duties or trade responsibilities where it would be more efficient for one agency to manage an entire corridor.

- The City should evaluate if there is expertise in some departments that might be helpful to Park Management, for example, whether Street Maintenance or an on-call contractor for the City could help with crack repair, such as is done in Bernalillo County.
- The City should sponsor an annual “trail maintenance workshop” with presentations on practices and sharing of strategies and experiences. In addition to discussing issues and approaches it could help build relationships among various personnel, and provide a venue to clarify where there are opportunities to share responsibilities and promote more efficient use of resources. It could be internal to the City (Park Management, Weed and Litter, Street Maintenance, Open Space [Division](#), etc.) or broader, including Bernalillo County, NMDOT, MRGCD, AMAFCA, Rio Rancho, etc. An initial concept: AMAFCA has offered to host such an event in their conference room. There would be display maps for people to write on and facilitated discussions could cover subjects such as: practices, equipment, costs, future collaboration, overlapping responsibilities, and gaps. A summary of the discussions and outcomes would be prepared for the participants and managers.
- Looking at long term solutions, some considerations might include creating a cross-jurisdictional agency whose primary responsibility is to maintain and promote trails in the region, or promoting the creation of a regional non-profit trails organization to assist in supporting maintenance of the trails.

Inventory and Tracking

An accurate inventory, keyed to the Trails Maintenance Map is needed, with consistent names, confirmed mileages, and clear beginning and end points. Park Management plans to implement the YARDI system which is an automated work order system. Supervisors will receive 311's in real time for their respective areas, triage and send to appropriate personnel to address and close out. Employees will be assigned a tablet that will be used to input, communicate and view assigned work. YARDI will be used to schedule preventive maintenance tasks (be more proactive) and for inventory control, including parts, tools, time and areas maintained by Park Management. Eventually, utilizing signage, quick read codes, web site and apps there will be a platform for use by patrons of the trail system. YARDI will assist in organizing responsibilities of Park Management for various trail corridors, keeping track of requirements of license agreements, and maintaining schedules for regular inspections (as the system is being developed, these details are being included). The database and regular usage will allow PM to provide feedback to the trails community regarding how/when reported problems will be corrected.

Weed control and establishment of native grasses and plants

Effective weed control is highly dependent upon timing and ability to deploy manpower, whether removal is manual or chemical.

- The City should protect existing stands of native grasses and forbs and establish new stands to create a vegetative cover that is drought tolerant and reduces the intrusion of noxious weeds, overtime reducing the need for herbicides. This would make the trails more pleasant for users, less maintenance intensive, assist in preventing erosion at the edge of the asphalt, and address one of the most common citizen complaints about trail maintenance: goat heads.
- The entire right-of-way should be considered, in cooperation with other agencies that have responsibilities for maintenance in the corridor.

- Park Management might also support in-house training of workers to recognize desirable natives versus noxious weeds.
- More details on the how to address the problems with weeds are included in the Design Manual.

Upgrade the existing trails system to address maintenance issues

Parks should utilize capital project funding to develop an on-going urban trail renovation program. This would include evaluating priority trail rights-of-way for: ~~safety issues~~ ~~potential hazards~~; potential for establishment of native grasses and forbs; ADA upgrades; replacement of bridge decking; locating opportunities for amenities (such as seats and shade structures, and occasional trees and shrubs where feasible); bollard relocation; signage upgrades; and separation of user types where desirable.

- Projects should be coordinated with other infrastructure upgrades (arroyo channel repairs/replacement, asphalt trail re-surfacing, etc. and various funding sources should be evaluated, including: trail renovation funding in CIP program; participation from agency that owns and has responsibility for the right-of-way outside of the trail corridor (Street Maintenance, NMDOT, AMAFCA, other); and coordination with 50-Mile Activity Loop funding.
- Input should be sought from trail users, neighborhoods, trails maintenance crews, 311 logs and staff regarding priorities and guidance on how to implement specific projects.
- The Design Manual should be followed and re-seeding and mulching should be in compliance with City Standard specifications, modified if necessary to meet multiple objectives (e.g. erosion control).
- For major projects, the design engineer/landscape architect should include a concept plan for the long-term maintenance protocol if there are needs specific to that project that vary from routine maintenance practices.
- Park Management should evaluate each project as it is completed after one year and re-seed as necessary until grasses establish.

Use of volunteers and other workers

Park Management should maximize the use of volunteers, seasonal employees, community service workers, and inmate crews to enhance their ability to address problem areas. Use of volunteers requires a commitment of some employees with Saturday hours and ability to build regular communications with committed volunteers. The Adopt-a-Trail program hasn't been particularly effective thus far, but this program and trails clean up days (such as Company's Coming and National Trails Day) can have an impact with proper preparation and support. Community service workers haven't been utilized on trails due to the inconsistency of numbers available and difficulty of managing over a linear system. Inmate crews are reliable, but require organizational efforts up front and, again; management oversight is a big issue. Park Management should conduct strategic planning with key agencies and staff who are currently involved in these issues to consider how to best utilize these resources on the urban trails.

Maintenance Schedule

~~Maintenance programs can be divided into three levels depending on the regularity of services needed.~~

- ~~• Regular maintenance, performed weekly or monthly, includes such activities as mowing and landscape maintenance, sweeping and litter removal.~~
- ~~• Periodic maintenance, performed annually, includes crack repair, sign replacement, painting, drain clearing and facility evaluation.~~

- Occasional maintenance includes resurfacing or sealing the asphalt widening and furnishing replacement. This last level of maintenance can be accomplished on an as-needed basis.

Governmental agencies responsible for trails are delineated in the *Trails and Bikeway Facility Plan*. Presently Park Management is responsible for off street trails and trails within neighborhood or regional park facilities, including trails along AMAFCA channels. Bernalillo County Parks and recreation is responsible for trails outside of the City limits. The Open Space Division is responsible for trails within Major Public Open Space and trails along open space arroyos.

The number of responsible agencies makes coordination of maintenance difficult. Possible solutions include:

- Creating a government agency whose primary responsibility is to maintain and promote trails in the region. However, a new level of government may be met with skepticism.
- Promoting the creation of a regional non-profit trails organization to maintain and support trails.

2. On-Street Bicycle Facilities Maintenance Considerations Practices & Policies

See the recommendations in **Section 7.F of Chapter 7, Design Manual**. Also see the Policies for Bikeway & Trail Development, Section 6.A.4, Objective 4, “Provide an Elevated Emphasis on Maintenance along Roadways & Trails.”

Current Practices

For on-street bikeways, pavement preservation, signs, pavement markings and sweeping are the responsibilities of Municipal Development, typically through the Street Maintenance Division or Traffic Engineering Division. City streets are swept a minimum of four times per year on average, and upon request according to 311 calls that report debris in the roadway.

On-Street Facility Maintenance Recommendations

Like all roadways, bike lanes, routes, and bike boulevards require regular maintenance. This includes sweeping, maintaining a smooth roadway, and ensuring that the gutter-to-pavement transition remains relatively flat and installing bicycle friendly drainage grates. These considerations are particularly relevant to bike lanes, as cyclists have a narrow corridor to traverse.

Best Management Practices

Effectively maintain street surfaces on designated bikeway and multi-use, including elimination of lip between paved surface and gutter, elimination of manhole/water valves in bike lanes, installation of bicycle-friendly drainage grates, and maintenance of bicycle-friendly railroad crossings, drain grates, and cattle guards. These types of projects are typically accomplished through a facility redesign project, which would be led by DMD’s Engineering Division.

Avoid use of chip seal/coating wherever practicable. Use a small aggregate chip seal when resurfacing roads, and provide a level transition with the existing concrete gutter pan. Maintain arterial and collector street surfaces, including those not designated as bikeways, on a routine basis to reduce hazards (e.g., potholes, debris) for bicyclists who use these facilities. These maintenance actions are generally the responsibility of DMD’s Street Maintenance Division.

Maintain bicycle facility pavement markings, and pavement signs, signing and pavement loop detectors, and other signals. Missing or defective pavement markings and signs shall be replaced or repaired in a

timely manner. Retro-reflectivity of pavement markings and signs shall be in accordance with current MUTCD requirements. These maintenance actions are generally the responsibility of DMD's Traffic Engineering Division.

Establish timely responsiveness to maintenance requests from citizens through the use of the City's 311 Citizen Contact Center or website or other means for citizens to report concerns. This practice could be measured by monitoring response time for the maintenance requests and provide follow-up on the type of response. Report annually the number and type of request being made. This monitoring action could be completed by the City's bikeway coordinator.

Establish weed and vegetation control procedures to reduce the occurrence of noxious weeds (i.e., puncture vine) and plants that block sight lines or grow within two feet of trails or within bicycle facilities. Encourage a bottle deposit program in order to reduce littering of roadways and bike facilities with broken glass. These efforts could be led by the City's bike coordinator in conjunction with Parks & Recreation, Solid Waste, Planning, and City Council.

Maintenance of bicycle routes during construction

Maintain bicycle routes and lanes through construction projects, referring to Chapter 6, "Temporary Traffic Control," of the MUTCD maintaining curb lane widths (i.e., provide lane widths of 14 feet or greater) through construction projects on roadways that would otherwise contain a bike lane or bike route. Where this is not feasible, provide appropriate bicycle friendly and reasonably direct detours and detour signing, per NACTO, AASHTO, and/or other City standards.

Maintenance Schedule

With On-Street Bikeway and Multi-Use Trails, improve and fully fund the street maintenance and sweeping program. Establish the highest priority for allocation of street sweeping resources to sweeping all bike routes and bike lanes in response to 311 requests and a minimum of four times a year. Multi-use trail sweeping should be performed on a regular basis and as requested. Street Maintenance has one sweeper dedicated to bicycle lanes and to respond to 311 requests; typically bikeways are swept as part of regular road sweeping.

Measurement: Request the annual data on frequency of scheduled sweeping for the on-street bikeway and multi-use trail network, along with the number and location of spot sweeping requests based on 311 call volume. Establish a database to track trends and provide data that can be used refine scheduled sweeping and maintenance budget request. This monitoring action could be completed by the City's bikeway coordinator.

3. Citizen Maintenance Requests

The City has in place a centralized reporting system, "Citizen Contact Center," that can be used effectively to report problems and request maintenance. Several methods for reporting are available: call 311 by telephone, using Twitter and by visiting www.SeeClickFix.com. Comments are then routed to the appropriate people. To increase utilization of this service the City should promote its use by informing bike clubs and organizations and bicycle advocacy groups and consider developing a Public Service Announcement.

One of the challenges of the current 311 reporting system is that the case is closed after a work order is issued. There isn't a way for the public to know where in the queue their concern is to be addressed. The

City should explore adding another step to the 311 notification system that closes the loop after the work order is completed.

4. Spot Improvement Program

The City should consider implementing a “spot improvement” identification program where bikeways and trail users can provide recommendations. Soliciting comments from users can help the City identify specific problem locations that need maintenance and/or rehabilitation. Institutionalizing this process in the form of a spot improvement program can provide ongoing input and, in many cases, help identify problems before someone gets hurt. In addition, such a program can dramatically improve the relationship between an agency and the bicycling public.

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Figure 13: Trail Maintenance Map

(insert 11x17 map here)

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Figure 14: On-Street Facility Maintenance Map

(insert 11x17 map here)

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D. Monitoring & Evaluation

For evaluation efforts, the City's top priority should be to perform Annual Bicycle and Trail Counts. The resources needed to support this effort will primarily be staff time, so a lead city staff person should be identified who is able to set aside sufficient time to manage the count effort. Many communities seek volunteers to do the counts. It is recommended that the City follow the National Bicycle and Pedestrian Documentation Project (NBPDP) methodology, which recommends counts in September. The advantages of starting with the NBPDP approach is that a) count forms, training materials and instructions are ready for use and b) the results can be compared with communities around the U.S.

1. Trail and Bikeway Counts

User Counts

Annual or semi-annual counts: The City should consider participating in the annual National Bicycle and Pedestrian Documentation Project. This will help to better estimate existing and future bicycle and pedestrian demand and activity. This nationwide effort provides consistent model of data collection and ongoing data for use by planners, governments and bicycle and pedestrian professionals. Annual counts are normally conducted in mid-September. Additional a second set of counts, possibly in April, could be conducted at the same locations and time period of the September counts to better understand seasonal fluctuation in the number of cyclists. [If equestrian data is collected, the researcher should consult with equestrians for recommendations about locations, days, and times to perform user counts.](#)

Day long counts: The City should conduct day long (sunrise to sunset) counts at selected locations to better understand the off-peak user patterns and to accurately identify the peak user time of day. This data can reveal the recreational and utilitarian usage of the bikeways in the city.

Counts at high crash location: At locations identified as having experienced greater than normal crashes with motor vehicles the City should conduct bicycle user counts. These counts can provide data to help in the determination of the greater than normal crash rate. Evidence has shown that as ridership increases, crash rates decrease. It has been speculated that this can be attributed to the expectation of cycling activity.

Permanent count locations: Permanent, automated bicycle count locations can be established where the City would like to record daily bicycle use. The location selected can be based on the type of target user group such as commuters, recreational, utilitarian and students. The information gathered can be used in determining commute mode-share, provide a fuller understanding of variation of use by time-of-day, season, weather and special events and provide supporting evidence of the change in use of the targeted facility.

- Consider day-long counts at along key corridors to determine daily citywide use.
- Consider counts along high crash corridors without existing bicycle facilities to determine current level of use.
- Conduct annual or semi-annual counts at selected locations on bikeways and multi-use trails across the city.

2. Crash Data Collection & Analysis

Approach to Crash Data Collection:

- The detailed crash analysis presented in this report should be **repeated every few years** to identify high crash locations and solutions to improve [safety conditions](#) for non-motorized transportation users. This could be done as a part of a periodic bikeway and multi-use trails ‘report card’ that documents relevant metrics, including new bikeway miles, new trails and crossings, major completed projects, number of bicycles and other trail users, crash analysis, user satisfaction, public perception of [safety facilities](#), etc. This periodic review could be used to create updates to the *Bikeways & Trails Facility Plan* that can tune the plan’s implementation strategies to respond to changing [safety, best practices and](#) walking and bicycling patterns.
- The City should consider **education or enforcement programs** that address specific causes of crashes involving bicycles and other non-motorized transportation users. The most frequent type of crashes were instances where a car hit a bicycle at an angle.
- The City should consider a **detailed analysis of conditions along top crash corridors and at top intersections**. This analysis should help the city determine whether the higher numbers of crashes are related to difficult conditions or higher numbers of cyclists using the corridor.
- The majority of reported bicycle crashes have occurred on major roadways with four to six travel lanes, no dedicated bicycle facilities, and posted speeds of at least 35-mph. Future roadway design and corridor retrofit of these corridors should focus on **increasing safety through increased bicycle/vehicle** separation and enhanced crossing treatments.

3. Survey

The City should consider conducting a survey of the bicycle and trail users. This survey could be led by a local advocacy organization under the direction of the City. The survey results could be used to evaluate the City’s progress and identify areas of concern and evolving needs of the users.

- Consider programs to increase bicycle parking at high priority locations across the city.
- Continue and when possible expand education, encouragement and enforcement programs. Target these programs to key groups that are under-represented in the city’s current cycling demographic including women and groups that would benefit from education such as school age children.
- Consider placing high priority on filling gaps in the multi-use trail network.

E. Funding

1. State and Local Sources

New Mexico Department of Transportation

The Department of Transportation provides funds to match Federal-aid projects on New Mexico and U.S. highways within Albuquerque. [State and Federal Transportation Improvement Funds are administered through the MRCOG.](#)

New Mexico Legislature

During its annual legislative sessions, funds can be provided for bicycle projects through special appropriation bills (e.g., capital requests or memorials).

2. Local Sources

Capital Implementation Program (CIP)

Funding for capital improvement projects is provided through the General Obligation (GO) bond program and Urban Enhancement Trust Fund (UETF). Both the City of Albuquerque and Bernalillo County have set aside 5% of the Public Works Streets portion of their GO bonds to be used exclusively for bicycle projects, beginning in 1995. ~~The City set aside is equally distributed between the on-street (2.5%) and trails (2.5%) programs.~~ The GO bonds are obligated in 2-year cycles, ~~generating \$600,000 for the on-street system biennially.~~ Additional monies from the CIP (e.g., major pavement rehabilitation or specific roadway construction projects) may be used for bicycle projects. On-street bikeways will be incorporated into new roadway construction and street rehabilitation/resurfacing projects wherever feasible.

Gross Receipts Tax

A 1/4-cent gross receipts tax for fixing existing streets, building new roads, expanding transit and constructing bikeways/trails was approved by voters in 1999. A set percentage (4%) of this revenue, or \$1.65 million biennially, is earmarked for trails used for both commuting and recreational travel; however, no dedicated funds were specifically identified for on-street bikeway improvements.

Land Development

There also exists an opportunity to work with the private sector to implement bicycle projects. This is accomplished through right-of-way dedications, infrastructure improvements and/or impact fees. ~~Impact fees are deposited to the City's General Fund, which is allocated through the CIP and GO Bond Process.~~

Additional Funding Sources

Other funding opportunities include:

- City Council set-aside funds
- Municipal bonds
- Public/Private Partnerships
- Metropolitan Redevelopment Area projects
- Tax Increment Financing (TIFs), Special Investment Districts (SIDs), and Public Investment Districts (PIDs)

F. Summary of Implementation Actions

The following matrix lists the actions that the City will complete to implement this *Bikeways & Trails Facility Plan*. The actions are grouped according to work that is currently ongoing as a part of our standard practice today. The other sections classify future actions or projects as Short-Term, Mid-Term, and Long-Term. This Implementation Matrix should be used as a summary of the recommended actions and as a guide to realize the goals and policies proposed in this Facility Plan.

The following section, Chapter 7 Design Manual, provides standards and guidance for the design of specific bikeways and trails and should also be consulted as an implementation guide to improve the quality of our bikeways and trail system.

Table 10: Implementation Matrix on page X is arranged with several categories: Type of Project, Priorities, Actions, Deliverables and Lead Agency. Listed under the heading Type of Project are: CIP/Network Improvements, Administration, Data Collection and Analysis, Interagency Coordination, Maintenance, Planning and Programs. Priorities are listed as Ongoing, Short-term, Mid-term and Long-term. The Actions, Measurements, and Lead Agencies vary, depending on the implementation requirements. The following is a summary of the contents of the table broken down by the Type of Project. For more detailed information, refer to the ID numbers listed that correspond to the ID numbers found in the table.

CIP/Network

- Ongoing CIP/Network actions include increasing street bike mileage as well as trail miles and implementing new bikeways as roads are rehabilitated. (ID 1 & 7)
- Short-term action items include completing “Critical Links” identified in this Plan and assessing the need for new facilities. All new bridges, overpasses and underpasses should have a lane/shoulder of at least 5 feet. (ID 31, 32, 35 - 37)
- Mid-term actions will be using designs that minimize conflicts on trails and evaluating all collectors and arterials for striping to provide for bikes. Also prioritizing enhancements for unclear travel paths at major intersections and including major intersection improvements as part of the CIP. Strategies should be adopted for including trails and bikeways in all new subdivisions. (ID 57 - 61, 95)
- Long-term the plan calls for providing bike lanes or shoulders consistent with current development standards as well as AASHTO designs on all new or rehabilitated roadways and evaluating the extent of the system for each user type. In addition, the plan calls for developing and implementing a wayfinding network. (ID 99, 105, 106)

Administration

- Ongoing Administration actions include working with citizen groups to promote bicycling and walking and improving biking and pedestrian safety. Also, to continue to support land use regulations that enable trails and bikeways to be built and support programs related to education, outreach and encouragement as well as maintaining and leveraging local funding for construction and maintenance of trails. Departments within the City should communicate and coordinate requests for funding and representation at MRCOG. (ID 2 - 6)
- Short-term action items call for updating the short-term priority construction list every two years in conjunction with the Decade Plan as well as monitoring and documenting the implementation of the project and implementation actions in the plan. An annual report will be produced as documentation of these items. Ensuring routine training of pertinent staff and MRCOG is occurring and developing improved project identification, design and development through a Project/Technical Team is also a short-term action item. Evaluating and making recommendations regarding the current advisory groups and their effectiveness is called for. Conducting a biennial meeting among agencies with a summary of the outcome transmitted to the Mayor and City Council is an important action item, as is adopting a Complete Streets Ordinance and developing a city-wide policy for maintenance. (ID 21 - 30)

- Mid-term actions will be prioritizing trail amenity projects, creating a technical team to review major projects (in addition to DRC) and conducting annual training to address safety, maintenance, design, etc. (ID 54 - 56)
- Long-term the plan calls for providing full-time staff dedicated to trails and bikeways with appropriate budgets. (ID 98)

Data Collection & Analysis

- Ongoing Data Collection & Analysis actions include obtaining crash data and evaluating progress in reducing trail and bikeway injuries and fatalities. Also, monitoring response times for maintenance requests and an annual reporting of the type and number of requests being made. (ID 8 - 9)
- Short-term action items include performing evaluations of the bikeway facilities and compiling an inventory and prioritization of intersection and other enhancements that do not meet minimum design standards. Also, routinely conducting and updating bikeway and trail user counts to estimate usage levels and conducting before/after counts to gauge effectiveness of improvements. Also, keeping records of accidents and performing an annual review of the types reported to see if there are design or other changes that could lessen crashes. The plan calls for requesting the street sweeping data annually and establishing a database to track trends and provide data that could help refine street sweeping budgets and schedules. (ID 38 - 43)
- Mid-term actions will be developing a strategy to collect accident and injury data on trails and bikeways, conducting an annual user survey to collect and report mode-share data for all trips and periodically conducting community-wide public opinion surveys to determine how bicycling in Albuquerque could be improved. (ID 62 - 64)

Interagency Coordination

- Ongoing Interagency Coordination actions include coordinating and partnering with other agencies' bike and trail programs as well as continuing to expand the interface between buses and bikes. They also include promoting bike/bus programs through ABQ Ride. (ID 10 - 11)
- Short-term action items include providing staff liaisons from departments of transportation (Counties, City, MRCOG, etc.) to attend Advisory Group meetings on a routine basis and developing a map or GIS tool that will improve interagency knowledge of emergency access and wayfinding information on trails. (ID 44 - 45)
- Mid-term actions are to work with the state universities to develop standards for a bicycle friendly transportation design and to develop and support a bike education program in elementary and secondary schools. Also, coordinate improvements and standards among city departments and other jurisdictions. (ID 65 - 67)

Maintenance

- Ongoing Maintenance actions include establishing standards and schedules for inspection and maintenance activities and keeping an updated database and map. Also, ensuring that proper design guidelines are followed for trail maintenance and that re-seeding is done properly, along with mulching. Additionally, maintaining street surfaces on a routine basis to reduce hazards for cyclists.(ID 12 - 14)

- Short-term action items include establishing a 48-hour agency goal for responding to maintenance requests from citizens. Also, exploring alternative methods of treatment of puncture vine (goatheads) and, for major projects, requiring the design engineer to include a concept plan for the long-term maintenance that is envisioned. (ID 46 - 48)
- Mid-term actions are to implement the YARDI system, institutionalize a trail spot improvement program and determine the most effective way to prolong pavement life. Another action item calls for the City to consider adding another step to the 311 system that closes the loop after work is done. Trails should be swept regularly and procedures should be developed that will result in more frequent sweeping. The Parks Department should utilize G.O. bond funding to plan and implement a method for establishing native grass. Also, an annual update of the database of facilities maintenance responsibilities and considering how to address recurring issues. (ID 68 - 75)
- Long-term the plan calls for improving and funding the street maintenance and sweeping program to facilitate multi-use trail sweeping regularly and when requested. It also calls for maximizing the use of community service workers to help maintain the trails. Establishing native grasses and plants to squeeze out the puncture vines as well as a bottle deposit program will help keep the trails clean and safe.(ID 100 - 103)

Planning

- Ongoing Planning actions include continuing to develop signage standards for trails and implementing wayfinding signage, completing a Bollard Replacement inventory and preserving/adding equestrian facilities where appropriate.(ID 15 - 17)
- Short-term action items include conducting an inventory of trails that do not meet minimum standards or have high ridership and retrofitting to current standards. This action item also includes using the ¼ cent Transportation Tax for trail rehab and modifying the DPM to reflect current standards for bicycle facilities and current best practices. In order to help prioritize funding, a list of the top bike/auto crashes should be compiled. (ID 49 - 54)
- Mid-term actions will be performing an audit of trails and developing an implementation plan for retrofitting, updating the Facilities Plan for Arroyos, evaluating the feasibility of a foundation that would allow tax-deductible contributions and development of a city-wide streetscape program. Additionally, the plan calls for amending the traffic code to help keep bike parking and trails free of motor vehicles, to include bicycle crashes in reporting and to include long-term bicycle permitting. Amending the DPM to update conflicting measuring standards and developing a new policy regarding exclusive use permits for trails events will also be done in the mid-term time frame. (ID 76 - 85)
- Long-term the plan calls for developing maps for the public that show appropriate trail types and identifying trails that are expected to have heavy commuter traffic. The plan also calls for amending the State Motor Vehicle Code to allow alternate methods for signaling turns on a bicycle. Additionally there should be a Pedestrian Safety and Infrastructure Plan as well as a Traffic Level of Stress Analysis. (ID 104, 107 - 112)

Programs

- Ongoing Programs actions include developing an education and media campaign to promote bike etiquette and general awareness. Also, distributing an annual updated bike and trail map which includes tips and laws related to bicycling. (ID 18 - 20)
- Short-term action items include heightening public awareness of bicycle planning efforts and implementing launch parties when new facilities are completed. (ID 52 - 53)
- Mid-term actions will be promotion of bicycling, education on bicycling, development of incentive programs and encouraging bike related questions on driving license tests. Also, expanding and creating more family oriented bike programs such as Safe Rides to School and a Car Free Street Event and city-sponsored bike rack programs. (ID 86 - 96)
- Long-term the plan calls for connecting public outreach and education to law enforcement and developing a public campaign to encourage bicycle commuting. Also having a “One Stop” bicycling website and developing a Driver Diversion Class with the help of appropriate professionals. (ID 113 - 120)