

# **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 or 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 and enjoyable for the public to use.
  - a. **Objective:** Provide full-time staff positions dedicated to trails and bikeways with appropriate office budgets to promote bicycling and trail use within Albuquerque.
  - b. **Objective (Planning):** Create linkages between Planning Department, Parks & Recreation, and DMD regarding planning of future projects and programming funding for facility improvements and projects.
    - i. 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.
    - ii. 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.
    - iii. 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.
    - iv. Strategy: DMD and Parks & Recreation, with assistance from the Planning Department, will conduct an annual update of the existing and proposed facilities map.
  - c. **Objective (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.
    - i. 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.
    - ii. Strategy: Create a Technical Review Committee (TRC) to include a few key staff members (P&R, DMD, and Planning Department) with expertise in design of trail

and bike facilities. TRC would review major projects on a project-by-project basis. This review would be in addition to and in anticipation of the Design Review Committee (DRC). 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 TRC would be appropriate and input from Citizen Advisory Groups will be sought. TRC's recommendations will be documented by the Project Manager.

iii. 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:

1. 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.
2. On-street bikeway design, including intersections, and techniques for trail crossings of arterials: for traffic safety personnel, engineers, and others involved in bikeway design.
3. Maintenance practices, issues and techniques: maintenance staff.

d. **Objective:** Coordinate bikeway and trails activities with other agencies.

i. 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, 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.

ii. Strategy: DMD and Parks & Recreation in partnership with the Planning Department will update this Plan every 10 years.

e. **Objective:** 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 a **full-time Trail Planner** and a **grant-funded Bicycle Encouragement Planner**. 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**

The City currently has two advisory committees for bikeways and trails – 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. GABAC has a broader interest in the street network, and GARTC has a broader interest in the unpaved trails. The current structure requires both Departments, Parks & Recreation (P&R) and the Department of Municipal Development (DMD), which are responsible for development and maintenance of the bicycle and trails network, to be engaged in issues concerning the paved trails, which are of mutual interest to both committees.

#### **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.

## **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.

### **Options for Albuquerque**

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

1. **Status quo - two Committees:** Continue with two committees – GABAC/GARTC – staffed by DMD/P&R. Ideas that may improve the process: 1) Clarify the role of the committees, integrate the advisory committee role in a more standardized manner into the planning and design process; (i.e. at particular points in the process, as outlined in the Streamlining Administration strategies), identify outside agency representatives as regular liaisons to work with the committees; 2) Improve recruitment and selection process for new members, advertise vacancies, develop a nomination process or other more standardized process for filling positions, conduct interviews, assure diversity and broad representation, have term limits, and fill vacant positions quickly; 3) Provide trainings for advisory committees, provide packets with orientation materials for new members; 4) Improve meeting effectiveness, abide by rules of conduct for public meetings, utilize subcommittees, not necessarily supported by City staff, to address particular areas of interest; and 5) consider a way to have committee members (or their constituencies) assist in standardized trail counts and reporting on other issues.

2. **Albuquerque Bike and Pedestrian Advisory Committee:** Create one committee with representation by geographic regions that reflect the diversity of the community – age, gender, type of travel, and other special interest as appropriate. Consider including representation from major established advocacy groups and ex-officio agency representatives. For general guidance, see the League of American Bicyclists Advocacy Advance publication: Best Practices for Bicycle and Pedestrian Advisory Committees at the web address above.
3. **City/County Bike, Pedestrian and Trails Advisory Committee:** Create one committee that represents the City/County or Albuquerque Metropolitan Planning Area. Work could be done by subcommittees, somewhat independently of staff, to address particular areas of emphasis and by a strong executive committee.

### ***Considerations regarding moving to single committee structure***

In Albuquerque, consolidation of the two committees may not specifically address the interests of people who use the unpaved trails (particularly equestrians). One concept for consideration is to create a standing subcommittee, with a specific charge to map and enhance the unpaved trail network and provide input on major projects that affect the network. An alternate approach to recognizing and accommodating equestrian interests would be to consider amending the Open Space Advisory Board and/or Parks and Recreation Advisory Boards to include equestrian and unpaved trail user interests. A process for regular communications with related land management agencies could be established; to include the Open Space Division, MRGCD, US Forest Service, etc.

**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:**

- a. **Planning Department.** If staffed by the Planning Department, participation and support of P&R and DMD would be essential.
- b. **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.
- c. **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.
- d. **City Council/Mayor's Office.** Nashville/Davidson County housed their advisory groups in the Mayor's Office. City Council has a Constituent Services group that might be appropriate to house an advisory group.
- e. **Joint City/County.** Would require exploration with the County to determine appropriate staffing. This is the Tucson-Pima County structure.
- f. **MRCOG.** Would require coordination with MRCOG to assess feasibility and how to structure representation and meeting schedules.

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.

##### **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.

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 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 report of the bicycle facilities that have been constructed.

5. Give priority to achieving connectivity of the bikeway network when planning and programming all roadway and bikeway improvements.
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 Plan* and update the Plan at five 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) 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 AASHTO bicycle facility design guidelines, on all new, rehabilitated or reconstructed roadways, as indicated in the Master 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.
4. 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.
7. Implement other design considerations, per the current versions of 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 Maintenance along Roadways**

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 lanes 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. 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 bicycle facilities.
3. Maintain 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 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 curb lane widths (i.e., provide lane widths of 14 feet or greater) through construction projects on roadways that do not have bike lanes. Where this is not feasible, provide appropriate bicycle friendly and reasonably direct detours and detour signing.
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. 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 tips and laws related to bicycling.
3. Develop and fully 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 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 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 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 database. Use the database to identify

high accident locations and/or high accident severity locations to help prioritize bicycle project and program improvements. Review each bicycle collision/accident in a timely manner to identify system deficiencies and potential improvements.

## **5. Procedures for 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).

### **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.

Future development areas without 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 "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:

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.
2. Future development requests with major or minor arterials or collector streets shall include provisions for off-street trails in addition to required sidewalks within the right of way.
3. 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.
4. 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 and dedicated to the City for public trail use.
5. 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.
6. Trails shall be provided within City ROW for all major arterials, minor arterials, and collectors. 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.
7. 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.

8. 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.
9. 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.
10. The City will only maintain trails and bikeways that are built within the public right-of-way.
11. 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.

## 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 redefine the way a bike lane width is referenced in the DPM.

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;

#### Documents to Revisit

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

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.

**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**

**N1.2.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 edge-line to the edge of gutter. The diagrams should be updated to match the text.

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

## C. Maintenance & Operations Recommendations

### 1. Trails Maintenance Practices

#### 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 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 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 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, 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 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).

Possible solutions to some of the difficulties created by overlapping responsibilities include:

- 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, 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 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. PM 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**

See the recommendations in **Section 7.F** of **Chapter 7, Design Manual**.

### 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](http://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.

## 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. Additionally 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.

**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

The detailed crash analysis presented in this report should be repeated every few years to identify high crash locations and solutions to improve safety 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, 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, 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 separation and enhanced crossing treatments.

### 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 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, etc. This periodic review could be used to create updates to the

Albuquerque Bikeways and Trails Master Plan that can tune the Plan's implementation strategies to respond to changing safety, walking and bicycling patterns.

- The city should consider **education and 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 4 – 6 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 by through increased 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.

#### 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.

## **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.

**Table 10: Implementation Matrix**

(insert pdf table here)

Element	ID	Priority	Action	Measurement	Lead Agency; Coordination Required
CIP/Network Improvements	1	Ongoing	Develop new facilities to implement this Plan's goals of bikeways and trails as integral transportation infrastructure and recreational opportunities. Strive to increase on-street bikeway mileage from the current 365 to 500 by the year 2025 and 650 by the year 2035. Strive to increase trail mileage from the current 175 to 200 in the year 2025 and 240 in the year 2035.	Produce an annual report of the miles of trails and bikeways that have been completed.	<b>Municipal Development Parks &amp; Recreation; and Planning</b>
Administration	2	Ongoing	Work with citizen advisory and advocacy groups to promote bicycling and pedestrianism, improve bicycle and pedestrian safety, and improve the implementation of new facilities in their advisory role.	Attend at least one meeting of all advocacy groups that register with the City.	<b>Trails Coordinator &amp; Bikeways Coordinator; Planning</b>
Administration	3	Ongoing	Strongly encourage trail and bikeway dedication as part of other public project planning. Continue to support Land Development Regulations enabling trail and bikeway dedication and construction.		<b>Parks &amp; Recreation and Municipal Development; Planning</b>
Administration	4	Ongoing	Continue supporting programs related to education, outreach, and encouragement.		<b>Parks &amp; Recreation and Municipal Development; Planning</b>
Administration	5	Ongoing	Maintain a dedicated local funding source for construction, maintenance, and enhancement of trails and bikeways. Leverage local funding to obtain state and federal transportation funds for major projects that serve a transportation purpose. Invest in the development and promotion of connections among elements of the Parks, Open Space, and Trails (P.O.S.T.) system as well as a regional recreational trail system. DMD and P&R will communicate and coordinate requests for federal transportation funding and representation at MRCOG related to bikeways and trails.	Operating funds will be allocated for construction and maintenance	<b>Municipal Development and Parks &amp; Recreation</b>
Administration	6	Ongoing	Maintain a dedicated local funding source to support bikeway and trail programming and education efforts.	Operating funds will be allocated for programming and education	<b>Parks &amp; Recreation and Municipal Development; Planning</b>
CIP/Network Improvements	7	Ongoing	Evaluate the feasibility and suitability for non-motorized facilities on all new roads. Implement on-street bicycle facilities in conjunction with roadway rehab projects. Plan and design for bicycle travel with all intersection improvements, where feasible according to budget and schedule, to include 5-foot bike lanes or minimum curb lane widths of 15 feet through intersections.	Produce an annual report that documents the percent of new road projects/rehabs that include bicycle and/or pedestrian facilities.	<b>Municipal Development; Parks &amp; Recreation and Planning</b>
Data Collection & Analysis	8	Ongoing	Obtain crash data from the UNM Geospatial and Population Studies, Traffic Research Unit (TRU). Evaluate progress in reducing trail and bikeway fatalities and injuries.	Prepare an annual report that documents the status.	<b>MRCOG; Municipal Development</b>
Data Collection & Analysis	9	Ongoing	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.	Database is created and maintained	<b>Trails Coordinator &amp; Bikeways Coordinator; Planning</b>
Interagency Coordination	10	Ongoing	Coordinate with all of the many agencies and jurisdictions needed to implement the plan. Continue support of and partnership with other agencies' bike & trail programs as well as the MRCOG's regional Travel Reduction and Rideshare programs.	Prepare an annual report that documents the status of coordination efforts.	<b>Trails Coordinator &amp; Bikeways Coordinator; Planning</b>
Interagency Coordination	11	Ongoing	Continue and expand the interface between bikes and buses, including such features as bicycle racks on all buses, bicycle racks and lockers at park-and-ride lots, and the guaranteed ride home program. Promote bike/bus programs through ABQ Ride literature and PSAs.	Prepare an annual report that documents the status.	<b>Transit, Bikeway Coordinator, Trails Coordinator</b>
Maintenance	12	Ongoing	Establish maintenance standards and a schedule for inspections and maintenance activities. Update the maintenance responsibility map and database.	Maintenance standards are adopted with this plan and implemented.	<b>Parks &amp; Recreation and Municipal Development</b>
Maintenance	13	Ongoing	Ensure that the Design Guidelines are followed for trail maintenance and that re-seeding and mulching is in compliance with best practices and safety needs of trail users. Practice selective weed control to reduce herbicide use and allow native grasses to establish.	Inventory the number and extent of facilities that are deficient in relation to the Design Guidelines	<b>Parks &amp; Recreation; Municipal Development and Planning</b>
Maintenance	14	Ongoing	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.		<b>Municipal Development; Parks &amp; Recreation and Planning</b>
Planning	15	Ongoing	Continue to develop Signage Standards for trails. Implement City-wide on-street and trail wayfinding signage program as budget allows.	Signage Standards are developed	<b>Trails Coordinator; Municipal Development and Planning</b>

Element	ID	Priority	Action	Measurement	Lead Agency; Coordination Required
Planning	16	Ongoing	Bollard Placement evaluation & inventory. Complete the Bollard Inventory to identify the location and design of all existing bollards on trails. Prioritize remediation of bollard installations that do not meet the Design Standards in City right-of-way.		<b>Municipal Development and Parks &amp; Recreation;</b> Planning
Planning	17	Ongoing	Preserve and add equestrian facilities where appropriate.		<b>Parks &amp; Recreation;</b> Municipal Development and Planning
Programs	18	Ongoing	Develop a public information campaign regarding trail use safety. Educate the public about trail rules of etiquette and the types of accommodations required with high user volumes (slower speeds, more communication). Cooperate to inform the public on ditch and arroyo safety matters.	Document at least 1 informational campaign per year.	<b>Bicycle Safety Educator;</b> Municipal Development and Planning
Programs	19	Ongoing	Continue development and use of PSAs, as well as short instructional safety videos, to promote proper and legal bicyclist behavior. Promote general public awareness and acceptance of bicycling to promote bicycle safety. Encourage and support head injury awareness and helmet usage through awareness of state laws, educational brochures, and programs. Target use of PSAs on television/local radio stations for specific community events, especially during the annual Bike Month.	Document at least 1 informational campaign per year.	<b>Municipal Development and Bicycle Safety Educator;</b> and Planning
Programs	20	Ongoing	Develop, distribute, and update annually a bicycle and trail map, which includes commuting, and safety tips and laws related to bicycling.	A new map will be produced each year	<b>Bikeways Coordinator;</b> Parks & Recreation and Planning
Administration	21	Short-term	Update the short-term priority facility construction list every two years, in conjunction with the Decade Plan		<b>Trails Coordinator &amp; Bikeways Coordinator;</b> Planning
Administration	22	Short-term	Monitor the implementation of elements within the Bikeways and Trails Facility Plan and have a goal to update the Plan at five year intervals. Monitor and document the status of work towards short and mid-term implementation actions. Evaluate if there is an adequate system and equitable distribution of each of the facility types, according to the principals of developing an extensive system that also responds to population densities and demand.	Produce an annual report with all projects and programs statused.	<b>Planning,</b> <b>Municipal Development and Parks &amp; Recreation</b>
Administration	23	Short-term	Develop an improved project identification, design, and development process through a Plan Implementation Project Team & Technical Review Group.	Project implementation team is established and operational	<b>Parks &amp; Recreation and Municipal Development;</b> Planning
Administration	24	Short-term	Ensure that consistent, routine training of City of Albuquerque, MRCOG, and other jurisdiction staff is taking place.		<b>Parks &amp; Recreation and Municipal Development;</b> Planning
Administration	25	Short-term	Evaluate the current Advisory Group process and its effectiveness. Make recommendations and implement an improved training, coordination, and input process.		<b>Parks &amp; Recreation and Municipal Development;</b> Planning
Administration	26	Short-term	Conduct a biennial 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, Park Management, Bike Safety Program), NMDOT, BernCo, 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.	Meeting is conducted	<b>Trails Coordinator &amp; Bikeways Coordinator;</b> Planning
Administration	27	Short-term	Adopt a Complete Streets Ordinance.	Ordinance is adopted by City Council	<b>Council Services;</b> Planning and Municipal Development

Element	ID	Priority	Action	Measurement	Lead Agency; Coordination Required
Administration	28	Short-term	Design & Construct facilities according to design standards/guidelines to improve safety of facilities. 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.	Develop a documentation process to explain any design elements that are not consistent with the Design Guidelines.	<b>Parks &amp; Recreation and Municipal Development; Planning</b>
Administration	29	Short-term	Develop a City-wide policy for incorporating maintenance considerations and funding as part of all new (or major renovation) trail construction projects.	New policy has been implemented.	<b>Parks &amp; Recreation; Municipal Development and Planning</b>
Administration	30	Short-term	Design, construct, and maintain the proposed Short-term projects in this Plan.		<b>Parks &amp; Recreation and Municipal Development; Planning</b>
CIP/Network Improvements	31	Short-term	Develop an implementation plan and work on completing the "Critical Link" Priorities that are identified in this plan by 2025 and identify other high priority gaps by 2035.	Produce an annual report of the gap closure projects that have been completed. Prioritized list of projects for next 2 years.	<b>Municipal Development and Parks &amp; Recreation</b>
CIP/Network Improvements	32	Short-term	Assess the need for and develop new facilities or routes as needed to support the Parks, Open Space, and Trails (POST) system. The facilities may include loop routes, secondary trails, primary trails, and other connecting facilities as needed to connect to desired destinations. Also assess the need for multi-use trails that contribute key linkages to the on-street bikeway system, including interim trail improvements where needed and spot safety trail improvements.	Document efforts to develop a prioritized list. Produce an annual report of the miles of trails that have been completed.	<b>Parks &amp; Recreation; Municipal Development and Planning</b>
Data Collection & Analysis	33	Short-term	Existing bicycle lanes should be inventoried to identify the number and location of intersections that do not provide a continuous bicycle facility.	Inventory is completed.	<b>Municipal Development; Planning</b>
CIP/Network Improvements	34	Short-term	Identify appropriate locations and implement innovative techniques to make the street system safe to provide critical connections in the trail and bikeway system. Provide appropriate educational campaigns before and after installation.	Implement at least one innovative technique at 2 locations per year.	<b>Bikeways Coordinator; Parks &amp; Recreation and Planning</b>
CIP/Network Improvements	35	Short-term	Utilize bicycle- and pedestrian-friendly roadway design practices and complete streets policies for all new and reconstructed roads.	Monitor the number of new lane miles added and reconstructed roads with multi-modal facilities	<b>Municipal Development and Planning</b>
CIP/Network Improvements	36	Short-term	Provide striped lanes/shoulders of at least five feet wide on all new or reconstructed bridges, underpasses and overpasses.	Produce an annual report that documents the percent of new road projects/rehabs that include bicycle and/or pedestrian facilities.	<b>Municipal Development; Parks &amp; Recreation and Planning</b>
Data Collection & Analysis	37	Short-term	Perform an evaluation of the existing bikeway facilities according to the Infrastructure Project Evaluation Criteria identified in Chapter 5.A.1 Existing Bikeway Evaluation	A study is completed that identifies the quality of all existing bikeways and the substandard links are identified.	<b>Bikeways Coordinator; Parks &amp; Recreation and Planning</b>
Data Collection & Analysis	38	Short-term	Inventory and prioritize implementation of intersection enhancements, facility gap closures, and reconstruction of facilities that do not meet the minimum Design Standards. Utilize the database to identify high accident locations and/or high accident severity locations to help in the prioritization of project and program improvements.	Inventory and priority list is updated.	<b>Municipal Development; Parks &amp; Recreation and Planning</b>
Data Collection & Analysis	39	Short-term	Routinely conduct and update bikeway and trail user counts to estimate usage levels and to help determine progress toward achieving future mode-split goals and to document the proportion of male vs. female users.	Database is created and maintained	<b>MRCOG; Parks &amp; Recreation, Municipal Development and Planning</b>
Data Collection & Analysis	40	Short-term	Conduct before and after bicycle counts for road-ways that are reconstructed or re-striped to have bicycle lanes and for other improvements to bike-ways to gauge the effect of the improvements.	Database is created and maintained	<b>MRCOG; Municipal Development</b>

Element	ID	Priority	Action	Measurement	Lead Agency; Coordination Required
Data Collection & Analysis	41	Short-term	Existing bicycle lanes should be inventoried to identify the number and location of intersections that do not provide a continuous bicycle facility.	Inventory is completed.	<b>Municipal Development; Planning</b>
Data Collection & Analysis	42	Short-term	Maintain and update a facility-user accident database. Perform an annual review of the types of incidents reported, and determine if there are design changes, location-specific improvements, or educational campaigns that could reduce the number of crashes and accidents. Review each collision/accident in a timely manner to identify system deficiencies and potential improvements. Consider using a Critical Incident Survey to collect self-reported accident and injury information.	Database is created and maintained	<b>Risk Management; Planning, Municipal Development, and Parks &amp; Recreation</b>
Data Collection & Analysis	43	Short-term	Request the annual data on frequency of scheduled sweeping for the on-street bikeway and multi-use trail system, along with the number and location of spot sweeping requests. Establish a database to track trends and provide data that can be used refine scheduled sweeping and maintenance budget request.	Database is created and maintained	<b>Bikeways Coordinator and Trails Coordinator; and Planning</b>
Interagency Coordination	44	Short-term	Provide staff liaisons from the City, MRCOG, Bernalillo and Sandoval Counties, and other area departments of transportation to attend Advisory Group meetings and to work on Advisory Group issues on a routine basis.		<b>Trails Coordinator, Bikeways Coordinator and Other Agencies</b>
Interagency Coordination	45	Short-term	Develop a map or GIS tool that will improve interagency knowledge of emergency access location and wayfinding information on trails.	Prepare an annual report that documents the status.	<b>Trails Coordinator; APD &amp; other First-Responders</b>
Maintenance	46	Short-term	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.	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.	<b>Municipal Development and Parks &amp; Recreation; Planning</b>
Maintenance	47	Short-term	Explore alternative methods of treatment of puncture vine, such as: various methods of mechanical removal; various methods of establishing native grass without using supplemental irrigation; alternative approaches to herbicide practices, with careful attention to application/timing; and biological techniques (weevils).	Study is completed	<b>Parks &amp; Recreation; Municipal Development and Planning</b>
Maintenance	48	Short-term	For major trail projects, require the design engineer to include a concept plan for the long-term maintenance protocol that is envisioned, e.g. care of plantings, drainage issues, etc.	Standard language about maintenance is included in engineering Scope of Work	<b>Parks &amp; Recreation; Municipal Development and Planning</b>
Planning	49	Short-term	Inventory, evaluate, and then retrofit design enhancements for facilities that do not meet the minimum standards or have a high number of users.		<b>Municipal Development and Parks &amp; Recreation; Planning</b>
Planning	50	Short-term	Apply 1/4 Transportation Tax funding for a trail rehabilitation project, using a City contractor to implement the outcomes of the evaluation.	Rehabilitation and evaluation are complete	<b>Trails Coordinator; Bikeways Coordinator and Planning</b>
Planning	51	Short-term	Modify the DPM to require developers of walled subdivisions to provide connectivity between their developments and adjacent bikeways and trails.	Standards have been amended.	<b>Planning; Municipal Development</b>
Programs	52	Short-term	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.	Document the number of informational campaigns per year	<b>Municipal Development; Parks &amp; Recreation and Planning</b>
Programs	53	Short-term	Implement Launch Parties for New Bikeways when new facilities are completed. It is a low-cost strategy that publicizes new facilities and builds public awareness of bicycling. As a low-cost/high-benefit program, it should become part of the City's standard bikeway implementation procedure.	Document efforts to expand the program.	<b>Trails Coordinator and Bikeways Coordinator; Planning</b>
Administration	54	Mid-term	Prioritize implementation of trail amenities projects. Obtain supplemental capital funding as needed for major projects and to provide trail amenities.	Trail amenity locations are prioritized.	<b>Parks &amp; Recreation</b>

Element	ID	Priority	Action	Measurement	Lead Agency; Coordination Required
Administration	55	Mid-term	Create a Technical Review Committee (TRC) to include a few key staff members with expertise in design of trail and bike facilities. TRC would review major projects on a project-by-project basis. This review would be in addition to and in anticipation of DRC. 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 TRC would be appropriate and input from Citizen Advisory Groups will be sought. TRC's recommendations will be documented by the Project Manager.	TRC is established and this approach is implemented.	<b>Trails Coordinator &amp; Bikeways Coordinator;</b> Planning
Administration	56	Mid-term	Conduct an annual training to address the following groups and topics: 1) engineers, landscape architects, and others involved in path design, including both in-house and non-City professionals, regarding shared use path design issues and innovations; 2) traffic safety personnel, regarding on-street bikeway design and techniques regarding paths crossings of arterials; and 3) maintenance staff, regarding status, issues and techniques in maintenance practices. Materials will be posted on the City's website.	Annual training program is developed and implemented.	<b>Trails Coordinator &amp; Bikeways Coordinator;</b> Planning
CIP/Network Improvements	57	Mid-term	Develop strategies and use design techniques on available right-of-way to minimize conflict of use on all high use trail corridors.	Reduced number of trail crashes is documented	<b>Trails Coordinator;</b> Municipal Development and Planning
CIP/Network Improvements	58	Mid-term	Evaluate all collector and arterial roadways for the possibility of restriping to provide bike lanes, or minimum out-side lane width of 14 feet.	All major roadways are evaluated.	<b>Municipal Development</b>
CIP/Network Improvements	59	Mid-term	Prioritize system enhancements for bicycle lanes with unclear travel paths through major intersections. Install Multi-Lane Arterial Intersection Improvements, including continuous bicycle lane markings up to the crosswalk, bicycle detection loop, and color enriched bicycle travel lane in conflict areas according to the adopted "Prototypical Intersection Improvement" design in this plan. Include these improvements as a portion of each annual capital improvements budget.	Document efforts to develop a prioritized list.	<b>Bikeways Coordinator;</b> Parks & Recreation and Planning
CIP/Network Improvements	60	Mid-term	Determine and prioritize appropriate locations for major improvements, such as overpass structures.	Document efforts to develop a prioritized list.	<b>Municipal Development and Parks &amp; Recreation</b>
CIP/Network Improvements	61	Mid-term	Develop a strategy for including publically accessible trails and bikeways in all new subdivisions to create a network with at least one facility every half-mile.	Document efforts to develop a program.	<b>Planning;</b> Municipal Development and Parks & Recreation
Data Collection & Analysis	62	Mid-term	Develop a strategy and program to collect accident and injury data on trails and bikeways. Consider using a Critical Incident Survey to collect self-reported accident and injury information.	Study is completed	<b>Trails Coordinator &amp; Bikeways Coordinator;</b> Planning
Data Collection & Analysis	63	Mid-term	Conduct an annual bicycle user survey to collect and report mode-share data for commuting trips and all trips taken.	Survey is created and administered	<b>Bikeways Coordinator &amp; Trails Coordinator;</b> Planning
Data Collection & Analysis	64	Mid-term	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.	Survey is created and administered	<b>Bikeways Coordinator &amp; Bicycle Educator;</b> Planning
Interagency Coordination	65	Mid-term	Work with the University of New Mexico and New Mexico State University to develop curricula for bicycle-friendly transportation system design.	Prepare an annual report that documents the status.	<b>Bikeway Coordinator; UNM</b>
Interagency Coordination	66	Mid-term	Develop and fully support a bicycle education program in Albuquerque's elementary and secondary schools as part of current physical education requirements.	Prepare an annual report that documents the status.	<b>APS; Bicycle Educator</b>
Interagency Coordination	67	Mid-term	Coordinate improvements and standards among City Departments, applicable public agencies, and other jurisdictions, including, but not limited to AMAFCA, NMDOT, Bernalillo County, Rio Rancho, Sandoval County, Corrales, Los Ranchos, KAFB.	Adoption of consistent design and maintenance standards across jurisdictions	<b>Bikeway Coordinator; Trails Coordinator</b>
Maintenance	68	Mid-term	Implement the YARDI system and apply it to the trails network to keep track of maintenance needs.	All maintenance activities are documented in YARDI	<b>Parks &amp; Recreation</b>

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Maintenance	69	Mid-term	Institutionalize a trail spot improvement program.	Spot improvement program is implemented for trail repair	<b>Trails Coordinator;</b> Municipal Development and Planning
Maintenance	70	Mid-term	Determine the most effective methodology for extending pavement life and explore sharing responsibility for addressing these issues (regarding equipment, expertise, etc.).	Study is completed	<b>Trails Coordinator &amp; Bikeways Coordinator</b>
Maintenance	71	Mid-term	Trails should be swept on a scheduled basis and when requested. Locations that historically require more frequent sweeping should be noted and investigated as to what may be causing this problem and fix if practical.	Monitor the number of maintenance requests	<b>Parks &amp; Recreation;</b> Municipal Development and Planning
Maintenance	72	Mid-term	Based on results and experience of investigations on methods for establishment of native grass, Park Management should utilize G.O. bond funding and 1/4 cent Transportation Tax to plan and implement a program to establish. This may take a sequence of years.	Revegetation program is implemented	<b>Parks &amp; Recreation</b>
Maintenance	73	Mid-term	Develop procedures to more frequently sweep and maintain streets that have on-street bicycle facilities	Sweep schedule is created	<b>Municipal Development;</b> Planning
Maintenance	74	Mid-term	P&R and DMD will annually update the database of facilities maintenance responsibilities and consider how to address recurring issues/complaints.	Annual maintenance actions are documented	<b>Parks &amp; Recreation and Municipal Development;</b> Planning
Planning	75	Mid-term	Perform an ADA audit of all trails and develop an implementation plan to retrofit trails to be universally accessible where feasible.	Document efforts to develop a prioritized list.	<b>Trails Coordinator;</b> Bikeways Coordinator and Planning
Planning	76	Mid-term	Facilities Plan for Arroyos Update	Plan is updated	<b>Parks &amp; Recreation and Planning</b>
Planning	77	Mid-term	Development of a City-wide Streetscape Plan w/Maintenance Element	Study is complete	<b>Solid Waste;</b> Municipal Development and Planning
Planning	78	Mid-term	Evaluate the feasibility of a Parks, Open Space & Trails Foundation, which would allow tax-deductible contributions and encourage patronship	Parks, Open Space, and Trails Foundation is established	<b>Parks &amp; Recreation;</b> Municipal Development and Planning
Planning	79	Mid-term	Develop a new policy regarding Exclusive Use Permit for Trails Events	New policy is adopted	<b>Open Space and Cultural Services;</b> Municipal Development and Planning
Planning	80	Mid-term	Identify and evaluate how to address needed ADA non-compliance, repairs, replacements, and frequently required problem areas (sweeping, pavement drop-offs, erosion, etc.).	Study(s) are complete	<b>Trails Coordinator;</b> Bikeways Coordinator and Planning
Planning	81	Mid-term	Amend the Albuquerque Traffic Code, §8-5-1-1, to prohibit parking in a marked bicycle lane or bicycle box, and §8-5-1-15, to clearly identify that bicycle lanes are travel lanes	Regulation is amended	<b>City Council;</b> Planning
Planning	82	Mid-term	Amend the Albuquerque Traffic Code, §8-2-9-1 and 8-2-9-2 Accidents, Reports, to include reporting of bicycle crashes.	Regulation is amended	<b>City Council;</b> Planning
Planning	83	Mid-term	Amend the Albuquerque Parking Code, §14-16-3-1, to include long-term bicycle parking, where applicable.	Regulation is amended	<b>City Council;</b> Planning
Planning	84	Mid-term	Amend the Development Process Manual to indicate the correct way of measuring the width of bicycle lanes to make the text match the diagram	Manual is amended	<b>Planning,</b> <b>Municipal Development</b> <b>and Parks &amp; Recreation</b>
Programs	85	Mid-term	Law Enforcement Education trainings and Community Enforcement Actions (such as targeted speed enforcement near schools, speed reader board deployment, bicycle light giveaways, etc.).	Education and Enforcement programs are developed & implemented.	<b>Bikeways Coordinator;</b> APD and Planning

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Programs	86	Mid-term	Promote Albuquerque as a Bicycle-Friendly Community by achieving the League of American Bicyclists' Bicycle Friendly Communities award designation and Bicycling Magazine's Top Ten Best Cities for Cycling award. <i>Apply to become a silver-level Bicycle Friendly Community.</i>	Report the results of the survey. Identify solutions to rectify deficiencies reported by the award.	<b>Bikeways Coordinator;</b> Planning
Programs	87	Mid-term	Utilize volunteers and the citizen advisory committees to the greatest extent possible to implement the policies in the plan. Develop a program to utilize volunteers for safety patrols.	Document efforts to develop a program.	<b>Trails Coordinator and Bikeways Coordinator;</b> Planning
Programs	88	Mid-term	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.	Document efforts to develop a program.	<b>Environmental Health and Planning</b>
Programs	89	Mid-term	Develop, implement, and promote specific incentive programs to encourage existing businesses and other entities to provide facilities for bicycling, such as bicycle racks, bicycle lockers, changing areas, showers, and clothes lockers. 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.	Document efforts to develop a program.	<b>Bikeways Coordinator;</b> Economic Development and Planning
Programs	90	Mid-term	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.	Document efforts to develop a program.	<b>Bikeways Coordinator and Planning</b>
Programs	91	Mid-term	Encourage the inclusion of bicycling-related questions in motor vehicle driving license tests as a means to raise awareness of bicyclists' rights and responsibilities.	Document efforts to develop a program.	<b>APD;</b> Bicycle Educator, Municipal Development and Planning
Programs	92	Mid-term	Expanding the existing Albuquerque Safe Routes to School program will offer great benefits to children's health and safety. The statewide Safe Routes to School program, run by the New Mexico Department of Transportation, offers funding assistance for developing an action plan, implementing infrastructure projects and offering non-infrastructure projects.	Document efforts to expand the program.	<b>Bicycle Educator and Bikeways Coordinator;</b> Planning
Programs	93	Mid-term	Several family-oriented outreach programs have been recommended, including a Family Bicycling and Trail Use Program, a Bike to Parks Program and a Summer Streets Car-Free Street Event. These all should be seen as medium-priority actions and the City should select which program they would like to focus on first. A Share the Trail Campaign is not a first-tier priority, but may be implemented sooner if a community group like BikeABQ is willing to take primary responsibility for it.	Document efforts to expand the program.	<b>Trails Coordinator and Bikeways Coordinator;</b> Planning
	94	Mid-term	Prioritize, design, construct, and maintain the proposed intersection improvements and the proposed grade separated crossings & mid-block crossings		<b>Municipal Development;</b> Parks & Recreation and Planning
	95	Mid-term	Driver Education Related to Bicycling		<b>Municipal Development;</b> Parks & Recreation and Planning
	96	Mid-term	City-Sponsored Bike Rack Program		<b>Municipal Development;</b> Parks & Recreation and Planning
Administration	97	Long-term	Provide full-time staff positions dedicated to trails and bikeways with appropriate office budgets to promote bicycling and trail use within Albuquerque.	Report of the number of staff who are dedicated to bikeways & trails	<b>Municipal Development;</b> <b>Parks &amp; Recreation</b> and Planning
CIP/Network Improvements	98	Long-term	Provide a striped bicycle lane or shoulder consistent with the City's Development Process Manual and AASHTO bicycle facility design guidelines on all new, rehabilitated or reconstructed roadways, as indicated in the Facility Plan.		<b>Municipal Development;</b> Planning

Element	ID	Priority	Action	Measurement	Lead Agency; Coordination Required
Maintenance	99	Long-term	Improve and fund the street maintenance and sweeping program. Establish the highest priority for allocation of street sweeping resources to sweeping all bike lanes 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 when requested.	Request the annual data on frequency of scheduled sweeping for the on-street bikeway and multi-use trail system, along with the number and location of spot sweeping requests. Establish a database to track trends and provide data that can be used to refine scheduled sweeping and maintenance budget request.	<b>Municipal Development;</b> Parks & Recreation and Planning
Maintenance	100	Long-term	Maximize use of community service workers program to enhance Park Management's ability to address trail maintenance.	Parks and Recreation has implemented a community service work program	<b>Trails Coordinator;</b> Municipal Development and Planning
Maintenance	101	Long-term	Establish native drought-tolerant grasses and plants next to trails, with a goal that over time, the natives will out-compete the puncture vine.	Monitor the number of complaints about puncture vine problems	<b>Trails Coordinator;</b> Municipal Development and Planning
Maintenance	102	Long-term	Encourage a bottle deposit program in order to reduce littering of roadways and bike facilities with broken glass.		<b>Municipal Development,</b> <b>Solid Waste and City</b> <b>Council</b>
Planning	103	Long-term	Develop maps for use by the public that show which portions of the trail system are appropriate for particular types of trail users and that highlight major destinations.	A new series of maps is produced and distributed	<b>Trails Coordinator;</b> Municipal Development and Planning
CIP/Network Improvements	104	Long-term	Assess the system's ability to provide connectivity for different user type. Evaluate the extent of system for each user type.	Different maps are produced that reflect facilities suitable for different user groups	<b>Planning;</b> Municipal Development and Parks & Recreation
CIP/Network Improvements	105	Long-term	Develop and implement a wayfinding & orientation program. Develop a standardized facility naming and marking program for trail wayfinding. Implement trail and bikeway signage and marking as recommended in the wayfinding program. Coordinate with emergency responders regarding the outcome of the trail way-finding system		<b>Trails Coordinator and</b> <b>Bikeways Coordinator;</b> Planning
Planning	106	Long-term	Amend the NM State Motor Vehicle Code, §66-7-327, to allow alternate methods for signaling turns on a bicycle	Regulation is amended	<b>Bikeways Coordinator;</b> Planning
Planning	107	Long-term	End of trip facilities & incentivization programs		<b>Municipal Development;</b> Parks & Recreation and Planning
Planning	108	Long-term	Identify trails which may expect heavy bicycle commuter traffic and require an extra design effort on those trails to separate user types depending on right-of-way and License Agreements.	Planning Study with User Survey	<b>Parks &amp; Recreation;</b> Municipal Development and Planning
Planning	109	Long-term	Pedestrian Safety & Infrastructure Plan	Plan is complete	<b>Planning;</b> Municipal Development
Planning	110	Long-term	MMLOS or Traffic Level of Stress Analysis	Study is complete	<b>Planning;</b> Municipal Development
Planning	111	Long-term	Perform a corridor analysis or specialized study where necessary to address environmental agency or neighborhood concerns, or to determine precise alignment for future trails and on-street bicycle facilities.	Study is complete	<b>Municipal Development</b> <b>and Parks &amp; Recreation;</b> Planning

Element	ID	Priority	Action	Measurement	Lead Agency; Coordination Required
Programs	112	Long-term	Develop and implement a consistent, balanced traffic law education program for law enforcement personnel for improving target pedestrian, bicyclist, and motorist compliance with traffic laws. Update or develop materials for use by law enforcement personnel to support education and enforcement efforts.	Document efforts to develop a program.	<b>APD;</b> Bicycle Educator, Municipal Development and Planning
Programs	113	Long-term	Develop and implement a traffic law enforcement program for bicyclists and motorists and link to education program efforts. Increase public outreach efforts, including video and audio PSAs to educate motorists on bicyclists' rights and responsibilities.	Document efforts to develop a program.	<b>APD;</b> Bicycle Educator, Municipal Development and Planning
Programs	114	Long-term	Develop a public information campaign to encourage bicycle commuting. Work with businesses throughout the Albuquerque to encourage commuting by bicycle among their employees and to increase motorists' awareness to share the road. Provide outreach and personal travel cost information that shows how bicycle transportation can be beneficial to both employees and students.	Document at least 1 informational campaign per year.	<b>Bikeways Coordinator;</b> Parks & Recreation and Planning
Programs	115	Long-term	Commit appropriate police time (bicycle and motor vehicle patrols) to target pedestrian, bicyclist, and motorist enforcement efforts.	Document strategies for balanced enforcement efforts.	<b>APD</b>
Programs	116	Long-term	Continue and expand Police Bicycle Patrols and dedicate a distinct percentage of their time to educational efforts on proper bicycling behavior.	Report the number of staff or FTE assigned to bicycle patrols.	<b>APD</b>
Programs	117	Long-term	Provide dedicated funding to support public bicycling awareness programs and "Share the Road" campaigns.	Operating funds will be allocated for bicycling awareness programs	<b>Bicycle Educator and Municipal Development;</b> Planning
Programs	118	Long-term	Developing a Driver Diversion Class will be a longer-term effort, as they will require coordination with many community partners. The Diversion Class will require the support and participation of local courts, and work-ing with lawyers, traffic safety professionals and educators to prepare the curriculum will help the program launch on a firm footing. This program may need start-up funding to develop the course, but it should be self-sustaining on a long-term basis as the fee for participation can be set to cover the costs of the program.	Document efforts to develop a program.	<b>APD;</b> Parks & Recreation, Municipal Development and Planning
Programs	119	Long-term	"One-Stop" Albuquerque Bicycling Website. It can be hosted on the City's existing website, incurring no additional expenses, and can largely be assembled by City staff, with the support and participation of GABAC and GARTC.	Document efforts to develop a program.	<b>ITSD Coordinator;</b> Planning