Bernalillo County

Pedestrian and Bicyclist Safety Action Plan

July 2012

Isleta Boulevard, an example of a Complete Street

BERNALILLO COUNTY

BOARD OF COUNTY COMMISSIONERS

RESOLUTION NO. 2012-66

ADOPTING THE PEDESTRIAN AND BICYCLIST SAFETY ACTION PLAN AND REPEALING THE TRAILS AND BIKEWAYS FACILITY PLAN (1993).

WHEREAS, the Board of County Commissioners is authorized to adopt facility plans to promote the health, safety, and general welfare of the residents Bernalillo County; and

WHEREAS, The Pedestrian and Bicyclist Safety Action Plan includes a survey of existing plans, an inventory of existing facility needs, a proposed 'complete streets' policy, and proposed capital projects; and

WHEREAS, The Pedestrian and Bicyclist Safety Action Plan succeeds the 1993 city-county Trails and Bikeways Facility Plan and applies to unincorporated Bernalillo County, excluding the East Mountain Area and;

WHEREAS, The Pedestrian and Bicyclist Safety Action Plan helps to implement the Metropolitan Transportation Plan (2035) adopted in 2011 by the Metropolitan Transportation Board that includes a bicycle and pedestrian facility map for the Metropolitan Area, including unincorporated Bernalillo County; and

WHEREAS, The Pedestrian and Bicyclist Safety Action Plan has incorporated comments regarding the proposed project list and recommended street design provided during community meetings in unincorporated Bernalillo County; and

WHEREAS, The Pedestrian and Bicyclist Safety Action Plan furthers the Goal and Policies of the Albuquerque/Bernalillo County Comprehensive Plan that call for incorporating pedestrian and bicyclist facilities within developments and along streets, and between Activity Centers and within the metropolitan area-wide recreational and commuter bicycle and trail network; and

WHEREAS, the County Planning Commission recommended approval of the Pedestrian and Bicyclist Safety Action Plan at their May 4, 2012 public hearing.

NOW, THEREFORE BE IT RESOLVED BY THE BOARD OF COUNTY COMMISSIONERS:

In order to implement the policies of the Albuquerque/Bernalillo County Comprehensive Plan and the Metropolitan Transportation Plan, the Pedestrian and Bicyclist Safety Action Plan is hereby adopted and the Trails and Bikeways Facility Plan is repealed.

DONE this ____ day of _____, 2012.

BOARD OF COUNTY COMMISSIONERS

Art De La Cruz, Chair

Maggie Hart Stebbins, Vice Chair

Michelle Lujan Grisham, Member

Michael C. Wiener, Member

Wayne Johnson, Member

Legal Department

Date: 6/26/12

ATTEST:

Maggie Toulouse Oliver, Clerk

Date: 6-26-2012

BERNALILLO COUNTY COUNTY CLERK SEAL STATE OF NEW MEXICO

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Acknowledgements

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Michael C. Wiener, Vice Chair, District 4
Michelle Luan Grisham, Member, District 1
Maggie Hart Stebbins, Member, District 3
Wayne A. Johnson, Member, District 5

Bernalillo County Planning Commission

George Castillo, Chair
Linda Barbour, Vice Chair
Joe Chavez, Member
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A special thanks to all who attended community meetings and provided comments.

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Plan Summary

Plan Intent

Pedestrian and bicyclist facilities are an integral part of the Bernalillo County transportation system. They include sidewalks in the more urban areas, soft-pavement trails in the rural areas, bike lanes along major roads, and bike trails and equestrian trails off the road network.

When planning for pedestrian and bicyclist facilities in the County, the primary goal is to:

- Ensure safety for all travelers along county roadways, especially children on routes to school and access for disabled and elderly persons to transit stops.

Other goals include:

- Provide choice in transportation to work, school, and shopping for all ages and abilities,
- Promote healthy lifestyles and recreational opportunities for all ages and abilities by encouraging residents to exercise daily,
- Reduce energy use and improvement of air quality.

The Safety Action Plan is a ten-year Rank 2 facility master plan that identifies many of the pedestrian and bicyclist issues by County planning areas. It includes an overview of existing plans, studies, and ordinances related to pedestrian and bicycle facilities; an inventory of existing facility needs, proposed policy changes, and proposed/ prioritized projects.

The plan is based on staff research, peer review, and community meetings in conjunction with the regional transportation plan.

The three main sections of the Safety Action Plan are:

1. Plan Intent
   Purpose and goals of the plan as well as the community meeting process

2. Plan Findings
   A survey of existing regional, area, and sector plans with pedestrian and bicycle provisions
   An inventory of pedestrian and bicycle facility needs by planning area
   A review of health and safety studies relating to the transportation

3. Plan Recommendations
   Complete streets policy
   Pedestrian and bikeways projects
   Coordination with partner agencies

Plan Findings

The following pedestrian-bicycle findings are provided in the plan:

Section 2.0 Existing Plans:

- ✓ Most of the unincorporated County growth over the past decade has been in the Northeast and Northwest areas. Projections indicate most future growth will be in the Southwest area of the unincorporated County.
- ✓ Several County adopted area and sector plans make policy recommendations for pedestrian and bicycle facilities
- ✓ The regional Metropolitan Transportation Plan (MTP) recommends constructing many miles of bicycle and pedestrian facilities in the unincorporated County.
- ✓ Data on pedestrian and bicycle travel is sketchy but indicates about 3% of the County population make their trip to work by these means. Recreational pedestrian and bicycle trips are thought to be much higher.

Section 3.0 Pedestrian and Bicyclist Network:

- ✓ Existing facilities in the unincorporated County include 30 miles of trails, 21 miles of bike lanes, and 56 miles of sidewalk.
- ✓ An inventory of pedestrian facilities found most roadways lack sidewalks; those which do have sidewalks contain obstructions, are too narrow, and are ADA non-compliant.
- ✓ Bikeway needs include narrow widths, inadequate signage and markings, and gaps in the bikeway system.
- ✓ Multi-use trail needs include rehabilitating existing trails and completing trail gaps.

Section 4.0 Pedestrian and Bicyclist Safety:

- ✓ High pedestrian and bicycle crash rates exist on some County roadways
- ✓ A number of countermeasures can be designed into County roadways to make them safer for pedestrians and bicyclists.
- ✓ A number of chronic diseases are attributable to the lack of physical activity, especially among children. Pedestrian and bicycle facilities can help address health issues.

Plan Recommendations

The Action Plan contains a number of strategies for implementing the County's pedestrian and bicycle facility recommendations.

- *Include Street Standards Recommendations (Section 5.0)*

Revisions to the County's Street Standards should include the following recommendations:

- Consider adequate pedestrian and bicycle facilities as part of all new roadway projects. Higher speed collector and arterial streets are of paramount concern.
- Sidewalks should be a minimum of 5 ft. wide with a 5 ft. buffer. Bike lanes are to be a minimum of 6 ft. wide. Multi-use trails are to be a minimum of 10 ft. wide.
- Flexibility is desired when retrofitting existing roadways by considering urban and rural environments, available rights-of-way, adjoining land use, roadway classification, traffic volume, speed, drainage, and other factors.
- Improve intersections with continental crosswalk markings, adequate lighting, shorten crosswalk length with smaller turning radii, install countdown walk signals, and set signal timing to accommodate elderly and children. Midblock crossings at schools and other locations may require refuge islands and beacons or signals.
- Alternative traffic calming devices to speed humps may include chokers, traffic circles, diverters, chicanes, and islands.
- Transit stops should include ADA compliant landings.
- Limit residential block lengths to 600 ft. to increase walkability.
- Pedestrian access through cul-de-sacs and from public sidewalks and parking areas to building entrances are to be strictly applied.

- *Develop Criteria for Review of private development*

Develop criteria for large subdivisions and master planned developments should incorporate appropriate pedestrian and bicycle facilities to be reviewed through the project and special use permit approval process.

- *Require Traffic Impact Studies*

Site circulation plans and traffic studies will be required by Public Works for all large commercial projects.

- *Identify and Fund Capital Projects (Section 6.0)*

The plan identifies more than 65 pedestrian and bicyclist facility improvement projects totaling $18.1 million in CIP funding not anticipated in the 2035 MTP to be developed over the next 10 years.

Projects will be scored and prioritized by the Public Works CIP committee before being included in the General Obligation bond election. Some projects may also be eligible for federal funding through the regional transportation improvement program (TIP) process.

- *Promote Coordination with Partner Agencies (Section 7.0)*

The County coordinates with Mid Region Council of Governments (MRCOG) for regional transportation planning and federal funding of County pedestrian and bicycle projects.

Coordination with other agencies are on-going and will continue on the implementation of the plan with Albuquerque Public Schools (APS), Middle Rio Grande Conservancy District (MRGCD), Albuquerque Metropolitan Arroyo and Flood Control Authority (AMAFCA), New Mexico Department of Transportation (NMDOT), utility providers, federal agencies, and local municipalities.

1.0 Plan Purpose and Goals

1.1 Purpose

The purpose of the *Pedestrian and Bicyclist Safety Action Plan* is to identify pedestrian and bicycle facility needs for the unincorporated County and to recommend complete street design policies that will make pedestrian and bicycle facilities safer.

The *Pedestrian and Bicyclist Safety Action Plan* is a Rank 2 facility plan and falls under the Comprehensive Plan. The Plan contains several elements that will help promote safe pedestrian and bicycle facilities within the County:

- It is a ten-year facility master plan that identifies many of the pedestrian and bicyclist needs by County planning areas. It includes an overview of existing plans, an inventory of existing facilities, and proposed/ prioritized projects.
- It is a safety plan that recommends design modifications to make roadways safer by incorporating pedestrian and bicycle facilities into the roadway rather than retrofitting them later on.
- It is an action plan that recommends specific implementation steps to be taken by County Public Works and Planning staff as well as policy-makers for roadway design that provide for pedestrian and bicycle facilities.

The plan, therefore, is centered on promoting safe pedestrian and bicycle facilities in Bernalillo County.

The construction of pedestrian and bicycle facilities is called for in Section 74-116 of the County Subdivision Ordinance and Section 66-213 of the Roads and Bridges Ordinance.

Subdivision Ordinance74-116
Alternative modes of transportation should be expanded and integrated into the street system to improve air quality and quality-of-life and reduce traffic congestion. Bikeways and trails as identified in the Trails and Bikeways Facility Plan and other adopted plans shall be required in order to provide circulation or access to schools, playgrounds, shopping centers, public transportation, and other community facilities.

Roads and Bridges Ordinance 66-213
This article is…intended to secure the following objectives:
Provisions for the necessary separation between pedestrians and vehicles,…and street furniture;
Provisions for safe, convenient, and unobstructed paths for pedestrians;
Provisions for design criteria for sidewalks...in order to ensure acceptable levels of comfort, safety,…in completed designs.

The subdivision ordinance references the 1993 *Trails and Bikeways Master Plan* which was jointly adopted by the City of Albuquerque and the County. Recently the City has been preparing its own *Bikeways and Trails Master Plan.* The *Pedestrian and Bicyclist Safety Action Plan* along with the *Long Range Bikeway Systems* map will replace the 1993 trails and bikeways facility plan for the County. County sector development plans also indicate the need for pedestrian and bicycle facilities.

1.2 Complete Streets

In New Mexico, a few counties and cities have adopted policies and begun implementing Complete Streets. The Mid Region Council of Governments adopted a complete streets resolution in June of 2011. Complete Streets are designed to safely move people of all ages and abilities along and across the roadway: pedestrians, bicyclists, motorists, and transit users. Complete Streets make it safe to walk to school, a nearby cafe, a senior center, or cross the street to reach a bus stop. Complete streets are made safe to bicycle to work, a neighborhood park or connecting trail. Because Complete Streets are designed for everyone they can improve the livability of our communities.

1.3 Goals

When planning for pedestrian and bicyclist facilities in Bernalillo County, the primary goal is to

- Ensure safety for all travelers along county roadways and trails, especially children on routes to school and access for disabled and elderly persons to transit stops.

Other goals are to:

- Provide choice in transportation to work, school, and shopping for all ages and abilities,
- Promote healthy lifestyles and recreational opportunities for all ages and abilities by encouraging residents to exercise daily,
- Reduce energy use and improvement of air quality.

1.4 Planning Process

To address the primary County goal of safety for pedestrian and bicycle facilities, Public Works has initiated this plan. Infrastructure Planning and Geo-Resources Department staff held seven community meetings over the summer and fall on the Action Plan. These included three in the South Valley, two in the North Valley, one in Paradise Hills, and one in North Albuquerque Acres. Neighborhood associations were notified of all community meetings and the Action Plan has been posted on the County's website. Public comments received at the community meetings were incorporated into the Action Plan. Input was also received from County Public Works Technical Services, County Planning, County Parks and Recreation, City Parks and Recreation, and the Mid Region Council of Governments (MRCOG).

Infrastructure Planning also conducted extensive research on national safety and health issues and complete streets that applies to the County. It also undertook an inventory of pedestrian, bicycle, and trail facilities in the County as well as a review of County plans with reference to pedestrians and bicycle facilities.

The plan is divided into two main sections:

1. **Findings** – background studies and inventory
2. **Recommendations** – policy and implementation

B. Plan Findings

2.0 Existing Plans

This section provides demographic information for the County's unincorporated planning areas: northeast, northwest, southeast and southwest. It presents data bicycle and pedestrian travel within these areas. It also summarizes bicycle and pedestrian policies in the County's various area and sector plans, and regional transportation plans.

2.1 County Planning Areas

Between 2000 and 2008, most unincorporated County growth has been in the Northwest and Northeast areas. While substantial growth has occurred on the Southwest Mesa, most has been within the City limits (as shown in Exhibit 1 and 2). Varying population growth by sub-areas can indicate varying needs for pedestrian and bicycle facilities throughout the unincorporated County to be planned.

Exhibit 1: Bernalillo County Unincorporated Area Population

	2000	2008	2035
Northeast County	8,189	9,882	12,783
Northwest County	19,807	19,925	75,027
Southwest County	48,270	51,991	144,877
Southeast County	4,878	4,799	9,173
East Mountains	16,771	20,057	29,809
Unincorporated County*	93,037	106,654	185,072
Total County	*556,002*	*649,916*	*1,037,719*

Sources: MRCOG, for unincorporated county projections, 2010
*doesn't include population on Pueblo lands

- **Northeast County**

The Northeast area has been growing the most rapidly of the subareas at an annual rate of 2.6% (compared to overall unincorporated county growth of 1.1% annually). North Albuquerque Acres, Primrose Pointe, and Sandia Heights are located in the foothills region of the County, west of the Sandia Mountains, in the northeast corner of the County. This planning area of the County makes up about 10% of its unincorporated population.

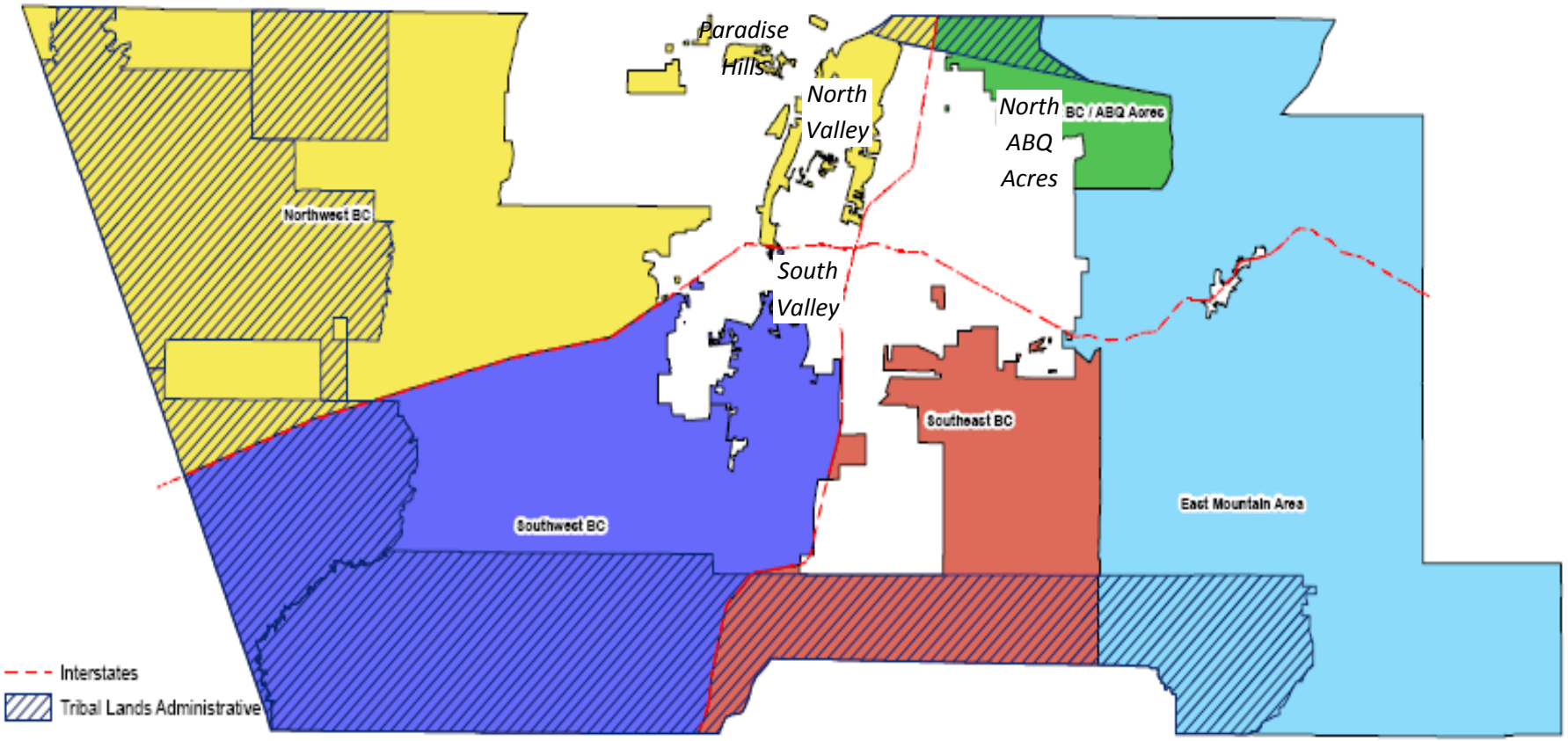


Exhibit 2: County Planning Areas

- **East Mountains**

The East Mountains area has been growing at about 0.1% annually. This area includes the rural communities of San Antonio, Sandia Park, Sedillo, Cedar Crest, and Carnuel in the northern part of the County. The southern East Mountain planning area contains small communities such as Chilili, Juan Tomas, Escobosa, Ponderosa Pine, and Cedro. The East Mountains make up about 20% of the County's population.

The East Mountains Area will not be included in this plan because of its largely rural character and in order not to replicate projects identified in the *East Mountains Bikeway and Trails Master Plan*.

- **Northwest County**

The Northwest area has been growing at an annual rate of 2.4%. The North Valley includes the unincorporated rural community of Alameda and the semi-rural Edith Blvd. corridor as well as Lee Acres and Duranes neighborhoods located between the Rio Grande and the East Mesa.

Paradise Hills on the northwest mesa was the earliest urbanized area outside the Albuquerque metropolitan area developed in the 1960s and 1970s, now surrounded by the City of Albuquerque. Paradise Hills, Sky View, and Alban Hills are in the northwest corner of the County. The North Valley and Paradise Hills areas together make up about 21% of the County's unincorporated population.

- **Southeast County**

The Southeast area of the County includes Kirtland Air Force Base and Mesa del Sol, the latter community is in the City. A small area of unincorporated County is located north of Mesa del Sol but has no population.

- **Southwest County**

The Southwest area is the most populous area of the unincorporated county but has been growing at 1% annually. (Most of the rapid growth has been in the Albuquerque incorporated area of the Southwest Mesa.) The South Valley is one of the oldest areas in Bernalillo County, and many families trace their lineage to the earliest settlers of Atrisco, Pajarito, and Los Padillas, whose livelihoods were directly tied to the land and the river. The area was predominantly agricultural until the early 1940s.

The Southwest Mesa planning area is the southwestern most corner of Bernalillo County and includes much of the recent suburban subdivision development on Albuquerque's West Side. Together, the South Valley and Southwest Mesa make up 49% of the County's unincorporated population. This area is also expected to experience most of the county's growth over the next 20 years.

2.2 Pedestrian and Bicyclist Mobility

Data about pedestrian and bicycle travel in Bernalillo County is only available for commuter trips collected during the 2000 U.S. Census and subsequent Census surveys (Exhibit 3a/b). The census data indicates that most work trips are by single occupancy vehicles. Almost 2% of commuters walk and 0.3% bike to work in the North Valley and 0.5% walk and 1.6% bike in South Valley. Walking to work is down since 2000 while biking is up slightly. Pedestrian and transit trips are often linked. The data suggests lack of pedestrian and bicycle facilities contribute to reliance on automobile.

Estimates for recreational or non-employment walking and biking trips are much higher. See Exhibit 11 for available counts on specific roadways and trails.

Exhibit 3a: Bernalillo County Commuting Patterns, 2000						
	Single Occupant Vehicle	Carpool	Bus	Bicycle	Walking	Work at Home
Albuquerque	77.7%	12.5%	1.7%	1.1%	2.7%	4.3%
Bernalillo County	77.4%	13.0%	1.5%	0.9%	2.5%	3.8%
North Valley	76.1%	15.7%	0.1%	0.1%	2.8%	5.2%
South Valley	74.6%	18.8%	1.0%	0.0%	1.2%	4.3%
Exhibit 3b: Bernalillo County Commuting Patterns, 2005-09						
Albuquerque	77.7%	11.9%	2.0%	1.2%	2.1%	3.8%
Bernalillo County	77.9%	12.2%	1.8%	1.1%	1.9%	3.9%
North Valley	79.9%	9.6%	1.2%	0.3%	1.9%	5.1%
South Valley	78.2%	16.1%	0.6%	1.6%	0.5%	3.0%
Sources: US Census, American Community Survey; 2035 MTP, MRCOG						

2.3 Existing Plans

The Albuquerque/ Bernalillo County Comprehensive Plan is the rank one plan; area and facility plans are rank two plans; and sector development, neighborhood, and corridor plans are rank three plans. All plans must be compatible with higher ranking plans for the same area. The *Pedestrian and Bicyclist Safety Action Plan* is a Rank 2 Facility Plan. Existing plans often use authoritative language such as "should" or "required" since they are established policy of the County.

Adopted existing plans with pedestrian-bicycle recommendations include the following**:**

- Comprehensive Plan
- Bikeways and Trails Facility Plan
- Parks, Open Space, and Trails Master Plan
- Area, Corridor, and Sector Development Plans.

- **Albuquerque/ Bernalillo County Comprehensive Plan, 1988/2002**

  The *Comprehensive Plan* establishes county-wide development policies for a number of elements including land use and transportation. It identifies character areas such as urban core, established urban, developing urban, semi-urban, and rural (see map below).

  Roadway design for sidewalks and bikeways should follow character designations of the *Comprehensive Plan* as well as take into account density and existing land use. Areas designated as rural include South Valley (south of Gun Club) and North Valley north of Osuna as well as North Albuquerque Acres.

The *Comprehensive Plan* also identifies activity centers and corridors where the full range of transportation modes – including pedestrian and bicycle facilities - should be available to residents.

The Goal is to develop corridors, both streets and adjacent land uses that provide a balanced circulation system through efficient placement of employment and services, and encouragement of bicycling, walking, and use of transit/para-transit as alternatives to automobile travel, while providing sufficient roadway capacity to meet mobility and access needs.

In the unincorporated areas, these corridors include:

- Express transit corridors:
  - Coors Boulevard Southwest
  - Alameda Boulevard
  - Paseo del Norte
- Enhanced transit corridors:
  - Isleta Boulevard
  - Arenal Road *(County staff recommends Bridge Blvd/ Tower Rd corridor instead)*
  - Fourth Street NW
  - Eubank Boulevard

Designated corridors and activity centers call for:

- 6 to 8 ft wide sidewalks with 4 to 8 ft. wide buffers
- Multi-use trails or bikeways.

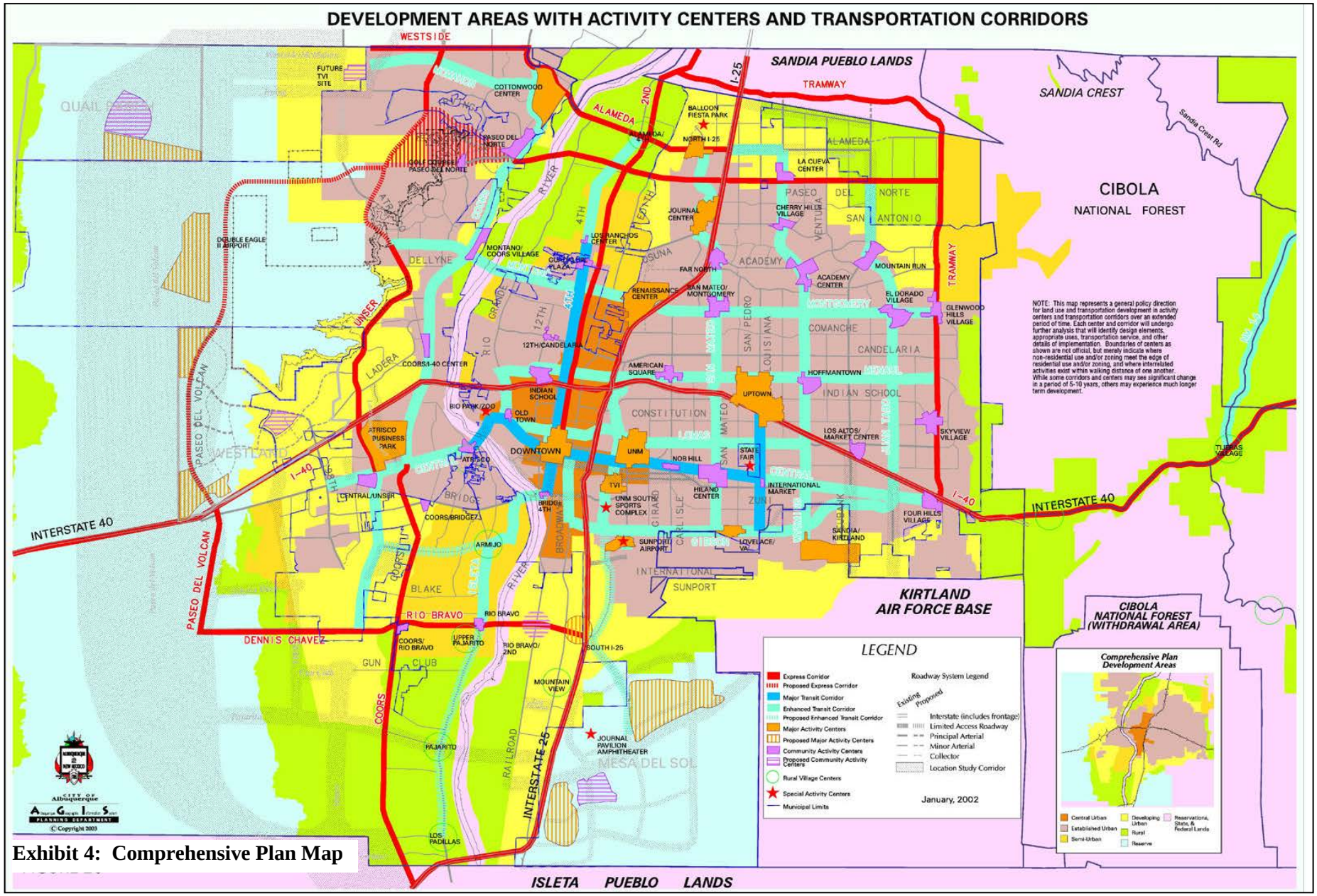


Exhibit 4: Comprehensive Plan Map

- **Trails and Bikeways Master Plan, 1993**
  In 1993 the City and County adopted Trails and Bikeways Facility Plan. The City is currently updating the plan within its jurisdiction. This *Pedestrian and Bicyclist Safety Action Plan*, along with MRCOG's *Long Range Bikeway Systems* map will replace the 1993 Trails and Bikeways Facility Plan for the County. Projects identified in the unincorporated area in the 1993 plan never built include:

  - Dennis Chavez/ Rio Bravo corridor trail
  - Gun Club Lateral Trail
  - Amole Arroyo Trail
  - 118th St Trail
  - Pajarito Rd Trail
  - Ceja Trail
  - Arenal Main Canal Trail
  - Isleta Drain Trail
  - Los Padillas Drain Trail
  - Atrisco Riverside Trail
  - Tijeras Arroyo Trail
  - San Jose Drain Trail
  - South Diversion Channel Trail
  - Tijeras Arroyo Trail
  - Albuquerque Main Canal
  - Chamisal Lateral
  - Calabacillas Arroyo Trail
  - La Cueva Arroyo Trail
  - South Domingo Baca Arroyo Trail

- **Parks, Open Space, and Trails Master Plan, 2003**
  The master plan identifies new capital projects and improvement to existing recreation facilities. It provides a framework for future growth and facility enhancement. Provisions related to pedestrian and bicycle facilities and trails include:

  - Support APS "Safe Routes to School" initiative through appropriate trail development
  - Develop segments of the metropolitan trail network in the unincorporated County where consistent with the *Trails and Bikeways Facility Plan*
  - Work with developer to build trail along South La Cueva Arroyo between Lowell and Tennyson as part of Primrose Pointe Units 5 & 6 (completed)
  - Explore feasibility of extending the San Antonito/Vista Grande trail connection further south to the commercial center at Frost Road and NM 14.
  - Explore feasibility of extending the San Antonito/Vista Grande trail connection further north - along the designated Turquoise trail – with private landowners and NMDOT
  - Acquire and develop trail easement between Riverside Drain and Main Canal as close to the Sandia Reservation Boundary as possible
  - Develop trail or bike lane along Paradise Blvd. as part of road widening, either by City Public Works, BCPW, or by private developer(s) (partially competed).

- Develop non-vehicular easement on north side of Alameda Blvd. between Albuquerque Main Canal and North Rio Grande Blvd.
- Consider extending the Alameda Boulevard trail east from 4th Street to Balloon Fiesta Park. (under development)
- Design and construct South Diversion Channel Trail Phase II (north side of Rio Bravo to Railroad spur).
- Design and construct Tijeras Arroyo Phase II (South Diversion Channel to University Boulevard extension)

- **Southwest Area Plan, 2000 update**
  The *Southwest Area Plan* (SWAP) is intended to encourage community involvement in the implementation of policies and action strategies related to built and natural environments. The plan update includes human resources and economic development elements. Strategies specific to pedestrian and bicycle facilities include:

  - Identify and build missing bicycle and pedestrian links
  - Promote the installation of bike lockers and showers (at the offices of major employers and at public buildings)
  - Design streets with geometry safe for bicycles (and pedestrians)
  - Increase bicycle and pedestrian facility construction and pavement striping.

- **North Valley Area Plan, 1993**
  The *North Valley Area Plan* inventoried local resources, defined citizen needs and issues, identified implementation strategies, and recommended policy changes including those relating to pedestrian and bicycle facilities:
  - Consider restriping narrower driving lanes to promote additional space for sidewalks or walkways, bikeways, and bus stops
  - Seek agreement with MRGCD to establish notification procedures for ditch closures that include posting the affected right-of-way and holding advertised public meetings
  - Undertake a study of multiple-use of ditches and associated rights-of-way *(Ditches to Trails).*

  Trails and bikeways identified in the plan were incorporated into subsequent LRBS map and *Trails and Bikeways Master Plan*.

- **Isleta Boulevard Sector Development Plan, 2008**
  The Isleta Blvd. corridor plan is intended to protect, rehabilitate, restore, and enhance the historic, cultural, and economic significance of the Isleta corridor.

  - Promote trail networks in order to:
    - Allow for safe pedestrian activity;
    - Promote the utilization of local amenities; and,
    - Encourage physical health of the community.
  - Promote a safe and healthy environment in the form of walking trails, Bernalillo County should promote a

Network Plan that seeks connections between the Isleta Boulevard Village Centers and their services.

- Work with County and City Planning Departments, County and City Parks and Recreation Departments, County Public Works Division and City Municipal Department, and the Albuquerque Metropolitan Arroyo Flood Control Authority in order to locate, design, and construct a trail system around each of the Village Centers.
- A trail system should be constructed in a manner that is accessible and that preserves the historic character of the South Valley.

- **Bridge Boulevard Village Center and Corridor Plan, 2010**

  The Bridge Boulevard plan provides design standards to address the Bridge Boulevard right-of-way as well as design standards that apply to properties along the corridor and designated village centers. Pedestrian and bicycle design standards include:

  Outside the Village Centers, the sidewalks will be narrower, 5 feet and separated from the street with a continuous landscape buffer. Street trees, street lights and pedestrian lights will be equally spaced and coordinated with existing utility easements.

  Around the Village Centers (at Five Points and Goff) where denser commercial development is anticipated, and therefore a higher level of pedestrian traffic is expected, the sidewalk will widen to 10 feet and extend from the street curb to the private property line. In these areas the sidewalk is distinguished by decorative paving patterns or decorative pavers and is punctuated by landscape cutouts, public art and site furnishings.

  Crosswalks will respond to the following criteria:

  1. Crosswalks should be marked by striping and/or textured/ colored pavement for high visibility.
  2. Raised medians should be used for pedestrian refuges in all crosswalks with cut-throughs for wheelchairs.
  3. Pedestrian countdown signals that are audible and visual should be installed and signal buttons should be located at the appropriate height next to the ramp landing.
     Signals should be timed for children, seniors, and the disabled.
  4. Two-stage pedestrian crossings with signals and/or beacons should be used at all mid-block locations.
  5. Crosswalks should be placed before bus stops so pedestrians are visible to motorists. Bus stops may consist of a sign and bench or in areas of higher use, a shelter is appropriate.
  6. Pedestrian lighting should be installed along sidewalks and all crosswalks should be well lit.
  7. Pedestrian and accessible facilities are to be constructed according to AASHTO “Guide for Planning, Design, and Operation of Pedestrian Facilities.”

8. Consolidate driveways and reduce the number of access points by developing shared access between properties.
9. Bus shelters require a 5 ft. wide and 8 ft. deep hard surface landing per ADA. ABQ Ride requires an 8 ft. wide by 12 ft. deep pad for each bus shelter.
10. All ramps should be designed to ADA standards and be in line with crosswalks; two ramps at each corner are recommended.
11. All public art and site furnishings will be coordinated with existing bus stops to accentuate the way-finding and pedestrian experience.

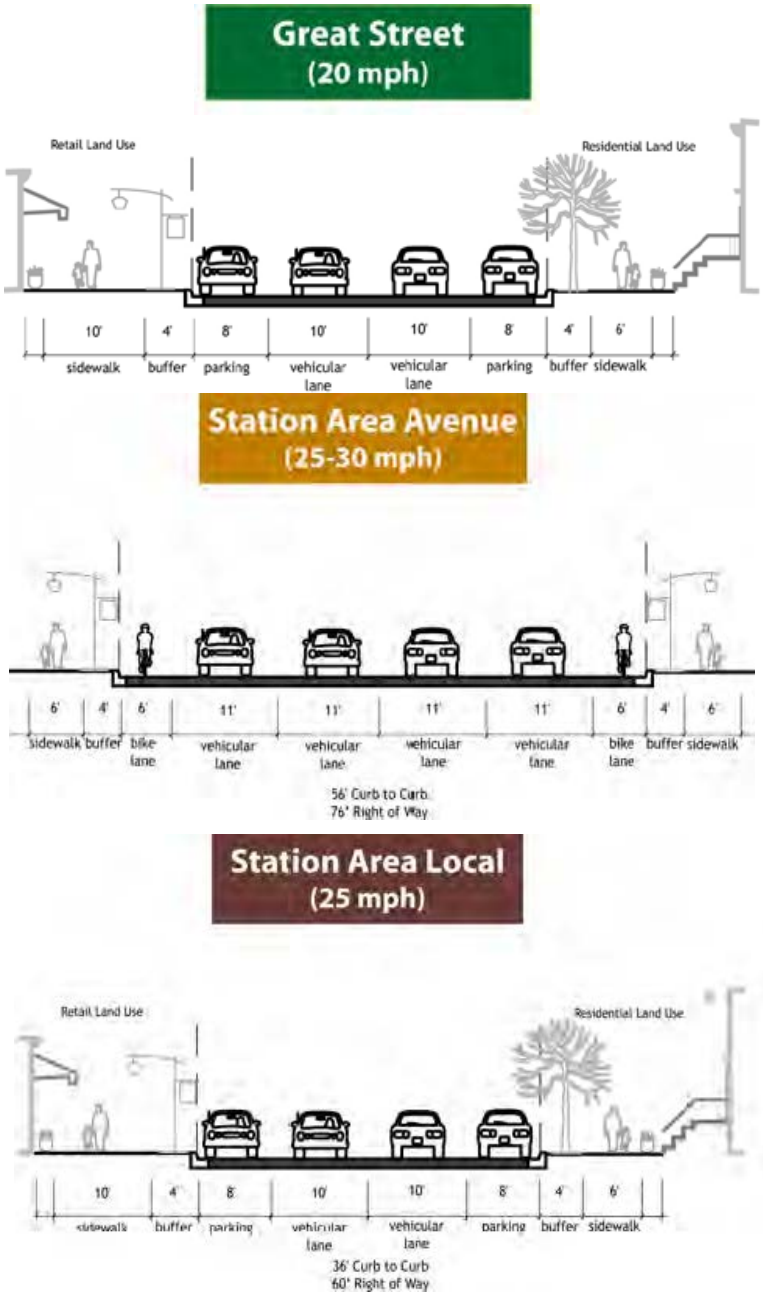
To properly promote and support safe biking, good practices such as those detailed below should be followed:

1. Bike lanes need to be properly defined with a high contrast stripe. Ideally the lane is painted a solid color to distinguish the extents of the bike lane.
2. Bike lanes need to be marked with proper signage, both within the lane on the ground and with posted street signs.
3. Bike lanes need to be properly coordinated and marked at right turn lanes.
4. Short term bike parking (ranging from street furniture, to a standard bike rack to a bike locker) needs to be located throughout the length of the boulevard to accommodate visitors and customers to the area.
5. Short term bike parking needs to be visible, secure, well lit, unimpeded by stationary objects and easily accessible.
6. Bicycle facilities are to be constructed according to AASHTO "Guide for the Development of Bicycle Facilities."

- **Bernalillo County/International Sunport TOD Sector Development Plan, 2009**
  The station area sector development plan is intended to encourage transit-oriented, mixed-use development (TOD) near the Railrunner commuter station in the South Valley. Three roadway typologies are called for in the plan:

  - **Great Street**
    Avenida de la Tren would be transformed into a community focal point for special events. It would include wide sidewalks where retail is located and sidewalks with buffers where residential is adjoining to the street. Both sides would have on-street parking. Slow speeds would allow for shared bicycle use.
  - **Station Area Avenue**
    Prince Street and a future east-west collector would provide four vehicular lanes, bike lanes, and sidewalks with buffers.
  - **Station Area Local**
    Peripheral local streets in the TOD would provide on-street parking and wide sidewalks on the retail side of the street and sidewalks with buffers on the residential side.

  Four-lane divided cross sections for high speed Second Street and Rio Bravo Boulevard are also provided. Both call for bike lanes and sidewalks/ multi-use trail with buffers.



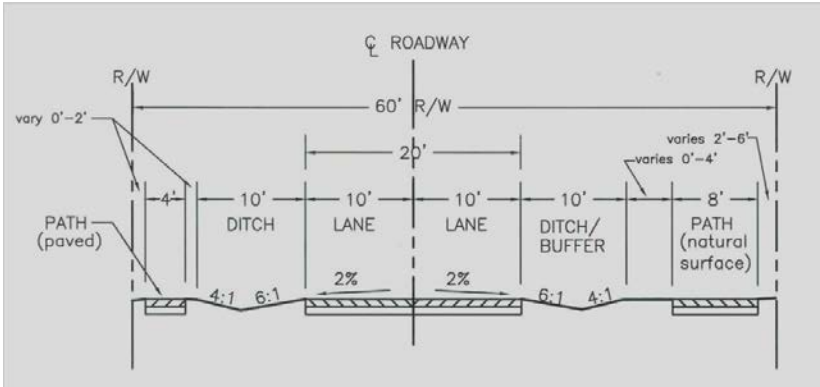
- **Alameda Boulevard Design Overlay Zone (DOZ), 1996**
  The intent of the Alameda DOZ is to protect visual qualities and unique and historic character of the corridor and to provide guidance for new development and streetscape projects. Design guidelines pertaining to pedestrian and bicycle facilities include the following:

  - Sidewalks should be developed as a continuous system. Vehicle-free connections must be provided from all primary entries to the right-of-way as well as providing sidewalks along the right-of-way.
  - Sidewalk treatments should be used in new construction to accentuate the basic characteristics of each Character Zone.
  - Where right-of-way is adequate, new sidewalks should be set back a minimum of three to five feet from the curb. The setback should be landscaped.
  - All sidewalks will comply with ADA standards.
  - In (Village Center) enhance pedestrian crosswalks with textured and colored paving to create a pleasant, safe pedestrian system which links the community services.
  - Provide bicycle links between the multi-use trail located on the south side of Alameda Boulevard and the Village Center. Include bicycle parking conveniently located to community and commercial uses.
  - Provide bridle paths wherever possible.
  - Complete the Alameda Boulevard multi-use trail to the North Diversion Channel trail and Balloon Park (under construction)
  - Provide pedestrian-only trails connecting Alameda Boulevard and neighborhoods along the acequias, and multi-use trails along acequia rights-of-way no longer used.
  - Sidewalk regulations are the same as the County Sidewalk Ordinance with the following additions:
    - Direct pedestrian access to commercial and office buildings must be possible from public sidewalks.
    - No driveways or parking lots paralleling Alameda Boulevard should be located between new commercial and non-residential buildings and the public right-of-way.
    - Develop distinctive connecting paths between the school, church, Alameda Community Center, new plaza area, and commercial areas.

- **Paseo del Norte/ North Albuquerque Acres Sector Development Plan, 2000**
  The sector plan establishes regulations to implement an earlier corridor study to preserve the rural character of the area. The sector plan includes traffic calming measures designed to encourage movement of traffic on the north-south roads by minimizing the number of stops required on north-south routes, and maximizing the number of stops and traffic-calming measures on the east-west routes.

- The traffic calming plan places speed humps, mid-block islands, intersection traffic circles, and cul-de-sacs throughout the plan area and stop signs on east-west roads at intersections.
- Regional natural surface trails be soft-surfaced for equestrians and regional off-street bicycle paths be hard-surfaced.
- 8-foot minimum width natural surface trail on one side of the roadways and a 4-foot minimum width paved surface trail on the other side.

Regional Trail on Browning Road



Sector Plan Street Section

2.4 Regional Transportation Planning

This Safety Action Plan seeks to implement regional long range pedestrian and bicycle plans. The County participates in regional transportation planning efforts as part of the Mid Region Council of Governments (MRCOG) Albuquerque Metropolitan Planning Area (AMPA). MRCOG prepares a 25-year metropolitan transportation plan (MTP) that identifies future transportation needs. MRCOG prepares a six-year transportation improvement programs (TIP) for fiscally constrained projects of all modes. County pedestrian and bicycle projects identified on the *Long Range Bikeways System* (LRBS) map are listed below. The map shows existing and proposed facilities.

The LRBS map identifies long-distance bikeways facilities such as:

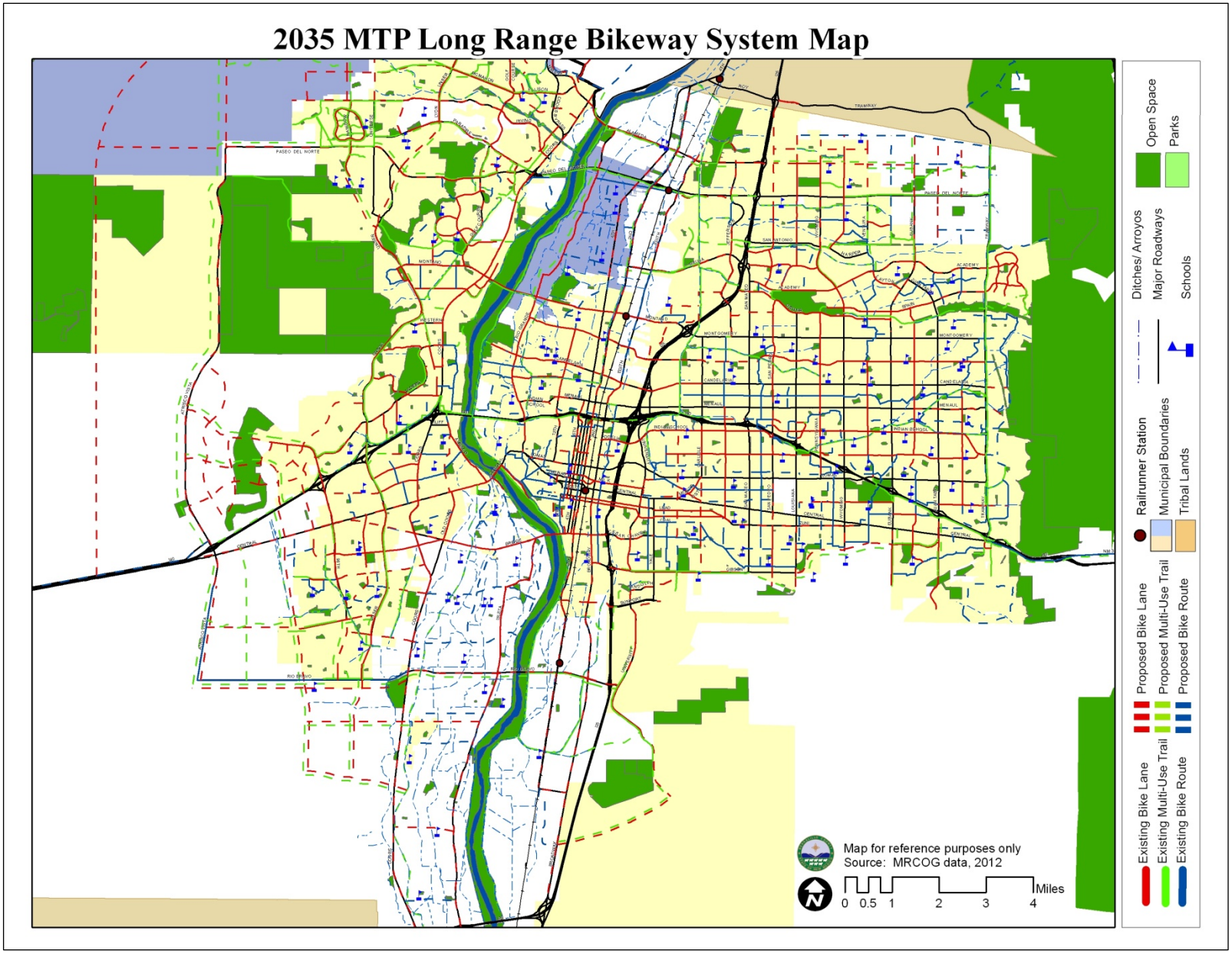
- Unser Boulevard Trail (COA)
- Paseo del Norte Trail (COA) with an overpass proposed at I-25
- Isleta Drain Trail (MRGCD)
- Isleta Blvd. south of Rio Bravo Blvd.
- Dennis Chavez/Rio Bravo Blvd. (NMDOT)
- Extension of Bosque Trail south of South Diversion Channel
- NM 333 east to Tijeras (NMDOT)
- NM 14 north to Frost Rd. (NMDOT)

The LRBS map also identifies bike routes (shared roadways) such as:

- Atrisco Dr.
- Sunset Rd.
- La Vega Dr.
- Tapia Blvd.
- Arenal Rd.
- Blake Rd.
- Lake View Rd.
- Metzgar Rd.
- Los Padillas Rd.
- Reading Dr.
- Elena Dr.
- Frost Rd. east of Vallecitos
- Mountain Valley Rd. (NMDOT)

The Mid-Region Council of Governments is currently updating its Future Albuquerque Area Bikeways and Streets (FAABS) document. That document has served as a guide for regional roadway design since 1965, including establishing right-of-way widths by functional classification. Future revision to County Street Standards should reference the updated FAABS guidelines.

Exhibit 5: Long Range Bikeway Systems Map,
2035 Metropolitan Transportation Plan, MRCOG, 2011



2.5 Conclusion

This section identified findings for demographics and pedestrian and bicycle policy by County planning areas such as:

- ✓ Most of the unincorporated County growth over the past decade has been in the Northeast and Northwest areas. Projections indicate most future growth will be in the Southwest area of the unincorporated County.
- ✓ Data on pedestrian and bicycle travel indicates about 3% of the County population make their trip to work by these means. Recreational pedestrian and bicycle trips are thought to be much higher.
- ✓ Several County adopted area and sector plans include policy recommendations for pedestrian and bicycle facilities
- ✓ The regional Metropolitan Transportation Plan (MTP) recommends constructing many miles of bicycle and pedestrian facilities in the unincorporated County.

3.0 Pedestrian and Bicyclist Network

This section provides information about the existing and proposed pedestrian and bicycle facility network in the unincorporated County. The *Long Range Bikeways System (LRBS) Map* (Exhibit 5) identifies corridors where these facilities are to be built. An inventory of existing County pedestrian and bicycle facilities conducted in 2009 is summarized by length in Exhibit 6. There is an existing 30 miles of multi-use trails, 16 miles of bike routes, 25 miles of bike lanes, and 60 miles of sidewalks in the unincorporated County. The Safety Action Plan proposes an additional 22 miles of multi-use trails, 25 miles of bike lanes, and 208 miles of sidewalks. Additional pedestrian and bicycle facilities are proposed for the LRBS map in the *2035 Metropolitan Transportation Plan*.

Exhibit 6: Unincorporated Bernalillo County (Excluding East Mountains) Pedestrian and Bicycle Facilities

Facility	Existing MTP	Prop. MTP	Exist BC Maint.	Prop. Plan Proj	Total Plan Proj	Total MTP
MU Trails	25.3	75.3	19.3	22.0	*41.3*	100.6
Bike Route	7.35	41.0	N/A	N/A	*N/A*	48.4
Bike Lanes	14.6	90.0	25.0	25.2	*50.2*	104.5
Sidewalks	N/A	N/A	59.5	208.6	*268.1*	N/A

Source: BC 2009 Inventory, 2012 update; 2035 LRBS Map; Lanes both sides
Sidewalks both sides except where multi-use trail one side

Exhibit 7: Bernalillo County Sidewalk Inventory, 2009 (in miles)											**No. Segments**					
	Width		Pavement Type			Curb Type					Needed Improvements					
	≥ Required Width	Narrow Width	Concrete	Asphalt	Soft-Surface	Vertical Curb	Roll-over Curb	Flat Curb	No Curb	Buffer	Obstructions*	Deficiencies**	Signalized Intersection Cross-walks	Mid-block Crosswalks	Non ADA Ramps***	Total Length
Southwest BC	19.7	10.9	29.7	0.3	0.6	28.4	0.3	1.3	0.6	14.0	34	22	14	4	25	30.6
Northwest BC	19.6	0	19.6	0	0	19.6	0	0	0	8.8	10	72	5	2	32	19.6
Northeast BC	9.2	0	6.4	2.8	0	5.4	0	0	2.8	7.4	0	5	1	2	7	9.2
East Mountains	Not inventoried (no sidewalks)															
Total	48.5	10.9	55.7	3.1	0.6	53.4	0.3	1.3	3.4	30.2	44	99	20	7	64	59.5

Notes: *Obstructions include sidewalks with poles, mailboxes, signs, and fire hydrants with less than 3 ft. of passable space
**Deficiencies are locations with scaling/ spalling, buckling, faulting, broken, cracked, and missing sidewalk sections;
***Includes unsignalized intersections

3.1 Sidewalks

County staff has identified and evaluated the existing pedestrian and bicycle facility needs as part of its inventory. "Sidewalks" used in this section refers to concrete, asphalt, or soft-surface walkways within the roadway right-of-way. The County maintains 60 miles of sidewalk on 730 miles of roadway. Exhibit 7 summarizes the inventory of County sidewalks by planning area and characteristics and is described below.

- **Southwest**

The South Valley of the County has the most sidewalks with 30 miles but it also has the least amount of connectivity. Many sidewalks are in fair or good condition but 16.5 miles have obstructions or need repairs. Sidewalk repair needs include the following: two sections have gaps, four sections are broken, four sections have faulting, 12 locations are buckled, 18 places are overgrown with vegetation or weeds, and 31 locations are obstructed by signs, poles, fire hydrants, etc. South Valley sidewalks are concrete, asphalt, and soft-surface walkways. Most sidewalks are four feet wide and most with sidewalks have a vertical curb and gutter but no buffer between the curb and sidewalk. Eight streets have sidewalks of more than four feet in width and a few with as much as eight feet of walkway. 12 streets provide a buffer between the curb and gutter and sidewalk of between three and eight feet. Two streets with sidewalks have roll-over curb and three have flat curbing.

Existing South Valley corridors with sidewalks include:

- Gun Club Rd. west of Coors Blvd.
- Isleta Blvd. from Bridge Blvd. to Gun Club Rd.
- Arenal Rd. east of Coors Blvd. to Tapia Rd.
- Atrisco Dr. north of Bridge Blvd.
- Bridge Blvd.

Nine South Valley elementary schools lack good pedestrian access except for Adobe Acres Elementary School.

Obstructions in Bridge Blvd. Sidewalk

No ADA curb ramp

Existing corridors where sidewalks are needed:

- Coors Blvd. (NMDOT) from Old Coors Rd. to Gun Club Rd.
- Old Coors Rd. from Bridge Blvd. to Coors Blvd.
- Rio Bravo Blvd./ Dennis Chavez Blvd. (NMDOT) from I-25 to 118th St.
- Pajarito Rd. west of Coors Blvd.
- Broadway Blvd. (NMDOT) from Woodward St. to Desert Rd.
- Second St. SW. Pedestrian intersection improvements are planned as part of a 2nd St/ Prosperity signalization project.

Future corridor extensions are to include sidewalks:

- 118th St.
- Unser Blvd. south of Rio Bravo.

The following narrow collector streets are located in Established Urban, Semi-Urban, and Developing Urban areas as designated in the *Comprehensive Plan* and should accommodate pedestrians:

- Atrisco Rd. (40 – 60 ft. right-of-way) south of Bridge Blvd.
- Sunset Rd. (40 – 50 ft. right-of-way) Feasibility study prepared between Bridge Blvd. and Yakima Rd. includes sidewalks.
- Sunset Gardens Rd. (40 ft. right-of-way) Sidewalks under construction in 2011.
- Goff Rd. (50 – 60 ft. right-of-way)
- Tapia Blvd. (40 – 50 ft. right-of-way)
- Barcelona Rd. (50 – 60 ft. right-of-way)
- Del Rio Rd./ Camino del Valle (50 – 60 ft. right-of-way)
- Gun Club Rd. (50 – 60 ft. right-of-way).

Collector streets in Semi-Urban and Rural areas may use a stabilized, compacted crusher aggregate walkway and have rollover curbs or stained concrete.

South Valley gaps in the sidewalk network include:

- Sunset Rd. from Sunset Gardens to Goff Blvd.
- Goff Blvd. from Five Points Rd. to Sunset Rd.
- Atrisco Rd. from Bridge Blvd. to San Ignacio Rd.
- Citation Rd. from Patton Rd. to Valdora Ave.
- Sanford Ave. from Tapia Blvd. to Isleta Blvd.
- Sylvia Rd./ School Access Rd. from Blake Rd. to Barcelona Rd.
- Barcelona Rd from Isleta Blvd. to Joe Sanchez Rd.
- Gun Club Rd. from Grace Vigil Rd. to Isleta Blvd.
- Valley Gardens Dr. (COA)/Metzgar Rd./West Lea Dr., between Gun Club Rd. and Pajarito Elementary School
- Los Padillas Rd. from Coors Blvd. to Isleta Blvd.
- Prince St. from Camino del Tren to Prosperity Ave.
- Second St. SW from Prosperity Ave. to Shirk Ln.
- Prosperity Ave. from 2nd St. SW to Prince St.

- **Northeast**

The Northeast sub-area of the County has the least amount of sidewalk totaling about 9 miles. Most sidewalks are in good condition but almost 2.5 miles has repair or other needs. Much of the sidewalk in this area is fairly recent and consists of a strip of asphalt separated from the roadway. Sidewalk needs include four locations with faulting, four sections with broken pavement, one buckled location, and 16 places with overgrown vegetation or weeds. Most streets have four foot wide sidewalks; some wider with as much as nine feet. Most streets with sidewalks have vertical curbing but many have none. The majority of streets provide a buffer between the roadway and the sidewalk of between two and 14 feet in width.

Developments with existing sidewalks include Primrose Pointe. The east side of Tennyson has a sidewalk. Sidewalks are under construction on the east side of Eubank Blvd. from San Antonio Dr. to Paseo del Norte.

Both Northeast County elementary schools, Double Eagle and North Star provide pedestrian connections from the neighborhood on Florence Ave., San Diego Ave., and Ventura St. Asphalt sidewalks also exist along Lowell St. from Paseo del Norte to Elena Dr. and along Del Rey Ave. from Eubank Blvd. to Tennyson St. and along Eagle Rock Ave.

Existing corridors where sidewalks are needed:

- Alameda Blvd. from Ventura St. to Eubank Blvd.
- Eubank Blvd. from Paseo del Norte to Alameda Blvd.

Other collector or minor arterial roads may include asphalt as opposed to concrete sidewalks.

Gaps in the North Albuquerque Acres sidewalk network include:

- Tennyson St. from Paseo del Norte to Modesto Ave. and from San Bernardino Ave. to Del Rey Ave.
- Cedar Hill Rd., Live Oak Rd., Pino Ave. and San Rafael Ave. from Tennyson St. to Tramway Blvd.
- Lowell St. from Oakland Ave. to Eagle Rock Ave.
- Florence Ave. and San Diego midblock to Holbrook St.

Deteriorating Asphalt Sidewalk

- **Northwest**

The Northwest sub-area of the County has about 20 miles of sidewalk. Like the South Valley, many areas of the North Valley lack connectivity. Most sidewalks are in poor condition; 83% need repairs other improvements. Most of the sidewalks in Paradise Hills were built in the 1960s before ADA requirements. Ramps are not provided at intersections on 32 streets. All are concrete sidewalks with vertical curbing and most are four feet wide with a four foot buffer. One street has three foot sidewalks and three streets have sidewalks five and six feet wide.

Many areas of sidewalk had overgrown landscaping or weeds (178 locations) not being maintained by the property owner. In one instance, vegetation totally covered the sidewalk so that it was not visible. Among the substandard sidewalks: 10 sections have obstructions in the sidewalk preventing passage; 35 locations have buckled sidewalks; 25 places have faulted sidewalks, four locations have scaled /spalled sidewalks, one location has a missing section and another a drainage cut, and three places are broken.

Neighborhoods without sidewalks:
- Alban Hills and Sky View Acres
- Alameda neighborhoods.

Some streets, mostly in the eastern portion of Paradise Hills, provide sidewalks as described above. Irving Blvd. has a sidewalk on its south side between Pase(ito) del Norte and

Crusher fine sidewalks must be stable enough for wheelchairs

Unser (Lyon) Blvd, Golf Course Rd. on its east side and Unser (Lyon) Blvd. a 6 ft. sidewalk on the west side.

Alameda Blvd. has a sidewalk on the north side and 4th St. on the west side. Both Sierra Vista and Alameda Elementary schools have sidewalk connections.

Sidewalks are needed on the following corridors:

- Paseo del Norte (COA) from Golf Course Rd. to Universe Blvd.
- La Orilla Rd. between Golf Course Rd. and Coors Blvd.

Gaps in the Northwest sidewalk network include:

- Rio Grande Boulevard from Ortega Road to Alameda Boulevard
- Fourth Street from Ortega Rd to Alameda Blvd
- Irving Blvd. (COA) from La Paz to Pas(ito) del Norte and from Lyon Rd. to Rempas Dr.
- Madeline Dr. from Furman Ave. to Paradise Blvd.
- El Pueblo Rd. between 2nd St. and Edith Blvd.
- Osuna Rd. (COA) between 2nd St. and Edith Blvd.
- Mission Ave. between Edith Blvd. and Alexander Blvd.
- Los Ranchos Rd. between 4th St. and 2nd St.
- Alameda Blvd. (NMDOT) (north side) between 2nd St. and El Pueblo Rd.

Spalled Sidewalk

Scaled Sidewalk

3.2 Bike Lanes, Trails and Routes

As identified on the *Long Range Bikeways System Map*, this section describes existing bicycle facilities based on the 2009 inventory. The County maintains over 19 miles of multi-use trails and 25 miles of bike lanes as shown by planning area and condition in Exhibits 8/9. A number of roadways are also designated as bike routes on the LRBS map. The bikeway and trail network is described below.

Exhibit 8: Bernalillo County Trails Inventory, 2009

Trail Name	Terminus	Area	Width	Pavement	Condition	Length	By Area
Bosque Trail South	Bridge to South Diversion Channel	SW County	10 ft.	asphalt	poor to good	4.96	
Chavez Trail	South Diversion Channel to Bosque	SW County	8.5 ft.	asphalt	poor to fair	4.13	9.09
Del Rey Trail	Eubank Blvd. to Tennyson St	NE County	8 ft.	asphalt	poor to fair	1.44	
La Cueva Trail	Eubank Blvd. to Signal Ave.	NE County	10 to 11 ft.	asphalt	fair to good	0.58	
Paseo Del Norte	Tramway Blvd. to Eubank Blvd.	NE County	10 ft.	asphalt	poor to fair	1.53	
Primrose North	Lowell to Crimson Glory Rd.	NE County	4 to 12 ft.	asphalt/concrete	poor to good	0.36	
Primrose South	Summer Wind Rd. to Wilshire Ave.	NE County	5 ft.	asphalt	poor	0.52	
Eubank Trail	San Antonio to Paseo del Norte	NE County	10 ft.	asphalt	good	1.01	
Tramway Trail	Tramway Rd. to Simms Park Rd.	NE County	12 to 13 ft.	asphalt	fair	2.20	7.65
Alameda Trail	Railroad to River	NW County	6 ft	concrete	good	1.52	
Paradise Blvd Trail	Golf Course Rd. to Justin Ct.	NW County	5 ft.	asphalt	fair to poor	0.63	
Unser (Lyon) Blvd.	Paradise Blvd. to Irving Blvd.	NW County	8 ft.	asphalt	good	0.44	2.59
Total						*19.32*	*19.32*

Exhibit 9: Bernalillo County Bike Lane Inventory, 2009							
Corridor	**Terminus**	**Area**	**Width**	**Striping**	**On-Street Parking**	**Condition**	**Length (miles)**
Isleta Blvd.	Bridge to Gun Club	SW County	4 ft.	yes	no	Fair, Good	8.38
Bridge Blvd.	River to Old Coors	SW County	3 to 9 ft.	yes	Isleta – La Vega	Fair	4.53
Alameda Blvd.	River to railroad	NW County	5 to 7 ft.	yes	no	Good	3.51
Golf Course Rd.	Paradise to Irving	NW County	3.5 to 4.5 ft.	yes	no	Good	1.71
Paradise Blvd.	Golf Course to Justin	NW County	5ft.	yes	no	Good	1.75
Unser (Lyon) Blvd.	Paradise to Irvine	NW County	6 ft.	yes	no	Good	0.88
Eubank Blvd	San Antonio to PDN	NE County	6 ft.	yes	no	Good	2.02
Lowell St.	Paseo del Norte. to Elena	NE County	3.5 to 4.0 ft	yes	no	Good	2.22
							25.01

- **Southwest**

The Southwest area provides more multi-use trails bike lanes than any other area of the County. The County maintains more than 9 miles of multi-use trails and 13 miles of bike lanes.

The Bosque del Rio Trail extends south of I-40 to the South Diversion Channel. (The County maintains the section south of Bridge Blvd.) The Chris Chavez Trail follows the South Diversion Channel loops back north to Rio Bravo Blvd. east of Broadway Blvd.

A trail runs along Rio Bravo Blvd. between Broadway Blvd. and the river. The trail will be extended east to University Blvd. as part of a Rio Bravo/ I-25 interchange project.

The following multi-use trails are called for MRGCD/ AMAFCA facilities:

- Extend Rio Bravo Trail to the west
- Amole Arroyo Trail
- Isleta Drain Trail
- Arenal Canal Trail
- Tijeras Arroyo Trail
- South Diversion Channel north to Sunport Blvd.
- Extend Rio Grande Bosque Trail to Isleta Pueblo boundary

Isleta Blvd. and Bridge Blvd. provide bike lanes. Bike lanes are planned as part of the construction of the Sunport Blvd. extension from I-25 west to Broadway Blvd.

Existing corridors where bike lanes are needed:

- Gun Club Rd. from Isleta Blvd. to 118th St.
- Broadway Blvd. (NMDOT) from Woodward St. to I-25
- 2nd St. SW
- Rio Bravo Blvd./ Dennis Chavez Blvd. (NMDOT) from I-25 to Atrisco Vista Blvd.

Gaps in the South Valley bikeways and multi-use trails system include:

- Gun Club Rd. between Grace Vigil Rd. and Isleta Blvd.
- Isleta Blvd. between Rio Bravo Blvd. and Gun Club Rd.
- Chris Chavez Trail between North Diversion Channel and University Blvd. along Rio Bravo Blvd. (NMDOT)
- Blake Rd. between Barcelona Pl. and Coors Blvd.
- Arenal Rd. between Unser Blvd. and Coors Blvd.

- **Northeast**

The Northeast part of the County has 7.7 miles of multi-use trails and 4.3 miles of bike lanes. Trails are in poor to fair condition; bike lanes are in good condition.

Tramway Blvd. has a multi-use trail on its east side. Bike lanes and a multi-use trail on the west side of the roadway are currently under construction on Eubank Blvd. from San Antonio Dr. to Paseo del Norte.

Tramway Trail

The Alameda Trail along the south side of Alameda Blvd. is planned for construction in 2012 to extend it from Fourth St. to the North Diversion Channel Trail.

A multi-use trail exists in the North Domingo Baca Park and along the La Cueva and North Domingo Baca arroyos in Primrose Pointe.

Bike lanes and multi-use trails currently exist along Paseo del Norte and Tramway Blvd. in the County.

Existing corridors where bike lanes are needed:
- Alameda Blvd. from Ventura St. to Eubank Blvd.
- Eubank Blvd. from Pso del Norte to Alameda Blvd.

The following multi-use trails are needed as follows:
- Alameda Trail from Ventura to Eubank Blvd.
- La Cueva Arroyo Trail to Primrose Pointe.

Gaps in the North Albuquerque Acres bikeways and multi-use trails system include:

- South La Cueva Arroyo Multi-use Trail from North Domingo Baca Park to Lowell St.
- South Domingo Baca Arroyo Multi-use Trail from Holbrook St. to Tramway Blvd.
- Eubank Blvd. Multi-use Trail from Paseo del Norte to South La Cueva Arroyo Trail.

Uneven, cracked trail pavement

- **Northwest**

The Northwest part of the County has 2.6 miles of multi-use trails and 8 miles of bike lanes. Trails and bike lanes are in good condition except for the Paradise Hills multi-use trail which is poor to fair and does not meet width standards.

The Bosque del Rio Trail extends north of I-40 to Alameda Blvd. It connects to east-west, river crossing trails at I-40, Montaňo Rd., Paseo del Norte, and Alameda Blvd. This portion of the trail is maintained by the City.

Corridors with bike lanes and/or trails include:

- Lyon Blvd. has bike lanes in both directions and a multi-use trail on its east side.
- A multi-use trail is provided along the south side of Paradise Hills Blvd. and bike lanes on either side.
- A multi-use trail is provided along the south side of Alameda Blvd. to Fourth St.

Existing corridors where bike lanes and/or trails are needed:

- Unser Blvd. from Universe to Paradise Blvd.
- Widen existing Paradise Trail and extend to La Paz Dr.
- Calabacillas Arroyo Trail.
- La Orilla Rd. between Golf Course Rd. and Coors Blvd.

Paradise Hills Trail is Too Narrow

Gaps in the Northwest bikeways and multi-use trails system include:

- Rio Grande Blvd bike lanes from Ortega Rd to Alameda Blvd
- Irving Blvd. (COA) bike lanes between Lyon Rd. and Golf Course Rd. and between La Paz Dr. and Pas(ito) del Norte
- Alameda Trail between 4th St. and Edith Blvd. (project construction to begin in 2012)
- Alameda bike lanes from 2nd St. to Edith Blvd.
- Edith Blvd. bike lanes from Alameda Blvd. to El Pueblo Rd.

3.4 Traffic Calming

The County maintains over 800 traffic calming devices on more than 130 streets. Most of the traffic calming features are located in the Northeast and Southwest areas as shown in Exhibit 10. Devices include:

- Speed humps or tables are the most common
- Traffic circles (intersection islands)
- Traffic diverters (right-in, right-out, or left-in movements)
- Bump-outs, bulb-outs, or curb extensions

Curb extensions must be designed not to interfere with bicycle lanes. Traffic circles and median refuges must not present hazards to motorists. Traffic calming devices must also take into account drainage concerns.

Curb Extensions can interfere with bike traffic

Exhibit 10: Bernalillo County Traffic Calming

Area	Speed Humps	Speed Table	Right Turn Only	Mid Block Island	Intersection Island	Total	No. Streets
Southwest	341	4	1	0	0	346	72
Northwest	89	0	0	0	0	89	21
Northeast	340	0	0	8	8	356	35
East Mountain	19	0	0	1	0	20	5
Total	***789***	***4***	***1***	***9***	***8***	***811***	***133***

Source: Bernalillo County GIS

3.5 Bicycle and Pedestrian Counts

Monitoring of bicyclists and pedestrians along sidewalks, bike lanes, in crosswalks, and on multi-use trails are infrequent and spotty at best. MRCOG had conducted annual counts at major intersections but has since discontinued. Counts are summarized in Exhibit 11.

Bernalillo County will be installing inductive loops and video cameras in 2012 at eight locations along multi-use trails to count bicyclists and pedestrians.

The highest bicyclist counts are at the Tramway Blvd. intersections of Paseo del Norte, Tramway Terrace, and San Rafael. The highest pedestrian counts are at Paradise Blvd. and Davenport, and Tramway at Paseo del Norte and Tramway Terrace.

Traffic Circle

3.6 Conclusion

A 2009 inventory of County pedestrian and bicycle facilities found that:

- ✓ Existing facilities in the unincorporated County include 30 miles of trails, 21 miles of bike lanes, and 56 miles of sidewalk.
- ✓ Most roadways lack sidewalks; those which do have sidewalks contain obstructions, are too narrow, and are ADA non-compliant.
- ✓ Bikeway needs include narrow widths, inadequate signage and markings, and gaps in the bikeway system.
- ✓ Multi-use trail needs include rehabilitating existing trails and completing trail gaps.

Exhibit 11: Bernalillo County Pedestrian-Bicycle Counts

Highest On-Street and Trails Counts	Year Count	Season Count	Bicycle Counts AM Total	Bicycle Counts PM Total	Bicycle Counts Total Weekday	Bicycle Counts Weekend	Pedestrian Counts AM Total	Pedestrian Counts PM Total	Pedestrian Counts Total Weekday	Pedestrian Counts Weekend
Alameda Blvd. and 2nd St.	2006	Summer	14	11	35	-	26	45	83	-
Alameda Blvd. and Tomas Ln.	2004	Fall	24	14	62	-	4	0	4	-
Alameda Blvd. and 4th St.	2010	Spring	24	40	64	-	-	-	-	-
Arenal Rd. and Atrisco Dr.	2005	Spring	7	8	19	-	71	14	95	-
Arenal Rd. and Coors Blvd.	2008	Spring	12	5	30	-	23	35	82	-
Blake Rd. and Coors Blvd.	2008	Spring	9	9	22	-	15	9	36	-
Bridge Blvd. and Atrisco Dr.	2005	Winter	5	2	9	-	9	30	60	-
Bridge Blvd. and Isleta Blvd.	2007	Fall	20	15	60	-	19	17	58	-
Bridge Blvd. and Isleta Blvd.	2010	Spring	28	26	54	-	-	-	-	-
Bridge Blvd. and La Vega Dr.	2007	Fall	15	24	48	-	26	26	86	-
Bridge Blvd. and Old Coors Rd.	2004	Fall	2	3	10	-	18	10	62	-
El Pueblo Rd. and Edith Blvd.	2005	Summer	45	25	93	-	4	1	5	-
Goff/ Arenal and Isleta Blvd.	2005	Spring	8	5	26	-	23	38	90	-
Paradise Blvd and Golf Course Rd	2010	Spring	13	40	53	-	-	-	-	-
Paradise Blvd. and Davenport Dr.	2006	Fall	1	6	10	-	47	68	126	-
Paradise Blvd. and Universe Blvd.	2007	Spring	6	9	25	-	56	19	85	-
Paseo del Norte and Tramway Blvd.	2005	Spring	31	50	141	-	45	42	104	-
Rio Bravo Blvd. and Isleta Blvd.	2008	Spring	16	10	44	-	19	24	74	-
San Rafael Ave. and Tramway Blvd.	2005	Fall	81	69	184	-	74	9	92	-
Tramway Terrace Lp and Tramway Blvd.	2005	Spring	25	81	146	-	86	49	157	-
Bosque Trail										
N/S of Alameda Blvd	2010	Spring	16/56	32/97	48/153	88/327	13/27	24/39	37/66	80/199
N/S of Paseo del Norte	2010	Spring	52/63	90/101	142/164	335/374	29/38	32/32	61/70	130/140
N/S of Montano Rd	2010	Spring	60/70	100/112	160/182	345/397	16/12	26/31	42/43	78/87
N of Central	2010	Spring	51	70	121	261	19	12	31	422
N/ Rio Bravo	2010	Spring	-	-	-	184	-	-	-	23

Source: MRCOG Intersection Bicycle/ Pedestrian Counts, 2004-2008; City of Albuquerque Bikeways and Trails Master Plan, 2011 draft

4.0 Pedestrian and Bicyclist Safety

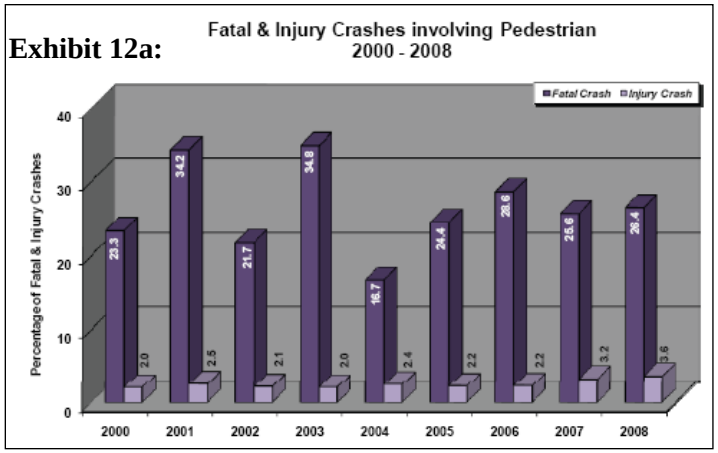
The high number of pedestrian and bicycle crashes in the County necessitates the Safety Action Plan. This section first discusses pedestrian and bicycle crashes locally and nationally. Next, the types of pedestrian and bicycle crashes are described and effective roadway design countermeasures that have been demonstrated to improve safety. Finally, health impacts of the built environment are described and how providing safe routes to schools and other facilities can lessen them.

4.1 Crashes Involving Pedestrians

New Mexico has the unfortunate distinction of having one of the highest pedestrian fatality rates in the nation, about three times the national average. Pedestrians account for between 26.5% of all highway fatalities in Bernalillo County (compared to 12% for the US). In 2009, there were 254 crashes in Bernalillo County involving pedestrians. Of the total, 11 pedestrians were killed and 210 were injured.

Fatal and injury crashes involving pedestrians were up slightly from 2000 with spikes in 2001 and 2003 (Exhibit 12a). Percentage of alcohol-related fatal crashes involving pedestrians were up over 2000, while the percentage of injury crashes remained steady. For 2008, pedestrian crashes were highest in the late afternoons on Fridays with fatalities highest on Saturdays. Pedestrian crashes were also highest in Spring and Fall. Most drivers involved in pedestrian crashes were male and in their 20s.

Exhibit 12a:



Source: MRCOG Albuquerque Metropolitan Crash Data, 2000-08

Intersections within the unincorporated County with recently recorded pedestrian crashes are:

- Coors Blvd. (NMDOT) and Bridge Blvd.
- Coors Blvd. (NMDOT) and Arenal Rd.
- Coors Blvd. (NMDOT) /Dennis Chavez Blvd. (NMDOT)
- Coors Blvd. (NMDOT) and Gun Club Rd.
- Coors Blvd. (NMDOT) and Don Felipe Rd.
- Isleta Blvd. and Blake Rd.

4.2 Crashes Involving Bicycles

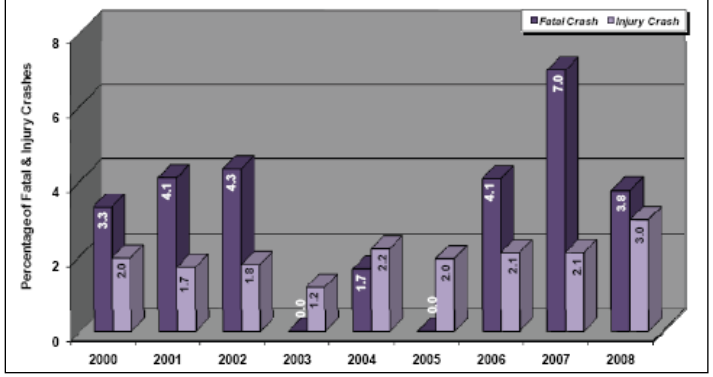
In 2009, there were 224 crashes involving bicyclists in Bernalillo County. Of the total, 1 bicyclist was killed and 167 were injured.

The percentage of fatal crashes involving bikes dropped during the middle part of the decade then spiked in 2007 (Exhibit 12b). Injuries were up over 2000. For 2008, summer months were highest for crashes as would be expected. Most crashes occurred in late afternoons on Wednesdays and Fridays. As with pedestrian crashes, most drivers involved were males in their 20s.

Intersections within the unincorporated County with recorded bicycle crashes include:

- El Pueblo Rd. and Edith Blvd.
- Bridge Blvd. and Coors Blvd. (NMDOT)
- Bridge Blvd. and Old Coors Dr.
- Bridge Blvd. and Atrisco Dr.
- Gun Club Rd. and Coors Blvd. (NMDOT)
- Gun Club Rd. and Isleta Blvd.
- Paradise Hills and Lyon Blvd. (Unser Blvd.)
- Paseo del Norte and Tramway Blvd.

Exhibit 12b: Fatal & Injury Crashes Involving Bikes 2000 - 2008



Source: MRCOG Albuquerque Metropolitan Crash Data, 2000-08

4.3 Pedestrian Crash Types and Countermeasures

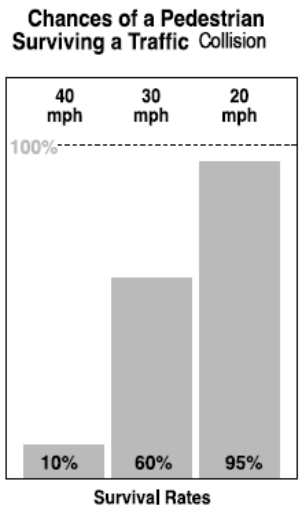
A number of design countermeasures based on FHWA standards can be applied to address the most common types of pedestrian and bicycle crashes.

1. **Crossing mid-block, no crosswalk**
   Conflicts: Pedestrians dart into high speed lanes; Vehicles fail to see, slow for pedestrians in time.
   Countermeasure: Digital speed boards, enforcement
   - ✓ Under 12,000 AWDT, there is no increase in crashes at crossings without markings.

2. **Crossing mid-block at crosswalk**
   Conflicts: High speed vehicles fail to slow or stop for pedestrians at crossings without medians, signs, or signals.
   Countermeasures:
   - ✓ Over 12,000 AWDT, a marked crosswalk will reduce crashes.
   - ✓ Over 15,000 AWDT, a pedestrian median will further reduce crashes.
   - ✓ Over 40 mph, pedestrian signals are also required.

   Bar crosswalk markings are more visible to drivers than line markings.
   Raised medians and island reduce pedestrian crashes at marked crosswalks by 46% and at unmarked crosswalks by 39%,

3. **Crossing at an un-signalized intersection**
   Conflicts: Vehicles turning at intersection
   Countermeasures:
   Reduce crosswalk length with smaller curb radii
   Smaller curb radii reduce the crossing distance making them safer for pedestrians.



4. **Crossing at a signalized intersection**
   Conflicts: Vehicles run signal, fail to slow or stop, or turn into pedestrians and bicyclists on roadways without bike lanes and poorly designed, signaled crosswalks.
   Countermeasure:
   Pedestrian crashes were reduced by 70% by converting from permissive left turns to protected only left turns. In one study, pedestrian crashes were also reduced by 25% after countdown signals were installed.

5. **Night time crossing**
   Conflicts: Vehicles fail to see pedestrians and bicyclists in time at poorly lighted intersections.
   50% of pedestrian crashes happen at night.
   Countermeasure: Install pedestrian lighting
   Lighting reduces pedestrian fatalities by 42% at midblock locations and 54% at intersections.

6. **Disabled or Parked Vehicle**
   Conflicts: Vehicles fail to slow, go around stopped vehicle on roadways without parking lane or shoulder.
   Countermeasure: Add shoulders

7. **Absence of sidewalk, narrow shoulder**
   Walking along roadways accounts for 10 to 15% of all pedestrian crashes; especially, in rural areas which lack sidewalks.
   Conflicts: Vehicles fail to slow, watch for, and/ or go around pedestrians and bicyclists along the road side.
   Countermeasure: Install minimum 5 ft. wide sidewalks and 6 ft. wide shoulders
   Paved shoulders reduce pedestrian crashes by 70%.
   Sidewalks reduce pedestrian crashes by 88%

8. **Work Zones**
   Conflicts: Vehicles don't stop, go around workers, especially if not properly signed or diverted.
   Countermeasure: Work zone signage

9. **School Zones**
   Conflicts: Vehicles fail to slow, stop, watch for children at drop-off locations; Children do not cross at the crosswalk.
   Countermeasure: Better signage and beacons; Crosswalk attendants
   Continuous flashing beacons are warranted at schools and at 20 pedestrians per hour. Signals are warranted at 90+ pedestrians per hour.
   Flashing beacons increased rates of motorists yielding to pedestrians from 20 – 80%

10. **Driveways**
    Most sidewalk crashes occur at driveways.
    Conflicts: Vehicles backing up fail to watch for pedestrians and bicyclists.
    Countermeasure: Access management, add sidewalk buffers
    The presence of a sidewalk buffer results in more motorists yielding to pedestrians.

11. **Bus Stops**
    Conflicts: Vehicle fails to slow, stop for bus; visibility of pedestrians blocked by bus.
    Countermeasure: Consolidate bus stops near intersections; far side stops are safest

These countermeasures have been incorporated into the Complete Streets design recommendations found in Section 5.0.

4.4 Health Effects of Transportation System

The way our communities and transportation system are planned and built often negatively impacts the health of residents. Sprawl, lack of street connectivity, air pollution, and absence of pedestrian and bicycle facilities all contribute to poor health in our communities.

- ✓ Obesity. According to the Centers for Disease Control and Prevention (CDC), 30 percent of U.S. adults age 20 and older are obese, and approximately 65 percent of Americans weigh more than is healthful. Today, one in five children and one in three teens is overweight or at risk of becoming overweight.

- ✓ Heart Disease. The leading cause of death for women and men in the United States is heart disease, according to the American Heart Association. In 2003, a total of 685,089 people died of heart disease, accounting for 28 percent of all U.S. deaths.

- ✓ Diabetes. One of every ten health care dollars spent in the United States goes toward diabetes and its complications. Between 1994 and 2004, the prevalence of diabetes increased more than 50 percent.

- ✓ Respiratory Problems. Many studies have shown links between air pollution and health effects. Increases in air pollution have been linked to decreases in lung function and increases in heart attacks. High levels of air pollution directly affect people with asthma and other types of lung or heart disease. The elderly and children are especially vulnerable to the effects of air pollution.

All of these health problems are linked to environmental factors. Research conducted by UCLA has correlated the walkability of a neighborhood with increased walking by residents and found that the neighborhood environment – including the availability of parks – influences individual health behaviors.

4.5 Healthy Trails Programs

- **Prescription Trails**

The Prescription Trails Program (Rx Trails) operated by County Parks and Recreation has developed a prescription tool and walking guide to increase walking and wheelchair rolling on suggested routes, targeting and promoting healthy lifestyle for families. Sedentary lifestyles contribute significantly to chronic disease and poor health outcomes. Rx Trails connects health care providers and their patients to walkable sites in the South Valley. The outcome is a healthier, happier society.

Prescription Trails Program major partners include: NM Health Care Takes on Diabetes, National Park Service, Blue Cross-Blue Shield of New Mexico, City of Albuquerque, New Mexico State Parks, Albuquerque Alliance for Active Living and Bernalillo County Open Space.

Prescription Rx Walking Trails are at the following Bernalillo County/City of Albuquerque open spaces:

- Durand
- Gutierrez-Hubbell House
- Pajarito
- Rio Bravo
- Sanchez Farm
- Valle del Bosque.

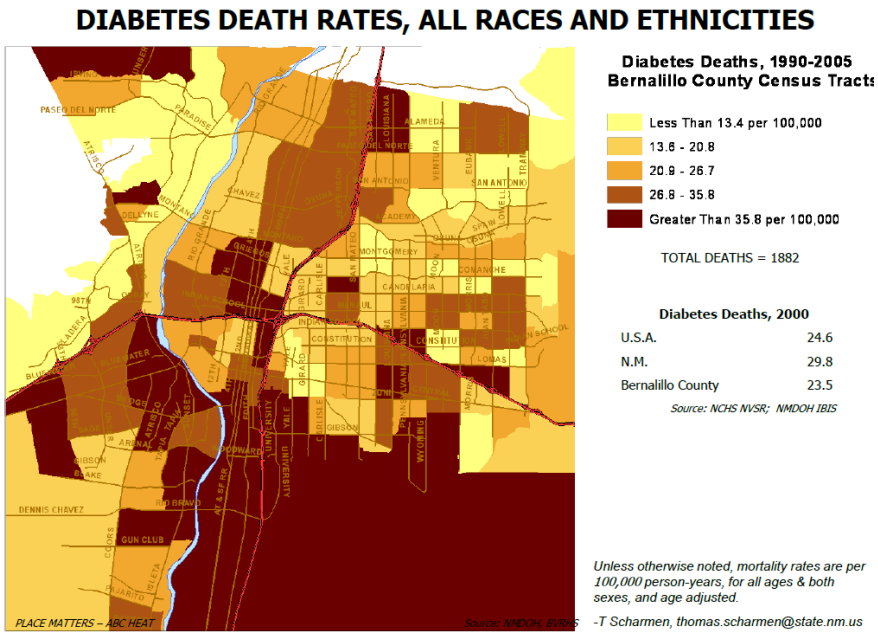
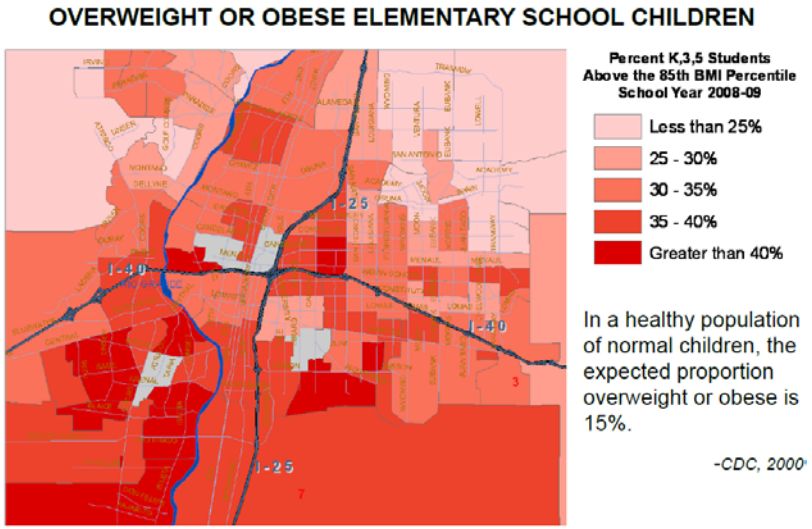


Exhibit 13: Diabetes/ Obesity Map by Census Tract



- **Safe Routes to School**

The New Mexico Safe Routes to School program supports walking and bicycling as viable and healthy transportation options for children and families on their school journeys. According to their Handbook:

"Thirty years ago, about one half of all schoolchildren walked or bicycled to or from school, including 87 percent of those living within one mile of their school. Today fewer than 15 percent of all children and adolescents use active modes of transportation, such as walking or bicycling.

In a nationwide survey of parents conducted in 2004, 30 percent indicated traffic danger as a barrier to allowing their children to walk or bike to school. Twenty to 25 percent of morning rush hour traffic is attributable to parents driving their children to school.

Nationally, pedestrian injury is the second leading cause of unintentional injury death among children ages 5-14. Motor vehicle crashes in which children are passengers are the leading cause of death for school-age children.

In New Mexico, obesity affects 22 percent of adults and nearly 17 percent of youths ages 10-17. This proportion for New Mexico's youth is the tenth highest in the nation.

Thirty-nine percent of students had not participated in recommended levels of either moderate or vigorous physical activity. No physical activity was reported by 12.1 percent of students.

Regular physical activity in childhood and adolescence:
- Improves strength and endurance
- Helps build strong bones and muscles
- Helps control weight
- Reduces anxiety and stress and increases self-esteem
- May improve blood pressure and cholesterol levels.

Walking to school is associated with higher overall physical activity throughout the day. Research studies also show that regular participation in physical activity is associated with improved academic performance."

Ditch-bank trail to Valle Vista Elementary School, Albuquerque

Within unincorporated Bernalillo County, there are 10 elementary schools in the Southwest area, two in the Northwest, two in the Northeast, and two elementary schools in the East Mountains where safe school routes need to be evaluated.

4.6 Conclusion

Findings for pedestrian and bicycle safety include:

- ✓ High pedestrian and bicycle crash rates exist on some County roadways
- ✓ A number of countermeasures can be designed into County roadways to make them safer for pedestrians and bicyclists.
- ✓ A number of chronic diseases are attributable to the lack of physical activity, especially among children. Pedestrian and bicycle facilities can help address health issues.

The Safety Action Plan contains strategies for implementing the County's pedestrian and bicyclist facility policies through complete streets design, review and approval of private development, a facilities project list, and coordination with the County's partner agencies.

Plan Implementation

The Safety Action Plan may be implemented in a number of ways as described in the following sections and in the matrix below (Exhibit 14). These strategies include incorporating pedestrian and bicycle complete street/ safety design recommendations into the County's Street Standards. Another method for implementation is through funding of pedestrian and bicycle projects (Exhibit 29) either with local GO bonds or federal grants. Pedestrian and bicycle safety recommendations may also be implemented by changing County ordinances and policies that relate to the review of new developments and with the approval of master plans and sector plans. Administrative procedures will be developed to implement this plan through development review.

Plan Amendment

The Safety Action Plan is intended as a living document and may be amended as needed following the procedures set forth in the implementation matrix. Pedestrian and bicycle facility inventory data and capital project lists may be amended administratively with approval of the County Engineer on a bi-annual basis as part of the GO Bond cycle. Revisions to policy recommendations require approval by the County Planning Commission. Revisions to ordinances require approval by the Board of County Commissioners. The Safety Action Plan should be updated every 10 years to reflect changing conditions and community needs.

Exhibit 14: Implementation Matrix	Description	Responsible Department/ Agency	Approval Process	Initial Timeframe	Amendments
1. Plan Policies					
Street Standards	Incorporate pedestrian and bicycle safety design into County Street Standards	Public Works Division – Infrastructure Planning Technical Services	CPC BCC-Resolution	2012 - 13	At least every 10 years
Ordinance Changes	Incorporate pedestrian and bicycle safety into Roads Ordinance 66	Public Works Division – Infrastructure Planning Technical Services	CPC BCC-Ordinance	2012 - 13	At least every 10 years
Sector and Master Plans	Incorporate pedestrian and bicycle safety elements	Planning Department Public Works/Infrastructure Planning	CPC BCC-Resolution	2012 – 13	varies
Administrative Procedures	Develop a plan review process to include on-site pedestrian circulation	Public Works Division – Infrastructure Planning Technical Services	County Engineer	2012 - 13	Every 2 years
2. Plan Projects					
Pedestrian/ Bicycle Projects List	Identify and administratively approve changes to the official project list to be kept on file; copies to County Planning, Parks and Recreation, MRCOG	Public Works Division – Infrastructure Planning	County Engineer	2012	Every 2 years
GO Bond Funding	Score priority projects for CIP and GO Bond elections	Public Works Division – CIP Committee	BCC-Resolution	2012	Every 2 years
3. Plan Coordination					
Pedestrian/ Bicycle Projects	Update County projects in *Long Range Bikeway System*	Public Works Division – Infrastructure Planning MRCOG	MTB, FHWA	2015	Every 4 years
Federal Funding	Apply for federal funding for County Projects in TIP	Public Works Division – Infrastructure Planning MRCOG	MTB, FHWA	2012	Every 2 years
CPC-County Planning Commission, BCC- County Commissioners, MTB-Metropolitan Transportation Board, FHWA-Federal Highways Administration MRCOG – Mid Region Council of Governments					

5.0 Complete Streets and Trails Policy

This section describes how complete streets principles can make Bernalillo County pedestrian and bicycle facilities safer for all travelers. Complete Streets are designed to safely move people of all ages and abilities along and across the roadway: pedestrians, bicyclists, motorists, and transit users. Complete Streets make it safe to walk to school, a nearby cafe, a senior center, or cross the street to reach a bus stop. Complete streets are made safe to bicycle to work, a neighborhood park or a connecting trail. Because Complete Streets are designed for everyone they can improve the livability of our communities.

How well County streets are designed for multiple users, will depend on context, i.e., whether located in urban or rural environments, adjoining land use, available rights-of-way, roadway classification, traffic volume and speed, terrain, drainage, and other factors.

Street design for pedestrians and bicyclists should be incorporated into the County's Street Standards. Current County Street Standards date from 1988 and are being updated.

Street design may be unique to the character of County areas. For example, slower speed local streets may be shared use facilities, especially in rural environments or where traffic calming facilities have been installed. Higher speed collector and arterial streets may provide separate pedestrian and bicycle facilities.

Bike lanes are generally required when roadway:

- > 3,000 ADT
- > 25 m.p.h.
- Provides transit service.

Policy 1

All new roadway projects in Bernalillo County should be designed to safely accommodate pedestrians and bicyclists – of different ages and abilities - as well as motorists. Trail projects should also be designed with user safety in mind.

Design projects should take into account local conditions such as whether located in urban or rural environments, available rights-of-way, adjoining land use, roadway classification, traffic volume and speed, terrain, drainage, and other factors.

5.1 Rural Street Design

This section describes how rural character should be considered when designing streets for pedestrian and bicycle facilities. County area and sector plans recognize the importance of rural street design. For example, *Paseo Del Norte/ North Albuquerque Acres Sector Development Plan* calls for rural street design that includes pedestrian, bicycle, and equestrian facilities. A similar design could be applied in the more rural parts of the North and South Valleys.

- **Narrow Rights-of-Way**

In the North and South Valleys, existing rights-of-way are often limited as far as provide pedestrian and bicyclist facilities. In spite of this, new roadway projects have been built in rights-of-way of 35 ft. to 43 ft. and have included 4 to 6 ft. wide sidewalks.

The following guidelines may be used within existing rights-of-way (ROW) depending on the provision of on curb and gutter:

- 40 ft. – 50 ft. ROW – sidewalk w/ buffer on both sides
- <40 ft. ROW – sidewalk w/ buffer on one side
- Bikes share the roadway rather than have a separate bike lane.

- **Alternative Materials**

Alternative sidewalk materials may be used in rural areas. These could include stained concrete, asphalt, or compacted, stabilized crushed aggregate sidewalks. Where roll-over curb is used, a sidewalk setback is recommended to prevent vehicles from parking on sidewalk.

Soft surface sidewalk

Two AASHTO authoritative guides for design of pedestrian and bicycle facilities:

Guide for the Planning, Design, and Operation of Pedestrian Facilities, 2004

Guidelines for the Development of Bicycle Facilities, 1999

- **Rural Local and Collector Roadways** *(Exhibit 15a. proposed section)*:

For new rural roadways, a minimum right-of-way of 40 to 50 feet wide for locals and 70 feet wide for collectors:

- 2 travel lanes, 10 – 12 feet wide
- 4 ft. wide shoulders for local, each side
- Optional: 5 feet wide sidewalks (paved or soft surface side path), each side
- Drainage swales – 5 - 10 feet wide, each side
- 8 ft. wide bike lanes and shoulders for collectors, each side

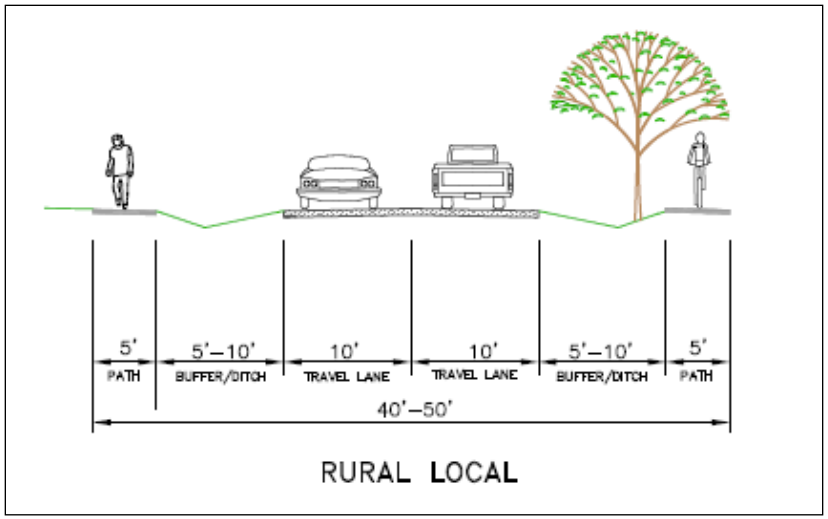


Exhibit 15a: Conceptual Cross Section for Rural Local Roadways

5.2 Urban Street Design

Areas of the County designated 'Established Urban' and 'Developing Urban' in the *Albuquerque/ Bernalillo County Comprehensive Plan* will apply urban street design (see Exhibit 4). Village Centers and TOD areas will apply urban street design. 'Semi-Urban' areas may apply either rural or urban design depending on land use and densities.

- **Local Streets** (Residential, Exhibit 15b. and Commercial, Exhibit 15c):

Right-of-way minimum 50-64 feet wide:

- 2 travel lanes, 10 - 12 feet wide each
- Wide shoulders for bicycles for minor local
- 5 ½ ft. bike lanes for commercial local street, on each side
- 5 foot wide sidewalks with 4 foot setback, on each side (currently 4 ft. wide with no buffer)
- Optional: 8 ft. wide parking lanes

- **Collector Streets** (Exhibit 15d):

Right-of-way minimum currently 68 feet (proposed 74 feet) wide:

- 2 travel lanes, 12 feet wide each
- 1 center turn lane or median 13 feet wide minimum
- 6 feet wide bicycle lane, on each side
- 5 feet wide sidewalk with 5 foot setback, on each side (currently 4 ft. wide with no buffer)
- Optional: 8 ft. wide parking lanes

Exhibit 15b: Conceptual Cross Section for Urban Local Streets

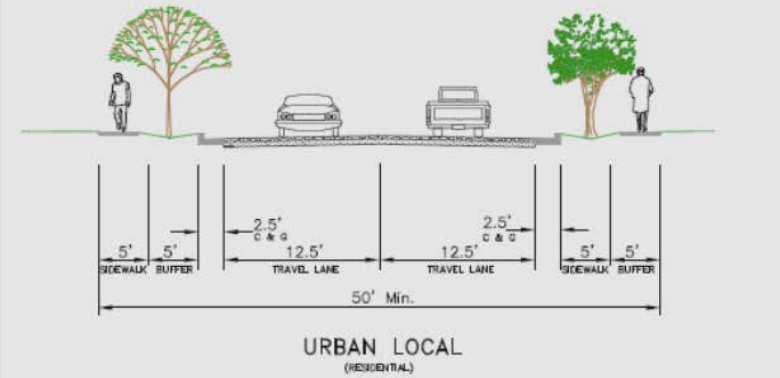


Exhibit 15c: Conceptual Cross Section for Major Local Streets

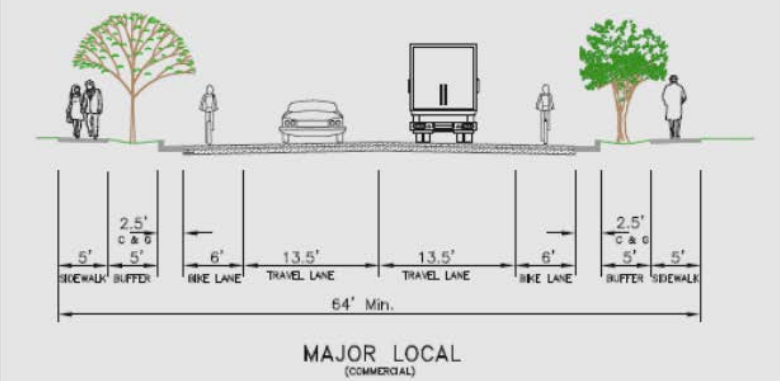
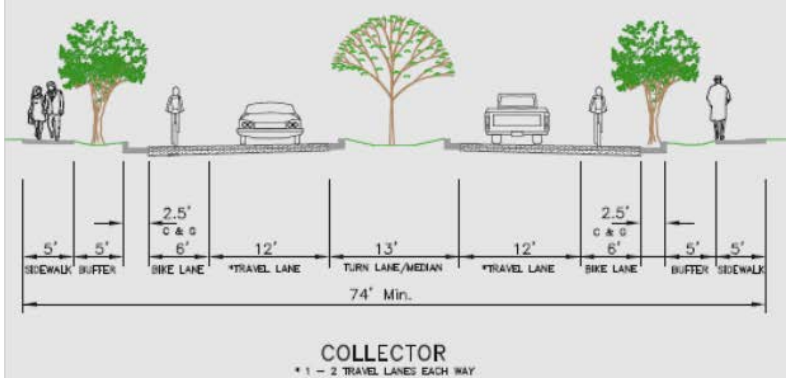


Exhibit 15d: Conceptual Cross Section for Collector Streets



Minor Arterial Streets (Exhibit 15e)**:**
Right-of-way minimum 100 feet wide (currently 86 ft. wide):
- Up to 4 travel lanes, 12 feet wide each
- Median 13 feet wide minimum
- 6 feet wide bicycle lanes, on each side
- 5 – 6 feet wide sidewalk with 5 foot setback, on each side (currently 4 ft. wide with no buffer). 6 ft. wide sidewalk is preferred.

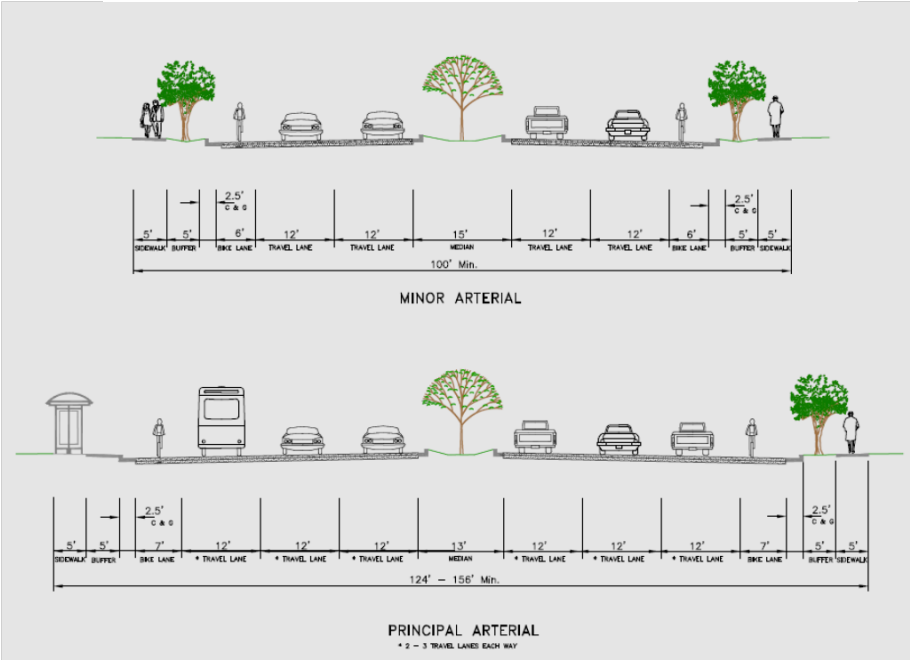
- **Principal Arterial Streets** (Exhibit 15f):

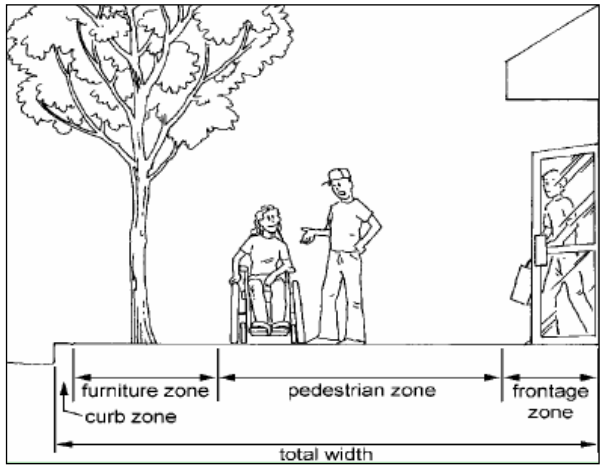
Right-of-way minimum 124 to 156 feet wide:
- Up to 6 travel lanes, 12 feet wide each
- Median 13 ft. wide minimum
- 7 ft. wide bike lanes, both sides where speeds exceed 40 MPH
- 5 – 6 feet wide sidewalk with 5 foot setback, on each side. 6 ft. wide sidewalk is preferred.

- **Roadway Pedestrian Zones**

Urban roadways include a pedestrian zone that extends from the curb to the the right-of-way and includes:
- Curb Zone: provides a transition from sidewalk to street.
- Furniture Zone (setback, buffer, or planter strip): Signs, utilities, fire hydrants, and landscaping are appropriate in this zone. Coordination with utility providers is required when locating facilities in the furniture zone.
- Pedestrian Zone: the sidewalk.
- Frontage Zone: A shy distance or clearance should be provided between sidewalk and wall or building.

Exhibit 15e/f: Conceptual Cross Section for Arterial Streets





5.3 Multi-Use Trails

Shared-use trails should be designed for the safety of all users whether pedestrians, bicyclists, equestrians, for recreation or commuting. Trails should not substitute for on-street bikeways (e.g. bike lanes and paved shoulders). All paths should be 12 ft. wide unless right-of-way constraints require a reduction in width to no less than 10 ft. as shown in Exhibit 13. Additional width may be required for curves with inadequate sight distances or for steep hills. Paths may be constructed of either asphalt (preferred) or concrete. County standards for grade, drainage, crossings, clearance, and signage also apply.

Unlike paved, shared-use paths/trails, unpaved trails vary greatly. “One-size-fits-all” design is inadequate for several reasons. First, unpaved trails may serve various combinations of users, including walkers, hikers, joggers, equestrians, mountain bikers and off-highway vehicles. Second, unpaved trails may vary drastically according to purpose (e.g. accessibility, transportation, technical challenge). Lastly, unpaved trails may be located in varied settings, including natural open space, atop irrigation ditch banks and abandoned railbeds, and adjacent to paved, shared-use paths within urban trail corridors.

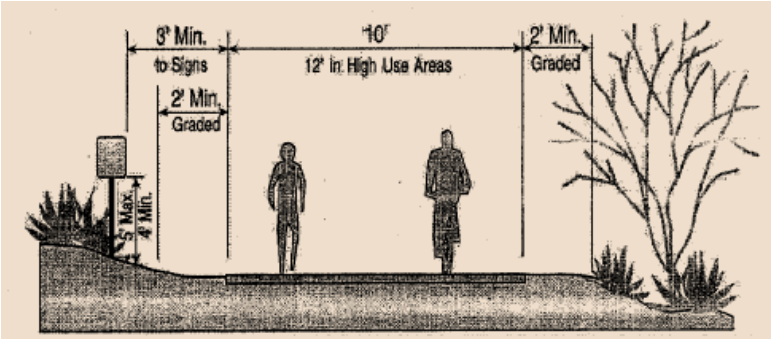


Exhibit 16: Multi-Use Trail Section
Source: City of Albuquerque DPM

5.4 Intersections and Mid-block Crossings

A number of design elements can be used to make intersections safer for pedestrians and bicyclists.

- **Crosswalks**

All major signalized and un-signalized intersections, located on collector and arterial streets, should be provided striped crosswalks. Crosswalk striping should be the bar or continental type as preferred by the County Engineer. Patterned or raised crosswalks may be used for crosswalks in Village Centers. Crosswalks should be striped to the same width as the sidewalks for the streets which they connect.

- **Refuge Islands**

Where crosswalks are longer than 40 feet, a refuge island should be provided to narrow the travel lane for pedestrian safety as long as it does not block bicycle lanes. Exhibit 17 illustrates refuge islands in intersection crosswalks.

Converting an undivided four lane roadway into three lanes (one a continuous turn lane) has been demonstrated to reduce multiple threat pedestrian and bicycle crashes (crash reduction factor, CRF=29%) as well as providing space for a complete street with opportunities for crossing medians, sidewalks, and bike lanes. Road diets operate most successfully for roadways with less than 15,000 to 20,000 ADT.

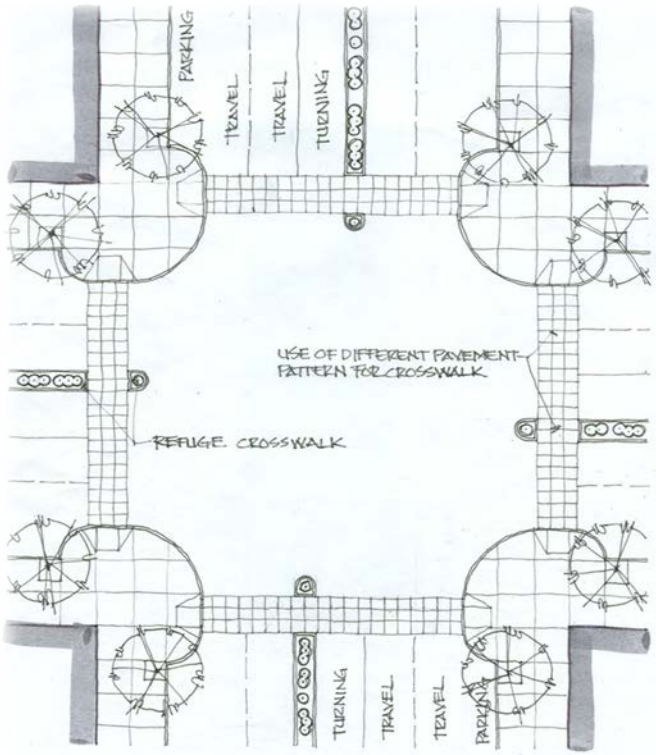


Exhibit 17: Intersections

- **Turning Radii**

Tighter turning radii can shorten crosswalks and slow traffic. Curb extensions are recommended when on-street parking is available (Exhibit 17). Minimum acceptable turning radii are 30 ft. to 35 ft. depending on roadway type. Tighter radii may be approved by the County Engineer to make streets more pedestrian friendly (Exhibit 18).

- **Curb Ramps**

The *Americans with Disabilities Act* was enacted in 1990 to ensure people with disabilities have equal opportunities and access to public facilities. The County will adhere to New Mexico Department of Transportation (NMDOT) standards for ADA Curb ramps are to be aligned to the crosswalk and include detectable warning surfaces per NMDOT ADA standards (Exhibit 19).

All new and existing sidewalks which are to be constructed or reconstructed should be designed to enable persons with disabilities using wheelchairs to travel freely and without assistance by integrating a curb ramp into the sidewalk that blends with street and driveway crosswalks at a common level.

- **Round-abouts**

Single lane round-abouts, or circular intersections, have been shown to reduce crashes by at least 40%, including for pedestrians, by eliminating conflict points and slowing traffic (Exhibit 20).

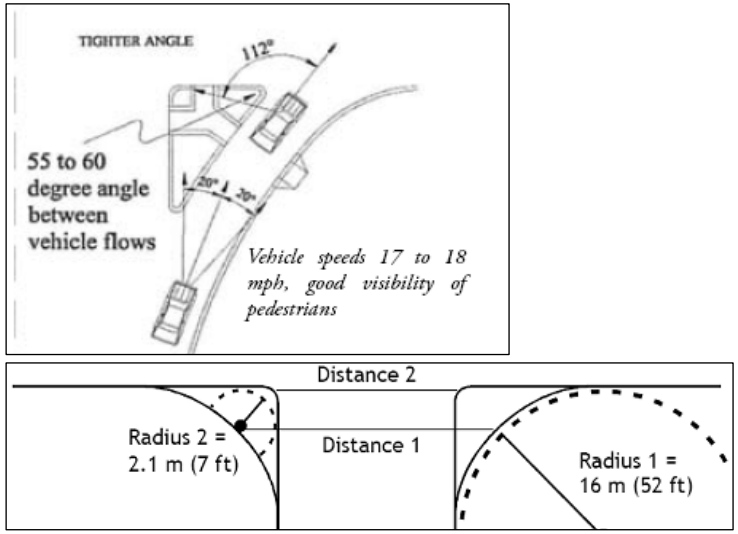


Exhibit 18: Examples of Tighter Curb Radii

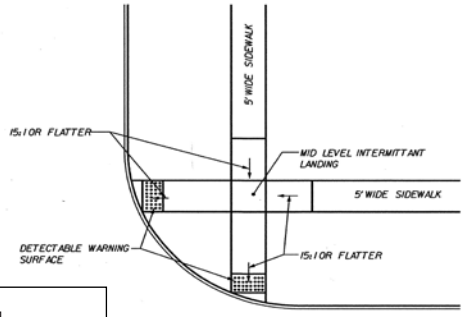


Exhibit 19: ADA Access

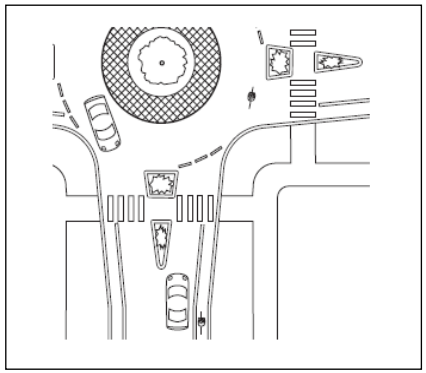


Exhibit 20: Round-about

- **Continuous Bike Lanes/Bike Boxes**

Bike boxes and continuous bike lanes should be striped at intersections per MUTCD, latest edition (Exhibit 21) as should crosswalks in round-about intersections.

- **Mid-Block Crossings**

Mid-block crosswalks (Exhibit 22) should be provided for schools and other community facilities but should have pedestrian warning flashers, beacons, or pedestrian-activated signals when located on collector and arterial streets. Otherwise appropriate pedestrian crossing signage will be installed. Where refuge islands are used, crossings should be staggered (two-stage) between each side of the street.

Pedestrian hybrid beacons (HAWK signals) and rapid flash beacons are two of the latest technologies to demonstrate safety benefits for pedestrians (CRF = 69% for HAWK signals).

- **Pedestrian Signal Heads and Push Buttons**

All traffic signals should incorporate countdown pedestrian signals. Pedestrian signals should be timed to accommodate seniors, children, and disabled, especially near facilities serving these populations. Pedestrian signal pushbuttons should be accessible to the curb ramp. Some locales may require audible pedestrian signals for the blind.

Intersections should be well-lit and provide appropriate signage (see 7.7 below) located near the crosswalk ramp. Signals should be protected for left-turns.

Exhibit 21: Bike Box; Continuous Bike Lanes

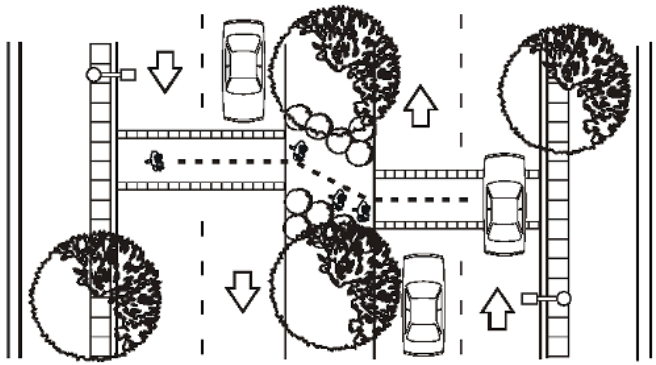


Exhibit 22: Two-Stage Midblock Crosswalk

5.5 Lighting

A street lighting warrant study was prepared for the County in 2011. The study looks at 35 arterial and collector corridors within the unincorporated area to determine where additional lighting is needed. A number of factors are considered on both non-controlled segments and intersections including: geometry, operations, type of development, and crash history. The study indexes lighting priority by location on a scale from 0 to 10. Pedestrian scaled lighting is shown in Exhibit 23.

The highest needs are on arterials such as Coors Blvd. (NMDOT), 2nd St. NW, Eubank Blvd., Old Coors Dr., 4th St., and Isleta Blvd. Lower priority roadways for lighting include Blake, Tapia, Atrisco, Arenal, Sunset, Raymac, Del Norte, 2nd St. SW, Lowell, and Tennyson.

5.6 Bus Stops and Shelters

Along transit corridors, a six (6) foot by 20 foot concrete pad should be provided in the setback and sidewalk areas of the public right-of-way, at designated transit stops for bus benches and shelters to be constructed to ABQ Ride or other transit provider standards. Sidewalks should be installed in front of the bus shelter to the curb and should be at least six (6) feet wide. Bus stops and shelters should be placed on either side of the street served by transit in coordination with ABQ Ride and spaced 900 to 1,200 feet apart. Bus stops should be well-lit and provide appropriate signage (Exhibit 24).

Exhibit 23: Examples of Pedestrian Lighting

Exhibit 24: Bus Shelter Example

5.7 Village Centers and Transit Oriented Development (TOD)

Mixed use developments such as in Village Centers proposed along Isleta Boulevard or in the South Valley/ Sunport TOD are designed to be more pedestrian friendly than other developments. Design recommendations include:

- Wider Sidewalks: 6-8 feet with buffer
- Bike lanes, sharrows, or trails
- Crosswalks with textured surfaces, refuge islands, and bump-outs
- *Parking:*
  - Shared parking is permitted if within 1,320 feet of another parking facility
  - Off-street surface parking should be located at the rear and sides of a building relative to its primary street frontage.
  - Parking is not permitted between a building and the street, with the exception of retail uses of over 80,000 square feet, provided a minimum of 50% of street frontage has building frontage
  - Parking areas at the side of a building should have a street frontage of not more than 120 lineal feet, screened from view
  - No single parking area should exceed 150 spaces unless divided into smaller sub-areas by a building, internal landscaped street or shaded pedestrian way with trees planted at < 30 feet on center.
  - Loading areas should be separated from automobile parking and screened from view.
  - Where practical, water harvesting areas for surface runoff should be provided in parking lots.
  - Bicycle parking must be provided in easily-accessible locations from the street and visible from storefronts or office building front doors. One bicycle space should be provided for every 10,000 square feet of building net floor area.

- *Building Entrances:*
  - Building entrances should be oriented to the primary street.
  - Buildings adjacent to the transit platform, transit station, a transit street, or a major pedestrian ways, should orient building entries towards transit and pedestrian facilities.
  - Pedestrian ways should be provided from the building entry to the transit platform, transit station, transit-street, or major pedestrian ways.

- *Pedestrian Lighting:*
  - Outdoor light fixtures exceeding 12 feet in height should be shielded outdoor light fixtures so that light is directed downward.
  - Free standing light fixtures should not exceed 15 feet.
  - Outdoor walkways should be lighted.

- *Street Trees*
  Roadways should provide tree-lined buffers when possible.

- *Bus Shelters*
  Bus shelters should be provided at major intersections.

5.8 Traffic Calming

The design of streets should take into consideration various calming, crime prevention, and safety techniques in residential neighborhoods, near schools, and at intersections or areas with heavier pedestrian activity. The design of traffic calming devices should take into account bicycle traffic as well as drainage considerations. Methods (Exhibit 25) may include but are not limited to:

- Mid-Block Islands
- Chokers
- Traffic Circles
- Speed Tables
- Diverters/Barriers
- Chicanes

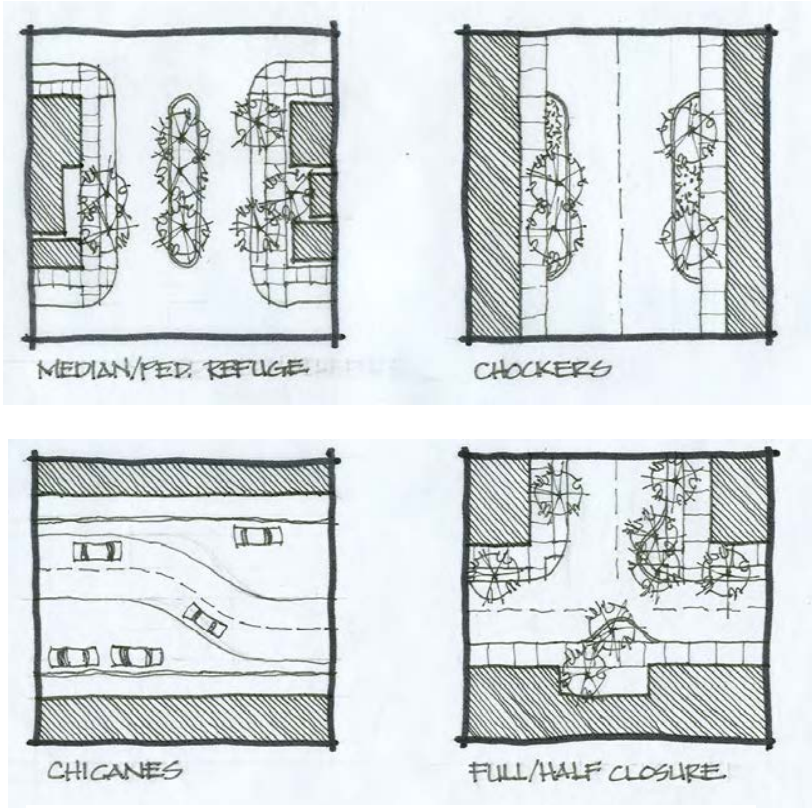


Exhibit 25: Traffic Calming Examples

5.9 Crime Prevention through Environmental Design (CPTED)

- *Natural Access Control*
  - Limit access without completely disconnecting the subdivision from adjacent subdivisions.
  - Design streets to discourage cut-through or high-speed traffic.
  - Install plantings, and architectural design features such as a columned gateway to guide visitors to desired entrances and away from private areas.
  - Install walkways in locations safe for pedestrians, and use them to define pedestrian bounds.

- *Natural Surveillance*
  - Avoid landscaping that might create blind spots or hiding places.
  - Locate open green spaces and recreational areas so that they are visible from nearby homes and streets.
  - Use pedestrian scale street lighting in high pedestrian traffic areas to help people recognize potential threats at night.

- *Territorial Reinforcement*
  - Design lots, streets, and houses to encourage interaction between neighbors.
  - Accentuate entrances with the subdivision name, different paving material, changes in street elevation, architectural, and landscape design.
  - Define property lines with post and pillar fencing, gates, and planting to direct pedestrian traffic to desired points of access only.

- *Maintenance*
  - Maintain all common areas to very high standards, including entrances, and right-of-ways.

5.10 Pedestrian Access in Developments

Commercial developments and subdivisions should include a pedestrian and bicycling element to provide sidewalks, walkways, bike lanes, and trails. Right-of-way should be dedicated for trails and bike lanes designated on the LRBS Map and should be constructed as part of the required improvements.

- **Connections through Cul-de-sacs**

- Pedestrian and bicycle access should be provided to link residences with nearby schools, parks, community centers, and retail areas. Loop streets are preferable to cul-de-sacs.
- Where cul-de-sacs do exist, pedestrian connections should be provided to adjacent roadways. Pedestrian access routes or connections through stub streets or cul-de-sacs should contain a 6 foot path in a 12 to 18 foot wide easement and should prevent vehicular entry (Exhibit 26)

- **Connections to Building Entrances**

- Pedestrian connections should be provided from the public sidewalks, bus stops, and parking areas to building entrances as required by ADA Title III (Exhibit 27)
- Buildings should front onto the street to promote pedestrian activity. Parking should be placed behind or on the side of the building.

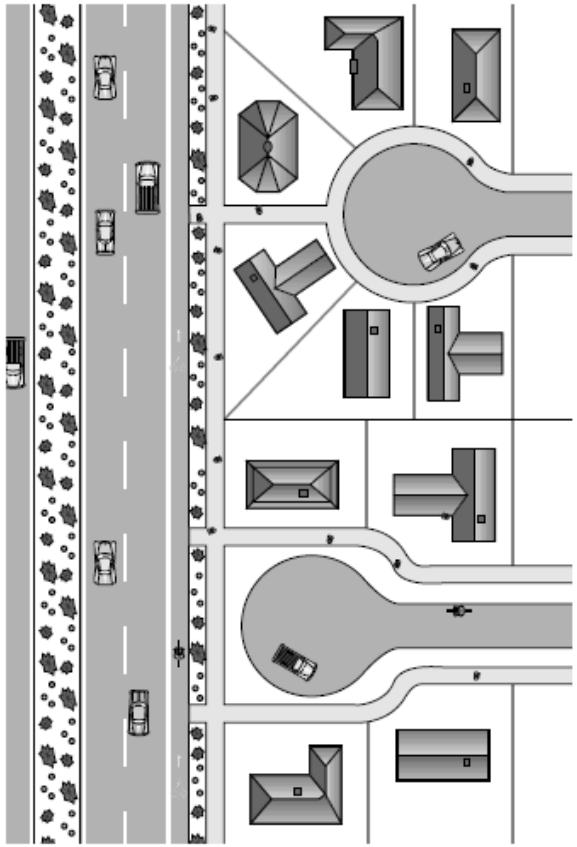


Exhibit 26: Pedestrian connections through cul-de-sac

- **Connections through Parking Lots**
  Parking lots with 150 or more spaces should be divided into separate areas with walkways and landscaped areas in between aisles that are at least 10 feet in width.

- **Connections between adjoining Businesses**
  Parking should be shared between nearby businesses especially those that have different hours of operation or underused lots.

  To encourage walking instead of driving between uses on the development site, sidewalks should connect those uses to adjacent ones.

- **Shared Driveway Access**
  Shared access easements can reduce the number of driveways and make sidewalks and bike lanes far safer (Exhibit 28).

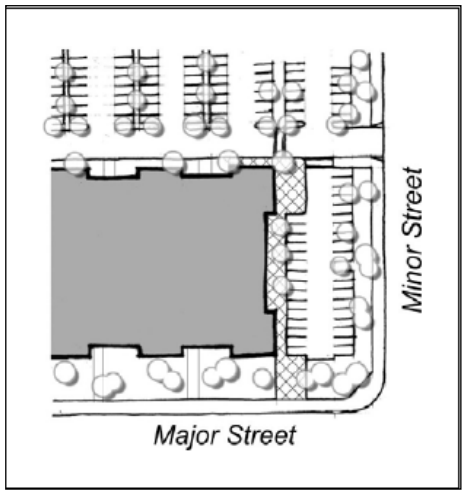


Exhibit 27: Pedestrian access from parking and sidewalk

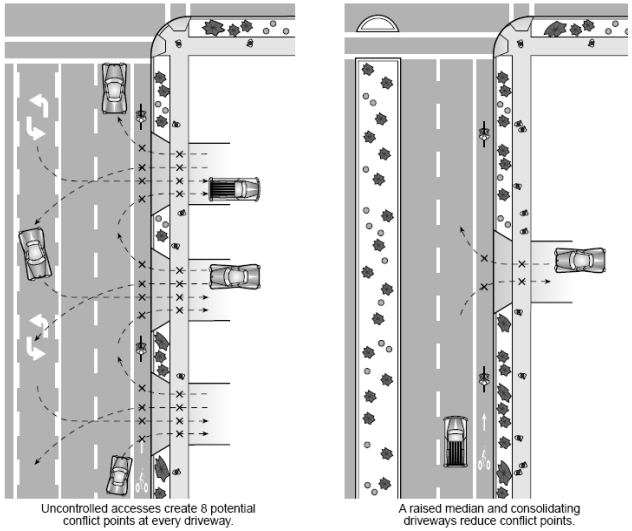


Exhibit 28: Shared driveways between lots are safer

5.11 Street Trees

Street trees can provide many health and safety benefits; chiefly, they promote pedestrian activity by providing shade, blocking wind, and buffering from vehicles. Street trees are recognized as a significant off-set for carbon emissions. In addition, trees:

- Reduce and clean storm water run-off
- Stabilize soil
- Reduce dust in the air
- Reduce temperatures which decreases the heat island effect
- Absorb air pollutants
- Reduce energy costs for homes and businesses
- Increase property values.

In choosing street trees, consideration should be given to a tree's height and canopy at maturity, water use, hardiness, pollen, and any ornamental features such as flowering and fall color.
Source: City of Albuquerque sustainability website, 2009

A five foot setback buffer is proposed for County roadways between the back of the curb and the sidewalk. Street trees planted in the buffer, maintained by the property owner, may count towards the County's 10 to 20 foot wide landscaping requirement for commercial development.

Water harvesting swales are encouraged for use by landscaping in the setback buffer (Exhibit 2). Regularly spaced curb inlets or drains may be used to direct storm-water from the gutter into the swale.

The County maintains median - landscaping along the following corridors:

- Bridge Blvd.
- Rio Bravo Blvd. (NMDOT)
- Isleta Blvd.
- Alameda Blvd. (NMDOT)

Medians should be inverted to allow for rainwater harvesting of landscaping.

Exhibit 29: Bio-swale in Landscape Buffer

5.12 Development Review

When appropriate, the County may use its permitting authority to require pedestrian and bicycle improvements for new developments during its review process. Master plans, site plans, and major subdivision plats (class 4 and 5) should provide sidewalks, bike lanes, and trails. Administrative procedures will be developed by County Public Works to provide for the review of pedestrian and bicycle facilities.

- **Require Pedestrian and Bicycle Improvements in Master Plans**
  Specific items evaluated in master plans should include:
  - Pedestrian and bicycle access should be provided to link residences with nearby schools, parks, community centers, and retail areas.
  - Pedestrian access should connect cul-de-sacs with surrounding streets.
  - Transit facilities should be provided for when appropriate.

- **Include Pedestrian and Bicycle Element in all Sector Development Plans**
  All County sector development plans, especially corridor plans, should include bicycle and pedestrian transportation elements to link residential areas with Village Centers and community facilities. Transit is closely tied to walkability and should also be a part of County plans.

- **Continue Provision for Pedestrian and Bicycle Facilities in Major Subdivisions**
  The Subdivision Ordinance will continue to recognize the importance of alternative modes of transportation for major subdivision plats (class 4 and 5). The pedestrian and bicycle project list approved as part of the Safety Action Plan will guide facility requirements in major subdivisions.
  - Right-of-way should be dedicated to accommodate sidewalks, trails, and bike lanes designated on the LRBS Map and in the Safety Action Plan.

Policy 2

The County should use its permitting authority to require bicycle and pedestrian improvements for all new developments as well as in master and sector plans.

5.13 Traffic Impact Studies

The County currently requires all major subdivisions (class 4 and 5) over 25 lots and all commercial development to submit a Traffic Impact Study for review and approval by Public Works. TIA submittals should also be required for special use permits as well as for commercial building permits meeting minimum threshold requirements (as indicated in the Public Works TIA procedures.)

- **Require TIAs Address Pedestrian and Bicyclist Safety**
  When appropriate, building permit submittals reviewed by Public Works should include a Vehicle Movement Plan showing the following in relation to any on-site existing and proposed buildings:

  - interior circulation
  - driveways
  - parking aisles and spaces
  - ADA compliant facilities
  - pedestrian access from the sidewalk to the building entrance
  - queuing lanes at drive-through businesses
  - bicycle racks
  - bus stops/shelters
  - fire lanes and emergency vehicle parking
  - loading and unloading areas
  - signage and pedestrian scale lighting.

5.14 Changes to Ordinances

Changes to County ordinances should be implemented as necessary to incorporate bicycle and pedestrian provisions. Current ordinances do not include provisions that would require Complete Streets, pedestrian and bicycle safety, or connectivity. The Roads and Bridges Ordinance (Section 66) should be revised to include the following recommendations:

- **Build Complete Streets**
  Complete Street language that incorporates pedestrian and bicycle facilities within roadways as appropriate should be placed in the County Street Standards.

- **Connectivity**
  - Connectivity language that encourages the well-designed movement of people between one subdivision and another should be placed in County Street Standards. Connectivity includes movement between subdivisions and nearby schools, parks, community centers, and retail areas.
  - When appropriate, there should be pedestrian connectivity between adjoining streets and cul-de-sacs, with design preference for loop streets.
  - Block lengths should be not excessive (generally shorter than 660 feet on residential streets).

- **Provide Circulation Plans for Review**
  A provision should be added for appropriate building permit submittals to include a Vehicle Movement Plan. All commercial developments should provide pedestrian access from the public sidewalk to the building entrance. Vehicle Movement Plans should be added to County Street Standards (see 5.13).

Policy 3

The County should incorporate bicycle and pedestrian provisions into its Roads and Bridges Ordinance to provide for safety, complete streets, and connectivity.

5.15 Conclusion

In summary, this section has made the following recommendations:

- Consider adequate pedestrian and bicycle facilities as part of all new roadway projects. Higher speed collector and arterial streets are of paramount concern.
- Sidewalks should be a minimum of 5 ft. wide with a 5 ft. buffer. Bike lanes are to be a minimum of 6 ft. wide. Multi-use trails are to be a minimum of 10 ft. wide.
- Flexibility is desired when retrofitting existing roadways by considering urban and rural environments, available rights-of-way, adjoining land use, roadway classification, traffic volume, speed, drainage, and other factors.
- Improve intersections with continental crosswalk markings, adequate lighting, shorten crosswalk length with smaller turning radii, install countdown walk signals, and set signal timing to accommodate elderly and children. Midblock crossings at schools and other locations may require refuge islands and beacons or signals.
- Alternative traffic calming devices to speed humps may include chokers, traffic circles, diverters, chicanes, and islands.
- Transit stops should include ADA compliant landings.
- Limit residential block lengths to 600 ft. to increase walkability.
- Pedestrian access through cul-de-sacs and from public sidewalks and parking areas to building entrances are to be strictly applied.

- *Review and approval of private development*

Large subdivisions and master planned developments should incorporate appropriate pedestrian and bicycle facilities through the site plan approval process.

- *Traffic Impact Studies*

Site circulation plans will be required for all large commercial projects. TIAs should also be required for special use permits meeting minimum threshold requirements.

6.0 Pedestrian and Bicycle Projects

This section presents the facilities proposed to be built in the County for pedestrians and bicyclists by area. These facilities will help address safety concerns by completing gaps in the network. Funding sources for projects are also identified.

6.1 Capital Improvements Plan

Pedestrian and bicycle project needs have been identified by Public Works and Parks and Recreation planning staff as part of the MRCOG *Long Range Bikeway System* process and by residents and advocates attending community meetings held during the summer and fall of 2011. Local, state, federal, and private funding sources will be used to finance pedestrian and bicycle projects identified in the Safety Action Plan. The County's Capital Improvements Plan is adopted by the County Commission every two years. It contains roadway, drainage, parks and recreation, and community facility projects.

Section 2-241 of the Bernalillo County Code requires that 5% of all general obligation bond funds for roads and storm drainage be used for trail and bikeway projects designated on adopted plans. The section also directs the Public Works Division and the Parks and Recreation Department to develop a memorandum of understanding to administer these funds. Public Works Division and the Parks and Recreation Department meet on an annual basis to evaluate projects budgeted to receive 5% trails and bikeways funds.

Policy 4

The County will seek local, state, federal, and private funding sources to finance pedestrian and bicycle safety projects.

Existing and Proposed Pedestrian/ Bicycle Facility Maps found in this section:

- Vicinity Map
- Atrisco-Five Points
- Arenal-Armijo
- El Centro Familiar
- Valley Gardens-Adobe Acres
- Los Padillas
- Mountain View
- Alameda
- Paradise Hills
- North Edith Boulevard
- North Albuquerque Acres

6.2 Pedestrian/ Bicycle Facility Projects List

The following table is the list of recommended pedestrian and bicycle projects by planning area – Southwest, Northwest, and Northeast. It includes specific roadways or trails, type of improvement, possible funding sources, and an estimated cost. The projects list will be updated every two years as part of the CIP process. Shading on the table indicates these projects are recommended in the 2035 MTP. The tables are accompanied by neighborhood maps that show existing and proposed routes.

Sixty-five pedestrian and bicyclist facility improvement projects have been identified totaling $18.1 million in local funding for three sub-areas of the County (Exhibit 30). Additional federal funding may build projects identified in the regional MTP (highlighted projects on list). Project costs for all funding types amount to $106 million.

- New Arterial Sidewalks/Bike Lanes – 14
- New Collector Sidewalks/Bike Lanes – 21
- Schools, Parks, Comm. Center Bicycle/ Pedestrian Facilities – 9
- Transit Station Bicycle/ Pedestrian Facilities - 2
- Sidewalk Repair – 2
- New Multi-Use Trails – 10
- Extend Multi-Use Trails – 2
- Pedestrian and Bikeway Gap completion projects – 27

Projects will be scored and prioritized using criteria developed by the Public Works CIP Committee. Criteria will include filling system gaps and proximity to non-motorized generators. All capital projects must be approved by the Bernalillo County Commission before any design or construction work may commence.

Projects potentially could be built over a 20 year period or more subject to funding availability and priorities of the County. Multiple jurisdictions and agencies may be involved in the planning, funding, and maintenance of these projects.

Projects can be prioritized by area of need. Priority projects are those collector streets or local streets that serve community facilities, parks, and schools. They are also projects which complete gaps and provide connectivity in the system. Corridor projects are arterial roadways in which bicycle-pedestrian projects are likely to be federally funded.

Project costs reflect only the cost for sidewalk, bike lane, or trail improvements. Sidewalk costs assume concrete construction but some projects may be less because they incorporate an asphalt or soft surface type walkway. They do not include the costs for other roadway improvements such as storm drainage, curb and gutter, and pavement rehabilitation or new construction. They do not include any right-of-way costs, engineering design, or environmental clearance.

Bernalillo County Pedestrian-Bicycle Facilities
Vicinity Map

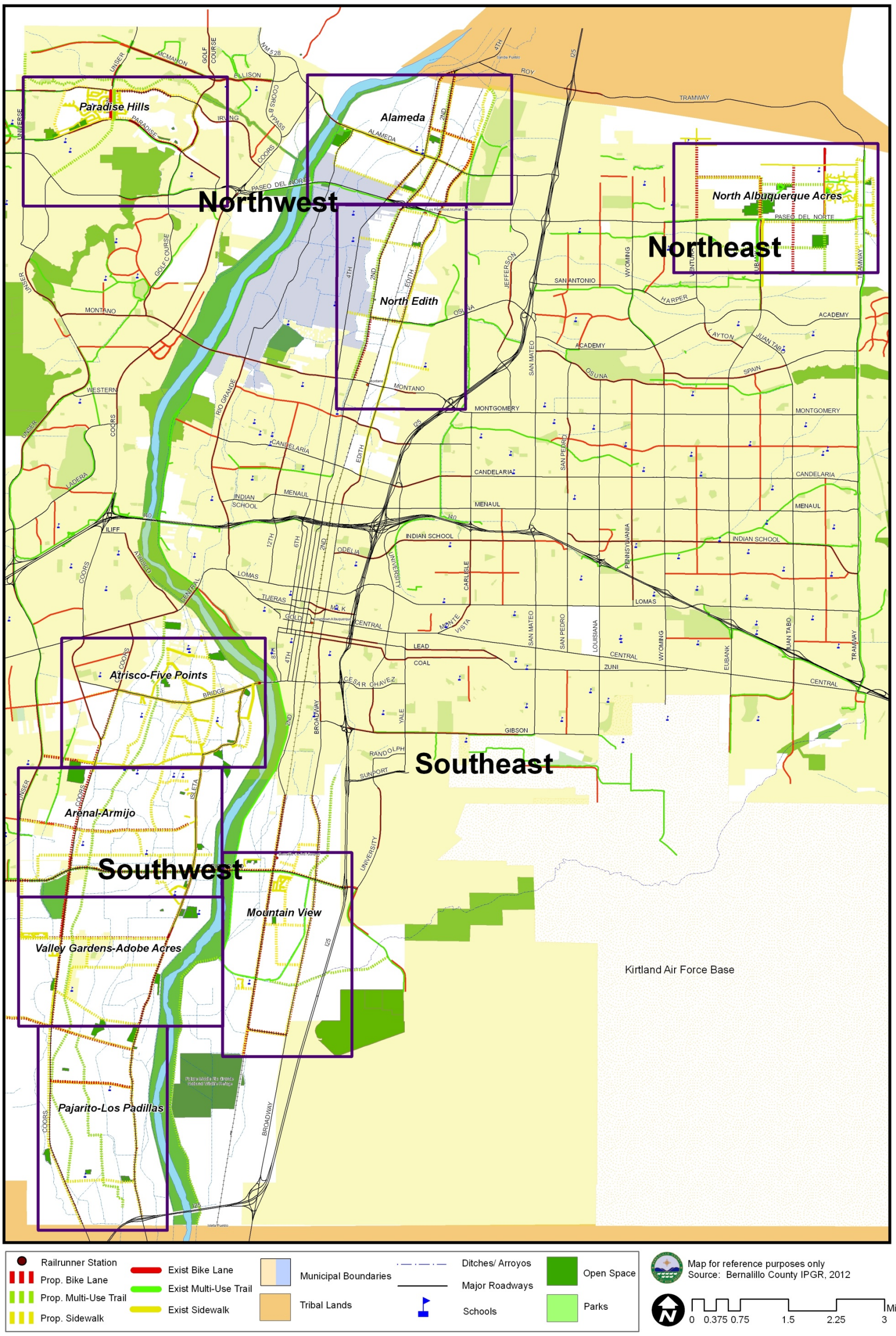
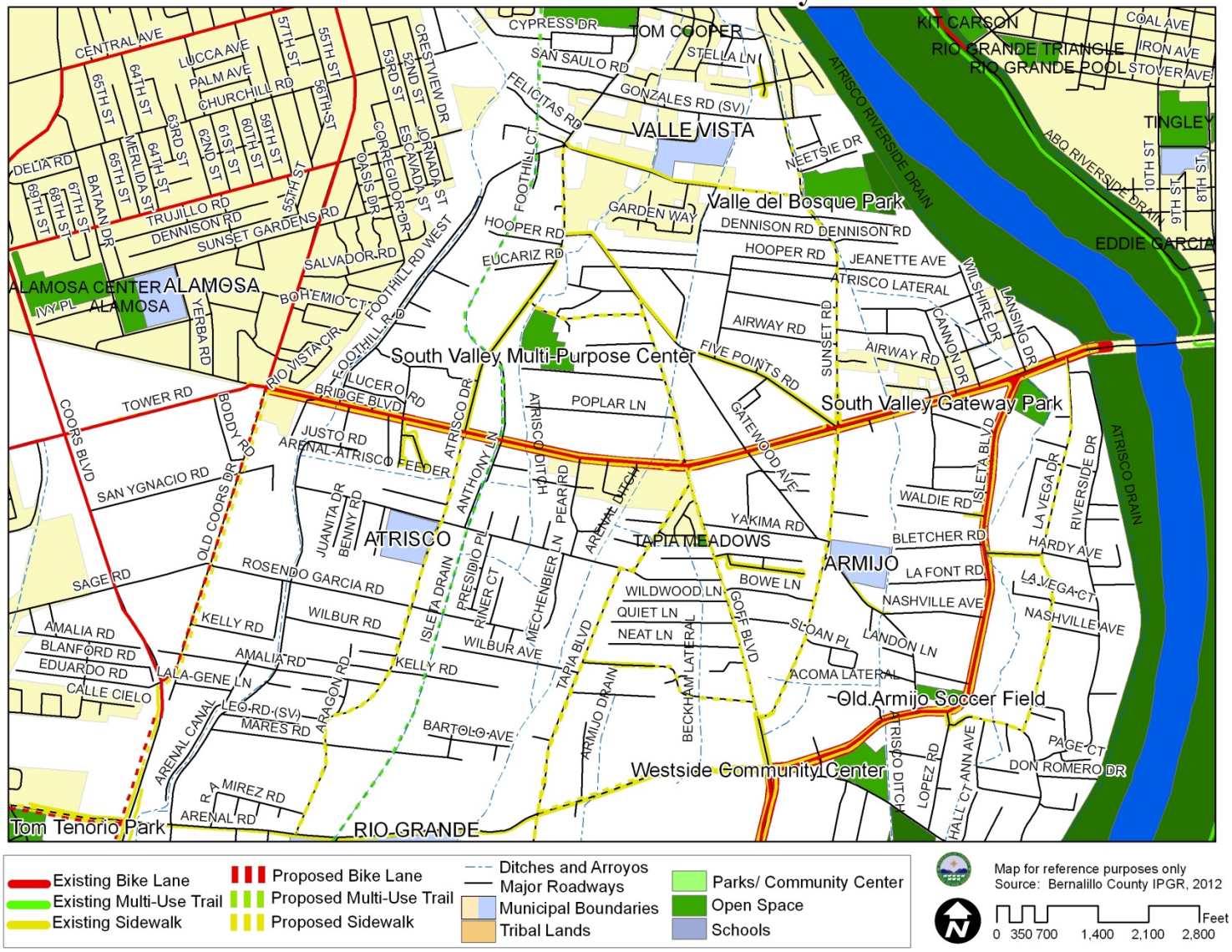
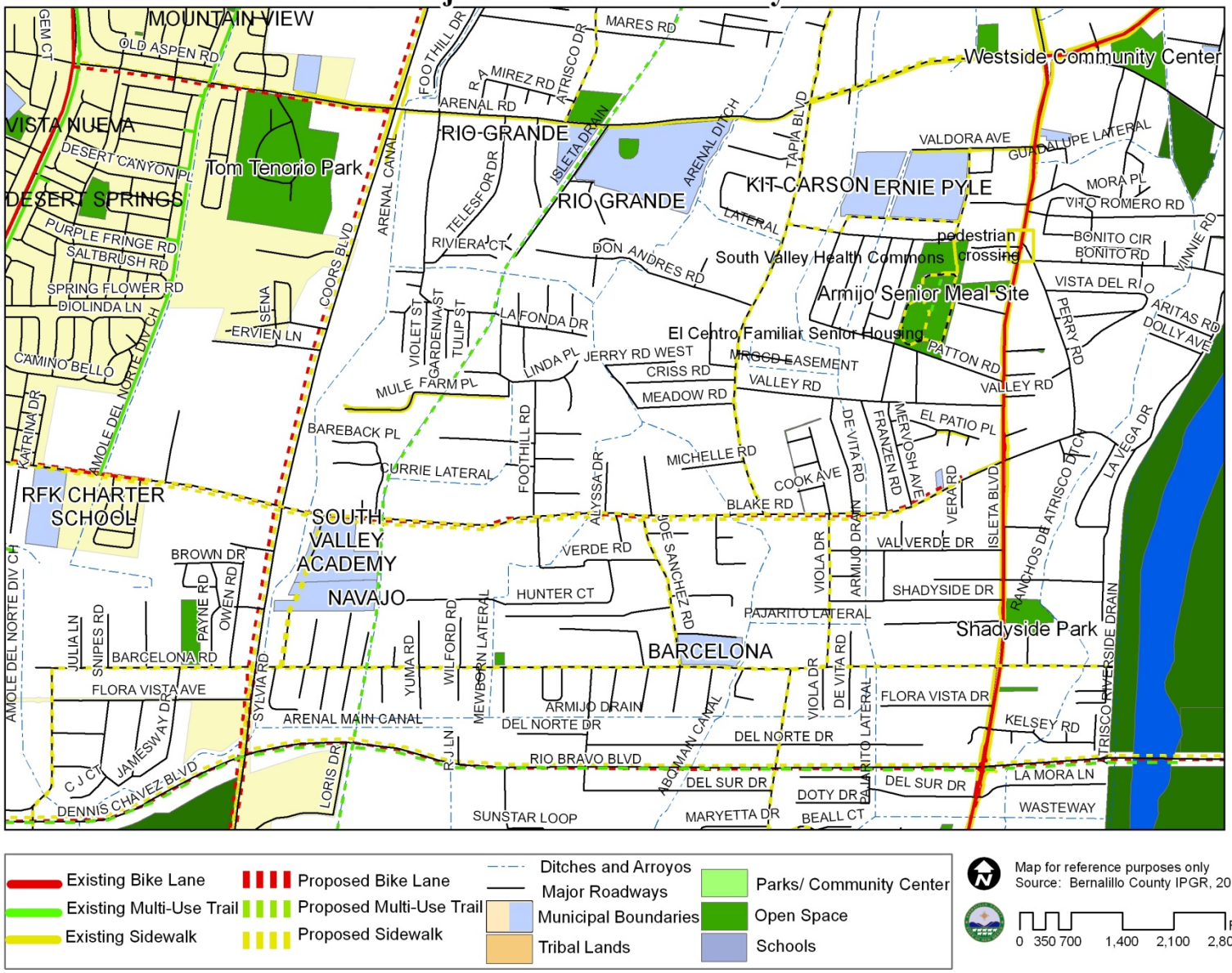


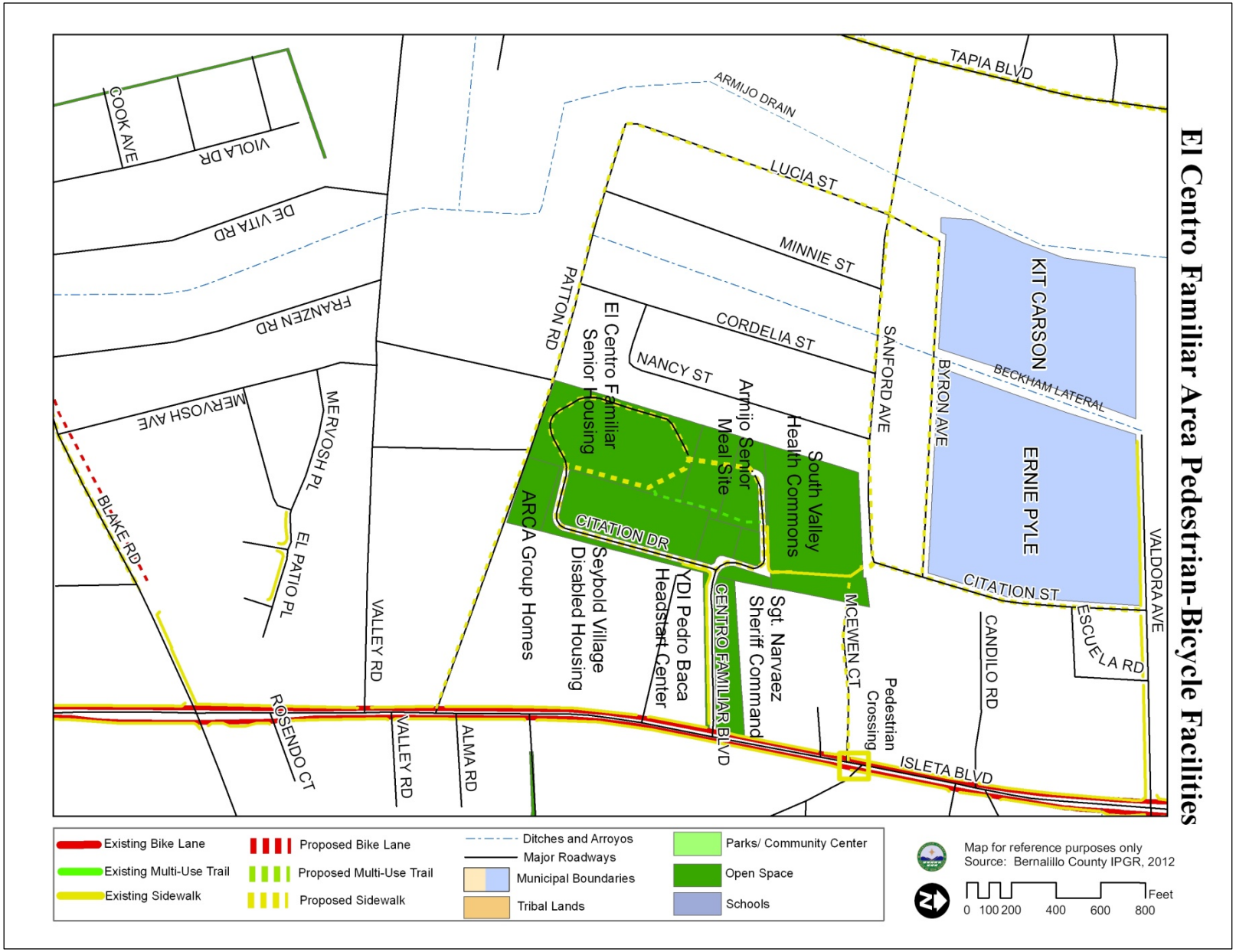
Exhibit 30: Bernalillo County Pedestrian and Bicycle Facility Projects – Southwest Area						
Facility	**Type**	**Description**	**Connectivity**	**Funding**	**Cost**	**Source**
Atrisco Dr.	Sidewalks, crosswalks, lighting	Arenal Rd. to Bridge Blvd.	Atrisco ES	GO, SRTS	$ 408,940	BC
Goff Blvd.	Sidewalks, crosswalk, lighting	Bridge Blvd. to Sunset Rd.		GO Bonds	$ 241,480	BC
Sunset Rd.	Sidewalks, crosswalks, lighting	Central Ave. to Arenal Rd.		GO, SRTS	$ 542,460	BC
Tapia Blvd.	Sidewalks crosswalk, lighting	Bridge Blvd. and Blake Rd.		GO Bonds	$ 674,740	BC
Arenal Rd.	Sidewalks crosswalk, lighting	Tapia Blvd. to Isleta Blvd.		GO Bonds	$ 160,160	BC
Blake Rd.	Sidewalks, bike lanes, crosswalks	Barcelona Pl. to La Vega Dr.	Navajo ES	GO, SRTS	$ 893,240	BC
Barcelona Rd.	Sidewalks, crosswalks, lighting	Condershire Dr. - La Vega Dr.	Barcelona, Navajo ES	GO, SRTS	$ 642,500	BC
Old Coors Dr.	Sidewalks crosswalk, lighting	Coors Blvd. to Bridge Blvd.		GO Bonds	$ 282,320	BC
El Centro Familiar	Sidewalks, trail, crosswalks, lighting	Citation, Sanford	Health Commons, Kit Carson	GO, SRTS	$ 397,320	BC
Sunset Gardens Rd.	Sidewalks, crosswalks, lighting	Arenal Ditch to Sunset Rd.	Valle Vista ES, Bosque Park	GO, SRTS	$ 80,620	BC
Del Rio Rd./Violet Rd.	Sidewalks, crosswalks, lighting	Rio Bravo Blvd. to Blake Rd.	Adobe Acres ES	GO, SRTS	$ 402,020	BC
Joe Sanchez Rd.	Sidewalks, crosswalks, lighting	Rio Bravo Blvd. to Blake Rd.	Barcelona ES	GO, SRTS	$ 212,160	BC
Larazolo Rd./Five Pts	Sidewalks, crosswalks, lighting	Atrisco Dr. to Goff Blvd.	SV Multi-Purpose Center	GO Bonds	$ 170,080	BC
La Vega Rd.	Reconstruct sidewalks, crosswalks, lighting	Armijo Rd. to Hardy Ave.		GO Bonds	$ 212,410	BC
Grace Vigil Rd.	Sidewalks, crosswalks, lighting	Rio Bravo Blvd. to Gun Club		GO Bonds	$ 293,860	BC
Gun Club Rd.	Sidewalks, bike lanes	Isleta Blvd. to 118th St.		STP-E	$9,058,500	MTP
Don Felipe Rd.	Sidewalks, crosswalks	Coors Blvd. to Isleta Blvd.	Pajarito ES	GO, SRTS	$ 475,500	BC
Pajarito ES easement	Sidewalks, crosswalks	Don Felipe Rd. to school		SRTS	$ 80,640	BC
Raymac Rd.	Sidewalks, bike lanes, lighting	Coors Blvd. to Isleta Blvd.	Middle School	GO Bonds	$ 428,870	BC
Los Padillas Rd.	Sidewalks, crosswalks	Coors Blvd. to Isleta Blvd.	Los Padillas ES, Los Padillas CC	GO, SRTS	$ 369,660	BC
Malpais Rd.	Sidewalks, crosswalks	Coors Blvd. to Isleta Blvd.		GO Bonds	$ 342,060	BC
Metzgar Rd.	Sidewalks, crosswalks	Isleta Drain and Isleta Blvd.	Pajarito ES	GO, SRTS	$ 486,740	BC
V Gardens Dr. (COA)	Sidewalks, crosswalks, lighting	Metzgar Rd. to Gun Club Rd.	V Gardens Park	SRTS	$ N/A	BC

Atrisco-Five Points Area Pedestrian-Bicycle Facilities

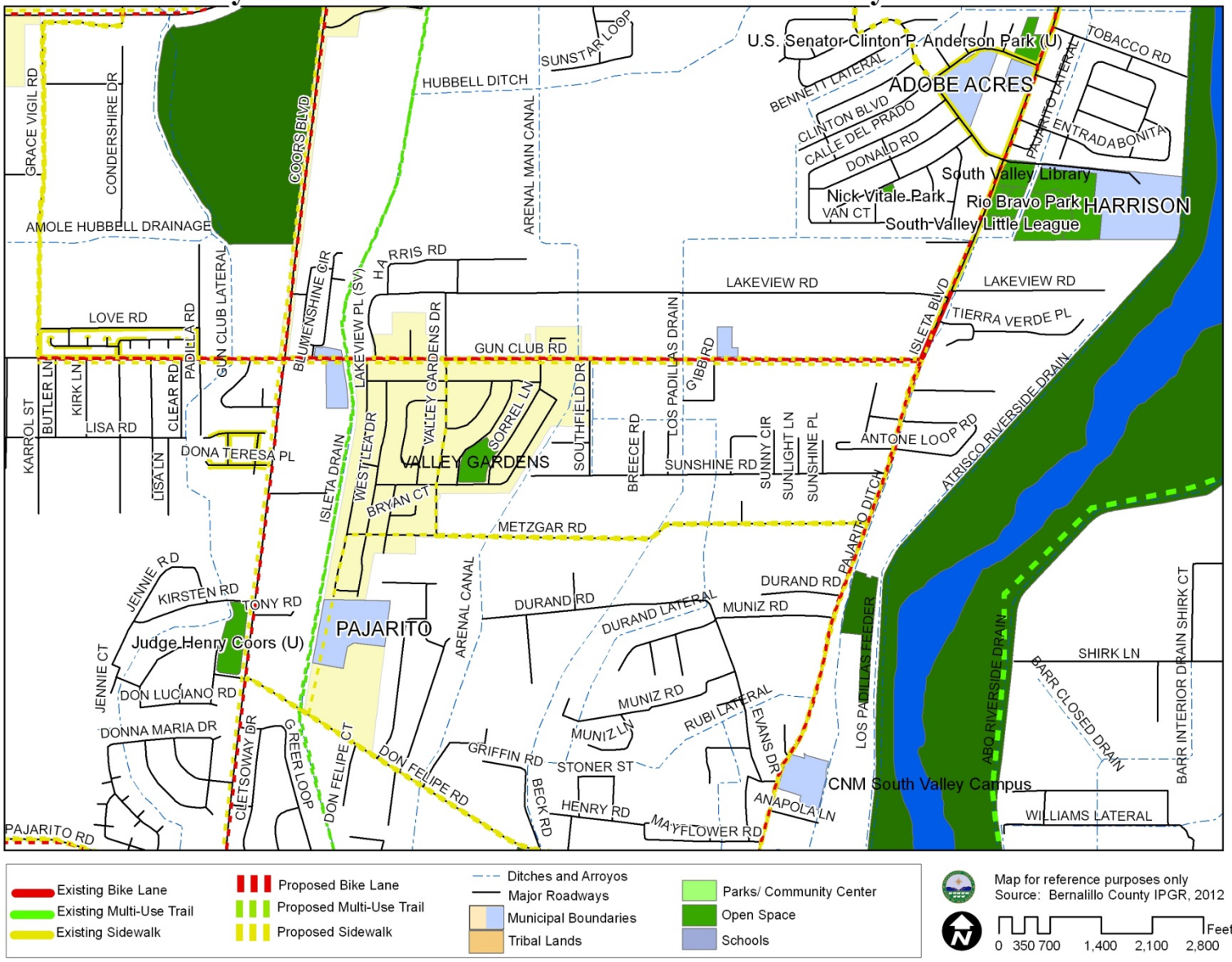


Arenal-Armijo Area Pedestrian-Bicycle Facilities




El Centro Familiar Area Pedestrian-Bicycle Facilities
TAPIA BLVD
ARMIJO DRAIN
LUCIA ST
MINNIE ST
CORDELIA ST
NANCY ST
PATTON RD
SANFORD AVE
BYRON AVE
KIT CARSON
ERNIE PYLE
BECKHAM LATERAL
CITATION ST
VALDORA AVE
ESCUELA RD
CANDILO RD
MCEWEN CT
Pedestrian Crossing
ISLETA BLVD
CENTRO FAMILIAR BLVD
Sgt. Narvaez Sheriff Command
South Valley Health Commons
Armijo Senior Meal Site
El Centro Familiar Senior Housing
CITATION DR
YDI Pedro Baca Headstart Center
Seybold Village Disabled Housing
ARCA Group Homes
ALMA RD
VALLEY RD
VALLEY RD
ROSENDO CT
BLAKE RD
EL PATIO PL
MERVOSH PL
MERVOSH AVE
FRANZEN RD
DE VITA RD
VIOLA DR
COOK AVE
Existing Bike Lane
Existing Multi-Use Trail
Existing Sidewalk
Proposed Bike Lane
Proposed Multi-Use Trail
Proposed Sidewalk
Ditches and Arroyos
Major Roadways
Municipal Boundaries
Tribal Lands
Parks/ Community Center
Open Space
Schools
Map for reference purposes only
Source: Bernalillo County IPGR, 2012
0 100 200 400 600 800
Feet

Valley Gardens-Adobe Acres Area Pedestrian-Bicycle Facilities



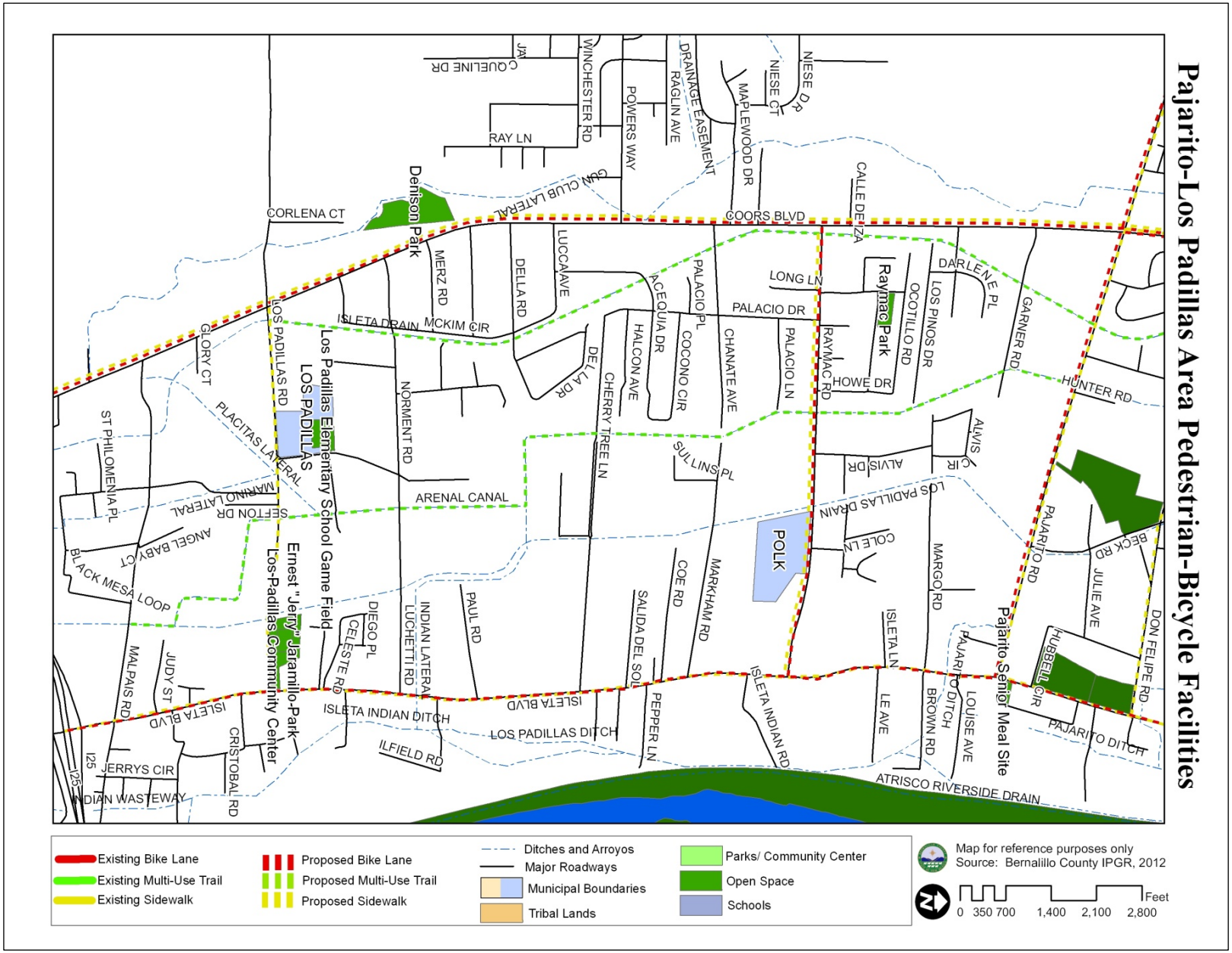

Pajarito-Los Padillas Area Pedestrian-Bicycle Facilities
Existing Bike Lane
Existing Multi-Use Trail
Existing Sidewalk
Proposed Bike Lane
Proposed Multi-Use Trail
Proposed Sidewalk
Ditches and Arroyos
Major Roadways
Municipal Boundaries
Tribal Lands
Parks/ Community Center
Open Space
Schools
Map for reference purposes only
Source: Bernalillo County IPGR, 2012
0 350 700 1,400 2,100 2,800 Feet
Denison Park
Raymac Park
Los Padillas Elementary School Game Field
Ernest "Jerry" Jaramillo-Park
Los-Padillas Community Center
Pajarito Senior Meal Site
LOS PADILLAS
POLK
COORS BLVD
GUN CLUB LATERAL
CORLENA CT
RAY LN
C QUELINE DR
WINCHESTER RD
POWERS WAY
DRAINAGE EASEMENT
RAGLIN AVE
MAPLEWOOD DR
NIESE CT
NIESE DR
CALLE DE ZA
LONG LN
PALACIO DR
DARLENE PL
LOS PINOS DR
OCOTILLO RD
GARNER RD
HOWE DR
RAYMAC RD
PALACIO LN
CHANATE AVE
PALACIO PL
ACEQUIA DR
COCONO CIR
HALCON AVE
CHERRY TREE LN
DELLA DR
LUCCA AVE
DELLA RD
MERZ RD
MCKIM CIR
ISLETA DRAIN
NORMENT RD
ARENAL CANAL
HUNTER RD
ALVIS CIR
ALVIS DR
SUL LINS PL
LOS PADILLAS DRAIN
COLE LN
MARGO RD
PAJARITO RD
BECK RD
JULIE AVE
DON FELIPE RD
HUBBELL CIR
PAJARITO DITCH
LOUISE AVE
BROWN RD
ISLETA LN
LE AVE
MARKHAM RD
COE RD
SALIDA DEL SOL
PEPPER LN
ISLETA INDIAN RD
ISLETA BLVD
LOS PADILLAS DITCH
ISLETA INDIAN DITCH
ATRISCO RIVERSIDE DRAIN
PAUL RD
INDIAN LATERAL
LUCHETTI RD
DIEGO PL
CELESTE RD
ILFIELD RD
LOS PADILLAS RD
GLORY CT
ST PHILOMENIA PL
PLACITAS LATERAL
MARNO LATERAL
SETTON DR
ANGEL BABY CT
BLACK MESA LOOP
MALPAIS RD
JUDY ST
CRISTOBAL RD
JERRYS CIR
INDIAN WASTEWAY
125

Exhibit 30: Bernalillo County Pedestrian and Bicycle Facility Projects - Southwest Area (continued)						
Facility	**Type**	**Description**	**Connectivity**	**Funding**	**Cost**	**Source**
Sunport Railrunner Station	Sidewalks, crosswalks, lighting	Prince St. and Cmo. del Tren N Rio Bravo	Sunport Stn.	HSIP	$ 259,700	BC
Shirk Ln	Sidewalks, crosswalks, lighting	Ditch and 2nd St.	Mtn View ES	GO, SRTS	$ 102,520	BC
Mountain View Neighborhood	Sidewalks, crosswalks, lighting	Prince St, Prosperity Av, Williams St, Murray Rd.	Mtn. View Comm. Center	GO Bonds	$ 836,860	BC
Desert Rd.	Sidewalks, crosswalks, lighting	2nd St. to Broadway Blvd.		GO Bonds	$ 960,700	BC
Woodward Rd. (COA)	Sidewalks, Bike Lanes, Lighting	2nd St. to Broadway Blvd.		STP-E	$ 300,000	MTP
Coors Blvd. Corridor (NMDOT)	Sidewalks, Bike Lanes, or Wide Shoulders, Crosswalks, Lighting	Sage Rd. to Gun Club Rd. to Malpais Rd.		STP-U, CMAQ	$ 8,150,000	MTP
Bridge Blvd. Corridor	Sidewalks, Bike Lanes, Crosswalks, Lighting	Coors Blvd. (via Tower) to Barelas Bridge		**Funded in TIP – $1.131 million**		
Broadway Blvd. Corridor (NMDOT)	Sidewalks, Bike Lanes, or Wide Shoulders, Crosswalks, Lighting	Woodward Rd. to Desert Rd.		STP-U, CMAQ	$ 3,150,000	MTP
D. Chavez/ Rio Bravo Corridor (NMDOT)	Sidewalks, Bike Lanes, or Wide Shoulders, Crosswalks, Lighting	Paseo to Coors	Atrisco Heritage HS	STP-U, CMAQ	$14,105,000	MTP
Isleta Blvd. Corridor	Sidewalks, Bike Lanes, or Wide Shoulders, Crosswalks, Lighting	Rio Bravo Blvd. to I-25		STP-U, CMAQ	$ 4,260,000	MTP
Isleta Blvd. Midblock Crossings	Pedestrian HAWK Signals	Install/ replace pedestrian signals at 1 midblock crossing		HSIP	$ 312,400	BC
Second St. (South) Corridor	Multi-use trail, Crosswalks, Lighting	Woodward Rd. to Desert Rd.	Mtn View CC, ES, Sunport Stn	STP-E, CMAQ	$ 2,000,000	MTP
Pajarito Rd. Corridor	Sidewalks, Bike Lanes/ Wide Shoulders, Crosswalks	Coors Rd. to Escarpment Rd.		STP-E, CMAQ	$ 5,346,000	MTP
Arenal Canal	Multi-Use Trail	Pajarito Rd. to Malpais Rd.		STP-E	$ 1,011,420	BC
Rio Grande Trail	Multi-Use Trail extension	South Diversion Channel to I-25		STP-E	$N/A	
Amole Arroyo Trail (AMAFCA)	Multi-Use Trail	Coors Blvd. west to La Ceja open space		STP-E	$ 2,200,000	MTP
Isleta Drain Trail (MRGCD)	Multi-Use Trail	Central Ave. to Rio Bravo Blvd.		STP-E	$ 7,600,000	MTP
Tijeras Arroyo Trail (AMAFCA)	Multi-Use Trail	South Diversion Channel east		STP-E	$ 1,800,000	MTP
S. Diversion Channel (AMAFCA)	Multi-Use Trail extension	Sunport Blvd. to Gibson Blvd.		STP-E	$ 1,760,000	MTP
Bosque Trail	Multi-Use Trail reconstruction	South Diversion Channel to Bridge Blvd.		**Funded in TIP - $1 million**		

Mountain View Area Pedestrian-Bicycle Facilities

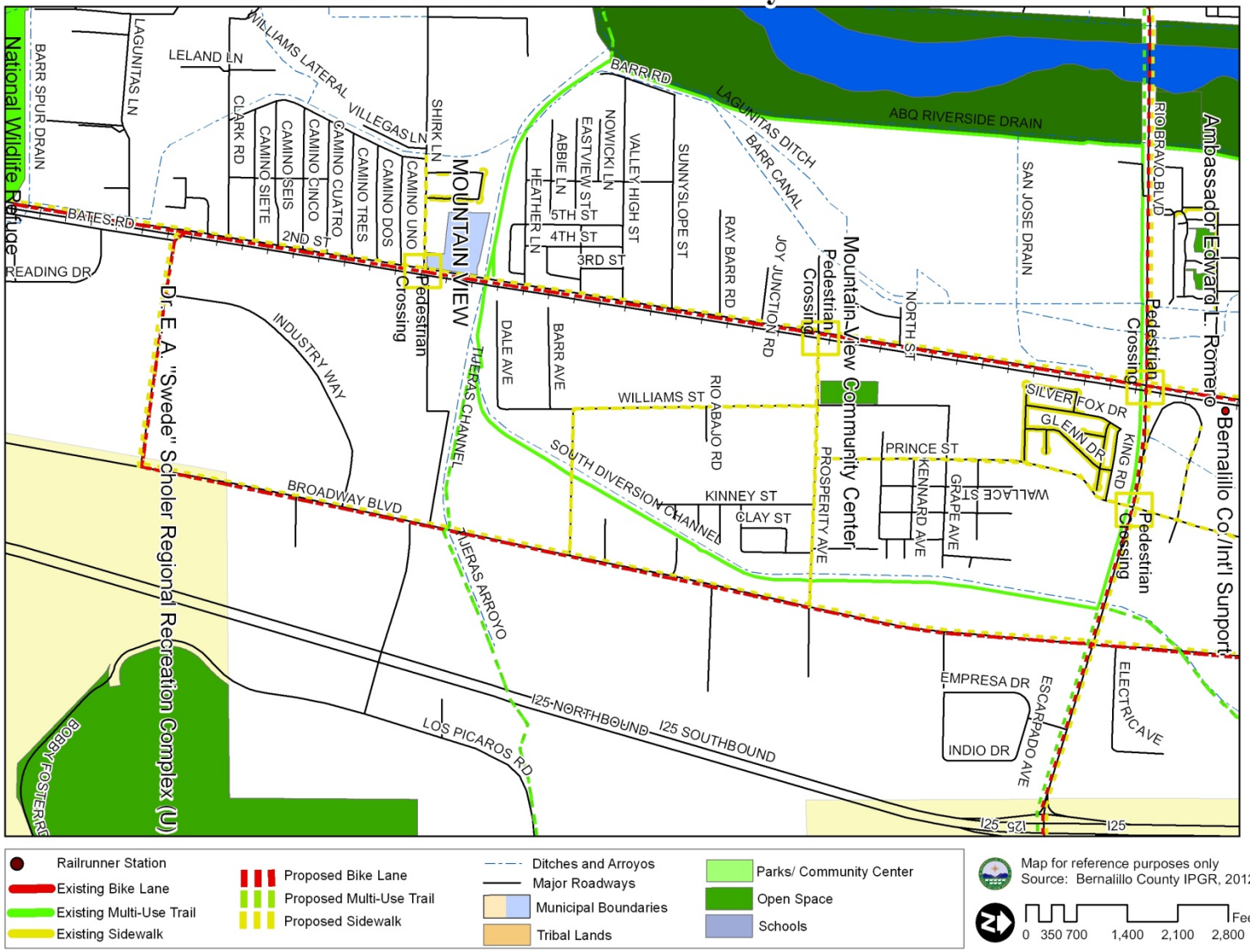
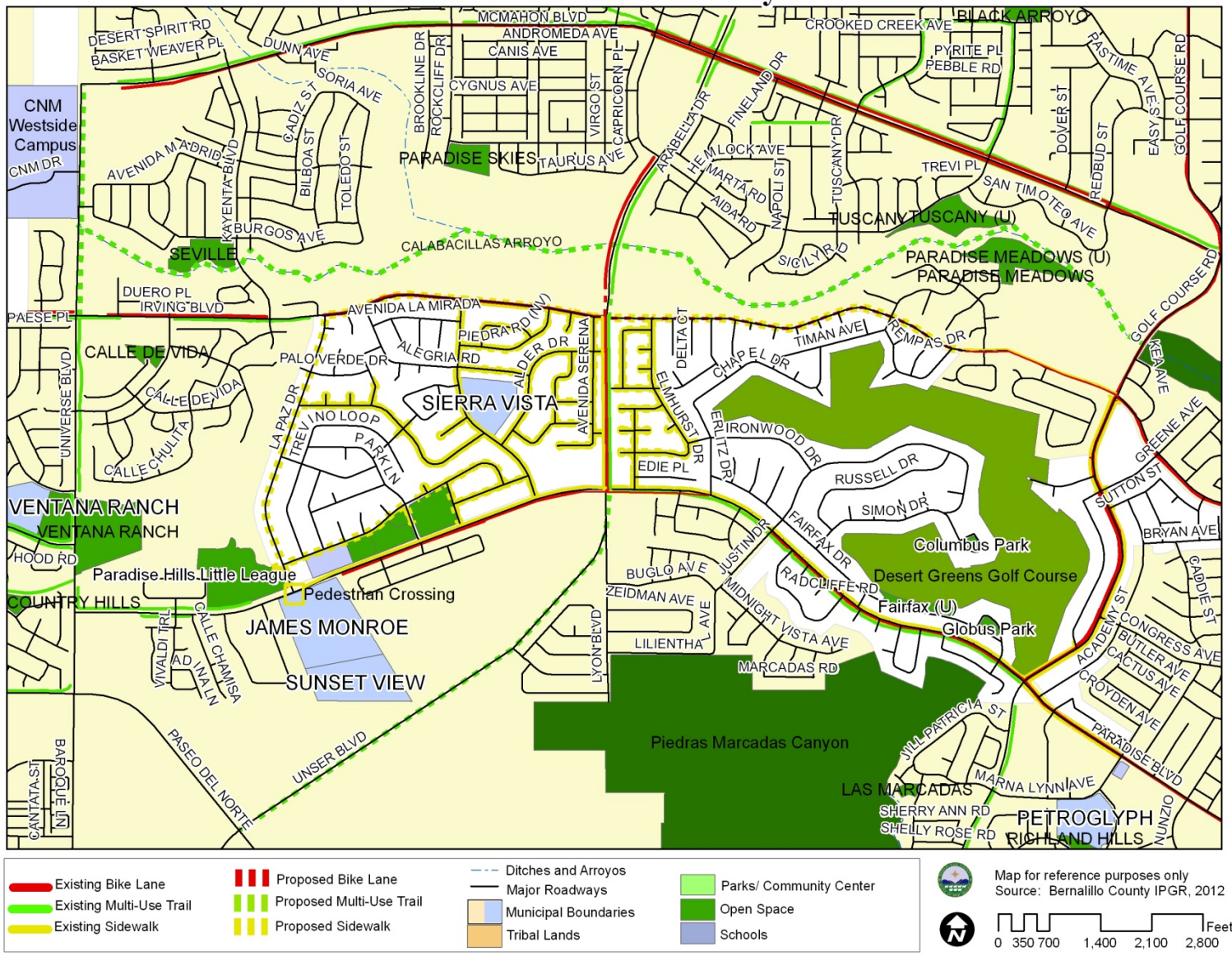
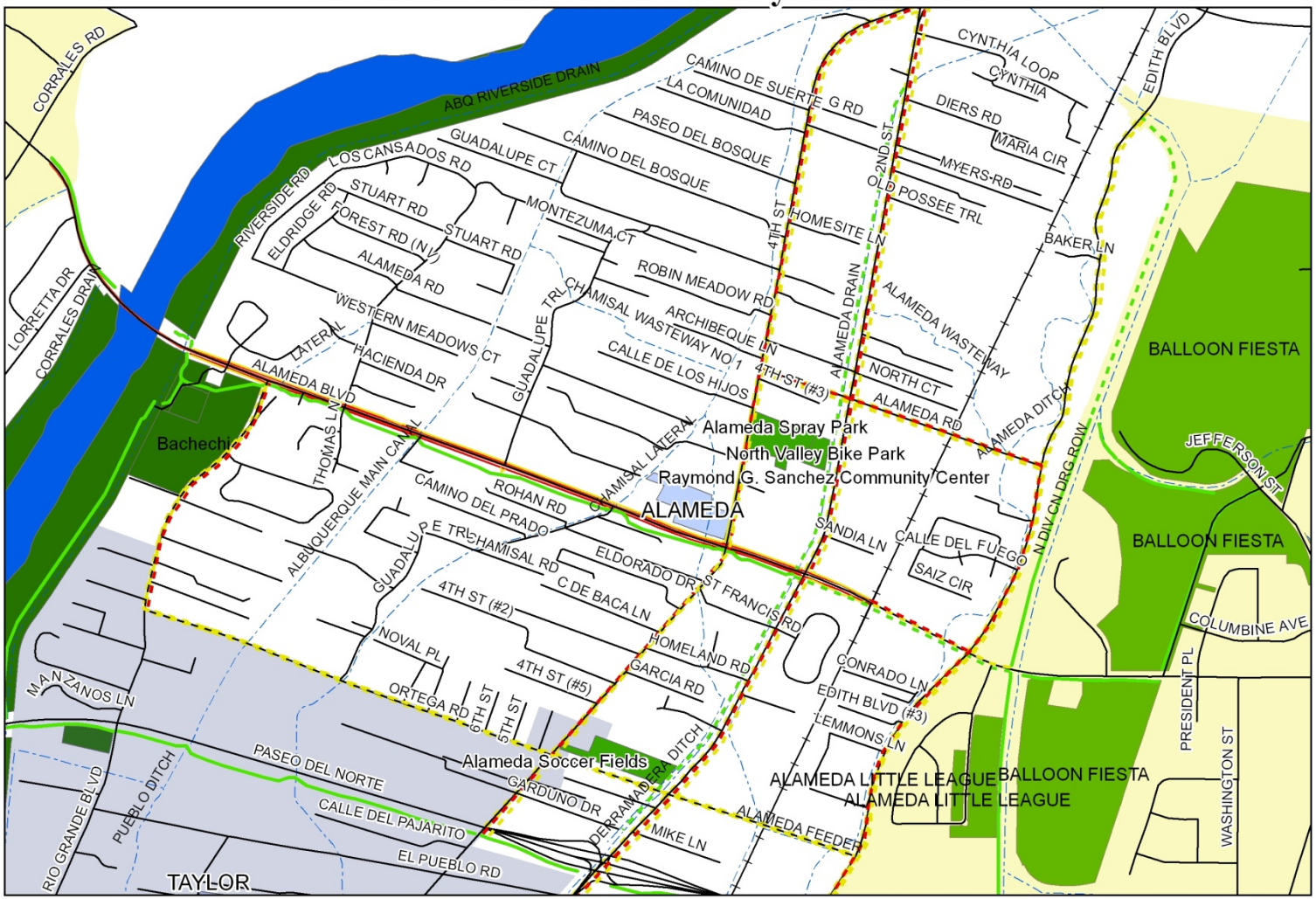


Exhibit 30: Bernalillo County Regional Pedestrian and Bicycle Facility Projects - Northwest Area (continued)						
Facility	**Type**	**Description**	**Connectivity**	**Funding**	**Cost**	**Source**
4th St. Corridor	Sidewalks, Bike Lanes(restripe lanes), Crosswalks, Lighting, Bus Shelters	Osuna Rd to Roy Ave.		STP-U, CMAQ	$ 381,007	BC
2nd St. (North) Corridor	Sidewalks, Bike Lanes, Crosswalks, Lighting	Osuna Rd to Roy Ave.	North Valley Library	STP-U, CMAQ	$ 9,209,121	MTP
Osuna Rd.	Sidewalks, Bike Lane, Crosswalks, Lighting	2nd St. to Edith Blvd.		STP-U, CMAQ	$ 3,069,000	MTP
Edith Blvd. Corridor	Sidewalks, Bike Lanes	Osuna Rd. to N. Diversion Channel		STP-U, CMAQ	$1,300,000	MTP
Rio Grande Blvd.	Sidewalks, Bike Lanes	Ortega Rd. to Alameda Rd.	Bachechi OS	STP-E	$ 470,000	MTP
Ortega Rd.	Sidewalks	Rio Grande to Edith (easement req'd)		GO Bonds	$ 599,660	BC
Mission Ave.	Sidewalks, crosswalks, lighting	Edith Blvd. to Renaissance Dr.	Mission ES	GO, SRTS	$ 214,480	BC
Irving Blvd.	Complete sidewalk, bike lane gaps	La Paz Dr. to Golf Course Rd.		GO Bonds	$ 536,000	BC
La Orilla Rd.	MU Trail, Sidewalks, Bike lanes	Golf Course Rd. to Coors Blvd.		**Funded - $400,000**		
El Pueblo Railrunner Station	Sidewalks, Bike Lanes	El Pueblo Rd. 2nd St. to Edith Blvd.		HSIP	$ 202,740	BC
Alameda Rd.	Sidewalks	4th St. to Edith Blvd.		GO Bonds	$ 242,280	BC
Los Ranchos Rd.	Sidewalks, crosswalks, lighting	4th St. and Edith Blvd.	Los Ranchos ES	GO, SRTS	$ 327,180	BC
La Paz Dr.	Sidewalks	Irving Blvd. to Chaparral Cir.		GO Bonds	$ 229,020	BC
Paradise Hills Neighborhood	Sidewalk Repair, Complete gaps, ADA accessible	28 streets	Paradise Com.Ctr SierraVista ES	GO Bonds	$2,140,000	BC
Paradise Blvd.	Sidewalks, bike lanes, MU trail	La Paz Dr. to Golf Course Rd.		GO Bonds	$ 390,440	BC
Paradise Hills Midblock Crossing	Pedestrian bridge or HAWK signal	La Paz @ Paradise Blvd.	Monroe MS, Sunset View ES	HSIP	$ N/A	COA
Paradise Blvd. Trail	Widen, extend MU Trail	La Paz Dr. to Golf Course Rd.	"	**Funded in TIP-$819,288**		
Alameda Drain Trail (MRGCD)	Multi-Use Trail	Montano Rd. to N. Diversion Channel		**Funded in TIP-$629,000**		
N.Diversion Channel (AMAFCA)	Multi-Use Trail extension	Balloon Park to Alameda Drain Trail		STP-E	$1,260,000	MTP
Calabacillas Arroyo (AMAFCA)	Multi-Use Trail	Lyon Rd. to Gold Course Rd.		STP-E	$2,000,000	MTP

Paradise Hills Area Pedestrian-Bicycle Facilities



Alameda Area Pedestrian-Bicycle Facilities



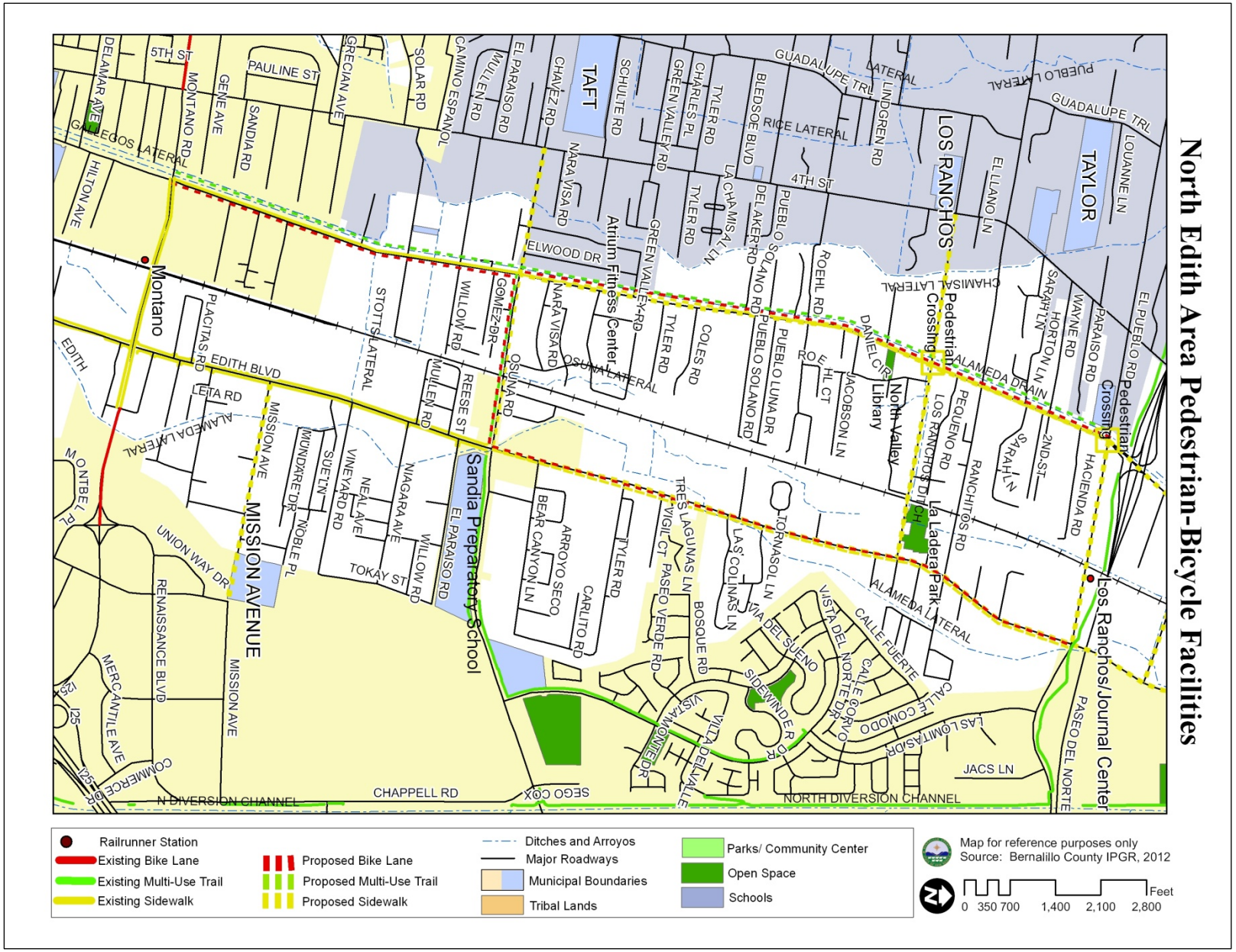
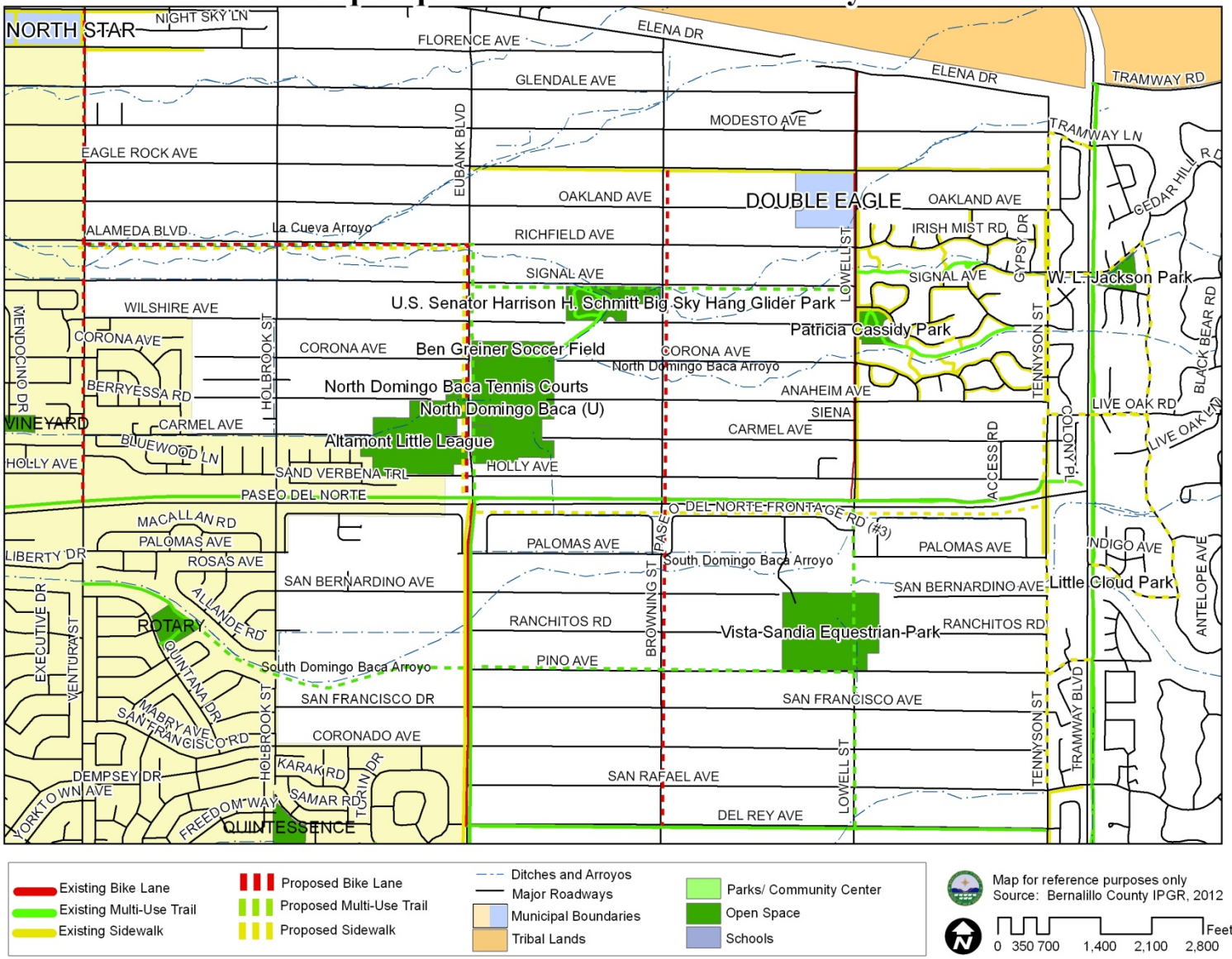

North Edith Area Pedestrian-Bicycle Facilities
Railrunner Station
Existing Bike Lane
Existing Multi-Use Trail
Existing Sidewalk
Proposed Bike Lane
Proposed Multi-Use Trail
Proposed Sidewalk
Ditches and Arroyos
Major Roadways
Municipal Boundaries
Tribal Lands
Parks/ Community Center
Open Space
Schools
Map for reference purposes only
Source: Bernalillo County IPGR, 2012
0 350 700 1,400 2,100 2,800
Feet
Montano
Los Ranchos/Journal Center
TAFT
LOS RANCHOS
TAYLOR
MISSION AVENUE
Sandia Preparatory School
Atrium Fitness Center
North Valley Library
La Ladera Park
Pedestrian Crossing
Pedestrian Crossing
EDITH BLVD
ALAMEDA DRAIN
ALAMEDA LATERAL
GUADALUPE TRL
RICE LATERAL
CHAMISAL LATERAL
PUEBLO LATERAL
GALLEGOS LATERAL
OSUNA LATERAL
STOTTS LATERAL
N DIVERSION CHANNEL
NORTH DIVERSION CHANNEL
CHAPPELL RD
SEGO COX
5TH ST
4TH ST
2ND ST
PAULINE ST
MONTANO RD
GENE AVE
SANDIA RD
GRECIAN AVE
SOLAR RD
CAMINO ESPANOL
MULLEN RD
EL PARAISO RD
CHAVEZ RD
SCHULTE RD
NARA VISA RD
ELWOOD DR
GOMEZ DR
OSUNA RD
WILLOW RD
REESE ST
TYLER RD
CHARLES PL
GREEN VALLEY RD
LA CHAMISAL LN
BLEDSOE BLVD
DELAKER RD
PUEBLO SOLANO RD
PUEBLO LUNA DR
COLES RD
ROEHL RD
ROEHL CT
JACOBSON LN
DANIEL CIR
LINDGREN RD
LATERAL
EL LLANO LN
LOUANNE LN
EL PUEBLO RD
PARAISO RD
WAYNE RD
HORTON LN
SARAH LN
HACIENDA RD
PEQUENO RD
LOS RANCHOS DITCH
RANCHITOS RD
TORNASOL LN
LAS COLINAS LN
TRES LAGUNAS LN
VIGIL CT
PASEO VERDE RD
BOSQUE RD
VIA DEL SUENO
SIDEWINDER DR
VISTA DEL NORTE DR
CALLE CORVO
CALLE FUERTE
CALLE COMODO
LAS LOMITAS DR
JACS LN
PASEO DEL NORTE
ARROYO SECO
BEAR CANYON LN
CARLITO RD
VILLA DEL VALLE
VISTA WONDER DR
NIAGARA AVE
NEAL AVE
VINEYARD RD
SUE LN
MUNDARE DR
NOBLE PL
MISSION AVE
TOKAY ST
PLACITAS RD
LEITA RD
MONTBEL PL
UNION WAY DR
RENAISSANCE BLVD
MERCANTILE AVE
COMMERCE DR
HILTON AVE
DELAMAR AVE
I25

Exhibit 30: Bernalillo County Pedestrian and Bicycle Facility Projects - Northeast Area (continued)						
Facility	**Type**	**Description**	**Connectivity**	**Funding**	**Cost**	**Source**
Alameda Blvd. Corridor (East)*	Sidewalks, Bike Lane, Crosswalks, MU Trail, Lighting	Ventura St. to Eubank Blvd. to Lowell		STP-U, CMAQ	$5,950,000	MTP
Eubank Blvd. Corridor	Sidewalks, Bike Lane, Crosswalks, MU Trail, Lighting	Paseo del Norte to Alameda Blvd.		**Funded in TIP**		
Paseo del Norte Corridor Frontage Road	Sidewalks on south side, Bike Lanes, Crosswalks, Lighting	Eubank Blvd. to Tramway Blvd.	Equestrian Park	STP-U, CMAQ	$ 244,350	BC
Tennyson St.	Sidewalk connections to Tramway; bridge over S. Dom. Baca Arroyo	San Antonio to Modesto Ave.		GO Bonds	$ 493,980	BC
Lowell St.	Sidewalks, MU Trail	Del Rey to PDN	Equestrian Park	GO Bonds	$ 276,240	BC
Tramway Ln.	Sidewalks crosswalk, lighting	Modesto Ave. to San Bernardino Ave.	Open Space/ Park	GO Bonds	$ 446,400	BC
La Cueva Arroyo Trail (AMAFCA)	Multi-Use Trail	Follows Signal Ave. to Lowell St.		STP-E	$ 695,000	MTP
S. Domingo Baca Arroyo (AMAFCA)	Multi Use Trail	Follows Pino Ave. Holbrook to Tramway	Equestrian Park	GO Bonds	$ 295,496	BC
Total GO Bond Projects Only					***$ 18,106,146***	
Total GO Bond/MTP Projects					***$105,961,562***	
Notes: Highlighted cells indicate those projects listed in the MTP and using federal funding.						
MTP costs are per MRCOG; County costs for sidewalks do not include curb and gutter						

Agency Jurisdiction: AMAFCA – Albuquerque-Metropolitan Flood Control Authority MRGCD – Middle Rio Grande Conservancy District NMDOT – New Mexico Department of Transportation BC – Bernalillo County	Abbreviations: MTP – 2035 Metropolitan Transportation Plan. Projects included in the plan are eligible for federal funding TIP – 6 year Transportation Improvement Plan programs projects	Funding Sources: STP-U – Urban Surface Transportation Prog STP-E – Surface Transportation Enhancement HSIP – Highway Safety Improvement Program GO Bonds – County General Obligation Bonds SRTS – Safe Routes to School CMAQ – Congestion Mitigation and Air Quality

North Albuquerque Acres Area Pedestrian-Bicycle Facilities



6.3 Funding Sources:

- **Transportation Enhancement Activities (TEAs).** The law provides a specific list of activities that are eligible for Surface Transportation Enhancement (STPE) projects and including the "provision of facilities for pedestrians and bicycles, provision of safety and educational activities for pedestrians and bicyclists, and the "preservation of abandoned railway corridors (including the conversion and use thereof for pedestrian and bicycle trails)." *23 USC Section 109 (a)(35)*

- **Congestion Mitigation and Air Quality Improvement Program (CMAQ)** funds may be used for either the construction of bicycle transportation facilities and pedestrian walkways, or non-construction projects (such as maps, brochures, and public service announcements) related to safe bicycle use. *23 USC Section 217 (a)*

- **Recreational Trails Program** funds may be used for all kinds of trail projects. Of the funds apportioned to a State, 30 percent must be used for motorized trail uses, 30 percent for non-motorized trail uses, and 40 percent for diverse trail uses (any combination). *23 USC Section 206*

- **National Scenic Byways Program** funds may be used for "construction along a scenic byway of a facility for pedestrians and bicyclists." *23 USC Section 162 (c)(4)*

- **Job Access and Reverse Commute Grants** are available to support projects, including bicycle-related services, designed to transport welfare recipients and eligible low-income individuals to and from employment. *TEA-21 Section 3037*

- **State and Community Highway Safety Grants** funded by the Section 402 formula grant program. A State is eligible for these grants by submitting a Performance plan (establishing goals and performance measures for improving highway safety) and a Highway Safety Plan (describing activities to achieve those goals). *23 USC Section 402*

- **Safe Routes to School**
  SRTS programs use a comprehensive "5 E" approach that includes the following elements:
  - **Education** — Pedestrian and bicycle safety training for children and parents, and driver education targeting parents, neighbors and others in the community.
  - **Encouragement** — Fun, educational and motivational activities that promote walking and bicycling.
  - **Enforcement** — Legal enforcement of traffic laws and activities that help change unsafe behaviors of drivers, bicyclists and pedestrians.
  - **Engineering** — Improvements to infrastructure, such as streets, sidewalks, trails, and crosswalks, that facilitate safe walking and bicycling.

- **Evaluation** — On-going information-gathering to determine what is working and what is not.

The program funds $15,000 to prepare a Safe Routes to School Action Plan and up to $250,000 per jurisdiction to make improvements.

- **General Obligation (GO) Bonds**
  Bernalillo County Code, 2-241: 5% Trails & Bikeways Funding
  Projects in the road and drainage capital improvement general obligation bond program should include an amount for trails and bikeways of not less than five percent of the total program funding, exclusive of any trails and bikeways G.O. bond projects. Sidewalk and bike lane projects should be funded as part of roadway bonds.

6.4 Maintenance

The County regularly maintains its roadway and trails facilities for safe use by pedestrians and bicycles. For example, it stripes and signs all pedestrian and bicycle facilities according to *Manual on Uniform Traffic Control Devices* (MUTCD), latest addition. Striping and signs will be maintained for visibility.

For rural roadways with drainage swales, the County maintains gentle slopes and cuts grass and weeds to allow pedestrian use. For resurfacing projects, the County avoids creating unsafe conditions to bicyclists along pavement edging. The County also sweeps shoulders, bike lanes, and trails to keep bikeways clear of debris.

6.5 Conclusion

In conclusion, the Safety Action Plan recommends construction of more than 65 pedestrian and bicyclist facility improvement projects totaling $18.1 million in funding not anticipated in the 2035 MTP for three County sub-areas.

Projects will be scored and prioritized by Public Works CIP committee before being included in the General Obligation bond election. Some projects may be eligible for federal funding through the regional transportation improvement program (TIP) process.

7.0 Agency Coordination

The County will coordinate with its partners to build and complete bicycle and pedestrian facilities through-out the unincorporated area as well as provide safety outreach and education.

> ***Policy 5***
>
> *The County will coordinate with its partners to build safe bicycle and pedestrian facilities and provide safety outreach and education.*

7.1 Albuquerque Public Schools

APS has a responsibility to provide safe bicycle and pedestrian facilities within their school walk zones. The County will continue to work with APS to ensure these facilities are provided at the following schools.

- Pajarito Elementary School
- Armijo Elementary School
- Los Padillas Elementary School
- Mountain View Elementary School
- Navajo Elementary School
- Kit Carson Elementary School
- Atrisco Elementary School
- Barcelona Elementary School
- Valle Vista Elementary School
- Mission Elementary School
- Los Ranchos Elementary School
- Sierra Vista Elementary School
- Double Eagle Elementary School
- North Star Elementary School

7.2 Middle Rio Grande Conservancy District (MRGCD)

The County will continue to work with MRGCD to build trails along the following drains:

- Isleta Drain in the 2035 MTP
- Arenal Canal
- Alameda/2nd Street Drain in the 2011-2017 TIP

Proposed trails identified in the Safety Action Plan located along MRGCD facilities will require approval on a case-by-case basis for their compatibility with the conditions, functions, and maintenance of those facilities. Connections to open space trailheads and urban bikeways and pedestrian network will be completed and maintained.

7.3 Albuquerque Metropolitan Arroyo and Flood Control Authority (AMAFCA)

The County will continue to work with AMAFCA to build trails along the following arroyos. AMAFCA currently has agreements with the County to provide trails along its facilities.

- Amole Arroyo
- Tijeras Arroyo
- La Cueva Arroyo
- Calabacillas Arroyo
- South Diversion Channel
- North Diversion Channel

7.4 City of Albuquerque (COA) Department of Municipal Development (DMD), Parks and Open Space, and Transit

The County will continue to work with the City Department of Municipal Development to build bicycle and pedestrian facilities for corridors under both jurisdictions. In addition, the County will work with ABQ Ride to locate bus signs and benches out of the public sidewalk. Connections will be completed and maintained between the urban bikeway and pedestrian network and open space trails.

The County will work with the City Open Space Division anywhere a new trail, bikeway, or pedestrian facility connects with, intersects, or crosses City Open Space.

The City's Parks and Recreation Program provide bicycle and pedestrian safety education and other outreach programs to areas of the unincorporated County:

- Bike safety classes for youth and adults
- Safety awareness media campaign
- Community policing programs.

7.5 Village of Los Ranchos

The County will continue to work in cooperation with Village staff to build bicycle and pedestrian corridors crossing jurisdictional boundaries.

7.6 Mid Region Council of Governments (MRCOG)

The County will continue to work with MRCOG to implement the Long Range Bikeways System (LRBS) facilities (Exhibit 28) in the long-range Metropolitan Transportation Plan (MTP) and short-range Transportation Improvement Program (TIP).

7.7 New Mexico Department of Transportation (NMDOT)

A number of state roadway corridors in the County do not provide adequate pedestrian and bicycle facilities. The County will continue to work with NMDOT to get these facilities built:

- Coors Blvd. (South) Corridor
- Dennis Chavez/ Rio Bravo Blvd.
- Broadway Blvd. (South) Corridor.

7.8 PNM, NM Gas Company, Phone/Cable and Water Utility Authority

The County will continue to work with utility providers to relocate power poles, utility boxes, and water hydrants located in sidewalks and that cause obstruction to users.

Bernalillo County Public Works will coordinate with utility providers early on for roadway design projects to determine the location of underground and above ground utilities within sidewalk buffer zone. This will ensure the placement of street trees and other street furniture will not impact utilities. Public Works will also coordinate with utility providers on proposed Street Standards and roadway sections to accommodate utility facilities.

7.9 Coronado National Forest, South Valley Wildlife Refuge, and Petroglyphs National Monument

Trailhead connections between national forest, wildlife refuge, and monument open space will be completed to urban bikeways and pedestrian network.

7.10 Conclusion

In conclusion, the County will continue to coordinate with Mid Region Council of Governments (MRCOG) for regional transportation planning and federal funding of County pedestrian and bicycle projects.

Coordination is also necessary with other agencies including Albuquerque Public Schools (APS), Middle Rio Grande Conservancy District (MRGCD), Albuquerque Metropolitan Arroyo and Flood Control Authority (AMAFCA), New Mexico Department of Transportation (NMDOT), utility providers, federal agencies, and local municipalities.

Definitions

Bike Lane - A portion of the roadway which has been designated by striping, signing and pavement markings for the preferential or exclusive use of bicycles (American Association of State and Highway Transportation Officials or AASHTO).

Bike Route - A segment of a system of bikeways designated by the jurisdiction having authority with appropriate directional and informational markers, with or without specific bicycle route number(s) (AASHTO). Also referred to as a sharrow.

Bikeway - Any road, path, or way which in some manner is specifically designated as being open to bicycle travel, regardless of whether such facilities are designated for the exclusive use of bicycles or are to be shared with other transportation modes (AASHTO).

Broken pavement - Any pavement that has been broken or cracked all the way through the thickness of the pavement and affects the overall rating of the sidewalk.

Buckling - The lifting of 2 adjacent sections of pavement by more than 3/8", presents a barrier to pedestrians as well as wheelchairs. This will not affect the overall rating of the sidewalk condition. The location is to be noted even on poor condition sidewalks.

Buffer - The space between a sidewalk and the curb. It is also referred to as the furniture zone, landscape strip, or setback area.

Complete Streets – Roadways designed to safely move people of all ages and abilities along and across the right-of-way: pedestrians, bicyclists, motorists, and transit users.

Cracking – Facilities with a lateral or longitudinal crack in the pavement either part way or all the way across its surface and affecting its overall rating. Severity is rated by how many and how deep the cracks are. Severity: (1) light cracks, very few; (3) moderate cracks part way into the pavement; (5) most of the surface is affected by cracks; the cracks do not go all the way through the pavement.

Crime Prevention through Environmental Design (CPTED) - A multi-disciplinary approach to deterring criminal behavior through the design of the physical environment. CPTED strategies relating to public rights-of-way include:

- street and walkway lighting,
- landscaping,
- development fronting on street,
- traffic calming, and
- regular maintenance.

Curb Ramp – Curb ramps are located at intersection corners and provide access from the street level to the sidewalk level for persons with disabilities. NMDOT standard drawings should be referenced in curb design.

Diagonal - Single ramp at apex of the corner, should have a 4ft. landing area on the bottom, out of the traffic lane, and a 4ft. landing area at the top of the ramp.

Parallel - Ramps that are parallel to the sidewalk, located on the curved section of the curb. The ramp is actually the flare and will normally have a curb face at the back of the ramp.

Perpendicular - These ramps are perpendicular to the curb face, located on the straight section of the curb. The ramp should have a 4ft. landing pad at the top.

Deficiencies - Conditions that negatively affect the surface of the sidewalk (i.e. scaling of surface, cracks).

Detectable Warning - Raised truncated domes typically applied to the crossing surface prior to meeting the road surface. These should be at least 24" wide and across the entire ramp width. Roughened pavement is not an adequate detectable warning.

Faulting - A section of pavement either lifted or settled by more than ¼", trip hazard for pedestrians as well as a barrier for wheelchairs. The location is to be noted even on poor condition sidewalks. Severity: (1) Less than 3/8"; (3) 3/8" to 1; (5) Greater than 1" = 5.

Flare - The transition from a sidewalk to ramp.

Gap - The space between two pavement slabs to allow for expansion. This does affect the overall rating of the sidewalk. Severity: (1) under ½ inch; (3) ½ to1"; (5) 1" or greater.

Grade - Overall slope of the sidewalk given in percent.

Improvements – Pedestrian and bicycle improvements may include but are not limited to the following new or reconstructed facilities: sidewalks, multi-use trails, bike lanes, shared lanes, signage, striping, beacons, signals, crosswalks, median refuges, traffic calming devices, ADA curb ramps, and associated amenities including lighting, landscaping, bus shelters, benches, bike racks, etc. Improvements should account for drainage among other factors.

Multi-use Trail – A separate pathway designated by signs for use by non-motorized traffic only, including pedestrians, bicyclists, equestrians, and people using wheelchairs. Not all trails may accommodate all of these uses. Trails may be either hard or soft surface.

Obstruction - Any permanent fixture that decreases the pavement width to less than 48" wide.

Scaling –Facilities with breaking or peeling from the top surface of the pavement, affecting its overall rating. Severity: (1) Not at joints; (3) if less than 25% of surface and less than 3/8" deep; (5) more than 50% of surface or over 3/8" deep.

Severity - How serious the deficiency is, rated on a scale of 1 to 5, 1 being the best, 5 the worst.

Sharrow - A shared-lane marking or sharrow is a street marking placed in the center of a travel lane to indicate that a bicyclist may use the full lane. Bike routes and bike boulevards are examples of shared vehicle-bicycle use facilities.

Sidewalk – A path or walkway paralleling a highway, road, or street intended for pedestrians (AASHTO). That portion of the public right-of-way primarily devoted to pedestrian use (County Code). Sidewalks may be hard or soft surface.

Sidewalk Condition:

Good - Sidewalks in new or near new condition with only few, if any deficiencies. A section that is below the rating for the block should be separated into segments and rated accordingly.

Fair to Good – Sidewalks showing some wear, just individual deficiencies, such as scaling, cracking and spalling, not effecting more than 10% of the overall segment. A section that is below or above the rating for the block should be separated into a separate segment and rated accordingly.

Fair – Sidewalks showing some wear, just individual deficiencies, such as scaling, cracking and spalling, not affecting more than 20% of the overall section. Individual deficiencies should to be noted as to location. A section that is below or above the rating for the block should be separated into a separate segment and rated accordingly.

Poor to Fair - Sidewalks showing wear, individual deficiencies, such as scaling, cracking and spalling. Individual deficiencies should be noted as to location. Over 35% of surface has deficiencies. A section that is below or above the rating for the block should be separated into a separate segment and rated accordingly.

Poor – Sidewalks with deficiencies more than 50% of its surface. Individual deficiency locations need not be recorded, as the condition of the sidewalk infers that the deficiencies are the majority of the surface. A section that is above the rating for the segment should be separated into a separate segment and rated accordingly.

Slope - The cross grade of the sidewalk toward the curb.

Spalling –Facilities with broken edges within 6 inches of a joint or crack and affecting its overall rating. The depth of the cracking is important, the deeper the more the effect on severity. Severity: (1) light flaking of the edges, not more than 1/8 inch deep; (3) moderate flaking of the edges, not more than ¼ inch deep; (5) heavy flaking of the edges, depth of more than 3/8 inch.

Street Furniture – Generally located in the sidewalk buffer, street furniture includes mail boxes, signs, utility poles, benches, trash receptacles, street trees, etc.

Traffic Calming Device – An improvement constructed or installed on residential and local streets to encourage vehicle speed reduction in neighborhoods such as:

- Speed humps or tables
- Traffic circles (intersection islands)
- Traffic diverters (right-in, right-out, or left-in movements)
- Bump-outs, bulb-outs, medians, or curb extensions
- Signage, striping, beacons, or signals
- Electronic message boards.

Traffic calming devices must take into account cycling and drainage concerns into their design.

Priority Project – A pedestrian and/or bicycle facility located on a collector or arterial street or located on a local street providing access to a school, park, community center, or transit facility.

Vehicle Movement Plan – A site plan showing such elements as: interior circulation for ingress-egress, driveways, parking aisles, parking spaces, ADA compliant facilities, pedestrian access from the public sidewalk to the building entrance, queuing lanes at drive-through businesses, bicycle racks, bus stops, fire lanes and emergency vehicle parking, loading and unloading areas, signage, lighting, and other facilities. The plan should provide dimensions of all features, preserve vision clearance, and include information on surface pavement materials

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