Corrales Trails Master Plan

Prepared for the
Village of Corrales, New Mexico
By Resource Technology, Inc
April 15, 2009

Reviewed and Updated by the Corrales Trails Master Plan Task Force
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Forward
2015-16 Corrales Master Trails Plan

In April, 2009, Resource Technology, Inc. completed and presented to the Village Council a proposed Corrales Trails Master Plan. The report was accepted by the Council, but the plan was not adopted. In February, 2015, the Council appointed a Trails Task Force to examine the 2009 report, correct inaccuracies, update information, and suggest priorities. The task force was comprised of representatives of major groups of trail and pathway users. The goal was to develop a plan that could be adopted by the Council by ordinance in order to form a flexible guideline for trails planning and to emphasize the Village’s commitment to enabling non-motorized transportation.

Beginning in March, 2015, the Task Force met twice monthly and prepared a revised draft of the original report, correcting factual errors and updating outdated information. For example, the Task Force removed Angel Road as a proposed bike trail route and added Rhythm’s Way as a completed and functioning equestrian trail.

The 2009 report envisioned more than 50 miles of dedicated recreational trails within the Village at a construction cost in 2009 dollars of $4.8 million. The report also envisioned an ongoing management and maintenance program funded by the Village. The task force believes that should remain the general long-range goal, although current financial resources are limited and specifics may change over time. By adopting the plan by ordinance rather than as an ordinance, the Village government will retain the flexibility to adjust the plan as resources and circumstances evolve.

In the shorter term, the task force suggests three goals:

- Preserve, enhance and formalize the impressive system of trails and pathways that already exists in the Village
- Expand access to existing trails and pathways
- Acquire and construct new trails according to the plan as opportunities present themselves
The task force believes there are steps that can be taken immediately in each of these areas. The original master plan study outlined a proposed 10-year development list and suggested regular updates. In that spirit, the task force identified the following specific projects meriting immediate attention:

- Formalizing the customary use within Corrales of ditch banks, paths and trails that are on property controlled by the Middle Rio Grande Conservancy District, the flood control district, the U.S. Army Corps of Engineers or other public or private entities.
- Trails and pathways along West Meadowlark, including safety improvements to the Meadowlark/Loma Larga intersection. The project planning is essentially complete and the project is awaiting funding.
- A connection from West Coronado to the Thompson Fence Line trail in Rio Rancho to facilitate better bicycle access without blocking equestrian or pedestrian access and without enabling motor vehicle access. The project is planned, funded and awaiting construction in 2016.
- A connection between West Sagebrush and the Thompson Fence Line trail. The Southern Sandoval County Arroyo Flood Control District has planned its portion of this project and intends construction in 2016. The Village portion still must be planned, funded and constructed.
- Trails and pathways connecting the north and south portions of the Village through or over the flood control channels. The flood control district has some plans for low-water crossings, but better access from the Village needs to be obtained and a bridge for recreational use may be the best long-term solution.
- A trail or pathway along the Corrales Road right of way, particularly within the commercial district of the Village. In 2015, the state Transportation Department surveyed and clarified the right of way. The state, Village and Corrales MainStreet should work together to make this long-desired feature happen, along with safer and more effective crossing points on Corrales Road for adult pedestrians, school children, equestrians and bicyclists.

It is important to note the Village of Corrales has limited opportunities to generate the revenue required for the completion of some of the goals in this revised report. In the past, the Village has relied upon outside funding sources such as grants as well as the generous involvement of its citizens in terms of donations of property, volunteer time and cash funding. Given these constraints, it is anticipated the goals of this plan will be implemented over time as circumstances allow.

The members of the 2015-16 task force and their respective constituent groups look forward to continuing to work with the Village to implement this master plan in order to fulfill the goal of developing a multiuse trails network that enhances the health, well-being and quality of life of the residents of Corrales.
I. EXECUTIVE SUMMARY

PURPOSE

The purpose of the Trails Master Plan is to develop specific goals and objectives for the implementation of a Village-wide trails network. It includes a map of the existing and future trail routes, as well as a framework for executing the trail development objectives, and a development list.

BACKGROUND

This plan supports and builds on the Village’s goal, objectives, and policies for trails outlined in its Comprehensive Plan. Development trends continue to endanger the connectivity of long-used pedestrian, equestrian, and bicycle trails and routes in the Village. The creation of a Trails Master Plan for the identification, preservation, and augmentation of the Village’s trail system is an important step in actively shaping the future character of the Village in the face of these issues.

VISION

The Village of Corrales envisions a system of trails utilizing public and private property to link a wide range of uses and users in a safe manner that supports alternative transportation and recreation.

The Trails Master Plan will address the preservation, protection, and construction of trails; improved safety; improved connectivity; and the encouragement of healthy, outdoor activity.

The Trails system will be implemented in partnership with multiple agencies and will be founded on consensus and sensitivity to the diverse viewpoints within the community.

PLANNING GOALS

Project goals were derived from community and Village staff input. Goals and objectives address the following key themes:

• Connectivity and Access
• Safety and Visibility
• Education and Awareness
PUBLIC INVOLVEMENT SUMMARY

Public input was gathered through a variety of means throughout the planning process. A public open house, mayor-appointed advisory committee meetings, focus group meetings, a second public presentation and discussion, and individual key-person interviews all provided opportunities for stakeholder input and guidance on the process and outcome of the Trails Plan.

EXISTING CONDITIONS

PHYSICAL INVENTORY AND ANALYSIS

The Village has many unofficial trails and routes that are well-used by pedestrians, bicyclists, and equestrians. A Geographic Information System (GIS) database has been developed to document the existing conditions of the in-use routes, access points, and proposed trail corridors. The database includes information on the specific conditions that would influence development of each facility, including length, development status, right-of-way width, obstructions, easement status, ownership, and maintenance responsibility. Results of this inventory indicate that there are over 85 miles of in-use trail routes identified by users and Village Commissions and 13 access points along the Bosque Preserve in the in-use trail route network. There are six existing fire service access points to the Bosque. MRCOG Long-Range Bikeways Map identifies 5 miles of bicycle lanes, 2.5 miles paved trail (Thompson Fence Line Trail), and 31 miles of unpaved trails (in the Corrales Bosque Preserve) in and around the Corrales area. This plan proposes an additional 47 miles of trail improvements.

KEY ATTRACTIONS AND DESTINATIONS

The following facilities were identified through the public involvement process as key destinations and connections for the trail system.

- Corrales Bosque Preserve
- Thompson Fence Line Trail (Rio Rancho)
- Paseo del Bosque Trail (Albuquerque)
- Corrales Community Recreation Center/Equestrian Center
• Commuter access to Rio Rancho and Albuquerque (via Meadowlark Ln, Corrales Rd, Loma Larga, and Don Julio Rd)
• Schools, Commercial Center, Churches, Municipal Offices, Library, Parks, Casa San Ysidro

EXISTING POLICY

Existing ordinances and codes protect the rights of pedestrians within the Village of Corrales. The Corrales Village Code, the Uniform Traffic Code, and the Corrales Comprehensive Plan all provide guidance on the rights and responsibilities of pedestrians, equestrians, and cyclists. The Village has adopted ordinances that require trails within the commercial zones of Corrales, as well as in all new subdivisions, and has adopted an ordinance requiring trails to be kept free of unlawful obstructions.

ISSUES AND NEEDS IDENTIFICATION

Community issues and needs were identified and documented through the public involvement process outlined above. Citizen input led to the identification of the following key opportunities and constraints to trail system development.

OPPORTUNITIES
• Favorable administrative climate
• Growing public interest and volunteerism
• Existing subdivision and pedestrian access code
• Potential for prescriptive and agricultural easements to protect in-use routes.
• Potential easements across undeveloped lots
• Joint use of MRGCD and SSCAFCA facilities

CHALLENGES
• Lack of public right-of-way on Corrales Road (prescriptive easement only)
• Private encroachments (walls, mailboxes, etc) & utilities (power poles, etc) in the public right-of-way
• Frequent driveway crossings
• High traffic volumes on major roadways
• Roadway drainage / erosion & sediment build up
• Steep slopes in the western escarpment
ANALYSIS

IN-USE ROUTE IDENTIFICATION

In-use routes were identified through public input. At the September 2008 Public Open House, community members were given the opportunity to identify historic routes, currently used routes, desired routes, and potential easement locations. This data was supplemented by informal maps produced by the Safe Routes to School program and by the Corrales Horse and Mule People (CHAMP) non-profit organization. From this input, a composite map was created identifying all of the in-use routes in the Village. This data informed subsequent fieldwork and evaluation of potential trail routes.

SUITABILITY ANALYSIS AND PROJECT PRIORITIZATION

Based on public input and feedback from the advisory committee, RTI developed a set of evaluation criteria and a ranking system to determine the suitability of individual trail routes for implementation. A small sampling of potential trail corridors was evaluated using the ‘initial’ criteria, and adjustments were made based on Steering Committee feedback and internal evaluation before applying the final criteria to the entire proposed trail network.

PLAN ELEMENTS

The trail system in Corrales is comprised of three trail components: Paved Multi-use Trails, Soft-surface Multi-use Trails, and On-Street Bike Lanes. The ability to combine these components in a variety of configurations according to right-of-way conditions and regional significance provides a flexible system for addressing the needs of various user groups, while maintaining desired Village character. The Trails Maps show the location of these proposed facilities. These use maps were revised and updated in 2015 and 2016 by the Trails Task Force in consultation with user groups, land owners and other citizens.

All public rights of way in the Village of Corrales shall continue to be open for pedestrian, equestrian and bicyclist use except where restricted for reasons of public safety. Where possible, the rights of way shall include an unobstructed pathway outside the traffic lanes for this purpose. The Village shall encourage the customary continued use by pedestrians, equestrians and bicyclists of the ditch bank roads operated by the Middle Rio Grande Conservancy District and the informal trails inside and adjacent to the Corrales Bosque.
The Village shall encourage private landowners to allow the use of trails and access points on private land and to set aside easements for that purpose.

**PAVED MULTI-USE TRAILS**

These trails will provide regional linkages, have the widest trail width, and provide opportunities for trail amenities such as educational signage and benches. For those reasons, these trails are the most expensive to build and maintain and have the greatest potential to conflict with the semi-rural Corrales atmosphere and lifestyle. As a result, they should be constructed only in places, such as the Corrales Road corridor, where other solutions are not feasible.

**SOFT-SURFACE MULTI-USE TRAILS**

These trails will provide the most frequently used connections within the Village and are primarily local in nature. They should generally be left free of paved materials and encroachments, and should be subject to only light maintenance. In places where developed multi-use soft surface trails are necessary, they should be constructed so that equine use will not damage the trail and the trail materials will not damage the animals’ hooves and feet.

**BIKE LANES**

These facilities will provide separate, designated corridors for bicyclists.

Illustrations of each component are included on pages 64 and 65 of the Plan.

**BRIDGES/LINKAGES**

These include ditch crossings and access points to the bosque or other key destinations. They are critical components of the system which should be evaluated in conjunction with related trail facilities in determining feasibility and priorities. In particular, the Village trails network is divided north and south by the lack of suitable crossings of the Montoyas Arroyo flood control channels and east and west by the long stretches of unbridged Corrales main irrigation ditch north of Sagebrush.
ROADWAY CROSSINGS

Key crossings of arterials have been identified on the Trails Plan Maps. Maximizing safety of trail users at these crossings is critical to the success of the trail system. Options investigated include raised crosswalks, pedestrian/equestrian actuated signals, and increased and updated signage.

TRAILHEADS

The proposed trail system includes designated trailheads with limited parking, although additional informal access points have been identified on the Trails Plan Maps.

CORRALES ROAD COMMERCIAL CORE

The proposed commercial core pathway along Corrales Road is an exception to the three trail-type components listed above. A paved multi-use pathway is recommended, but may consist of colored concrete or colored asphalt rather than the standard asphalt paving recommended for the Paved Multi-Use Trails. Additionally, the commercial core pathway may be as narrow as 3-4’ in some places due to physical constraints and may include features for pedestrian safety and drainage management.

IMPLEMENTATION

The Implementation of the Trails Master Plan will be accomplished by the Village Administration in concert with trails users and stakeholders. This section makes recommendations for organizational structures for trail project administration and project management. The Village will be able to use the Trails Master Plan as guidance for securing funding and building trail improvements. The Action Plan is a step by step guide for implementing this Plan. This section of the Plan also includes a summary of the Trail Development Process, Program Recommendations, Trail Development and Use Policies, and Measurement of Success.

TOOL KIT

The Trail Development Tool Kit, under separate cover, is a resource to guide the development of trail related processes and legal agreements. The Tool Kit includes information on permitting and regulatory requirements; explains strategies for developing trails on private property; provides model agreements; and includes information on
relevant state trail legislation and legal opinion. This Tool Kit also addresses trail liability issues for the Village of Corrales.
I. INTRODUCTION

A. VILLAGE CONTEXT

The Village of Corrales as a political entity has existed for less than fifty years, yet the land it inhabits holds centuries of cultural history significant to the Middle Rio Grande Valley landscape. As early as the sixth century B.C.E., people of the Tiguex culture cultivated corn, beans and squash in the valley. Corrales was home to Native Americans for centuries until, beginning in the 15th century, Spanish explorers and later settlers displaced the native populations. In 1710, the Alameda Land Grant that contained the lands of Corrales was awarded by Spain, subsequently sold, and divided into three large ranches. Over the next century, Spanish families partitioned the land among their heirs using the long-lot system, which eventually resulted in a proliferation of narrow properties extending west from the Rio Grande. In the late 1800s, families from France and Italy began to settle in the valley, using the fertile soil primarily to grow wine grapes. By the 20th century the vineyards gave way to livestock pasturage and orchards. Following World War II, Corrales’ population grew, eventually leading to the incorporation of the Village in 1971. Since incorporation, the Village has continued to grow in population and change in response to development both within the Village and in the surrounding cities of Albuquerque and Rio Rancho.

B. PURPOSE AND NEED

The Village of Corrales, with its agricultural history, majestic cottonwood trees, and dramatic views of the Sandia Mountains, offers its citizens and visitors an oasis of natural beauty and rural charm directly adjacent to the State’s largest metropolitan area. Unfortunately, that proximity threatens those valued characteristics. The effects of modernization and development on the Village include increased traffic, the subdivision of former agricultural land for high-end housing, and the loss of open space. Development trends endanger the connectivity of long-used pedestrian, equestrian, and bicycle trails and routes in the Village. The development of a Trails Master Plan for the identification, preservation, and augmentation of the Village’s trail system is an important step in actively shaping the future character of the Village in the face of these issues.

According to the Village’s Comprehensive Land Use Plan, an opinion survey distributed to all Village households showed that the importance of walking and riding trails was the topic receiving the highest level of agreement among respondents. The Village’s dedication to trail preservation and development is also evidenced by the number of active trails advocacy groups in Corrales (see
Chapter 2, page 21) and the recent passage by the Village Council of legislation supporting the development of trails. The Comprehensive Land Use Plan includes several policies aimed at the establishment of a Village-wide trails system for equestrians, bicyclists, and pedestrians (see Chapter 2, page 9).

 Trails in Corrales provide healthy and sustainable options for recreation and transportation, connections to nature, and a living link to the Village’s cultural history. In recognition of these benefits and in response to residents’ desire for formalized trails, the Village has initiated the Trails Master Planning process (see Policy 10.3.2, Comprehensive Plan). The goal of this process is to identify existing and future trail routes and to develop a strategy for the implementation of a Village-wide trails system. Additionally, the Trails Plan must also address current unsafe conditions at roadway crossings and along Corrales Rd. The development of a Trails Master Plan can serve to both preserve the Village’s character and history and to innovate in response to today’s needs.

C. TRAIL TRENDS AND BENEFITS

Recent years have seen a nationwide trend toward the increased development and use of trails for recreation and transportation. Trail facilities provide communities with a myriad of benefits, including improved public health and safety, natural and cultural resource protection, and economic growth.

HUMAN HEALTH BENEFITS

Physical activity is directly linked to our overall physical and mental health. Even moderate levels of exercise have been shown to aid in weight control, the prevention of heart disease and certain cancers, and the alleviation of anxiety and depression. However, making the choice to exercise can be a difficult one. “Lack of time or access to convenient outlets for healthy transportation and recreation opportunities are reasons commonly cited by all demographic groups as barriers to regular exercise” (Rails to Trails Conservancy). Safe, dedicated trails encourage the use of non-motorized modes of transportation for everyday errands and commuting. This allows people to build physical activity into their daily routines, rather than having to carve out extra time for exercise alone. Additionally, attractive, outdoor settings can make exercise more enjoyable and trails can provide cost-effective exercise options when compared to gym or health club memberships.

The Village of Corrales, as mentioned above, is already home to many active equestrians, cyclists, joggers, and walkers. The development of a formal trails system will help to preserve outlets for these healthy habits and encourage others to take part in them as well. Of particular importance, safe, formalized trails developed in conjunction with the Safe Routes to School program will encourage parents and children to walk and cycle to school, helping to develop healthy habits at a
young age. Additionally, the creation of walking routes in the Village core connecting destinations such as the Senior Center, Library, and Community Recreation Center, will encourage and facilitate the use of non-motorized transportation for everyday activities. Trails that connect with larger systems, including on-road bike lanes and public transit routes, support commuters who wish to combine their daily exercise with their daily commute.

ENVIRONMENTAL HEALTH BENEFITS

Trail preservation and development have positive impacts on environmental health and resource conservation. The designation of trail corridors can be used as a tool for preserving important natural landscapes in the face of increased development. In the Village of Corrales, this effort would complement the work of groups such as the Tree Preservation Advisory Committee, the Farmland Preservation Committee, and the Bosque Advisory Commission, who are all champions of open space, habitat, and resource preservation within the Village.

Additionally, the development of safe trail routes for use in everyday commuting and errands can significantly reduce our consumption of fossil fuels and our emission of pollutants. Substituting walking or bicycling trips for short vehicle trips in particular is especially important. “Short vehicle trips are more emission-intensive than longer trips because vehicles emit carbon monoxide and volatile organic compounds at higher rates at the beginning of a trip, when the engine is cold” (U.S. DOT 1993). Trails can provide an attractive alternative to driving for Corrales citizen’s daily activities within the Village.

ECONOMIC BENEFITS

There are many economic benefits associated with trail development. Trail use both reduces costs associated with vehicle use and health care and increases revenues by attracting tourism and increasing trails-related purchases. Commuting by bicycle costs, on average, less than half as much as driving when all internal and external costs, including travel time, maintenance of infrastructure, environmental impacts and ownership expenses, are considered. Additionally, studies have shown that those who exercise regularly “filed 14 percent fewer health claims, spent 30% fewer days in the hospital, and had 41% fewer claims greater than $5,000” (Greenways, Incorporated, p. 14). Trails promote tourism by providing additional destinations for visitors, who patronize nearby motels, bed and breakfasts, cafes, local restaurants or shops. Local businesses selling bicycles, biking gear and equestrian supplies also stand to benefit from increased demand for their products.
D. RECENT VILLAGE TRAILS ACCOMPLISHMENTS

SAFE ROUTES TO SCHOOL

Safe Routes to School (SRTS) is a federally funded program intended to enable and encourage elementary and middle school-aged children to walk or bicycle to school. SRTS programs use a “5 E” approach, involving Engineering, Education, Encouragement, Enforcement, and Evaluation to help communities improve safety and reduce traffic in the vicinity of schools. In March 2007, the Village of Corrales was selected to receive $15,000 in SRTS Phase I funding to develop a local SRTS Action Plan. Through the dedicated efforts of the Corrales SRTS team of volunteers and two co-champions, the SRTS Action Plan has been finalized. Phase II was restructured and dispersed to other SRTS projects.

CORRALES MAINSTREET

The Corrales MainStreet Design Committee, a part of the larger Corrales MainStreet organization, is made up of citizen volunteers dedicated to the preservation and enhancement of the historic downtown core of the Village. Several of their projects have focused on the development of a pedestrian pathway along Corrales Road. Recent accomplishments include securing monetary awards from the University of New Mexico Department of Emergency Medicine Center for Injury Prevention, Research and Education and Sandoval County for the installation of “Poly-Pavement” test strips along Corrales Road. These test strips were installed in July 2007 and were evaluated in October of that year, at which time they were deemed unsuccessful due to severe deterioration. In 2007 Corrales MainStreet was granted assistance from the National Parks Service for planning a multi-use trails system throughout the Village. That effort helped to lead to the current Village Trails Master Planning Process. As of 2015 Corrales MainStreet is working in conjunction with the Village of Corrales and NMDOT to get a pathway through the business district as soon as funds are available. An NMDOT Boundary Survey was needed to facilitate this project.

BOSQUE HABITAT MANAGEMENT PLAN

In December 2008, the Corrales Bosque Advisory Commission completed the Corrales Bosque Preserve Habitat Management Plan. This plan was revised and reviewed by the Village of Corrales and other stakeholder agencies before being finalized. One of the primary objectives of this plan is to manage and mitigate the impacts of human activity in the Bosque Preserve. There is concern that the public identification of existing access easements to the Sandoval Lateral and the Corrales Riverside Drain may increase non-vehicular traffic to the MRGCD maintenance roads and the Bosque. In order to mitigate potential additional traffic, the several trails within Bosque Preserve
identified in the Habitat Management Plan are not included in the Trails Master Plan Map. The implementation of the Trails Master Plan will require close coordination with and monitoring by the Bosque Advisory Commission to ensure that the Corrales Bosque Preserve is not unduly impacted by adjacent trails and trail connections.

RHYTHM’S WAY/DOROTHY SMITH EASEMENT

The Village has secured a trail easement known as Rhythm’s Way along the north side of a stretch of private property south of West Meadowlark Lane, between Loma Larga and the Corrales Acequia. The property adjacent to the easement continues to be used for raising livestock and, as a result, the easement agreement allows for equestrian use only at this time, with potential for expanded use in the future. The donation of this easement secured a safe, off-street trail linkage between the key north-south corridors of Loma Larga/Corrales Main Canal and the Corrales Acequia. The trail was completed through the efforts of community volunteers.
I. **EXISTING CONDITIONS**

A. **EXISTING TRAILS FACILITIES**

Although no formal trail system exists in Corrales, the Village has a large number of existing informal routes that are well-used by equestrians, pedestrians, bicyclists, commuters, and recreationists alike. Many of these, however, occur at least partially on privately owned land and/or involve crossing private access points. The Village’s main off-street travel routes are provided by irrigation ditch and drain banks that are operated and maintained by the Middle Rio Grande Conservancy District (MRGCD). The MRGCD supports the informal use of their irrigation facilities for recreation, and their Board of Directors will consider other improvements, such as signs or limited pavement, on a case by case basis.

The Village of Corrales shares a six-mile long border with the Rio Grande Bosque. This border is defined by the MRGCD’s Corrales Riverside Drain, as well as the Army Corps of Engineer’s flood-protection levee. This stretch of the Bosque has been designated the Corrales Bosque Preserve, and one of the management objectives of the Preserve is to prohibit any paved trails and organized activities within the Preserve. A large number of informal single-track trails have been created in the bosque, which will not be addressed in the scope of this project. A Habitat Management Plan has been developed to monitor the human impacts and help limit the creation of additional trails in that sensitive habitat. This plan identifies three maintenance roads used as trails that run the entire length of the Bosque Preserve - along the east side of the Corrales Riverside Drain, along the top of the levee, and in the Bosque east of the levee. In addition, there are four shorter trails - two that run along both sides of the Sandoval Lateral in the central portion of the Village, one trail along the west side of the Riverside Drain in southern Corrales, and one trail atop the levee west of the Riverside Drain in southern Corrales.

In addition to these off-street travel routes, Corrales’ citizens utilize the Village’s streets and street shoulders for non-motorized transportation and recreation. Currently, there are bicycle lanes along Loma Larga and bicycle routes on West Meadowlark, Coronado, Old Church, West Ella, Sagebrush, Corrales Road and parts of West La Entrada. While these bicycle routes may be signed, they do not necessarily provide extra space or other safety measures for bicyclists. The routes also require crossings at the dangerous, high-traffic roadways of Corrales Road and Loma Larga.
Citizens have described these routes as intimidating, frightening, and unsuitable for children riding alone. Some newer subdivisions include planned trail sections within the public road right-of-way, and trail easements connecting to adjacent natural features. Most of these trails are not evident on the ground.

Corrales Road (NM 448) began life as Highway 46 in 1917; one of the original roadways brought into the State highway system after New Mexico achieved statehood in 1912. It was a two track dirt lane that eventually became paved to a two lane roadway, as it exists today. Because the Highway Department (now NMDOT) acquired it as an existing roadway, there was never a formal acquisition of right-of-way as is now standard procedure. The existing roadway is defined as a prescriptive easement, which only includes the roadway between the edge of pavement (with maybe one to two feet outside of pavement for maintenance purposes.) The unimproved shoulder that exists between the edge of pavement and the various walls and fences of the private properties adjacent to the road in the past was a form of “no man’s land.” Because of that, many homeowners claimed this land as their own, and placed walls, fences and other structures upon the prescriptive easement.

As of January 2015 NMDOT completed a boundary survey of the entire length of Hwy. 448. The boundary of the Right-of-Way (ROW) was determined using the legal descriptions of each parcel of property adjacent to the roadway. NMDOT now claims as ROW all land between the fronting property boundaries. Since many landowners have, over the years, placed structures in what is now the ROW there are many encroachments, from a few inches to 15 feet or more.

Corrales MainStreet plans to recommend placing a five foot wide pathway within the NMDOT ROW through the business district from Meadowlark to Wagner Road. Since the ROW is not wide enough on one side of the road it will have to go from one side to the other several times. In several places there is not enough width to place the pathway on either side.

Since 1979 there have been many accidents, including at least one fatality, on Corrales Road. Therefore, ROW, liability and safety issues need to be resolved.

In sum, while the Village has many actively-used existing routes, these amenities would be greatly enhanced by officially legitimizing and protecting use of private facilities and by improving safety, visibility, and awareness.

B. PLANNING FRAMEWORK

This section provides a summary of existing policy, code, ordinance, resolutions, planning documents, and maps, which relate to the development of a Trail Master Plan for the Village of
Corrales. These plans and legislation will guide the vision and development of a Village-wide trail system, as well as implementing the goals of higher-ranking plans.

THE VILLAGE OF CORRALES COMPREHENSIVE PLAN

The Village of Corrales Comprehensive Plan provides authorization and guidance for the Corrales Trails Master Plan. The Comprehensive Plan recognizes the value of an integrated multi-use trail system in preserving the unique rural character of the Village and in enhancing quality of life for Corrales’ citizens. Specifically, the Comprehensive Plan calls for the development of safe, well-marked trails for walking, bicycling and equestrian use to provide linkages between existing trails within and adjacent to the Village. The Plan identifies strong community support for continuing to allow non-motorized access to the Bosque, recording and protecting easements for trails throughout the Village, and educating community members about the safe use of trails through mapping, signage, and other programs.

CORRALES VILLAGE CODE

In October 2007, the Village of Corrales adopted a Code of Ordinances that compiled, consolidated, and replaced all previous ordinances. Relevant sections include the following:

Chapter 11: Corrales Bosque Preserve
The Preserve is established as a protection area for wildlife and plants, which includes the Rio Grande, adjacent bosque on the west side of the river, and adjacent MRGCD drains (Corrales Riverside Drain) and Sandoval Lateral. Certain activities are restricted, including smoking, organized activities, hunting, and camping.

Chapter 18: Land Use
Zoning regulations have been adopted for the Village of Corrales to guide development and provide growth management. “Trails will be required within the right-of-way for all roads constructed in the Village. The minimum width will be five feet on either side of the constructed road, or ten feet on one side. Trails will be required in roads of 40 feet width or more.” These provisions became effective as of October 2007.

Chapter 26: Parks and Recreation
This chapter establishes a Parks and Recreation Commission to advise the Governing Body. Trails are not specifically included in the oversight of the parks and recreation (Department or Commission); however “open public space areas” are included in their purview.

Chapter 31: Streets, Sidewalks and Other Public Spaces
Any construction in streets or other public space requires an excavation and barricade permit. The permit is issued by the Village Administration after a plan review.
Chapter 34: Traffic and Vehicles
The Village of Corrales adopted by reference the New Mexico Uniform Traffic Code. There is the provision that “In the Village of Corrales the driver of a vehicle shall yield the right-of-way, slowing down or stopping if need be to so yield, to a pedestrian crossing the roadway within a crosswalk when the pedestrian is upon the half of the roadway upon which the vehicle is traveling, or when the pedestrian is approaching so closely from the opposite half of the roadway as to be in danger.” For equestrians, the driver must yield “regardless of which half of the roadway the equestrian or any animal in the control of the equestrian may be upon or may be approaching” and to stop a sufficient distance from the equestrian to avoid frightening the animal.

Village of Corrales Ordinance 11-012
Requires that a motorist pass a bicyclist no closer than three feet.

Village of Corrales Ordinance 15-04.
In 2015, chapter 31 of the Code of Ordinances of the Village of Corrales was amended by addition of Article II providing that the public streets, rights of way, sidewalks, trails, pathways and other public places of the Village must be kept free of obstructions or impediments that may interfere with their appropriate use and provide for the free and unimpeded passage of vehicles, equestrians and pedestrians. The ordinance allows for fines and/or injunctive relief.

VILLAGE OF CORRALES ORDINANCE NO. 07-016, 2007
This Ordinance modifies Section 18-81 of the Village Code as follows:

*Trails will be required and constructed within the right-of-way or easement for all streets constructed in the Village. The minimum trail width for streets having a street width of forty (40) feet or more will be five (5) feet on both sides of the constructed roadway, or ten (10) feet on one side. The minimum trail width for streets having a street width of less than forty (40) feet will be five (5) feet on at least one side of the roadway. Private streets may be exempted from the constructed trail requirement if the roadway itself also serves a double function as a trail. To provide for access connections to existing or planned trails or ditch banks, the commission may require that trails be extended to specified locations on the external boundary of subdivided property. Trails shall be constructed as described in attachment C, “Trail Design Materials and Sections.”*

Ordinance 07-016 also requires that pedestrian pathways are to be constructed within the landscaped areas of each property in the Neighborhood Commercial and Service Zone. The ordinance states: “Pedestrian pathways shall be required connecting the front door to other main access of the building to the parking area, to Corrales Road, and to adjacent properties fronting Corrales Road on either side.” This ordinance applies to the commercial zone in the Corrales Road Commercial Area and the Neighborhood Commercial Office District in the Far Northwest Sector.
This ordinance was crafted to enhance the safety of pedestrians, horseback riders, cyclists, and others, as well as to provide non-vehicular access in the Village.

**VILLAGE OF CORRALES RESOLUTION NO. 96-14, 1996**

This Resolution supports the development of a Trails/Bikeway Program for Loma Larga. This was implemented as bike lanes which were included with the roadway improvements for Loma Larga. Additionally, the Village “supports and commits to establishing and recording a Trails/Bikeways multi-use trail as part of the Loma Larga Road Project with the intent that this trail be posted and entered on the MRCOG Albuquerque Metro Trails Master Plan.” The preliminary design included a mixed-use trail west of Loma Larga; however, the trail was not included in the final design, due to right-of-way constraints.

**VILLAGE OF CORRALES RESOLUTION NO. 03-6, 2003**

This Resolution, passed in February 2003, provided for the establishment of a Bicycle-Pedestrian Advisory Commission to advise the Governing Body of the Village of Corrales on the development of, and acquisition of funding for, bicycle and pedestrian transportation facilities.

**VILLAGE OF CORRALES ORDINANCE NO. 06-01, 2006**

This Ordinance, also known as the Landmark Trees Ordinance, provides for the designation and protection of “Landmark Trees” in the Village of Corrales. The Ordinance also provides for the establishment of a Tree Preservation Advisory Committee to evaluate nominated trees and advise the Village regarding their eligibility for landmark status. While not specifically trail-related, the “Landmark Tree” program offers a unique tie-in to the trail system, both through increased visibility and offering additional ‘attractions and destinations’ for the trails.

**THE VILLAGE OF CORRALES PATHWAY PLAN, 2006**

A Conceptual Pedestrian Pathway Plan was prepared by New Mexico MainStreet and provides recommendations for the development of a pedestrian pathway along Corrales Road, through the Village’s commercial center. Though not officially adopted by the Village, the report is intended to be used as a tool for the Corrales MainStreet program in seeking funding for the design and construction of a Corrales Road pathway. The Plan states that such a pathway is necessary both for public safety and the economic vitality of this district. After describing the history, challenges, and constraints associated with the development of a pathway along Corrales Road, the authors of the Plan propose two alternative alignments and a multi-phased approach to pathway implementation. The plan offers two alternatives for a phase, from the Village Hall to Corrales Elementary School. One would follow entirely on the West Side of Corrales Road, narrowing considerably at several constraint points, while the other would cross Corrales Road twice to avoid those constrictions. The second phase would begin at Jones Road and travel along the East side of Corrales Road to the Village Hall where it would cross to the West side at an existing crosswalk and connect with the phase one pathway. The authors also recommend a minimum pathway width of 6’ and a soil stabilizer called Poly-Pavement for the pathway surface. This was tried unsuccessfully, as described earlier in Chapter 1.
DPAC CORRALES CORE VISIONING PLAN, 2008
This plan was completed by students of the University of New Mexico School of Architecture and Planning as a part of a semester-long studio course. Several sections of the plan address pedestrian, bicycle, and equestrian routes within the Village and identify a need for a pedestrian pathway along Corrales Rd., as well as clear trail connections to destinations throughout the Village. Several routing and design alternatives are presented. In general these alternatives focus on preserving the Village’s unique rural character, while providing safe options for non-motorized transportation and recreation.

CORRALES ROAD SCENIC BYWAY CORRIDOR MANAGEMENT PLAN, 1998
This plan was developed to guide “Corrales Road Scenic Byway preservation and economic development activities for the next five years.” The plan describes trails in Corrales as an opportunity for tourists and residents. The report mentioned an “official horse and bike trail system [that] is under development” as well as a “special equestrian plan [that] is under development.” The Middle Rio Grande Conservancy District’s ditches are identified as existing trails, and “Equestrians and bicyclists continue to be involved in negotiations with public agencies…to designate certain roads, lands and ditches for horses and bicycles.” Other recreational sites and facilities mentioned are the Community Recreational Center, Bosque Trails, Fishing, La Entrada Park, and Parque de Corrales. Salee Park has since come into existence and might be added to the list.

CORRALES BOSQUE PRESERVE HABITAT MANAGEMENT PLAN, 2009
This Plan contains a comprehensive review of existing conditions, management guidelines and recommendations, and a near term action plan for protecting and preserving the Corrales Bosque “as a nature preserve.” Specific objectives of the plan are to protect against the pressure of human activities, protect against fire, protect against neglect, maintain and protect habitat diversity, and to obtain resources to implement the plan. The Action Plan recommends that existing trails in the Bosque be more clearly defined and restored, “so that these areas do not develop an uncontrolled network of braided trails.” This plan draws on and is consistent with the Corrales Comprehensive Plan, the recommendations of the Biological Interagency Team and their Middle Rio Grande Ecosystem: Bosque Biological Management Plan.

VILLAGE OF CORRALES FAR NORTHWEST SECTOR PLAN
Ordinance Nos. 342, 344, 345, 347, 365, 385, 386
Ordinance 342 amends the Northwest Sector Plan (Ord. 243) and incorporates the Far Northwest Sector Plan (FNWSP). The FNWSP addresses several topics which apply to trails, including: vehicular circulation, recreation and open space, zoning, road design guidelines, and transportation objectives. The FNWSP identifies Village-owned Open Space lands adjacent to Los Montoyas Arroyo, which will remain in a natural state to protect wildlife and vegetation and provide recreational opportunities for area residents. The public lands “shall be used for open space and recreational trails where possible.” The Road Design Guidelines include a provision for recreational trails within the road ROW for all north/south corridors within the Far Northwest Sector, which covers the area north of Angel Rd. and west of Loma Larga Rd.
**MRCOG CORRALES SEGMENT OF THE RIO GRANDE TRAIL PROJECT, 2007**

In 2005, the State Legislature appropriated $4 million for the first phase of Governor Richardson’s statewide Rio Grande Trail Project. The Mid-Region Council of Governments has completed a feasibility study of trail alignments between Bernalillo and Belen. An alignment analysis report has also been completed to provide alternatives and recommendations for the extension of the Rio Grande Bosque trail from where it currently ends at the west side of the Alameda Bridge through the Village of Corrales. The report addresses alignment recommendations for a multi-use trail from the existing Alameda Bridge to Loma Larga in preparation for the design and construction of this connection as a pilot project. The report provides pros and cons, as well as basic cost estimates, for three alignment options to take the trail from the Alameda Bridge to the intersection of Corrales Road/Acequia and Cabezon Road/Channel, two alignment options for the trail along the Cabezon Channel from Corrales Road to Loma Larga, and three alignment options for taking the trail along Loma Larga as far as Quirks Lane. The report also includes a preliminary discussion of potential intersection treatments for increasing safety at roadway crossings. A draft map of the overall proposed alignment from Bernalillo to I-25 south of Albuquerque is included on page 18.

Subsequently the Village Council approved a plan to build a multi-use recreational trail bridge across the Harvey Jones Flood Control Channel at the north end of Loma Larga, which would facilitate connection to the Rio Rancho portion of a regional trail.

**DITCHES WITH TRAILS FEASIBILITY REPORT, 2008**

This project is a community initiative to preserve and enhance the Middle Rio Grande Conservancy District’s irrigation ditches as well as formalizing their use as trail facilities. This report was developed from three years of public outreach and coordination by volunteer members of the Steering Committee. The report addresses the history of acequias and ditches in the Middle Rio Grande area, the secondary ecological and cultural benefits of the irrigation system, and some of the challenges that have arisen from adjacent urban development, including the abandonment of the ditches. This in-depth report includes a discussion of liability issues related to the use of irrigation ditches as trails, operations and management details, and other policy recommendations related to trail design, community outreach, and pilot projects. This report has not been adopted by the Middle Rio Grande Conservancy District’s Board of Directors.

**2030 METROPOLITAN TRANSPORTATION PLAN (MTP) FOR THE ALBUQUERQUE METROPOLITAN PLANNING AREA (AMPA), 2007**

See the 2030 Long Range Bicycle Plan Map (page 20) for the location of existing and proposed regional, non-vehicular facilities in Corrales and surrounding communities.
C. TRAIL OPERATION AND MANAGEMENT

STAFFING

The Village of Corrales does not currently have a designated staff member who is responsible for coordinating all trail-related services. Instead, various duties are handled on an ad hoc basis by various staff and Council members, as well as volunteer committee members. The Planning and Zoning Department and Commission are responsible for ensuring that, wherever possible, new subdivisions and developments incorporate a trail easement alongside road rights-of-way under the ordinance listed above. Over the years, various Village Committees and Commissions and the Village Council have applied for and received funding for specific trail planning, design, and construction projects.

VOLUNTEERISM AND COMMUNITY SUPPORT

The Village of Corrales is fortunate to have a large base of advocates and volunteers who support the Governing Body; these include The Bicycle and Pedestrian Advisory Commission, the Equestrian Advisory Board, the Parks and Recreation Commission, Safe Routes to School, and the MainStreet Organization. Many of the volunteer groups and committees are dedicated to preserving aspects of the rural character of Corrales in the face of pressures for development. This strong advisory citizenry can help shape the direction and character of change in the Village.

MAINTENANCE AND OPERATIONS

Since there is no formally designated and constructed trail system, currently there is no budget set aside specifically for trail maintenance and the Village does not have a regular trail maintenance schedule. Maintenance of trails has been identified by Village residents as a key issue they would like the Trails Master Plan to address.

The Village of Corrales Community Services Department currently performs trail maintenance as part of its road and drainage maintenance. It consists of mowing the shoulders of the roads. In 2009, the Village purchased a street sweeper, which can help keep both roads and bike lanes free of debris. The Village Parks and Recreation Department only oversees trail operations and maintenance for trails located on their parkland. The maintenance of the acequias and canals is performed by the Middle Rio Grande Conservancy District; their focus is on preserving the irrigation capacity of the facility, and not on its functionality as a trail. SCAFCA’s mission does not specifically include the installation of recreational trails. However, they do create maintenance roads which are often used as trails. In some cases, SCAFCA will enter into an agreement with the municipality where the trail is located allowing that municipality to perform maintenance activities. Currently there is little to no enforcement of right of way encroachments.
Although there are currently no organized trail building or maintenance volunteer groups or formal adopt-a-trail programs in Corrales, the citizen groups listed above are all advisory groups which could be called upon to mobilize trail volunteers. There is evidence that trail users perform some maintenance of trails, including removal of low hanging tree limbs and other trail obstructions.

D. KEY ATTRACTIONS & DESTINATIONS WITHIN THE VILLAGE

RECREATIONAL ATTRACTIONS

The Village is home to a large number of active trail users and on any given day equestrians, joggers, families with strollers, people walking dogs, and bicyclists can be seen out enjoying the Village’s paths. Popular attractions for recreation include the Corrales Bosque Preserve, the Thompson Fence Line Trail, and the Paseo del Bosque Trail in Albuquerque. These facilities provide off-street trail corridors with minimal or no road crossings and are off-limits to motor vehicles.

The Corrales Bosque Preserve, encompassing the Sandoval Lateral, the Corrales Riverside Drain/levee road, and numerous single-track ‘goat trails’ throughout the interior of the Bosque, is owned by the MRGCD and jointly managed by the MRGCD and the Village of Corrales. The bosque is periodically monitored by the Fire Department, Corrales Bosque Preserve Commission members, Bosque patrol and CHAMP mounted patrol. The area consists of nearly 700 acres of riparian habitat which was designated as a resource protection area in 1978, and was designated the Corrales Bosque Preserve by Village ordinance in 1990. Currently, the unpaved maintenance roads adjacent to the MRGCD facilities attract walkers, joggers, mountain bikers, and equestrians.

The conditions of access points to the Bosque Preserve vary widely. Posted regulations and access control measures at official MRGCD access points are intended to limit human activities in the Bosque Preserve; however, human impacts can easily be seen in the braided single-track trails crossing the floodplain west of the levee.

On the other side of the Village, the Thompson Fence Line Trail, an 8’-wide asphalt multi-use trail, is located adjacent to part of the western border of Corrales in Rio Rancho. Though the trail is a Rio Rancho owned and operated facility, it serves as a key link in the Corrales Trails system. Its use could be increased through the development of better access to the trail from the Village. The Thompson Fence Line Trail is an 8’ wide, asphalt-paved, multi-use facility. Where space permits, equestrians and walkers have worn a parallel soft-surface dirt trail; however, in many areas the right-of-way is only wide enough to allow for passage on the paved trail surface. The Thompson Fence Line Trail extends approximately 1.6 miles from Calle de Blas at the north to Meadowlark Lane at the south, where it joins with the Intel Skyline Trail and continues south along the Rio
Rancho/Corrales border to Cielo Vista del Norte. Together the trails cover approximately 2.5 miles.

The Paseo del Bosque Trail, located across the river and south of Corrales, provides 16 miles of multi-use trail uninterrupted by roadways. The facility is primarily located atop the flood-protection levees along the east side of the Rio Grande and offers a 10’-wide asphalt-paved trail with an adjacent 15’-wide unpaved maintenance road/equestrian trail. The Paseo del Bosque Trail is a key segment in the proposed statewide Rio Grande Regional Trail. The trail provides an off-street non-motorized travel corridor between the south edge of the Village of Corrales and the City of Albuquerque, via the old Alameda Boulevard bridge.

Within the Village, the Community Recreation Center is also a popular recreational destination. The Center offers a skate park, swimming in the summer, sports fields and courts, and an equestrian arena, drawing a range of users of different ages and interests. Safe trail routes to the Recreation Center are particularly important for kids walking, riding bicycles, and skateboarding to access the Center’s amenities, and for those who ride their horses to the Center to be able to reach the equestrian arena. There is currently off-street access to the Recreation Center from the west via the Corrales Acequia, however, residents approaching from the east are required to cross or travel along Corrales Road to reach the Center.

**COMMUTER DESTINATIONS**

In addition to recreational uses, Corrales’ citizens are also turning to bicycle and pedestrian trails and routes for their daily commutes. Commuters’ destinations include workplaces and schools within the Village, as well as in Rio Rancho and Albuquerque. Other key destination points within the Village include the public library, the senior center, and the Corrales Road commercial area. Most commuter destinations lie on or are accessed by Corrales Road, including Corrales Elementary School, Cottonwood Montessori School, Sandia View Elementary School, and Sandia Academy. While the MRGCD ditch banks offer safe routes for some children, many are still required to travel along or cross Corrales Road and/or Loma Larga to go to and from school.

**E. TRAIL CONNECTIONS TO ADJACENT COMMUNITIES**

**RIO RANCHO**

The City of Rio Rancho shares approximately five miles of border with the Village of Corrales, the Village has only three main existing points of connection to the streets and trails of Rio Rancho. Corrales residents can enter Rio Rancho on Meadowlark Rd, access A (Don Julio Road) at Highway 528, or at the northern end of Corrales Rd. (NM 448). Although these facilities are designated bike routes, both roads carry relatively heavy volumes of traffic. The 2007 average
weekday traffic volume was 5,300 vehicles for Corrales Road and 5,000 vehicles for Meadowlark Rd. For comparison, the commercial core of Corrales Rd. carries 13,500 vehicles per weekday, and the northern portion of Loma Larga Rd. carries 3,000 vehicles per weekday. Meadowlark Rd. is designated to receive bicycle lanes in the MRCOG 2030 Long Range Bikeway System Map.

In addition to these two main access routes, there are several unofficial or neighborhood connections from Corrales to Rio Rancho. At the north end of the Village, there is access to the Rio Rancho bosque from the MRGCD Main Canal, which will eventually connect to the planned Rio Rancho and Bernalillo segments of the regional Rio Grande Trail. There is a pedestrian access gate at the northern terminus of Calle Contenta. This provides access to a new paved trail in Rio Rancho that runs parallel to the Dulcelina Curtis Channel. Several east-west roadways in the Village also have social trails (unofficial trails crossing public or private property) that connect Corrales to Rio Rancho’s Thompson Fence Line Trail, including extensions of Ashley Lane, Windover Road, and Morning Sun Trail. Additionally, several roads and vacant strips of land dead end at the border, with the possibility of making a connection to the Thompson Fenceline Trail or Rio Rancho border.

A settlement was reached in 2004 concerning the Angel Road easement and Rio Rancho boundary. It included an agreement by Curb, Inc. to extinguish the Angel Road easement, close off Angel Road with a wall at the Rio Rancho boundary, build a cul de sac as the west end of Angel Road in Corrales and construct a hammer-head turn-around at the end of Camino de la Tierra, while maintaining access to all existing homes served by Angel Road.

**ALBUQUERQUE**

There are two main linkages to the City of Albuquerque at the south end of Corrales: Corrales Rd. and Loma Larga Rd. Corrales Road (NM 448) is designated as a future bicycle route, and in Albuquerque, where it becomes Coors Blvd. (also NM 448) it is designated to receive bicycle lanes, according to the MRCOG 2030 Long Range Bikeway System Map. Loma Larga (Ellison) currently has bicycle lanes which connect to Alameda Blvd.

**REGION**

In 2006 the State began planning for the central portion of what is hoped to one day be a statewide trail along the Rio Grande. The Mid-Region Council of Governments (MRCOG) has taken the lead on the project, and is currently overseeing planning and design efforts for several pilot projects between Bernalillo and Belen, building off of the core segment provided by the City of Albuquerque’s Paseo del Bosque Trail. Due to a desire to protect the Corrales Bosque Preserve, the Village has determined against locating the Corrales segment of the proposed trail atop the flood-protection levee, preferring instead to see it along Loma Larga farther to the west. As a result, MRCOG has developed a proposed alternative alignment beginning at the existing Alameda
non-motorized bridge, following along the Cabezon Channel, and connecting to Loma Larga/the Corrales Main Canal. A 10’ multi-use trail would be located within the jointly managed AMAFCA/MRGCD Cabezon Channel, continuing north along Loma Larga within the MRGCD Corrales Main Canal right-of-way, and eventually connecting back to the Rio Grande (at some point) in Rio Rancho. If and when the state decides to proceed with this section of the Rio Grande Trail, the Village will have to determine whether the MRCOG proposal is the best route through Corrales.

A proposed multi-use trail bridge over the Harvey Jones Flood Control Channel connecting to Paseo Cesar Chavez would allow bicyclists, equestrians and walkers to more easily access the Northwest Sector of Corrales and the Rio Rancho portion of the proposed regional trail from the north end of Loma Larga. This project has been included on the Village’s ICIP for several years.

F. OPPORTUNITIES AND CONSTRAINTS

CHALLENGES

There are a number of real, but not insurmountable, challenges to the implementation of trails in the Village of Corrales. Some of the typical challenges are listed and described below.

LACK OF ADEQUATE PUBLIC RIGHT OF WAY ON CORRALES ROAD

With the publishing of NMDOT Boundary Survey the right of way is now defined. As described earlier (Chapter 2, page 8), there is little room left over for roadside amenities, leaving pedestrians and bicyclists to fend for themselves. However, in several locations, existing buildings sit only a few feet from the edge of the driving lane. The situation is made worse by the fact that almost no definition of ingress/egress points (i.e. driveways) exists, resulting in vehicles moving at will from the roadway onto adjacent properties and back. This means that pedestrians/bicyclists could encounter vehicular cross traffic at almost any point along the roadway.

ENCROACHMENT ON THE RIGHT OF WAY

With the major exception noted above, many of the Village’s roads have been platted with an ample right-of-way ranging from 35’ to 50’ in width, while only a 20’ to 25’ width is required for driving lanes. In several instances, this extra space was planned as a dedicated trail corridor. However, in practice, this space has commonly been appropriated for private landscaping, mailboxes, walls, fences, and drainage ditches. Roadway pavement has also been centered in the right-of-way, leaving two thin strips of land on either side, rather than being shifted to one side to leave a single wide swath of land for trail development.
**Utilities & Public Services in the Right of Way**
In several cases, power poles and electrical boxes present obstacles or obstructions on roadway shoulders that otherwise have good potential for development as trails. Depending on specific licensing/right of way agreements with the respective utilities, it may be possible to have these relocated at the utility’s expense rather than at the Village’s.

**Many Driveway Crossings**
Most of the Villages roadways have private residential driveway access from each individual lot. The number of driveway crossings along each route presents safety and maintenance challenges for trails constructed along the roadway shoulder.

**High-Traffic-Volume Roadway Crossings**
There is a distinct lack of east-west connections throughout the Village. Several east-west roadways present possible routes, but nearly all are faced with the challenge of high-volume and high-speed vehicle traffic crossings at Loma Larga and Corrales Road. Some crossings have marked crosswalks, though many have become faded and indistinct.

**Need for Roadway Drainage**
In keeping with (and in some ways defining) the rural character sought by many Village residents, roadway runoff is often collected in and conducted through ditches alongside the road. This presents a challenge for the construction of a trail alongside those roads. On particularly narrow roadways, the installation of curb and gutter would allow for trail construction on roadway shoulders, but may face public opposition due to both the cost and the change of character.

**Erosion and Sediment Build-up**
Linked to the storm water drainage issues mentioned above, large quantities of sand and sediment are often washed down from the escarpment along east-west roadways during storm events, causing road blockages and maintenance concerns for Village staff. This sediment build-up is generally scraped off of the road and piled on the shoulders to clear the roadway. With an active, dedicated trail alongside the road, these clean-up practices would have to be revised and maintenance would also expand to include the clean-up of the trail.

**Steep Shoulders**
Some of the Village’s roadways, particularly to the west of Loma Larga, have steep side slopes on the roadway shoulders that would require substantial re-grading and soil retention in order to locate a trail in the roadway corridor.

**Steep Connections to West**
Connections from the Village to the Thompson Fence Line Trail and Rio Rancho to the west are complicated in many cases by steep grades west of Loma Larga. In some cases, platted road corridors are too steep to build roads (or trails), while in other cases even the roads themselves exceed recommended maximum grades for trail development.
PRIVATE PROPERTY
In many instances throughout the Village, access points to the Bosque, to the Thompson Fence Line Trail in Rio Rancho, and to various destinations from the MRGCD ditches and drains, require the crossing of private property. In some cases this use has traditionally been open to all; in others it is a privilege reserved for friends and neighbors; while in others still, it is expressly prohibited. However, more and more of these opportunities for connectivity are being lost as subdivision and development change the face of the Village. At certain key points, easements must be acquired from property owners, either through donation or purchase, in order to create trail ‘loops’, rather than just trail ‘segments’ that do not connect or lead to desired destinations.

OPPORTUNITIES
With its active volunteers and trail user advocacy groups; existing MRGCD irrigation system infrastructure; and certain roadways platted with ample rights-of-way, there are excellent opportunities for the implementation of a first-rate trails system in the Village of Corrales. General areas of opportunity are listed and described below.

UNDEVELOPED LOTS
In many instances, particularly on the western edge of the Village, informal access has traditionally been gained across private, but vacant, properties. These pathways can form critical linkages in the proposed trail network. Formalization of these connections should be considered by the Village to prevent further loss of connectivity. This can be done via donated or negotiated easements wherever possible, or through fee-simple purchase as a last resort. In the case of property being developed, formalization of such easements should be accomplished as a condition of approval, according to existing Village ordinances.

PRESCRIPTIVE AND AGRICULTURAL EASEMENTS
Although muddled somewhat by recent case law (esp. Algermissen v. Sutin, 2003-NMSC-1), prescriptive easements are generally held to be applicable to property across which common access has been gained for a period of at least ten years. Many in-use paths in Corrales fit this definition; however, as the above-referenced NM Supreme Court decision indicates, this may not always hold up under legal challenge. Therefore, it may be in the best interest of the Village (and its trail system) to pursue formalized legal trail easements in critical locations to ensure continued access.

Agricultural easements, in contrast, are generally implemented to benefit both the landowner and the surrounding community. Usually used to protect traditional farm lands from real estate development, these easements can be structured to allow additional uses such as trails and/or recreational use. Landowners benefit from federal tax deductions equivalent to the value of the donated easement, while communities benefit through preservation of open lands and potential trail corridors. As of 2008, New Mexico also offers additional State income tax incentives for agricultural easement donations.
**MRGCD Facilities**
The existing corridors provided by the MRGCD ditch and drain banks serve as beautiful and unique off-road trails, primarily running north-south through the Village. The Village should work with the MRGCD to preserve and formalize the use of these facilities.

**Favorable Administrative Climate**
The current Village Administration and Village Council are supportive of trail development in Corrales. A supportive governing body is essential to the adoption and implementation of the Trails Master Plan.

**Growing Public Interest and Volunteerism**
Corrales citizens’ interest in Village improvements for the public good and ability to organize are evidenced by current citizen advisory groups and past projects such as the library improvements and the Community Recreation Center. This active citizenry will help to maintain momentum for the implementation of the trails plan and may offer a volunteer labor force for trails construction and maintenance.

**G. IN-USE ROUTE IDENTIFICATION**

As mentioned previously, the Village is populated with a wealth of informal and social trails. Two special-interest groups, Safe Routes to School and Corrales Horse and Mule People, have developed their own in-use route maps. These in-use maps have been reviewed and updated based on feedback from user groups, landowners and others. This information was compiled and digitized, and is shown on pages 32 and 33. At the September 2008 Community Open House, residents also mapped an extensive network of routes that are currently used, which is shown on page 97. This background data informed RTI’s extensive field work to verify the suitability of those in-use routes as formalized trails. A summary of the in-use trail facilities categorized by their type as existing facilities, publicly-owned routes, privately owned routes, encroachments and easements, as identified through key person interviews and public meetings is found in Appendix B. For the results of the fieldwork and plat research verification process, see table on page 140, Appendix C.
II. TRAIL PLAN ELEMENTS

A. PLANNING APPROACH
In 2008, the Village of Corrales hired the Resource Technology, Inc. team to complete a Trails Master Plan. The goal of the plan is to identify existing and future trail routes, along with strategies for implementing the trail system. The Trails Master Plan will guide the transformation of informal trails and social pathways into a designated trail system. The Master Plan will also help prioritize use of the Village’s resources and establish a defensible Trail Map to be adopted by the Governing Body.

OVERVIEW OF PLANNING PROCESS
The consultant team performed the following tasks for the research and analysis of the Trails Master Plan:

- Public Involvement, including key person interviews, public Open House meetings, and Focus Groups
- Review of existing plans and trail-related policy
- Existing conditions field inventory
- Develop GIS data and mapping of social trails and existing conditions
- Analysis of opportunities and constraints for a trail system
- Develop a trails system vision through community input and goals, objectives, and policies to implement the vision
- Meetings with the Advisory Committee, a stakeholder group appointed by the mayor and composed of representatives from each of the trail user interest groups and Village Staff
- Identification of trail routes and project phasing over the next 5 years
- Critical review of current trail guidelines, standards and policies to develop Design Guidelines
- Compile a Trail Development Tool Kit with trail development procedures and permitting requirements, legal implementation considerations, land acquisition strategies, and sample land acquisition and easement agreement forms
B. VISION

Trail planning has increasingly become a concern for the residents of Corrales. There has been progressively more traffic in the Village, while historic connections and pathways are being closed off, or are becoming unsafe due to high traffic speeds and volumes. Conversely, the informal development of trails and trail spurs in the Bosque Preserve is increasing and may result in wildlife habitat impacts. In the Village there is increasing desire for formalized trails from various user groups, sometime with competing interests and priorities. Further, the limited tax base and revenue sources that fund Village operations serve as constraints on the development of trails and acquisition of easements. These conditions emphasize the importance of developing a common vision for the trail system, and developing specific measurable steps to make the vision a reality.

Based on the input received in the September 11, 2008 Community Open House, and in an earlier ad hoc preparation meeting, the consultant team synthesized the following vision statement:

“The Village of Corrales envisions a system of trails utilizing public and private property to link a wide range of uses and users in a safe manner that supports alternative transportation and recreation.

The Trails Master Plan will address the preservation, protection, and construction of trails; improved safety; improved connectivity; and the encouragement of healthy, outdoor activity.

The Trails system will be implemented in partnership with multiple agencies and will be founded on consensus and sensitivity to the diverse viewpoints within the community.”

The 2015-2016 Trails Task Force did not recommend any change to this vision.

C. GOALS AND OBJECTIVES

In support of that vision statement, and to address the findings presented earlier in this document, the following goals and objectives are put forth.

GOAL #1 SUPPORT THE DEVELOPMENT OF TRAILS AS AN INTEGRAL PART OF VILLAGE TRANSPORTATION INFRASTRUCTURE

Objectives
GOAL #1  IMPLEMENT TRAIL DEVELOPMENT ACTIONS

1.1 Adopt policies and procedures to enforce existing trail dedication and development ordinances
1.2 Secure funding for trail construction and maintenance
1.3 Implement a phasing plan that balances the development of trails that serve each of the user groups
1.4 Coordinate volunteer labor to construct new unpaved trails
1.5 Create a new Village staff position or Volunteer Commission for Trails Development and Master Plan implementation
1.6 Construct and sign key trail routes that serve each of the user groups’ specific needs, including ADA accessible, equestrian, bicycle, pedestrian & youth
1.7 Maintain and update a GIS database of trail information, including construction status, length condition, materials, and maintenance schedule

GOAL #2  DEVELOP AN INTEGRATED SYSTEM OF TRAILS AND PATHWAYS

Objectives
2.1 Formalize the use of MRGCD facilities and preserve access points thereto
2.2 Connect to non-trail facilities, such as bicycle routes and lanes, and regional public transportation
2.3 Provide opportunities for all user modes, including: pedestrian, bicycle, equestrian and mule riding
2.4 Ensure the trail system serves as both a transportation and recreation facility
2.5 Connect to natural amenities, such as the Corrales Bosque Preserve, the Sand Dunes, and Arroyo de los Montoyas
2.6 Provide links to adjacent communities and regional trails
2.7 Provide routes that connect Village residences to schools, community services, and businesses
2.8 Develop a maintenance plan and schedule and identify responsible entities

GOAL #3  INCREASE NON-MOTORIZED TRAVEL IN THE VILLAGE

Objectives
3.1 Increase public awareness about trail facilities
3.2 Install bicycle racks, pedestrian activated signals, cavaletti (equestrian step-overs), and trail access infrastructure
3.3 Build pedestrian and equestrian friendly roads
3.4 Provide a safe, comfortable, and convenient trail environment
GOAL #4 ENCOURAGE HEALTHY LIVING AND ACTIVE LIFESTYLES

Objectives
4.1 Provide safe routes to local destinations
4.2 Provide attractive and easy to follow recreational routes, including looped facilities wherever possible
4.3 Support the Safe Routes to School program

GOAL #5 ENCOURAGE LOCAL ECONOMIC GROWTH IN CORRALES

Objectives
5.1 Provide a safe pedestrian pathway through the commercial core of the Village
5.2 Connect destinations within Corrales and to the regional trail system
5.3 Capitalize on tourism by providing clear signage, way-finding and promotional materials for visitors to experience trails in Corrales

GOAL #6 PRESERVE EXISTING TRAIL ACCESS POINTS AND LINKS

Objectives
6.1 Identify key existing easements and access points through plat review
6.2 Coordinate the knowledge of and preservation of easements between stakeholders
6.3 Create and enforce a policy to address encroachments into the public right-of-way, as recommended in the Trails Master Plan

GOAL #7 MITIGATE CONFLICTS BETWEEN TRAIL USERS AND VEHICULAR TRAFFIC

Objectives
7.1 Increase visibility of trail intersections and road crossings
7.2 Provide a buffer between trail and vehicular traffic, where possible
7.3 Mount public information campaigns in the Village through the news, word of mouth, and posted policy on street signs and at trailheads
7.4 Enforce speed limits and pedestrian rights in crosswalks through police enforcement campaigns
7.5 Investigate feasibility of adding user- or motion-activated signalization at critical crossings to enhance user safety

GOAL #8 INCREASE THE SAFETY OF TRAILS AND PATHWAYS
Objectives
8.1 Improve visibility at road crossings
8.2 Install trail etiquette and regulatory signage
8.3 Educate the public on trail safety issues - directed at both trail users and motorists

GOAL #9 INCREASE PUBLIC AWARENESS OF TRAILS AND THE TRAIL SYSTEM

Objectives
9.1 Install trail identity signage
9.2 Display the adopted trail map at key trailheads and other public places
9.3 Create a pocket size trail map to give out to visitors, trail users, and residents
9.4 Coordinate trail activity events to raise awareness

D. TRAILS ANALYSIS METHOD

SUITABILITY ANALYSIS
Feedback from the public meetings and focus group sessions resulted in what amounted to an overabundance of information. A composite map of all the existing and desired routes identified at those meetings (page 48) covers nearly every road and ditch in the Village, many of which are simply not suitable or feasible for trail development. From a purely practical standpoint, such a proliferation of trail facilities would be difficult to maintain, which in turn would result in a negative perception of the trails themselves, and ultimately erosion of support for the trail system in general. Instead, the consultant team felt that it was more important to focus on developing a core network of critical trail linkages that addressed many of the concerns and problems identified in the early stages of the planning process. This would provide a Village-wide framework for future development of neighborhood paths and connectors, which would in turn provide additional access to that larger network.

The first step in identifying the core trail network was to determine the suitability of various routes to that purpose. This involved analysis of measurable physical characteristics as well as less-easily defined functional criteria, and a certain degree of professional judgment. Each potential route was evaluated in the field, as well as on available GIS property boundary maps, relative to the following criteria:

Physical Characteristics
• Ownership status – does the route fall entirely within public ownership, or does it cross private property?
• ROW or easement width – is there sufficient horizontal space to provide a usable trail facility (either platted or on the ground)?
• Presence of obstructions or encroachments – is the roadside/route fairly clear, or is it blocked by existing walls, trees, or utilities?

**Functional criteria**

• Potential for linking to destinations – would the route offer connections to desirable destinations, or would it provide only localized point-to-point access?
• Relationship to other routes – does the route make sense in the larger context?

**Other considerations**

• Route character – would the route provide a pleasant experience for potential users, or is it merely functional?
• Perceived level of safety – do actual or anticipated conditions foster a sense of safety for potential users, or are there visibility issues or other hazardous conditions?

Generally accepted planning practice holds that half-mile spacing is considered a reasonable interval for the location of neighborhood parks and recreational facilities, based on the distance people are generally willing to walk to such amenities. Considering this, along with the overall size of the Village, ¼ to ½-mile spacing interval was deemed an appropriate and manageable target for the core trail network. The suitability analysis was used to identify routes that would be favorable to development of a trail network on that scale. The Village of Corrales Trails Master Plan Map (page 49) identifies the resulting proposed trail system.

**DETAILED LIST OF POTENTIAL TRAILS**

<table>
<thead>
<tr>
<th>NAME</th>
<th>LENGTH (FT)</th>
<th>LENGTH (MI)</th>
<th>EXISTING</th>
<th>OWNERSHIP</th>
<th>COST IN 2009 $$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academy Rd</td>
<td>2,079</td>
<td>0.4</td>
<td>NO</td>
<td>Public ROW</td>
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<tr>
<td>Camino Todos los Santos</td>
<td>896</td>
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<tr>
<td>Corrales Rd (NM448)</td>
<td>32,696</td>
<td>6.2</td>
<td>NO</td>
<td>NMDOT Facility</td>
<td>$1,096,059</td>
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<tr>
<td>Loma Larga Rd</td>
<td>27,078</td>
<td>5.1</td>
<td>YES</td>
<td>Public ROW</td>
<td>-</td>
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<tr>
<td>Old Church Rd.</td>
<td>2,562</td>
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<td>Public ROW</td>
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<tr>
<td>West Meadowlark Ln.</td>
<td>8,211</td>
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<td>Public ROW</td>
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<td>Totals for proposed work:</td>
<td>53,668</td>
<td>10.2</td>
<td>-</td>
<td>-</td>
<td>$1,799,098</td>
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<tr>
<td>Totals for completed work:</td>
<td>27,974</td>
<td>5.3</td>
<td>-</td>
<td>-</td>
<td>n/a</td>
</tr>
</tbody>
</table>
## 10’ PAVED TRAIL - Approximate cost $172,000/linear mile; $33/linear foot

<table>
<thead>
<tr>
<th>NAME</th>
<th>LENGTH (FT)</th>
<th>LENGTH (MI)</th>
<th>EXISTING</th>
<th>OWNERSHIP</th>
<th>COST in 2009 $$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arroyo de los Montoyas</td>
<td>7,673</td>
<td>1.5</td>
<td>NO</td>
<td>SCAFCA Facility</td>
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<tr>
<td>Cabezon (Rio Grande Regional Trail)</td>
<td>2,690</td>
<td>0.5</td>
<td>NO</td>
<td>MRGCD Facility</td>
<td>$87,629</td>
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<tr>
<td>Calle Contenta</td>
<td>5,495</td>
<td>1</td>
<td>NO</td>
<td>Public ROW</td>
<td>$179,004</td>
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<tr>
<td>Corrales Rd. (NM448)</td>
<td>9,460</td>
<td>1.8</td>
<td>NO</td>
<td>NMDOT Facility</td>
<td>$308,167</td>
</tr>
<tr>
<td>Main Canal (Rio Grande Regional Trail)</td>
<td>30,857</td>
<td>5.8</td>
<td>NO</td>
<td>MRGCD Facility</td>
<td>$1,005,190</td>
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<tr>
<td>Thompson Fence line</td>
<td>12,913</td>
<td>2.4</td>
<td>YES</td>
<td>Public ROW</td>
<td>-</td>
</tr>
<tr>
<td>Thompson Fence Line Extension</td>
<td>7,249</td>
<td>1.4</td>
<td>NO</td>
<td>Private Property</td>
<td>$236,142</td>
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</table>

**Totals for proposed work:**
- Length: 63,424 12
- $2,066,085

**Totals for completed work:**
- Length: 12,913 2.4
- n/a

## 6’ SOFT SURFACE TRAIL - Approximate cost $40,000/linear mile; $8/linear foot

<table>
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<th>LENGTH (FT)</th>
<th>LENGTH (MI)</th>
<th>EXISTING</th>
<th>OWNERSHIP</th>
<th>COST in 2009 $$</th>
</tr>
</thead>
<tbody>
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<td>Albino Rd</td>
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<tr>
<td>Anya Rd</td>
<td>700</td>
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<tr>
<td>Applewood Rd.</td>
<td>4,194</td>
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<td>NO</td>
<td>Public ROW</td>
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<tr>
<td>Arroyo de los Montoyas</td>
<td>7,673</td>
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<td>NO</td>
<td>SCAFCA Facility</td>
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<td>August Mader Rd.</td>
<td>1,308</td>
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<td>NO</td>
<td>Public ROW</td>
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<tr>
<td>Bessom Ln.</td>
<td>1,255</td>
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<td>NO</td>
<td>Private Road</td>
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<tr>
<td>Bosque Acres Rd.</td>
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<tr>
<td>C de Baca Rd.</td>
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<td>NO</td>
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<tr>
<td>Calle Blanca, North</td>
<td>1,840</td>
<td>0.3</td>
<td>NO</td>
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<tr>
<td>Calle Blanca, South</td>
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<tr>
<td>Camino Campo</td>
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<tr>
<td>Camino de la Tierra</td>
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<td>Camino de las Brisas</td>
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<td>Coronado Rd.</td>
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<td>Corrales Acequia</td>
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<td>2.4</td>
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<td>Corrales Acequia</td>
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<td>NO</td>
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<tr>
<td>Corrales Interior Drain</td>
<td>7,364</td>
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<td>NO</td>
<td>MRGCD Facility</td>
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<tr>
<td>Coyote Canta Rd.</td>
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<td>Don Julio Rd.</td>
<td>1,911</td>
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<td>Public ROW</td>
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<tr>
<td>Dorothy Smith Easement/Rhythm’s Way</td>
<td>3,257</td>
<td>0.6</td>
<td>YES</td>
<td>Potential Easement</td>
<td>$24,674</td>
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<td>East Ella Dr.</td>
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<td>Public ROW</td>
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<td>Jacob Ct.</td>
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<td>Kjersti Ct.</td>
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<td>Road Name</td>
<td>Length (ft)</td>
<td>Width (ft)</td>
<td>Access</td>
<td>Type of ROW/Easement</td>
<td>Cost (USD)</td>
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<tr>
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<tr>
<td>Mariquita Rd.</td>
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<tr>
<td>Nicholls Lateral</td>
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<td>NO</td>
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<tr>
<td>Paseo Tomas Montoya</td>
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<td>1</td>
<td>NO</td>
<td>SSCAFCA Facility</td>
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<tr>
<td>Perea Rd.</td>
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<td>Quirks Ln.</td>
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<td>Sagebrush Dr.</td>
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<td>Sego Ln</td>
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</tr>
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<tr>
<td>Tierra de Corrales Rd</td>
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<td>$16,205</td>
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<tr>
<td>Todos Juntos Rd</td>
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<td>Via Oreada</td>
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</tr>
<tr>
<td><strong>Totals for potential trails:</strong></td>
<td><strong>130,474</strong></td>
<td><strong>24.7</strong></td>
<td>-</td>
<td>-</td>
<td><strong>$988,442</strong></td>
</tr>
</tbody>
</table>

**PRIORITY ANALYSIS**

After identifying the base network and developing a comprehensive listing of trail improvements, the consultant team worked with the Advisory Committee to rank the projects in order of priority, as a first step in developing an Action Plan.

In order to prioritize the development of trails, a list of key criteria that could be used to evaluate the importance of each proposed trail segment was compiled. In the second Advisory Committee
meeting, representatives from each of the Village’s standing committees and commissions provided input on these criteria. The following list was refined at that meeting:

- Local link
- Loop
- Regional connections
- Critical connection
- New connection
- Right-of-way
- Commercial Core
- Existing use
- Physical constraints
- Ease of maintenance
- Trail / traffic relationship

With this list of criteria for trail development in hand, the consultant team crafted a list of questions to evaluate the trail routes in Corrales. Each of the criteria listed above was formed into a question that could provide information about the suitability and importance of developing a trail route for each corridor that was evaluated. For example, the questions assigned points depending on the extent a corridor was in public ownership, the number of user groups currently using the corridor, and routes that would improve public safety when developed.

*The Village Administration is advised to also consider habitat protection and preservation issues when determining the extent of publicizing bosque access information*

The question and point ranking system was developed to assess which routes were most suitable for development. The companion CD in the back of this report includes a reproducible copy of the evaluation form as well as a spreadsheet with the results for the trail routes proposed in this Plan. This assessment tool is intended to give the Village of Corrales an objective method of evaluating the different routes in relation to one another. In this way, the results of the prioritization analysis can be used by the Village Administration to respond to changing needs or priorities in the community. For example, if loss of access and connectivity becomes a popular concern for action, the trails that scored high on that dimension can be given priority in the next funding cycle. The spreadsheet can be sorted to rank a number of the Village’s current priorities in ascending order. Detailed instructions for performing this process can be found in the Trail Evaluation spreadsheet. This interactive tool can be used to evaluate and rank new trail routes proposed by trail users and advocates to determine how significant the segment is to the system as a whole and how feasible it would be to construct the trail improvement.

The questions/criteria were adapted from a FHWA Equestrian Design Guidebook for Trails, Trailheads, and Campgrounds Facility Evaluation form. The consultant team reviewed each question and determined how it specifically applies to Corrales. For example, it was determined
through public input that the Village residents consider the bosque, and its bounding Riverside Drain and Sandoval Lateral, to be both local and regional destinations. Because of this, the bosque was included in questions #1 and #3, as a qualified destination. Routes that connect to the bosque were given two points for each question, which would raise their overall score relative to other trails that did not form a key connection. The aspects that indicated a more rapid, cost-beneficial scenario of development were given higher priority.

After crafting the questions to apply to the specific conditions in the Village, the consultant team developed the levels for scoring. This was done through a trial and error process to arrive at a set of distinct levels and criteria to meet for each question. Because of the varying conditions in the Village, it was important to cover all possible scenarios in the responses. This is important for establishing the validity of the assessment tool. Different evaluators need to arrive at the same result for the tool to be reliable and objective.

E. POTENTIAL TRAIL SYSTEM DETAILS

ITEMIZED TRAIL COST (CONSTRUCTION ONLY) (2009 Costs)

10’ PAVED TRAILS, COST PER LINEAR MILE = $172,000
COST PER LINEAR FOOT = $32.50
Grading and 8” depth compaction $2.00/SY $7,820.00/mi
3” Bike Trail Asphalt $23.00/SY $134,918.00/mi
4” Engineered Base Course $7.00/SY $20,531.00/mi
5% Contingency $8,163.45/mi

6’ SOFT SURFACE TRAILS, COST PER LINEAR MILE = $40,000
COST PER LINEAR FOOT = $7.50
Grading and 8” depth compaction $2.00/SY $4,644.00/mi
Limestone Crusher Fines, 4” depth $40.00/TON $16,896.00/mi
Filter Fabric under Crusher Fines $0.52/SF $16,473.60/mi
5% Contingency $1,900.68/mi

5’ BIKE LAKES (2) AND 5’ COMPACTED EARTH TRAIL
COST PER LINEAR MILE = $177,000
COST PER LINEAR FOOT = $33.50
Grading and 8” depth compaction $2.00/SY $11,730.00/mile
3” Bike Trail Asphalt $23.00/SY $134,918.00/mile
4” Engineered Base Course $7.00/SY $20,531.00/mile
5% Contingency $9749.35/mile

ESTIMATED MAINTENANCE COST, PER LINEAR MILE
Soft Surface Trail approximately $2,000 per year per mile

39
Hard Surface Trail approximately $1,000 per year per mile

### TRAIL DISTANCES SUMMARY

<table>
<thead>
<tr>
<th>TYPE</th>
<th>PAVED</th>
<th>SOFT</th>
<th>BIKE LANE</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing Routes</td>
<td>2.5</td>
<td>-</td>
<td>5.3 mi</td>
<td>7.8</td>
</tr>
<tr>
<td>Proposed Trails</td>
<td>12.0</td>
<td>23.5</td>
<td>10.2 mi</td>
<td>45.7</td>
</tr>
<tr>
<td>Total Length</td>
<td>14.5</td>
<td>23.5</td>
<td>15.5 mi</td>
<td>53.5</td>
</tr>
</tbody>
</table>

### TOTAL POTENTIAL TRAIL PROJECTS WITH (2009) COST

*Total Build-out of 2009 Trails Master Plan = $4,853,625 (in 2009 dollars)*

Total Construction cost does not include any design or engineering fees (typically 8% of project cost), or any allowance for easement acquisition. This amount will vary by project depending on the current land ownership and potential easement donations.

**PAVED TRAIL**
- Existing = 2.5 mi
- Proposed = 12.0 mi
- $2,066,000 for total build out, 2009 dollars. This includes the full estimated cost of building the Rio Grande Regional Trail, which has committed funds pledged by MRCOG.

**SOFT SURFACE TRAIL**
- Existing = 0.0 mi
- Proposed = 23.5 mi
- $988,000 for total build out, 2009 dollars

**BICYCLE LANE**
- Existing = 5.3 mi
- Proposed = 10.2 mi
- $1,799,000 total build out, 2009 dollars

### DETAILED LIST OF EXISTING TRAIL EASEMENTS (May not be comprehensive)
**DETAILED LIST OF EXISTING TRAIL ACCESS POINTS (May not be comprehensive)**

<table>
<thead>
<tr>
<th>NAME</th>
<th>EXISTING</th>
<th>PRIVATE</th>
<th>OWNERSHIP</th>
</tr>
</thead>
<tbody>
<tr>
<td>West Meadowlark Ln</td>
<td>Existing</td>
<td>Public</td>
<td>Public ROW</td>
</tr>
<tr>
<td>Cottonwood Rd</td>
<td>Existing</td>
<td>Public</td>
<td>Public ROW</td>
</tr>
<tr>
<td>Camino Hermosa</td>
<td>Existing</td>
<td>Public</td>
<td>Public ROW</td>
</tr>
<tr>
<td>Coronado Road</td>
<td>Existing</td>
<td>Public</td>
<td>Public ROW</td>
</tr>
<tr>
<td>Sagebrush</td>
<td>Future</td>
<td>Public</td>
<td>Public ROW</td>
</tr>
<tr>
<td>Camino de la Tierra</td>
<td>Existing</td>
<td>Public</td>
<td>Public ROW</td>
</tr>
<tr>
<td>Arroyo de los Montoyas</td>
<td>Existing</td>
<td>Public</td>
<td>Public ROW</td>
</tr>
<tr>
<td>Calle Contenta</td>
<td>Existing</td>
<td>Public</td>
<td>Public ROW</td>
</tr>
<tr>
<td>Dixon Rd</td>
<td>Existing</td>
<td>Public</td>
<td>Public ROW</td>
</tr>
<tr>
<td>Ella Dr., East</td>
<td>Existing</td>
<td>Public</td>
<td>Unknown Type of Easement</td>
</tr>
<tr>
<td>Ella Dr., West</td>
<td>Existing</td>
<td>Public</td>
<td>Public ROW</td>
</tr>
<tr>
<td>East la Entrada</td>
<td>Existing</td>
<td>Public</td>
<td>Public ROW</td>
</tr>
<tr>
<td>Nicholls Lateral</td>
<td>Existing</td>
<td>Public</td>
<td>MRGCD Facility</td>
</tr>
<tr>
<td>Andrews Ln / Corrales Interior Drain</td>
<td>Existing</td>
<td>Public</td>
<td>Public ROW</td>
</tr>
</tbody>
</table>
### Via Oreada
- **Existing**: Public
- **Ownership**: Public ROW

### Camino Bajada
- **Existing**: Public
- **Ownership**: Public ROW

### Kjersti Ct
- **Existing**: Public
- **Ownership**: Public Trail Easement

### Jacob Ct
- **Existing**: Public
- **Ownership**: Public Trail Easement

### Camino de las Brisas
- **Existing**: PRIVATE
- **Ownership**: Private Access Easement

### Sego Ln
- **Existing**: Public
- **Ownership**: Public Trail Easement

### Rancho Alondra Rd
- **Existing**: Public
- **Ownership**: Public Trail Easement

### Chimaja Rd
- **Existing**: PRIVATE
- **Ownership**: Public Access Status Unknown

### Paseo de Dulcelina
- **Existing**: PRIVATE
- **Ownership**: Private Trail Access

### Bosque Acres
- **Existing**: Public
- **Ownership**: Public ROW

### Mariquita Ln South
- **Existing**: Public
- **Ownership**: Public Trail Easement

### Sanchez Rd
- **Existing**: PRIVATE
- **Ownership**: Public Access Unknown

### Alameda Entrance
- **Existing**: Public
- **Ownership**: MRGCD Facility

### MRGCD Main Canal / North Beach
- **Existing**: Public
- **Ownership**: MRGCD Facility

### Romero Rd
- **Existing**: Public
- **Ownership**: MRGCD Facility

### Coyote Canta Rd.
- **FUTURE**: PRIVATE
- **Ownership**: Not Publicly Platted

### Cabezon Channel
- **Existing**: Public
- **Ownership**: Private Drainage Easement

---

**DETAILED LIST OF TRAILHEADS (May not be comprehensive)**

<table>
<thead>
<tr>
<th>NAME</th>
<th>EXISTING</th>
<th>PRIVATE</th>
<th>OWNERSHIP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alameda Access</td>
<td>Existing</td>
<td>Public</td>
<td>MRGCD Facility</td>
</tr>
<tr>
<td>Corrales Main Canal / North Beach</td>
<td>Existing</td>
<td>Public</td>
<td>MRGCD Facility</td>
</tr>
<tr>
<td>Cabezon Channel</td>
<td>Existing</td>
<td>Public</td>
<td>MRGCD Facility</td>
</tr>
<tr>
<td>Sandoval Feeder / Romero Rd</td>
<td>Existing</td>
<td>Public</td>
<td>MRGCD Facility</td>
</tr>
</tbody>
</table>

### TRAIL PHASING AND COST

The following table identifies trail development projects from the plan that have been prioritized for development in the next ten years. These high priority projects were identified through a public process of prioritizing and ranking of the projects. This table is intended to provide an actionable trail development approach, but the Village should be prepared to respond to opportunities that may arise for a trail acquisition or development that may not appear on this Development Plan.

**Ten Year Development Prioritization List (As determined by 2009 Consultant’s Report)**

<table>
<thead>
<tr>
<th>Trail Name</th>
<th>Type</th>
<th>Ownership</th>
<th>Length (ft)</th>
<th>Construction Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corrales Rd.</td>
<td>Bicycle Lane</td>
<td>NMDOT</td>
<td>32,696</td>
<td>$1,078,968</td>
</tr>
<tr>
<td>Corrales Rd.</td>
<td>Pathway</td>
<td>NMDOT</td>
<td>9,460</td>
<td>$312,180</td>
</tr>
<tr>
<td>Rio Grande Trail (Cabezon Segment)</td>
<td>Paved</td>
<td>Private Property MRGCD Managed</td>
<td>2,690</td>
<td>$88,770</td>
</tr>
<tr>
<td>Project Description</td>
<td>Surface Type</td>
<td>Maintainer</td>
<td>Length (ft)</td>
<td>Cost ($)</td>
</tr>
<tr>
<td>----------------------------------------</td>
<td>--------------</td>
<td>-----------------------</td>
<td>-------------</td>
<td>------------</td>
</tr>
<tr>
<td>Rio Grande Trail (Corrales Main Canal)</td>
<td>Paved</td>
<td>MRGCD</td>
<td>30,857</td>
<td>$1,018,281</td>
</tr>
<tr>
<td>Thompson Fence Line Extension</td>
<td>Paved</td>
<td>Private Property</td>
<td>7,249</td>
<td>$239,217</td>
</tr>
<tr>
<td>Sagebrush Dr.</td>
<td>Soft Surface</td>
<td>Village of Corrales</td>
<td>10,287</td>
<td>$82,296</td>
</tr>
<tr>
<td>East Ella Dr.</td>
<td>Soft Surface</td>
<td>Village of Corrales</td>
<td>3,130</td>
<td>$25,040</td>
</tr>
<tr>
<td>West Ella Dr., Central</td>
<td>Soft Surface</td>
<td>Village of Corrales</td>
<td>6,854</td>
<td>$54,832</td>
</tr>
<tr>
<td>West Ella Dr., Western</td>
<td>Soft Surface</td>
<td>Village of Corrales</td>
<td>2,955</td>
<td>$23,640</td>
</tr>
<tr>
<td>Totals</td>
<td></td>
<td></td>
<td>106,178</td>
<td>$2,923,224</td>
</tr>
</tbody>
</table>
A. ADMINISTRATIVE RECOMMENDATIONS

In order to facilitate consistent and informed management of the Village Trails System, this plan proposes four potential organizational structures for trail project administration and project management: 1. Create a Trails Coordinator position in the Village Administration or through a non-profit organization, 2. Assemble a Management Team for interagency coordination, 3. Convene a Trails Implementation Committee, and 4. Encourage the formation of an organized/registered non-profit trails group in Corrales.

TRAILS COORDINATOR

The Village of Corrales should establish a Trails Coordinator position to enable the consistent implementation of trails-related policies and trail development. The individual in this position would be responsible for coordinating the planning, design, funding, permitting, jurisdiction, and development-review of all proposed trail improvements. The Trails Coordinator would manage fund-raising and grant writing, advocacy, education, and implementation activities. If the Village is unable to support a Trails Coordinator as a paid employee, a non-profit trails group or trails advisory committee may be able to support a similar paid staff position through grants or other fund-raising. However, if the position is not housed within the Village Administration, the Trails Coordinator will not have the authority to allocate and administer Village trail funds or manage the permitting process.

MANAGEMENT TEAM

Previous trail planning efforts have been hindered by the multiple jurisdictions and land ownership of potential trail corridors. The Village of Corrales should establish a regularly convening group of representatives from stakeholder organizations to promote interagency coordination for trail development. One possible structure is a Management Team made up of members who have a central role and responsibility for developing trails in the Village of Corrales, as well as of representatives from other governmental stakeholder agencies. Members from within the Village of Corrales should include representatives from the Village Council, the Village Administration, the Village Planning and Zoning Commission, and Village Trails Advocacy Groups, such as The Corrales Horse and Mule People (CHAMP), The Equestrian Advisory Board and The Corrales Bicycle and Pedestrian Advisory Committee (CBPAC). Stakeholder agencies include the Middle Rio Grande Conservancy District, the Mid-Region Council of Governments, the Southern Sandoval
County Flood Control Authority, Sandoval County, the Albuquerque Metropolitan Arroyo Flood Control Agency, the US Army Corps of Engineers, the U.S. Bureau of Reclamation, and the NM Energy, Minerals, and Natural Resources Department.

**TRAILS IMPLEMENTATION COMMITTEE**

Should it prove too difficult to secure standing representation from the various agencies mentioned above, a Trails Implementation Committee could perform a similar function. SSCAFCA, MRGCD and NMDOT have indicated a preference for consulting with the Village on a project by project basis, when the Village has specific development plans for review. The Village of Corrales could create a Trails Implementation Committee to gain public support throughout the community and with other governmental agencies and non-profit groups; to secure project funding; to review trail and land development applications; and to decide on funding priorities for projects and programs. The groups’ members would ideally have expertise in real estate/title research, right-of-way acquisition and negotiation, grant writing and management, design, and construction. When necessary, the group should supplement their capacity with advisors and consultants in any of the above mentioned areas of expertise. This can be done on an as needed basis.

**NON-PROFIT ORGANIZATION**

The Village of Corrales should support the creation of a non-profit trails interest organization to manage land donations, right-of-way acquisition, planning, and grant writing. This organization could help coordinate volunteer labor and issue tax benefit certifications for easement donations. Though the Village Government is also a qualified organization to accept an easement donation, this assistance would benefit the Village of Corrales administration. Some communities use a Land Trust model to preserve areas from development, which could be one approach for providing a financial benefit to property owners who provide easements or dedications. However, a trails-specific group would be better suited to providing a range of services to compliment the Village administration of trails, including specific right-of-way expertise and trail-related grant writing.

**B. ACTION PLAN**

Implementing a new trails plan from scratch can seem a daunting proposition at the start. To make the task more manageable, it is helpful to break the process down into five year increments. This is a manageable horizon for most administrations, and coincides with the recommended time frame for reviewing and updating the plan to accommodate changing conditions within the Village.

The following section reviews the steps that the Village should take over the next five years in order to implement the Trails Master Plan. This planning document can only be as useful as the Village Administration and Village residents choose to make it. The purpose of this document is to be used as a guidance to promote the development of trail improvements. In order for it to serve as
guidance, the Village Council must first formally adopt the plan through resolution. Once that critical step is completed, the following recommendations can guide the Village in its efforts to implement the trail system.

DEVELOP A FIVE-YEAR TRAIL DEVELOPMENT ACTION PLAN THAT IS APPROVED BY THE VILLAGE COUNCIL AND ADMINISTRATION

The Village should convene a Trails Stakeholder meeting to determine a working protocol for addressing the remaining Action Plan items listed below. This Trails Master Plan and its Action Plan Recommendations should serve as guidance in developing specific action items that are feasible for the Village to accomplish. The first order of business should be to determine the roles and responsibilities of a Trails Plan Coordinator or Trails Implementation Committee and work with the Village Administration to determine the most effective way to fill that role.

CREATE STAFF POSITION OR ADVISORY COMMITTEE TO FACILITATE IMPLEMENTATION OF THE TRAILS MASTER PLAN

• This step can be accomplished through several different possible organizational structures:
  • Create a part time Trail Coordinator position in the Village Administration through grant funding or special trail district taxation.
  • If this is not feasible, a non-profit trails organization may be able to support a similar position. A Village staff member or non-governmental organization director could serve as a key contact point for coordinating between the Village departments, volunteer committees and advocate groups.
  • If neither of these options is practical for the Village Administration, create a Trails Implementation Advisory Committee to provide guidance on trail issues from a pan-user framework. Creating one group to work on trail implementation could help unite the various trail user groups into one forum where they can work to achieve their collective goals.

FORMALIZE AND ADOPT A TRAIL EASEMENT DEDICATION PROCESS

The Village of Corrales should develop a working process for accepting easement donations, including assistance on a land value appraisal as well as providing information and support for the donor to deduct the charitable contribution for conservation purposes (see the Trail Development Tool Kit for additional information). This process needs to be authorized by the Village Administration; however, it is possible for a non-governmental organization to provide this service for the Village.

FORMALIZE A VOLUNTEER TRAIL BUILDING AND MAINTENANCE PROCESS

The Trail Development Tool Kit has sample agreements that the Village can use as a model to develop its own Trail Volunteer Agreement Form. These agreements are typically contracts
between the municipality and a group of trail volunteers. The agreement form outlines the roles and responsibilities of each party. Typically, a volunteer group agrees to provide a specified level of maintenance in exchange for being identified with an Adopt-a-Trail recognition sign on the trail. The Village would be responsible for providing the sign, potentially providing equipment for maintenance or construction, and inspecting the quality of the volunteer group’s work. The specific terms must be set forth in the agreement form to ensure that both parties are conversant in their roles and responsibilities.

**INCORPORATE TRAILS IN ALL NEW VILLAGE SUBDIVISIONS AND DEVELOPMENTS**

The Village of Corrales should amend the development review process to include participation of the newly appointed Trails Coordinator or Trails Implementation Committee in the review process to ensure compliance with trail-related ordinances and the Trails Master Plan. Before a project is accepted, require that the trail construction is inspected by a Village Administrator or designee of the Trails Implementation Committee. The Village should consider construction bonding as a possible strategy for ensuring the trail is developed to Village standards.

**INVENTORY EXISTING EASEMENTS; SECURE ADDITIONAL PUBLIC ACCESS EASEMENTS**

The Village should hire a right-of-way agent/property title examiner to perform a thorough plat record and property title research to confirm the existing public right-of-way, trail easements, and private drainage and irrigation easements in the Village. Alternatively, this task might be accomplished through an internship position with limited oversight from a real estate or title expert. Plat records that are not on file in the Village Offices should be purchased from Sandoval County Maps and Records. The Village should consider digitizing the subdivision plat records and requiring digital submittals for future subdivisions for ease of review.

The Village should seek legal help to investigate the feasibility of modifying existing private access and drainage easements into public, non-vehicular access easements, as well as the possibility of securing additional trail access easements in narrow or dead-end road rights-of-way.

**SURVEY CORRALES ROAD**

Because residents and user groups have consistently identified the development of non-vehicular routes along Corrales Road as a high priority action item, the Village should continue to pursue this opportunity. The Village will have to work closely with property owners that have structures in near proximity to the road to determine a suitable course of action.
C. TRAIL IMPROVEMENT PROCESS SUMMARY

The impetus for initiating a specific trail improvement can come from a trail-advocacy group organizing around a key need, or from the Village Administration identifying the importance of a specific improvement. The Trails Master Plan provides direction for the prioritization of trail improvement projects based on a set of prioritization criteria and shall serve as a guide to the selection of projects for implementation (see Prioritization Analysis in Chapter 3). There are several important steps in the successful implementation of a trail improvement project: determining the appropriate type of trail improvement, gathering public support, coordinating with outside agencies, securing funding and necessary permitting, design development, construction, and ultimately, ongoing maintenance.

The primary design decisions for built trail improvements are the type of trail surfacing and the typical trail width. For each of the trail routes proposed in the Master Plan Map, recommended trail surfacing and width have been identified (see Chapter 5 “Design Guidelines” for further detail). The alignment of paved roads within the public right-of-way was an important factor in assessing the appropriate trail type and width. In many locations where a desired route was identified through the public involvement process, but not included on the Master Plan Map, the available right-of-way was insufficient for a trail. In these locations, an overwhelming degree of neighborhood public support will be required before the Village can initiate an easement acquisition process. All trail design should follow the standards in Chapter 5 – Design Guidelines.

When developing new trails, the public involvement process is a critical component for overall success. The Village should make every effort to alert the public of trail implementation plans in the early stages of trail development. This will provide affected parties with the opportunity to comment on the proposed development. In most cases, the proposed trail improvements identified within this plan fall within the public right-of-way or on already platted easements and should not require additional easement donation or acquisition.

In addition to public support, inter-agency support will be essential to the implementation of many of the proposed trail improvements. The New Mexico Department of Transportation (NMDOT), the Middle Rio Grande Conservancy District (MRGCD), and the Southern Sandoval County Arroyo Flood Control Authority (SSCAFCA) own and/or manage many of the key potential trail corridors throughout the Village. As with public involvement, agency involvement should occur in the early stages of the trail development process. While these agencies have all indicated a general willingness to coordinate with the Village on trails projects, they will need to know the specifics of individual trail improvement proposals before approving them. In order to avoid misunderstandings or pitfalls, inter-agency coordination should be an on-going process throughout the development of each trail implementation project from inception to construction. Inter-agency coordination is discussed further under “Partnerships” below.
Depending on the specific trail improvement project, funding needs will vary greatly. Some projects may be implemented with relatively little funding due to dedicated volunteer labor sources or minimal materials costs, while others will require substantial engineering and professional construction services. Funding sources can come from private donors and volunteers, corporate donors, grants, and local, state and federal allocations. Trail funding options are discussed more extensively in Appendix E – Funding Sources. Trail improvements may also require local, state, and/or federal permitting.

The design development process begins with collecting the property records along a proposed trail route. Each plat along the corridor needs to be reviewed to verify that there is adequate space for the typical trail section. It is advisable to notify all affected property owners at this point in the process to prevent delays in the future. Broad support from the Governing Body, trails advocates, neighborhood associations, and trail related groups will greatly improve the chances for success in trail development. Design development can occur within the Village through coordination between Public Works, Planning and Zoning, and volunteer groups; or may require hiring outside design consultants.

When the funding and/or volunteer resources for implementing a trail improvement project are in place and design development is complete, the next step is trail construction. Most soft-surface trails can be constructed by volunteer groups with the guidance of an experienced trail builder. Paved trails require more construction expertise and specialized equipment, and will generally include sub-grade preparation, the installation of base course, and the laying and compaction of the all-weather surfacing. Paved trails can potentially be constructed by the Village’s Public Works Department or may need to be put out for bids by qualified contractors.

**PARTNERSHIPS**

Forging partnerships with regional and state agencies to further common goals will be critical to the success of Corrales’ Trail System. Agencies with compatible or overlapping jurisdiction include:

- The Cities of Albuquerque and Rio Rancho – regional trails
- The New Mexico Energy, Minerals, and Natural Resources Department (EMNRD) – statewide trail system
- The Mid-Region Council of Governments (MRCOG) – multi-modal transportation and trails
- The New Mexico Department of Transportation (NMDOT) - Scenic Byways Program and Safe Routes to School Program
- The Middle Rio Grande Conservancy District (MRGCD) – irrigation facilities
- The Southern Sandoval County Arroyo Flood Control Authority (SSCAFCA) and the Albuquerque Metropolitan Arroyo Flood Control Authority (AMAFCA) – flood control facilities
The Management Team should accomplish inter-agency coordination regarding trail related issues on an ongoing basis. The Management Team would also convene to advise the Village on the development of new trails (see A. Administrative Recommendations, this chapter).

PROGRAM RECOMMENDATIONS

The following recommendations are for trails-related programs and events that would complement the development of a Village-wide trail system:

- Trail Safety – Start a Neighborhood Trail Watch Program; Implement educational events and media outreach
- Shared Use Facilities Education – Host trail event days; Install trail etiquette signage; Conduct media outreach
- Resource Management – Monitor Bosque Preserve for increased use impacts; Develop management strategy to protect natural resources
- Trail Volunteer Maintenance – Organize an Adopt-a-Trail Program

D. TRAIL DEVELOPMENT POLICIES

TRAIL DEVELOPMENT

Revise and update the trail project prioritization schedule and Action Plan every three to five years.

Policy 2: Design Guidelines.
By the adoption of this plan, the Trail Design Guidelines will be accepted as the guidance on trail development, modifying Ordinance 07-016, Pedestrian Access.

Policy 3: Enabling Volunteers.
The Village of Corrales shall provide a legal agreement for trail volunteers, which indemnifies the Village against claims arising from the volunteer activity as well as indemnifying the volunteers from liability arising from trail use. All volunteer trail work shall be inspected by Village after completion, and once accepted, the Village will accept responsibility for the trail improvements.

Policy 4: Land Acquisition.
Enforce the existing subdivision trail dedication ordinance by requiring that any new land subdivision or development that occurs adjacent to a designated trail, in a trail study area, or adjacent to a regional destination or open space, as shown on the Trail Master Plan Map, shall
provide a trail easement dedication as well as the construction of the trail (or equivalent monetary fee to Village for construction) in the accordance with the intent of the Plan.

**POLICY 5: DRAINAGE EASEMENTS.**
If a trail is to be dedicated in conjunction with a drainage easement, that drainage easement shall include an additional minimum 10’ width dedicated outside the floodplain on at least one side of the drainage way, to be used as a trail easement.

**POLICY 6: ROAD REDUNDANCY.**
The Village shall pursue the consolidation of two abutting parallel roadways into a single public road right-of-way with a parallel trail.

**ADJACENT PROPERTY**

**POLICY 7: ENCROACHMENT.**
Private encroachments into the public right-of-way are not permitted. Where such encroachments interfere with the use of or development of a designated trail, the property owner will have 90 days from first notification to remove the encroachment. If the issue is not resolved, Village of Corrales Public Works will remove encroaching material and may seek reimbursement from the landowner, as appropriate.

**SAFETY**

**POLICY 8: PARKING.**
The Village of Corrales may take steps to control parking at trail access points in order to assure public safety.

**POLICY 9: GENERAL SAFETY.**
The Village shall provide a safe and interconnected trail system through construction and regular maintenance of trails.

**POLICY 10: ENFORCEMENT.**
The Village Police shall enforce appropriate trail use and motorist compliance with trail-related regulations adopted by the Village of Corrales.

**POLICY 11: SIGNAGE.**
The Village shall install appropriate signage and markings to identify constructed trails and designated trail routes, and repair the signs and painted street markings when faded or damaged.
Policy 12: Preventing Illegal Activity.

Neighborhood Crime-Watch activities are an effective way of preventing illegal activity related to trails. The Village will support the activities of such groups by placing standard “Crime Watch Community” signage when requested by an established neighborhood watch group.

MAINTENANCE

Policy 13: Maintenance Schedule.

The Village shall develop and implement a trail maintenance schedule that is feasible for the Village to accomplish and fund. The Village should perform an inventory of conditions of trails and update GIS database with new trail construction on a regular basis.

Policy 14: General Maintenance.

The Village shall promote and fund trail maintenance activities, in conjunction with trails volunteers to the extent possible.

Policy 15: Bicycle Lanes.

The Village shall sweep and maintain on-street bicycle facilities in conjunction with street maintenance to provide a clean, safe riding surface.

E. TRAIL USE POLICIES

The purpose of these policies is to establish rules for the use of the Village of Corrales Trails. These policies may need to be adopted into the Corrales Uniform Traffic Code in order to be enforceable by the Police Department.

Policy 1: General.

Users shall be provided with posted trail etiquette rules and shall adhere to said rules. Camping, hunting, and the building of fires shall not be permitted. Users shall be provided with posted procedures for reporting vandalism and unsafe trail conditions to the appropriate agencies/authorities.

Policy 2: Motorized/Electric Vehicles.

Motorized/Electric Vehicles including mopeds, scooters, and motorized skateboards are prohibited with the following exceptions:

1. All wheelchairs including electric wheelchairs shall be allowed on trails, including other electric vehicles for the mobility impaired, including “segway” type vehicles. The maximum speed for electric vehicles for the mobility impaired is 10 MPH, which shall be posted.
2. The following shall be permitted: fire, police, ambulance, or other emergency vehicle in emergencies or when needed for enforcement, emergency aid, fire suppression or other purposes of this nature.

**Policy 3: Bicycles on Roadways.**
Bicycles shall be allowed on roadways except where explicitly prohibited. Prohibitions/exclusions may include heavily travelled automobile commuter routes during peak travel hours. However, the Village shall make every effort to provide parallel bicycle facilities where such exclusions are made. Bicyclists on roadways shall follow applicable traffic rules and always travel in the same direction as vehicular traffic.

**Policy 4: Animals on Trails.**
Horses and leashed dogs are permitted on trails. Owners must retain complete control of their animals at all times. Dog owners must clean up after their animals. Rules regarding animals shall be posted at all trailheads, kiosks, and major intersections.

F. MEASUREMENT OF SUCCESS

Focus Group members were asked to identify what they would need to see to know that the trail planning was successful. They came up with the following list of measurements of success:

- Adopting the Trails Master Plan and Trail Map by the Village Council by ordinance.
- A Village commitment to budgeting and staffing for trail construction and maintenance; administrative structure
- Conservation easement acquisitions
- Trail development bonds
- A tax benefit for easement donations
- A trail map that has sufficient community and political support to be publicly displayed
- A schedule of, and actionable items for, trail development
- A supportive Village Council willing to implement the trail plan
- The construction of a trail or trails that is/are multi-purpose and that address the needs of all user groups. A demonstration project for each trail type should be identified and built as soon as possible, with input from the predominant user groups for each trail type
**Design Guidelines**

### A. Guiding Themes

Several guiding themes for the development of trail design standards for Corrales have emerged from community feedback gathered through the Public Open House and focus group meetings. These themes can be summarized as follows:

**Commercial Core Pathway**

Provide a safe, paved path along Corrales Road.

**Unpaved Surfacing**

With the exception of a paved pathway in the commercial core on Corrales Road, major routes of regional significance, and on-street bike lanes, develop trails with unpaved packed earth or crusher fines surfaces for the ease of construction and maintenance by volunteers; for equestrian use; and for the preservation of the rural character of the Village.

**Education and Signage**

Educate drivers and trail users about safety and courtesy issues through increased and improved signage and roadway crossings.

**Separate Facilities**

Where possible, separate bicyclists from equestrians and pedestrians. Parallel facilities, such as striped bike lanes on roadways alongside unpaved trails on roadway shoulders, are desirable.

### B. Multi-Use Trails in Corrales

In the Village of Corrales, all public rights of way shall be open to pedestrian, equestrian and bicyclist use unless expressly prohibited due to public safety considerations. Alongside motor vehicle traffic lanes, trails and pathways should be left as unpaved and unsurfaced packed earth whenever possible. In a few high-traffic areas, it may be desirable to create paved or surfaced multi-use trails and designated bicycle lanes or paths.
In the Village of Corrales, as is true throughout the nation, finding solutions to the wants and needs of multiple user groups is a serious challenge. Feedback from Corrales residents has indicated a preference for separate parallel facilities where feasible. However, acquiring sufficient right-of-way to provide adequate widths and safe separations for parallel trails throughout Corrales would be cost prohibitive at best, and simply impossible within some developed portions of the Village. Instead, this plan recommends the implementation of three trail system components in various combinations according to right-of-way conditions and regional significance. These three components are Soft-Surface Multi-Use Trails, Paved Multi-Use trails, and On-street Bike Lanes. Wherever possible, the implementation of a parallel paved and soft-surface trail is preferred; however, space constraints and other roadway conditions will make some locations better suited to other configurations. Regardless of the level of separation attainable, human nature is such that exclusion of certain user groups in favor of others will be difficult to achieve (or at least enforce) and may be politically unpopular. Therefore, some level of multiple-use must always be anticipated in any trail design.

TRAIL CLASSIFICATIONS

Three trail system components are appropriate for implementation in Corrales: Soft-Surface Multi-Use Trails, Paved Multi-Use Trails, and On-street Bike Lanes. The ability to combine these components in a variety of configurations according to right-of-way conditions and regional significance provides a flexible system for addressing the needs of various user groups.

Paved Multi-Use Trails

8’ – 10’ minimum width, up to 14’ wide (where feasible) for extremely high-use facilities, such as the proposed regional trail extension along Loma Larga. Trail Planners/Designers are referred to the AASHTO Guide for the Development of Bicycle Facilities (1999 or latest version) for additional criteria and considerations applicable to paved trail design.

Soft-Surface Multi-Use Trails

6’ minimum width recommended, however, as narrow as 4’ may be allowable in constrained areas, for short distances. The USDA Trail Construction and Maintenance Notebook (2007 or latest edition) provides valuable guidance for developing unpaved trails.

Bike Lanes

5’ minimum width paved shoulders on both sides of the road, clearly delineated with striping, bicycle symbols, and directional arrows. The AASHTO Guide also provides recommendations for design of bike lanes.
C. TRAIL SURFACING CONSIDERATIONS

UNPAVED TRAILS

Feedback from the public Open House and the focus group meetings has indicated a general preference for the implementation of unpaved or natural surface trails in the Village of Corrales. Conditions of existing dirt in the Village range from hard packed to extremely soft. In many cases, the existing native soil is suitable for surfacing unpaved trails; however, in instances of excessively clayey or sandy soils, imported materials may be desirable. These could include 3/8” or smaller angular gravel, crusher fines, decomposed granite, or other suitable soils (e.g. sandy loams) which remain firm underfoot in both wet and dry conditions. A three- to four-inch layer of these imported materials should be adequate in most instances if subgrade soils provide adequate support (greater depth or stabilizing geotextiles may be required over loose sand or silt). Where greater stability is desired, or erosion may be an issue, stabilizing binders can be added to either existing or imported soils to provide a more durable surface. Solid edgers should only be used if subsurface conditions allow for rapid drainage to avoid trapping water within the trail tread. Unpaved trails should be separated from paved trails within the same corridor as far as possible, given right-of-way constraints.

ASPHALT

Asphalt is the most widely used surfacing for paved trails in New Mexico, due primarily to its relatively low cost, and ease of installation and maintenance. It also offers a smooth surface, if installed correctly, and holds up relatively well over time, since it is not subject to the degree of frost heave or other environmental degradation often encountered in harsher climates.

The primary concerns with asphalt trail surfaces in New Mexico are oxidation (loss of asphalt binder) due to sun and rain exposure, and shrinkage cracking over time. Both of these problems can be minimized through modification of the pavement mix to increase the amount of asphalt binder in relation to the aggregate, as compared to a standard roadway mix. Care should be taken, though, not to increase the binder content to the point that the surface becomes sticky or difficult to finish.

Surface thickness also affects the durability of asphalt. Since the design of asphalt surfacing is generally based upon vehicular loads, two inches is usually considered more than adequate to support bicycle and foot traffic. However, since bicycles are not heavy enough to provide the “kneading action” of automobile traffic (which helps hold asphalt roadways together), surface integrity relies solely on the tensile strength of the asphalt binder. Current thinking generally holds that increasing the thickness of the asphalt surface will in turn increase durability and help reduce cracking. Therefore, the recommended design thickness for trail surfacing consists of 3” of asphalt over 8” of compacted subgrade. In areas with soft (sandy or high clay content) subgrade material,
the addition of 4” of engineered base course beneath the asphalt is recommended. Final determination of subgrade treatment should be made by a qualified civil or geotechnical engineer.

Surface quality and “rideability” of asphalt can be adversely affected by root intrusions and even penetration by tenacious weeds such as soap weed yucca and purple nightshade. This can be minimized by the use of pre-emergent herbicides prior to placement of the asphalt. However, care should be used to avoid overspray damage to adjacent areas.

CONCRETE

Although typically more expensive than asphalt, concrete trail surfacing is gaining popularity in many locales. The State of Colorado, for example, specifies concrete almost exclusively for its bicycle/multi-use trails, due primarily to its longer lifespan and greater durability in their harsh climate. Perceived shortcomings such as the more “urban” character of concrete and its stark “whiteness” can be ameliorated through the addition of coloring to more closely match the surrounding soils. This may be particularly appropriate in coloring to more closely match the surrounding soils. This may be particularly appropriate in locations such as along Corrales Road, where additional asphalt is undesirable, and stabilizing soil binders have been tried and deemed unacceptable for a pedestrian pathway. The other main complaint against concrete - - the repetitive “bumps” often experienced when riding over the evenly-spaced joints - - can be eliminated by cutting control joints with a sawblade, rather than using a jointing tool. This results in a much smoother surface with joints that are virtually imperceptible to bicycle tires.

ALTERNATIVE SURFACING OPTIONS

Environmentally-friendly variations on traditional pavement are also becoming more readily accepted and available. One such variation involves the use of recycled materials (such as shredded tires, plastic, or even crushed glass) in place of a portion of the normal stone aggregate in asphalt or concrete. Another removes the “fines” (smallest components) from the mix aggregate to create a porous pavement, which enables water to pass directly through the pavement and infiltrate into the ground below, thus minimizing runoff. Firestone has recently combined these approaches by developing a flexible pavement made almost entirely out of recycled tires. Other alternatives which are gaining acceptance as naturalistic, yet stable trail surfaces involve the use of organic or synthetic binders to form pavements using native soils. These may be appropriate for trails where a durable, accessible surface is desired; however, local experience has shown that they may not be suitable for locations subject to frequent vehicular traffic. In any case, sound engineering judgment should be used in determining suitability of materials for trail use on any given project.

DRAINAGE

In general, drainage design for trails does not differ greatly from drainage design for roadways. Nonetheless, a few key principles should be highlighted here:
• Trail surfaces should have a 2% min. cross slope, and uniform surface planarity (no depressions or “bird baths”) in order to prevent water ponding on the trail
• Interception ditches should be provided on the uphill side of trails which traverse slopes or hillsides, to prevent runoff from washing sediment onto the trail or creating gullies across it
• Drainage grates or other structures should be sized and/or located so as not to interfere with trail traffic (narrow bicycle tires in particular).
• Culverts should be sized adequately to pass expected flows and allow for easy maintenance, including removal of debris. Minimum culvert size should be 12” diameter; 18” diameter is preferred for maintenance purposes.

D. ROADWAY CROSSINGS

Roadway crossing safety is a primary concern for all Corrales trail users. Citizens report that the current striped crosswalks and crossing signage on Corrales Road and Loma Larga are simply not effective; drivers breeze through crosswalks and crossing regulations are not consistently enforced. In order to create Village-wide trail loops, provide access to desired destinations, and increase pedestrian usage of the commercial core, the creation of safe crossings at Corrales Road and Loma Larga is essential. A combination of the following traffic calming techniques is proposed for improving crossing safety in the Village.

The Institute of Transportation Engineers (ITE) defines traffic calming as a “combination of mainly physical measures that reduce the negative effects of motor vehicle use, alter driver behavior, and improve conditions for non-motorized street users.” These measures may include changes in street alignment, installation of barriers, and landscaping to reduce traffic speeds and/or cut-through volumes in the interest of street safety and livability. ITE’s website provides an overview of specific traffic calming measures and their impacts.

CROSSING TREATMENTS

RENOVATION OF EXISTING CROSSWALKS
As discussed above, the Village’s existing crosswalks are not effective. In many cases, painted striping has faded to the point where it is no longer readily apparent. Generally, crosswalks in school zones are marked with ladder or zebra-striping, as is currently the case in Corrales. The use of a similar ladder or zebra-striping pattern on non-school zone crosswalks would give them a stronger presence than simple parallel line markings. Durable striping material, bold striping patterns, and regular maintenance of crosswalks will increase visibility and awareness. Additionally, the use of reflectorized thermoplastic striping in place of painted striping would provide more visibility in low-light or nighttime conditions. Thermoplastic will generally last longer and fade less than paint, as well. In any case, monitoring of crosswalk conditions and as-needed maintenance will help to keep crosswalks visible and effective.
**Raised Crossings**

Raised crosswalks, or speed tables, are long raised speed humps with a flat section across the middle and ramped sides. Raised crossings serve the dual purposes of reducing vehicle speeds (although less than speed humps/bumps) and of raising the crossing area for pedestrians, increasing their visibility and the likelihood that a driver will yield (http://www.ite.org/traffic/table.asp). Raised crossings have been shown to decrease vehicular speeds and lower accident rates. The addition of raised crossings can also lead to reduced traffic volumes as drivers seek alternate routes. This may have adverse affects in increasing traffic volumes on other streets. The addition and placement of raised crossings should be considered carefully prior to implementation in order to understand their potential impacts on Village-wide traffic patterns.

**Pedestrian/Equestrian Actuated Signals**

Pedestrian/Equestrian actuated signals vary in scale and purpose and can consist simply of a flashing light to indicate a pedestrian presence in the roadway or can incorporate yellow and red lights requiring drivers to yield and/or stop. Lights may be mounted overhead or imbedded in the pavement for additional visual impact. Various activation methods are also available, including traditional push-button activation or a new generation of targeted, adjustable, motion sensor activators. Solar powered options are available to eliminate the need to connect to the electrical grid. As with raised crossings, the impact of pedestrian/equestrian actuated signals on Village-wide traffic patterns should be carefully considered, especially where times of high pedestrian use correspond with vehicle rush hours. Focus group participants have indicated a desire for the installation of up to three pedestrian/equestrian actuated signals along Corrales Road. Suggested locations include the south end of the Village at the intersection with Cabezon, the center of the Village near the Post Office, and an unspecified location at the north end of the Village.

**Center Refuge Islands and Bulb-outs**

In addition to raised crossings, several other physical changes to the roadway can add to pedestrian safety and serve to slow or reduce traffic. Bulb-outs or neckdowns can be installed at intersections or mid-block crossings to reduce pedestrian crossing distances and slightly narrow the roadway, causing traffic to slow through congested areas. Alternatively, median refuge islands can be installed to provide a place for pedestrians to stop mid-way through crossing the street. Median islands also narrow the roadway and serve as a visual indicator for drivers to slow down and be alert to their surroundings. These applications may have limited suitability for use on Corrales Rd. due to existing space limitations.

**Increased and Updated Signage**

Current crossing signage in the Village simply indicates a potential pedestrian presence in the roadway. More forceful signage should be implemented to indicate unambiguously that motorists are required to yield to pedestrians. The Manual on Uniform Traffic Code Devices (MUTCD) Signs R1-5, R1-5(a), and R1-6 are intended for use in advance of marked, unsignalized mid-block crosswalks, which are the type of crossing most commonly employed in Corrales, and explicitly state “YIELD HERE TO PEDESTRIANS.”
ENFORCEMENT OF CROSSING REGULATIONS

The strict enforcement of speed limits and crosswalk regulations is key to improving pedestrian, equestrian, and bicyclist safety in the Village. A highly visible education campaign and crackdown on drivers who do not stop for pedestrians can be used to increase awareness and establish the Village’s ‘new stance’ on crossing violations. Relevant warnings would be an appropriate addition/companion to the existing “Drive slow, see our Village. Drive fast, see our judge.” signs. Informational articles in the “Corrales Comment” or other applicable publications would also be helpful to bring the issue to the public attention and to serve as an update and reminder of crossing regulations.

E. SIGNAGE

Development of a consistent signage package is an important element in the creation of a unified and recognizable trail system in the Village of Corrales. Signage can be grouped broadly into two categories: regulatory and informational. Regulatory signage includes warnings, regulations, and directives applicable to trail use in general (Stop, No Motor Vehicles, Trail Etiquette, etc.), while informational signage would refer to a signage package specific to a particular trail and location, providing information such as the trail name (especially at designated trailheads), connections to other trails or facilities (through maps or directional arrows), and distances to key destinations. In an effort to expand trail accessibility, these signs also often include information such as trail length, grades, cross slopes, and obstacles which may be encountered. (Additional information on accessibility and trail difficulty ratings is available from the Federal Access Board [www.access-board.gov]).

Regulatory signage should be placed where most visible and effective, and should be grouped, where practical and appropriate, to minimize the number of posts (potential obstacles). In some cases, free-standing signs may be replaced by pavement markings, for the same reasons. (A specific example would be to replace “Stop Ahead” signs with the same message painted on the trail surface. See Pavement Markings discussion below.) Sizing and placement should be in accordance with the most recent version of the Federal Highway Administration’s Manual on Uniform Traffic Control Devices (MUTCD) Part 9, Bicycle Facilities.

Informational signage should be developed with a logo or theme. A signage package with a standardized mounting system and graphic medium which can be easily modified or replaced as the trail system grows is recommended. Creativity and customization of the trail-specific informational package, post (or alternative mounting) configuration and thematic colors are encouraged, in order to develop an individual identity for the Corrales Trails.
PAVEMENT MARKINGS

Pavement markings will, of course, only be appropriate on the On-Street Bike Lanes and Paved Multi-Use Trail components of the Corrales trails system. In general, pavement markings supplement or reinforce the regulatory signage, and are comprised of striping, text, and/or stenciled figures. Centerline striping may be used to help define directions of travel or separate different user groups on multi-purpose trails, while edge striping gives trail users visual reinforcement of the limits of the trail surface, which is particularly valuable in low light conditions (especially if a potentially hazardous condition exists beyond the edge of the trail). Text is generally intended to convey warnings of changing conditions ahead, although it is sometimes used in place of vertical regulatory signage (such as “Yield” signs). Figures usually take the form of arrows or other symbols, or may be used to designate portions of the trail for different modes of travel.

Striping along a trail should be consistent, as any change in color, thickness or width can be perceived as an indication of an expected change in trail conditions. An example of this would be changing from dashed to solid striping on sharp curves which require cyclists to slow down. Placement of text on the pavement, rather than on post-mounted signs, can reduce potential vandalism and/or graffiti targets; however, they are more easily overlooked, and are also easily obscured by snow or wind-blown debris. Therefore, critical signage such as “Stop” signs should still be provided on posts alongside the trail.

Both AASHTO and MUTCD provide additional guidance on striping bicycle facilities.

F. TRAIL ACCESS

ACCESS CONTROL

The conditions of access points to existing trails facilities in Corrales vary widely. The development of access point design standards will aid in the creation of a trail system identity, the dissemination of trail safety and courtesy information, and the implementation of access control measures. Focus group participants were asked to describe an ideal trail access point to the Bosque, the Thompson Fenceline Trail, or the MRGCD ditches. In response, the group indicated a desire for clear signage indicating no motorized vehicle access. They also recommended the use of cavaletti/horse walk-overs for motorized vehicle access restriction in combination with “U walk-through”/maze configurations, for wheelchair access and parents with strollers. Where space is limited, a simple bollard or guard post centered on the trail, with a 36” clear opening on either side will provide maximum access for all users and levels of ability, while excluding automobiles and discouraging ATVs.
TRAILHEAD PARKING

One of the Village’s goals is to provide a trail network which offers ready access to and from all parts of Corrales, thereby enabling a reduction in automobile usage. Nonetheless, due to gaps in that developing system, as well as simple human nature, the fact remains that some people do, and will continue to use vehicles to get to the trails. As a result, it is a good idea to provide some level of parking facilities at key trailheads and other major access points along the Village’s trails.

Currently, people park informally at the ends of Rincon and East Ella for Bosque access, while formal parking is provided at several MRGCD access points including the “north beach” Rio Grande access, Romero Road, along the Cabezon Channel at Corrales Road, and on both sides of the river at the Alameda Bridge. When asked about the need for trailhead parking, focus group participants did not see a very high demand for additional facilities; it was indicated that the existing parking at the MRGCD’s Romero Road facility was rarely full. However, they felt that having a few designated, signed parking areas (maybe three; south, middle, and north) might help to calm people’s fears about unauthorized parking on residential streets. Those streets could be signed “no parking” with additional signage indicating where official parking areas are located. The group was confident that these areas would be sufficient if they were clearly identified on the trail plan. One parking possibility suggested at the Public Open House was to approach the MRGCD about the possibility of burying/abandoning the Corrales Interior Drain and converting all or portions of that corridor to trail and/or trail parking use. (MRGCD has indicated that additional research may be needed to ascertain that this is possible, but that they would be willing to review specific plans or proposals.)

At a minimum, parking should be provided for cars, with additional spaces provided for horse trailers at trails likely to see equestrian usage (e.g. at the Alameda Trailhead). The size/capacity of each parking area should be determined based upon projected usage of nearby trails. Parking lots serving accessible trails should have at least two accessible, hard-surfaced, parking spaces, with a paved access route to the trail, even if the remainder of the parking lot is gravel surfaced.

G. TRAIL AMENITIES

The provision of amenities such as benches and/or tables, trash receptacles, lighting, water fountains, shade structures, and even restrooms tends to make trail use more enjoyable, especially on longer trails. Trail-related amenities can range from minor to major, both in terms of initial installation costs and long term maintenance issues. A major trail improvement might include a restroom facility with a water fountain, as well as benches, bicycle rack, and a trash receptacle. In Corrales, these major amenities will typically be provided at existing facilities, such as the Community Recreation Center, the Public Library, and the schools. Minor improvements, on the other hand, might include benches (or even sitting-height boulder groupings) or trash receptacles, alone or in combination, situated at intervals along the trail. Shade structures – always welcome in the Southwest climate – and directional signage packages fall in the mid-range of the amenity scale.
Lighting may be used for visual accent, as well as providing additional security in areas of concern, such as tunnels or other isolated locations. Fixtures should be vandal resistant and should be placed where they most effectively illuminate the trail (or key features within the corridor), without shining in trail users’ eyes. They should also be designed and/or located in such a way as to shield nuisance light and minimize impact on adjacent properties. AASHTO provides additional recommendations for lighting in its Guide for the Development of Bicycle Facilities.

Development of trail amenities should follow a conscious plan whereby major amenities are grouped in nodes at key locations, while minor amenities are consistently found along the length of each trail. Styles of amenities should be compatible with adjacent development or closely allied with other amenities found along the length of the trail, in a thematic arrangement. Materials for benches, trash receptacles, tables, and such, must be of durable materials and should be designed (or coated) for easy graffiti removal. Use of recycled materials is encouraged wherever possible.

LANDSCAPING

Landscaping along trails typically will fall into one of two categories: revegetation or enhancement. At a minimum, disturbed land within trail corridors should be re-seeded with native grasses (and wildflowers, where appropriate). The City of Albuquerque’s Standard Specifications Section 1012 lists two generic seed mixes (for sand or clay soils) which are suitable for use in Corrales, with the condition that the shrub component (four-wing saltbush) be eliminated from seeding alongside recreational trails (however, the inclusion of xeric shrubs in the seed mix may be desirable for slope stabilization in areas of significant cut or fill). The addition of wildflower seed to a revegetation mix will provide color and seasonal interest to the trailside, and is particularly effective where the seeding can take advantage of any available supplemental water (e.g. sprinkler overspray from adjacent properties, collected storm water, etc.).

More intensive “enhancement” landscaping may be appropriate for high use areas; perhaps at an important trailhead, through a neighborhood development, or in conjunction with a major trail amenity/improvement as identified above. The viability of such landscaping is dependent upon the availability of water and electricity (or alternative power) for an irrigation system, and the establishment of a maintenance agreement with a Village agency or volunteer group, prior to implementation.

Regardless of the type of landscaping considered, shoulder and clear-zone requirements should be followed. Native seeding should be kept back two feet from the edge of the trail, in most cases, to allow for the graded, compacted shoulders. Trees are encouraged along trails for the shade that they provide; however, they should be planted at least four feet back from the edge of trail (to maintain the three-foot clear zone at maturity), and further, if possible, to minimize root damage to the trail surface. Likewise, shrubs should be located such that their branches do not interfere with the trail as they mature. Plant materials in general should be selected for people- and trail-friendly
characteristics: thorny plants, trees which tend to drop messy fruit/seeds/pods (which could affect surface traction), and heavy pollen-producers should not be used alongside trails.

H. MAINTENANCE

Maintenance of a Village Trails System is complicated by the multiple jurisdictions potentially encompassed by the system. As discussed above, the MRGCD owns and operates the ditch and drain system throughout the Village. Additionally, SCAFCA owns and manages lands potentially viable for trail construction within the Village and the NMDOT owns and maintains Corrales Road (NM 448). Coordination with these entities will be necessary for the development of trails management and maintenance agreements.

The lack of a designated Village agency responsible for trail management and maintenance also raises coordination issues. Possible solutions include:

- Increasing the capacity of Public Works or Parks and Recreation Department so that they can maintain trails.
- Creating a Village agency whose primary responsibility is to maintain and promote trails in Corrales.
- Promoting the creation of a non-profit trails organization to maintain and support trails.

MAINTENANCE GUIDELINES

PAVED TRAILS

Routine Maintenance

i) Vegetation control- monthly or every other month during growing season depending on rainfall and growth rates
   (1) mowing- mow shoulders of trail to between 3-5’ beyond trail edge; following mowing, sweep or clear trail of all debris
   (2) vegetation removal- remove encroaching vegetation from edge of trail area, and remove or spray for noxious weeds such as goatheads, kochia, tumbleweed, and saltcedar.

ii) Litter removal- monthly clearing of trash along trail corridor; this service could be provided through volunteer or community service programs, or the Adopt-a-Trail program.

iii) Sweeping- as needed, clear trail surface of all gravel, sand, leaves, twigs or other obstacles to safe trail use
Periodic Preventative Maintenance

Yearly Maintenance

a. Facility evaluation - evaluate current trail conditions and perceived future maintenance needs including all categories of this maintenance document

b. Clearing drains and culverts - clear culverts and drains of debris (especially important during monsoon season)

c. Sign replacement - repair or replace damaged or missing signs

d. Bollard repair and maintenance- repair or replace bollards (guard posts) or hardware associated with removable bollards

e. Railing and furniture maintenance- repair or replace damaged railings and furniture

f. Erosion control - repair erosion scars and provide erosion control along trail to prevent increased future maintenance or unsafe trail conditions

g. Shoulder repair - inspect shoulder for erosion or damage and regrade as needed to maintain shoulder flush with trail surface

Every Other Year

a. Crack repair - fill 1/8” or greater spread cracks in the trail surfacing, (see COA Technical Specifications, section 350- Asphalt Trail Crack Repair and Resurfacing)

b. Painting and sealing- as needed seal or treat exposed wood; paint or touch-up painted surfaces such as trail signage, trail striping, cautionary markings, railings, and furniture

Every Five Years

a. Sealing asphalt - apply a fog seal asphalt emulsion to retard oxidation of the asphalt, restore skid resistance, seal small cracks, provide additional moisture protection to the pavement, and retard raveling of aggregate from the surface.

Major Rehabilitation or Renovation

a. Mill asphalt- as needed mill edge of asphalt where interface with concrete or other surfaces has resulted in a raised edge greater than 1/4”

b. Resurfacing- every 20 yrs +, or as needed, resurface trails showing decline in surfacing integrity, and those beyond spot repair and fog coat revitalization, see COA Technical Specifications, section 350- Asphalt Trail Crack Repair and Resurfacing
On Demand/As Necessary

a. Safety issues- repair any conditions that pose a safety threat or liability

b. Graffiti removal- remove or cover graffiti on trails and associated structures

c. Vandalism- repair or replace damage due to vandals

d. Emergency repairs- repair damage due to weather, use, or other circumstances

UNPAVED TRAILS

Routine Maintenance

a. Litter removal- monthly clearing of trash along trail corridor; this service could be provided through volunteer or community service programs, or the Adopt-a-Trail program.

Periodic Preventative Maintenance

a. Trail evaluation- yearly evaluation of current trail conditions and perceived future maintenance needs including all categories of this maintenance document

b. Trail clearing- yearly, as needed clear the trail passageway of obstacles or potential hazards
   a. Brushing and pruning - remove all living or dead vegetation from the passageway (to a height of 10-12ft.) that may impede the safe, intended use of the trail
   b. Windfalls and deadfalls- remove trees which have fallen within the trail passageway
   c. Hazardous trees- remove or stabilize trees which are in danger of falling across the trail passageway

c. Trail Surface- yearly, as needed repair or clear the trail tread of obstacles or potential hazards
   a. Grubbing- remove roots from trail tread that protrude enough to allow daylight beneath them, or that have potential to create a tripping hazard, but leave roots which are causing no problems, as they help to stabilize the trail.
   b. Ruts and holes- fill or grade trail surface to repair ruts and holes greater than 3” deep, or those not easily visible to trail users
   c. Rocks- clear the trail tread of large rocks (over 3” diameter) that pose a tripping, or lose footing hazard to trail users

d. Erosion control structures- yearly clean and repair erosion control structures to prevent increased future maintenance or unsafe trail conditions
   a. Culverts- clear culverts of any debris blocking water passage, repair entry and exit slopes or rockwork, restore backfills over culvert to a minimum of 6” depth
   b. Bar ditches- clear debris and sediment from flow line of ditches
c. Waterbars- reset or repair waterbars that are loose or eroded, clear debris and sediment blocking waterbar drainage

e. Sign replacement- yearly, as needed repair or replace damaged or missing signs

**Major Rehabilitation or Renovation**

a. Rock cribbing, tread armoring, slope stabilization- as needed, build or add erosion control structures or trail reinforcing to improve wear and maintenance of trail surface

**On Demand/As Necessary**

a. Safety Issues- repair any conditions that pose a safety threat or liability

b. Emergency Repairs- repair damage due to weather, use, or other circumstances

**BIKE Lanes**

In general, bike lane maintenance should be done in conjunction with (and as an extension of) normal roadway maintenance. Specifically, this should include the following:

**Routine Maintenance**

a. Sweeping - monthly sweeping to clear the lane surface of all gravel, sand, leaves, twigs or other obstacles to safe trail use

**Periodic Preventative Maintenance**

**Yearly Maintenance**

a. Facility evaluation - evaluate current trail conditions and perceived future maintenance needs including all categories of this maintenance document

b. Clearing drains and culverts - clear culverts and drains of debris (especially important during monsoon season)

c. Sign replacement - repair or replace damaged or missing signs

**Every Other Year**

a. Crack repair - fill 1/8” or greater spread cracks in the lane surfacing, (see COA Technical Specifications, section 350- Asphalt Trail Crack Repair and Resurfacing)

b. Re-painting / Reapplication of pavement tape - paint or apply lane striping, directional arrows, and bike lane symbols

**Every Five Years**

a. Sealing asphalt - apply a fog seal asphalt emulsion to retard oxidation of the asphalt, restore skid resistance, seal small cracks, provide additional moisture protection to the pavement, and retard raveling of aggregate from the surface.
**Major Rehabilitation or Renovation**

a. Mill asphalt- as needed mill edge of asphalt where interface with concrete or other surfaces has resulted in a raised edge greater than 1/4”

b. Resurfacing- every 20 yrs +, or as needed, in conjunction with roadway resurfacing, resurface lanes showing decline in surfacing integrity, and those beyond spot repair and fog coat revitalization, see COA Technical Specifications, section 350- Asphalt Trail Crack Repair and Resurfacing

**On Demand/As Necessary**

a. Safety issues- repair any conditions that pose a safety threat or liability

b. Emergency repairs- patch potholes or repair other damage due to weather, use, or other circumstances
MAPS
• **Appendix A:**

**Acronyms and Definitions**

*AASHTO* - American Association of State Highway and Transportation Officials: advocates transportation-related policies including the “Guide for the Development of Bicycle Facilities” manual, 1999

*Accessible* - Describes a site, building, facility, or portion thereof that complies with Federal ADA Standards for Accessible Design

*ADA* - Americans with Disabilities Act

*AMAFCA* - Albuquerque Metropolitan Area Flood Control Authority: plans, builds, operates and maintains flood control facilities throughout the greater Albuquerque area. AMAFCA also establishes drainage policy and regulates development within its defined boundaries.

*Bike Lane* - A portion of a roadway that has been designated by striping, signing, and pavement markings for the preferential or exclusive use of bicyclists (AASHTO 1999)

*Bike Path* - A bikeway physically separated from motorized vehicular traffic by an open space or barrier and either within the road right-of-way or within an independent right of way (AASHTO 1999)

*Bike Route* - A segment of a system of bikeways, designated by the jurisdiction having authority, with appropriate directional and informational markers, with or without a specific bicycle route number (AASHTO 1999)

*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 1999)

*The Bosque Advisory Commission* - a citizen group that advises the Village of Corrales Governing Body and administration on issues related to the Corrales Bosque Preserve located along the Rio Grande (Village website)
CHAMP - Corrales Horse and Mule People: a private club that promotes public awareness of equestrian interests and works to ensure rider’s rights in Corrales and the surrounding area

CBPAC – Corrales Bicycle and Pedestrian Advisory Commission: a citizen group that advises the Village Governing Body on ways to encourage bicycle and pedestrian transportation, assists the Village in the acquisition of funding for safety education, programs and events, and assists the Village in the development of designated paths, routes, bikeways and lanes (Village website)

Corrales Bosque Preserve - a narrow riverside strip of Rio Grande Valley cottonwood forest that was annexed into the Village of Corrales in 1975 and was declared a protected area in 1978. The Village of Corrales Ordinance No. 234 defines the preserve and sets forth limitations on its use (Findley 2005)

Corrales Tree Preservation Advisory Committee - a citizen group, including at least one person trained or experienced in arboriculture, that advises the Village’s Planning and Zoning Commission on the designation of “Landmark Trees”

EMNRD - New Mexico Energy, Minerals, and Natural Resources Department

The Equestrian Advisory Commission - a citizen group that advises the Governing Body on ways to encourage preservation of equestrian trails and lifestyle, assists the Village in the acquisition of funding for trails and education, and advises and assists the Village in the development of designated paths, routes and trails (Village website)

Irrigation Ditch - One of the conveyance channels owned or operated by the MRGCD for the irrigation and drainage of the Rio Grande Valley. These ditches may consist of drains, laterals, canals, and acequias (COA Trails Facility Plan 1993)

ISTEA - Intermodal Surface Transportation Efficiency Act of 1991. The federal highway and transportation bill which provides funding for roads and other modes of transportation, including bicycle and pedestrian facilities (COA Trails Facility Plan 1993)

MRCOG - Mid Region Council of Governments

MRGCD - Middle Rio Grande Conservancy District: established by State law in the 1920s to alleviate problems in the Middle Rio Grande Valley related to drainage, flood control, and the consolidation of the irrigation systems in the Valley. MRGCD policy is established by an elected board

NMDOT - New Mexico Department of Transportation, formerly the NM State Highway and Transportation Department
**NPS RTCA** - National Park Service Rivers, Trails and Conservation Assistance

**Paved trail** - A trail surfaced with asphalt, concrete, soil cement, or other hard, stabilized surface (COA Trails Facility Plan 1993)

**SAFETEA-LU** - Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users

**SRTS** - Safe Routes to School: a citizen group that aims to increase the number of children walking and riding their bikes to school by raising awareness, identifying safe and easy routes, and improving route conditions.

**Soft-surface trail** - An unsurfaced natural trail or trail surfaced with compacted earth, crusher fines, bark, or gravel (COA Trails Facility Plan 1993)

**SSCAFCA** - Southern Sandoval County Arroyo Flood Control Authority: an independent corporate political body with an elected board empowered to undertake the acquisition, improvement, maintenance and operation of flood and storm water control facilities on streams and watersheds which enter, originate or cross the Authority’s facilities

**TEA-21** - The Transportation Equity Act of the 21st Century

**Trail** - A separate pathway designated by signs for use by non-motorized traffic only, including pedestrians, bicyclists, equestrians, and people who use wheelchairs. Not all trails may accommodate all of these uses. Trails may be either hard surface or soft surface (COA Trails Facility Plan 1993)

**Trail Study Corridor** - An area where a trail is desired, but no specific route has been identified as the most feasible at this time
APPENDIX B:

Public and Agency Input Summary

The Village and the consultant team hosted two community-wide public input events throughout the course of the project. The first was a Community Open House with 38 people in attendance. In preparation for the Open House, an ad-hoc group convened for the purpose of developing a draft vision statement for the trails system. Members of this group, in addition to other volunteers from the Open House, were invited to form a Focus Group. The Focus Group met four times to provide guidance on the development of the Trail Master Plan and the trail network. The second community-wide event was a Public Presentation and Feedback Meeting with 41 people in attendance. A Mayor-appointed Steering Committee also met twice to provide guidance and input on the planning process.

PUBLIC MEETINGS

PUBLIC OPEN HOUSE, SEPTEMBER 11, 2008

VISION STATEMENT

Prior to the Community Open House, an ad hoc group met to develop an initial vision statement for the trail system. The group discussed earlier trail planning efforts, and drew from the Trails Master Plan RFP to craft a preliminary vision statement to take to the Open House. At the Open House, community members were asked to review and revise the statement to reflect their vision of the trail system. The draft vision statement was then updated to reflect the contributions and concerns of the community members as communicated in the Open House meeting. This vision may continue to evolve through the process of developing the Trails Master Plan, and, as of 9/12/08, reads:

“The Corrales Trails are a system of trails utilizing public and private property to link a wide range of uses and users in a safe manner that supports alternative transportation and recreation. The Trails Master Plan will address the preservation, protection, and construction of trails; improved safety; improved connectivity; and the encouragement of healthy, outdoor activity. The Trails system will be implemented in partnership with multiple agencies and will be founded on consensus and sensitivity to the diverse viewpoints within the community.”
ISSUES & OPPORTUNITIES

In June 2008, a project initiation meeting was held with a Mayor-appointed Steering Committee made up of representatives from various trails-related citizen Advisory Commissions and Committees and elected officials of the Village of Corrales. This group compiled a list of opportunities and constraints related to the development of a trail system in Corrales. Further, opportunities and constraints revealed through previous trail planning efforts were included to incorporate the long history of trail planning efforts in Corrales. These lists were added to, revised, and commented on at the Open House. Priorities were identified by community members who voted with sticker dots.

The top three ranked issues identified at the Open House were:
1. Need a safe walk through the commercial core of the Village to increase pedestrian activity. (29 votes)
2. Shortage of east-west connections, especially at the south end of the Village. Need to increase number of multi-use trails in the Village. (18 votes)
3. Coordinating the knowledge and preservation of easements between stakeholders. Establish a database of legal status of properties and address gates and fences illegally blocking easements. (9 votes)

Other issues raised by community members were safe roadway crossings and trail access, if and where to locate trail parking, and stray/hostile dogs on trails. Community members expressed interest in identifying public and private roads in order to prevent public access where property owners do not want it, and to preserve privacy for adjacent property owners. There was concern about trail maintenance; funding and management of the trail system; implementation of the trail system, vehicular, traffic, and safety enforcement; and providing a non-vehicular route along Corrales Road.

The top three opportunities as ranked by community members were:
1. Create an interconnected continuous trails and pathway network. (22 votes)
2. Identify future trail connections and access points to protect from being closed off/encroachment. (13 votes)
3. Create a Safe Routes to Schools system with designated drop off locations. Provide alternative drop-off points for escorted “walking school bus” routes along ditchbanks. (10 votes)

- Some of the other opportunities that were highly ranked include developing a process by which people could donate land for a trail easement with a tax benefit, developing regional trail connections, improving bicycle and pedestrian friendly spaces and routes along Corrales Road, and creating walking loops connecting local destinations. There were many other opportunities identified at the Open House, which will be addressed in more detail in the Trails Master Plan.
**Full Issues Ranking**

Trail Issues were voted on with sticky dots. Participants each had three dots to identify their priorities. *Emphasized text was written in by participants.*

**29 dots** - Need a safe walk through the commercial core of the Village to increase pedestrian activity.
- “Amen.”
- “So important!”

**18 dots** - Shortage of east-west connections, especially at the south end of the Village. Need to increase number of multi-use trails in the Village.
- “West Ella Drive would be excellent E-W connection from Loma Larga to Corrales Road”

**9 dots** - Coordinating the knowledge and preservation of easements between stakeholders. All easements must be shown on development applications, and these records can be reviewed to determine where official access points and easements are located. Establish a database of legal status of properties and address gates and fences illegally blocking easements.

**8 dots** - Need safe roadway and ditch/acequia crossings and ingress/egress for an accessible trial route. Shared crosswalks for equestrians on Corrales Road and equestrian-pedestrian safety enforcement by the Police Department.

**6 dots** - Confusion over public and private roads in the Village, and not knowing if an access point is public or private land. Subdivisions have closed off access to the bosque, or made it private access only.

**6 dots** - Many people fear public access and loss of privacy. It may help to assure residents that no parking zones will be enforced, to prevent their road from becoming informal trailhead parking. Encourage passive monitoring and safe houses to improve safety/security and change public perception.

**5 dots** - “Many people do not want public access on their private roads/easements.”

**5 dots** - If and where to provide trailhead parking areas.

**4 dots** - Stray/loose (“Hostile”) dogs are a concern for trail users, especially for kids.

**4 dots** - Need to develop a maintenance schedule, funding source, etc. for the Village to manage trail system.

**3 dots** - “Bicycle lane or trail along Corrales Road!!!”
2 dots - “Implementation!!”

1 dot - “Police enforce traffic code re: bicyclists and pedestrians and duties of motorists.”

1 dot - “Police enforce traffic code for the horse crossings. Drivers don’t stop for horses.”

No dots - Vehicular access on ditches conflicts with their dedicated use as trails. If these uses are separated, the bikes and pedestrians are forced to use a sandy part of the ditch, which is difficult to navigate. There are some instances of MRGCD granting access to households by the ditch, but they are rare. Access gates can be used to control vehicular movement on the trails.

• “I have rarely seen motorized vehicles on ditches.”

FULL OPPORTUNITIES RANKING
Opportunities were voted on with sticky dots. Participants each had three dots to identify their priorities. Emphasized text was written in by participants.

22 dots - Create an interconnected continuous trails and pathway network.

13 dots - Identify future trail connections and access points to protect from being closed off/encroachment.

10 dots - Create a Safe Routes to Schools system with designated drop off locations. Provide alternative drop-off points for kids using Rec Center, Village Complex, Sagebrush, and Loma Larga for escorted “walking school bus” routes along ditch banks.

9 dots - Develop a process by which people could donate (“Or voluntarily agree to allow usage of private land for a limited period of time.”) land to the Village for trail easements (and potentially get a tax benefit through a non-profit intermediary).

8 dots - Create connections to Rio Rancho (and Albuquerque).

7 dots - “Create walkable and bikeable shoulders along Corrales Rd.”

• “absolutely if not included in current thinking”
• “Good!”
• “The EDGES of Corrales Rd. are desperate for friendly, walkable, dedicated areas. This would be the one place for “sidewalk” or “boardwalk” concept with retail, service, entertainment uses.”
• “LOVE THE POST OFFICE PARKING LOT.”

7 dots - Create small walking loops around destinations such as the library, senior center, fire station.

• “And around the Corrales Rd. main strip!!!”
6 dots - Develop guidelines for trail development – surface dimensions, driveway, ditch and road crossing standards, etc.

6 dots - Develop innovative and effective pedestrian crossing treatments (that the Village can implement).

5 dots - Potential for “Adopt a Trail” programs for maintenance and creation of on-profit “Friends of Corrales Trails.”

3 dots - Provide routes by the Landmark Trees with interpretive signage.

3 dots - Preserve and enhance irrigation ditches where the trail system is benefiting the access roads through the maintenance and improvements.

2 dots - “Would like to see easements or other ways to keep arroyos accessible (in west/escarpment)”  
• “also edge of escarpment”

1 dot - “Please include signage to let bicyclists know to yield to horses and pedestrians.”

1 dot - “Provide connection connecting Loma Larga to NW transit center and Alameda Bridge.”

1 dot - “The Village has a bad track record of coordinating with other governmental agencies, for example the State Highway Dept. and the legal/court system in Bernalillo. This is a huge opportunity to create good relationships, yielding many benefits.”

1 dot - “Create a continuous, family-friendly, multi-use trail from Alameda Bridge to North end of Corrales.”

1 dot - Create area walking brochures (similar to MRCOG’s) that identify community resources/assets.

No dots - Create consistent signage that contributes to a sense of place.

No dots - “Designated parking for Bosque use is needed away from actual street “dead ends” – along secondary ditch”

**DESIGN GUIDELINES**

There were a variety of preferences expressed in the Design Guidelines work station. Some preferred striped concrete trail surfacing, while many others expressed preference for softer, natural surfaces. There was concern for the durability of stabilized trail surfaces, in light of failures
witnessed by community members. Trail surface preference tends to be driven by the needs of specific user groups. For example, community members indicated that horses prefer walking on natural ground, while crusher fines or natural ground is good for walkers and horses. Some commented that the natural ground can become too hard, irregular, or slippery for safe pedestrian use. There were many comments in favor of some separation of trail users, while recognizing that the trails will need to be mixed use. There was interest in providing different materials in different locations, for example, concrete in the downtown area and natural ground where possible. Finally, participants indicated the importance of signage to educate both trail users and motorists on trail/roadway rules and etiquette.

**Mapping Data (See Also Open House Map on Page XX)**

Participants at the Open House identified many potential trail routes in the Village. They were asked to mark routes that used to exist, routes they currently use, routes that would be desirable additions to the trail system, and possible easements. These trail routes were compared with trail maps produced by MRCOG, Safe Routes to School, the Corrales Bicycle and Pedestrian Advisory Commission, and Corrales Horse and Mule People to determine what is used and where there are gaps in the system. This information was used to focus the property title research on areas where trail easements may exist and easement encroachments may have occurred. The following sections consist of verbal descriptions of the routes and data recorded by Open House participants. The digitized graphic representation of this data is found in the map on page XX.

### Historic Access Points
- Alamos Rd. to Corrales Acequia; connects west to Recreation Center (closed off?)
- Rincon Rd. to Bosque; connects to Elementary School (closed off?) (debate over status of road; public status is challenged by property owners)
- Paisano Rd. to Bosque; connects to Elementary School (closed off?)
- Bridge along Corrales Main Canal over Harvey Jones Channel, currently no access

### Historic Routes
- Corrales Rd was identified by several community members as the primary north-south historic trail route through the Village.
- West Meadowlark, Rio Rancho border to Corrales Rd. (main east-west connection)
- In the area south of West Ella, between Loma Larga and Rio Rancho (east-west connection)
- Mission Valley Rd. general area was route from Corrales Rd / Old Church to Rio Rancho
- Calle Blanca By-pass Road (future), three segments identified for expansion but not platted

### Routes You Use
- All MRGCD facilities were identified as in-use trail routes – Corrales Main Canal, Corrales Acequia, Interior Drain, Bosque Levee and Riverside Drain, San Mateo Drain, Nickolls Drain, SCCAFCA’s Harvey Jones Channel, and the jointly operated Cabezon Channel. These form the backbone of existing north-south trail connections.
• Major East-west connections: all SCCAFCA channels, Applewood Rd., West Meadowlark Rd., Coronado Rd., Sagebrush Dr., Camino de la Tierra, Arroyo de los Montanos, and Todos Juntos Rd.
• Major Bosque connections: Marquita Ln. South, Quail Tr./Bosque Acres Rd., Dixon Rd., East Ella Dr., Coroval Rd., Corrales Interior Drain, Nickolls Drain, Via Oreada, Alameda
• Major North-south connections: Rio Rancho’s Powerline Trail, all MRGCD facilities,
• Northern Loop: Harvey Jones to Todos Juntos to Don Julio to Rio Vista (RR) to Corrales Main Canal

Routes You Would Like to See
• Corrales Rd. Pathway
• Rio Grande Levee / Corrales Bosque Preserve (unimproved, not mapped)
• Meadowlark and Ella Drive are the two main opportunities for a continuous east-west connection from Rio Rancho to the Bosque along roadways
• Route along Arroyo de los Montoyas from Rio Rancho to Harvey Jones and the Bosque
• “Spaghetti farm” from Corrales Rd. to Bosque, between Mockingbird Ln. and Rincon Rd.
• Trail connection from RR to Corrales Interior Drain, between properties along Ruffles, south of W. Meadowlark and north of Gossett Ln.
• Connection to Bosque from Camino de Lucia (anywhere in subdivision)

Potential Easement Donation
• South of W. Meadowlark Ln. between property lines (Dorothy Smith Agricultural Easement)
• 800 Hollywood to Coyote Trail between properties (confirmed by property owner)
• Road front easement donation from 1155 West Ella Dr. resident (confirmed by property owner)
• Rivera Ln. at south end of Village, west of Corrales Rd. (desire route?)
• Two marked at west end of Sagebrush (desire routes?)

Potential Existing Easement
• Near Adventist Church and Elementary School connection from Corrales Rd to Corrales Acequia (extension of Manierre Rd.)
• Between Corrales Acequia and Corrales Rd. at Calle Bonita & Alegria Ln. (private)
• Between Corrales Acequia and Corrales Rd. south of Sherrod Ct, north of Perea Rd.

Opportunities for Future Connections
• Easement/acquisition to extend Hollywood “coyote trail” across 3 properties to Rio Rancho’s Powerline Trail would serve as a major east-west connection in the northern part of Corrales. Additionally, there is the potential to continue the route to Corrales Road via Valverde Rd.

PUBLIC PRESENTATION AND FEEDBACK MEETING, MARCH 9, 2009
SUMMARY OF PUBLIC COMMENT AND RESPONSE

- Residents along Via Oreada were concerned to hear of plans for a paved trail on their road. This information was actually distributed in error – the trail proposed along Via Oreada would be soft-surface, meaning a crusher fines or bladed trail surface.
- The concern was raised that the “Study Area” in the NE of the Village is quite large and leaves a significant gap in the trail system. It was suggested that RTI should at least attempt to show some potential routes in that region.
- Attendees requested that RTI post the trail maps on the Village website.
- A desire was expressed for more connection points to the Bosque at the North end of the Village.
- “Will RTI address a preliminary signage package in the Master Plan?” RTI will include preliminary signage information in the Plan.
- The concern was raised that the MRGCD board may not be free to make the decisions needed to implement formalized trails in Corrales due to the influence of MRGCD leadership.
- The desire was expressed to hear more about the Corrales Road commercial core paved pathway and to see more emphasis placed on it.
- “Has RTI evaluated the possibility of moving power and phone lines in order to create more space along Corrales Road for a pathway?” This possibility has not been formally evaluated, but is probably feasible. However, the larger problem is with the buildings that are very close to the roadway.
- A desire was expressed for more crosswalks along Corrales Road.
- The concern was raised that Camino Hermosa is far too narrow for trail implementation. RTI will reassess this recommendation.
- The concern was raised that trail implementation would have negative impacts on wildlife habitat. An area at the west end of Camino Hermosa approximately between Valle Vista Road and Sagebrush Drive was identified as an important habitat area.
- “Has RTI gone so far as to identify which soft-surface trails are to be crusher fines and which would just be bladed?” No, but it is likely that any trail routes on MRGCD facilities would not include crusher fines.
- The suggestion was made that RTI needs to look into the court case regarding the closing of the western ends of Camino de la Tierra and Angel Road to vehicular traffic. Did the case include closure to pedestrian/equestrian/cyclist traffic as well?
- “What is RTI planning in terms of trailheads? How large would they be? Even though the ABQ Alameda trailhead is large, it is often overflowing.” RTI is planning minimal trailheads at areas where they already exist, i.e at Romero Road, on the north side of the Cabezon Channel east of Corrales Road, and at the ‘North Beach.’
- “What is RTI anticipating/assuming in terms of numbers of trail users for each facility/trail user counts?” This type of survey is outside of the scope of RTI’s contract with the Village. However, the City of Albuquerque has trail user counts and it was mentioned that Safe Routes to School may have collected some of this information in their work.
- The desire was expressed to include the landmark trees on the trails map.
Confusion was expressed as to the intended audience for the map. RTI is working with the understanding that the map will serve both as a planning document for the Village and as a usable map for Village citizens and visitors. RTI is planning to provide two different maps: one for public distribution and use showing the proposed primary network of trails and routes, and the other for Village Planning and Zoning use showing the primary trail network as well as the smaller in-use routes and access points identified through the public process. This approach is also intended to address concerns that increased access or awareness of access to the Bosque Preserve could have negative impacts on the Preserve. The majority of neighborhood access points and in-use routes will not show up on the publicly distributed map, but will only be shown on the Village’s planning map for the purposes of preservation and protection.

The concern was raised that the needs of the handicapped, elderly, and others with mobility impairments must not be overlooked in the Trails Plan.

**COMMENTS AND NOTES WRITTEN ON THE DRAFT TRAILS MAPS**
- “Angel Road is too narrow for bike lanes”
- “Camino Hermosa is too narrow for an unpaved trail”
- “Area at the west end of Camino Hermosa between Valle Vista Road and Sagebrush Drive is important wildlife habitat that is not likely to be developed soon due to the steepness of the lots and should not be disturbed by trail development.”
- “Corrales Road as ‘Crosswalk Zone’ from Ella to Dixon.”
- “Bike Lanes along Academy Drive and bridge crossing over the Corrales Main to Loma Larga – Great!!”
- “Levy Road – Perfect for Paved Trail, Need Village to put up for vote again”
- Highlighted potential routes in the NE “Study Zone”:
  - End of Moongate to the Bosque
  - Ruperts Lane
  - Walden Road
  - Perea Lane/Schmidt Road
  - Sanchez Road

**ADDITIONAL COMMENTS RECEIVED BY E-MAIL IN RESPONSE TO THE PUBLIC MEETING**
- “When making a recommendation on the trails master plan, one of the things I hope your company is mindful of is the needs of the handicapped. We have a good number of people here in the Village who are older and, in many cases, not quite mobile enough to walk or bike on rough dirt trails. These people need paved paths and walkways that are suitable for walkers, wheelchairs, or even strollers for younger people with young children. The bike/walking path in Albuquerque is paved and mindful of the needs of the handicapped. I hope Corrales will be at least as considerate. What we need in the downtown area of Corrales is handicapped accessible concrete sidewalks, they can be stained to look like adobe, and will help our merchants by making it easy for shoppers to get around in Corrales without having to trapse in the dirt and the mud.”
• “I hope you will also bite the bullet and make it clear to the Village that the major bike path through Corrales that ties into the regional bike trail through Albuquerque should go along side the west side of the levee near the bosque preserve. That is the only way that bikers can be safe from road traffic. The Loma Larga path subjects the bikers to cross road traffic every block or so and is much more dangerous. Corrales road is even more dangerous. Having a bike path along the west side of the levee will not intrude on the preserve.”
STEERING COMMITTEE MEETINGS

PROJECT ORIENTATION MEETING, JUNE 16, 2008

ATTENDEES
Phil Gasteyer    Village of Corrales Mayor
Nora Scherzinger  Village of Corrales Administrator
Ann Taylor       MainStreet
Karen Kennicott
Moe Hickey       SRTS
Sayre Gerhart    Village Council
Jim Fahey        Village Council
Bonnie Gonzales  Village Council
Penny Perkins    Landmark Trees
Steve Henry      CHAMP, EQ. Commission, Bosque Commission
Sandra Brown     CBAC
Brian Kilcup     CPBAC
Mick Harper      P & Z Commission
Yasmeen Najmi    MRGCD
Bob Oberdorfer   Resource Technology, Inc.
Carrie Barkhurst Resource Technology, Inc.

PURPOSE
This purpose of this project orientation meeting was to collect existing information from key stakeholder group representatives on current trail activities in Corrales.

ISSUES
• Shortage of east-west connections, especially at the south end of the Village. Mayor Gasteyer said “It is an act of courage to bicycle along Meadowlark and Corrales Road.”
• Confusion over public and private roads in the Village, and not knowing if an access point is public or private land. Subdivisions have closed off access to the bosque, or made it private access only. We will have to address safety/security perceptions of neighbors when developing a public access master plan. Don Quixote, Las Brisas, and Marquita were mentioned as controversial access points. Can the Village purchase the private access point or is there a process for accepting land donations/easements?
• If and where to provide trailhead parking areas
• Need safe roadway crossings and ingress/egress for an accessible trail route
• Preserving irrigation access is also a priority of some residents, and can be beneficial for a trail system if the access roads are not closed off/encroached upon.
• Coordinating the knowledge and preservation of easements between stakeholders. All easements must be shown on development applications, and these records can be reviewed to determine where official access points and easements are located.
• Many people fear public access and loss of privacy. It may help to assure residents that no parking zones will be enforced, to prevent their road from becoming informal trailhead parking. Encourage passive monitoring and safe houses to help improve safety/security and change public perception.
• Stray dogs are a concern for trail users, especially for kids.
• Vehicular access on ditches conflicts with their dedicated use as trails. If these uses are separated, the bikes and pedestrians are forced to use a sandy part of the ditch, which is difficult to navigate. There are some instances of MRGCD granting access to households by the ditch, but they are rare. Access gates can be used to control vehicular movement on the trails.

PROPOSED TRAIL DEVELOPMENTS
• Dorothy Smith Property – There is an offer to donate a trail easement along the north side of the property, which is south of Meadowlark, between Dina Nelson and Corrales Main Canal. This future 10’-14’ easement is an ideal location for a pilot project trail development because it provides much needed east-west connection through the Village. There is some dispute over the location of the northern property line, which would be addressed by an easement that is wider than the trail alone needs to be. Therefore, the southern edge would be defined, and the northern edge could vary in width. (Steve Henry, John Apple, Cliff Spyrock)
• Cabezon Channel – as part of the MRCOG Bosque Trail extension, this east-west connection is expected to be developed to link the Alameda Pedestrian Bridge (via Nickolls Drain, the levee, or Corrales Acequia, TBD) to Loma Larga.

KEY TRAIL LINKS
• Need access from Loma Larga to NM 528 & pedestrian crossing
• Children who bike to Taylor Middle School need a safe crossing of Corrales Road at Cabezon intersection to get to Alameda Bridge.
• Harvey Jones Channel – possible bridge location (?) Cannot compromise flow capacity
• West Ella is a good street connection because owners have respected the set back distance. The road is straight with a good sight distance.
• Coronado Road – does it go through to bosque? It seems like a private road, but would provide a good connection.
• Todos los Santos – no ditch crossing. Could connect to Loma Larga.
• Casa San Ysidro / Academy Drive was a historic crossing. It would be good to provide EMS access here also. There is an existing 50’ easement here. It would connect the school, church, etc.
• Alamos Rd. was closed, and the ROW was vacated.
• Rincon – there has been a long running dispute if this is public or private. There is no turn around space for a fire truck. It is recommended to purchase easement north of Rincon to Tree Farm (a pedestrian access point).
• Would like bicycle lanes on Corrales Road. There is only a 5’ ROW available in some places. Other cities (Santa Fe, for example) have painted vehicular lane with “Share the Road/Bicyclist Symbol.” The road could be paved with a widened shoulder. Any improvements here could not compromise the drainage capacity of the road ROW
• Forming connections between trails that were required in subdivisions, but that dead end at edge of subdivision or cul-de-sac. Councilor Gerhart has revised the subdivision ordinance to provide some informal access between the river and Corrales Road and the subdivisions in the north part of the Village.
• Parent escorted “walking school bus” routes have been developed. There are designated drop off parking lots, and routes to get to Cottonwood Montessori School and Corrales Elementary School. These routes would be key links to prioritize for trail development.

WISH LIST
• Intersections of the ditches/acequias and roadways need safety crossing improvements.
• Consistent signage that contributes to a sense of place. Could be in the trail surface to alert people that an intersection is approaching to identify road name and increase awareness of crossing. There are too many sign types out there. NMDOT approves signage on road ROW; the Mayor approves trail signage; MRGCD approves ditch signage.
• Need legal framework to require certain easements in subdivisions and a method to identify encroachment. There is increasing encroachment in older subdivisions that needs to be monitored.
• Proposed guidelines for trail development – surface, dimensions, driveway, ditch and road crossing standards, etc. Subdivisions currently require trail easements, but not construction. Trail development standards need to be developed.
• Identify future trail connections and access points to protect from being closed off/encroachment.
• Need to develop a maintenance schedule, funding source, etc. for the Village to manage trail system.
• Innovative/effective pedestrian crossing treatments that the Village could use.
• Would be desirable to have the trails go by the Landmark Trees, with some interpretive signage.
• Area walking brochures (similar to MRCOGs) that identify community resources/assets. They can be a way to build public support by having the neighborhoods develop the highlights. They can highlight “designated routes” or be a potential field trip route.
• Identify where there are gaps in the network. Where do you have to use a major road to access a trail? These are the locations that may have low usage if people are afraid to use the busy roads to access trails.
• Proposed budget for trail improvements
• Acquire more access points
• Developing a process by which people could donate land to the Village for trail easements (and potentially get a tax benefit through a non-profit intermediary)
• Need to develop a typical driveway access prototype (concrete) for trail crossings. Changing surface is one way to alert travelers to the road crossing.
• Attila Bality encouraged small walking loops around destinations such as the library, senior center, fire station when he worked with the Village through the NPS Rivers & Trails Program.
• There is no safe route to school from the fire station. It has been designated as a drop off location, and there is the possibility for partnering with the fire station for escort/safe house.

RESOURCES & KEY CONTACTS
• Safe Routes to School draft trail maps, with multiple transparent overlays.
• DPAC report for Corrales
• MainStreet Pathways Plan
• MRGCD has developed a stabilized soil trail in Socorro, which could be used as a model
• MRGCD will have a draft Ditches with Trails Design Manual in July
• Tony Tafoya – Public Works Supervisor
• Anthony Martinez – Fire Department Superintendent
• Andre Sanchez – MRGCD Ditch Rider
• Attila Bality/NPS Rivers, Trails & Conservation Assistance Program

PROJECT UPDATE AND FEEDBACK MEETING, FEBRUARY 23, 2009

ATTENDEES
Phil Gasteyer   Village of Corrales Mayor
Brian Kilcup   CBPAC
Ahren Edelhoff Corrales Citizen
Robin Riegor   CBAC
Karen Barnett  CBAC
Steve Henry    CEAC, CBAC, CHAMP
Sandra Brown   CBAC
Al Duarte      CBAC
Moe Hickey     SRTS
Jim Kruger     Corrales MainStreet
Jim Fahey      Village Council
Sue Hallgarth  Tree Preservation Committee
Linda Fahey    Corrales Citizen
Sayre Gerhart  Village Council
Carrie Barkhurst Resource Technology, Inc.
Bob Oberdorfer Resource Technology, Inc.
Julia Mulder   Resource Technology, Inc.

SUMMARY
RTI presented their proposed breakdown of trail types consisting of the three components of Unpaved Crusher Fines Trails, Paved Asphalt Trails, and Bike Lanes that can be combined in a
variety of configurations depending on available right-of-way and other conditions. The comment was made that it may be a waste of funds to create crusher fines trails in some areas, particularly along MRGCD facilities. RTI clarified that the crusher fines paths were not proposed for MRGCD facilities, but along road shoulders to define the trail space. The general response was that the Advisory Committee seemed to be comfortable with these classifications.

RTI presented the Draft Trails Map and asked for feedback on whether there appeared to be sufficient routes, too many routes, or not enough routes. The concern was raised that the areas marked as “Study Zones” would simply be ignored and forgotten if some specific routes were not proposed in these areas. The purpose of designating “Study Zones” is for Planning and Zoning to be aware of locations that would be desirable to have a trail, but there is not the public right-of-way to locate the trail. This would give them the authority to request a trail easement in the event of a subdivision or new public road.

Discussion of the safety concerns related to having horses and fast-moving cyclists in close proximity to one another. Specifically, the concern was raised that the proposed MRCOG Regional Trail along Loma Large would not leave sufficient space for equestrians to use the Main Canal and keep a safe distance from fast-moving cyclists. There was the question if it would be desirable or feasible to separate the regional trail from the equestrian access to the bosque to increase safety of trail users.

Discussion of the purpose/need to show MRGCD facilities on the Trails Map as opposed to simply using them as is. The point was made that the SRTS group must have designated trail routes with explicit public use permission and signage in order to have access to their funding. Also, the additional point was raised that by putting the MRGCD facilities on the map, there is more security for their continued use into the future. There was some discussion of liability and a license agreement with MRGCD to use their ditch-banks.

Discussion of RTI proposals for the Corrales Road Corridor. RTI suggested that the most feasible option for the Corrales Road Corridor would be the addition of striped bicycle lanes. RTI will need to continue attempts to contact the NMDOT’s Tony Abbo. Committee members discussed the importance to multiple groups and individuals to have a pedestrian connection in the commercial core of Corrales.

Discussion of RTI’s proposed criteria for determining route suitability. The group did not voice an opinion about also designating trails according to primary/secondary or local/regional. They did support the idea of having a trail map will all use routes and options shown that was not publically published. This would allow the routes to remain documented and protected without attracting too many regional trail users. They were essentially satisfied with the trail map proposed in the draft trail plan, and attached here.
Discussion of RTI’s proposed Route Prioritization Process and explanation of the “Homework Assignment” for Advisory Groups. The group added several additional criteria, which will be incorporated into RTI’s list.

An additional handout provided a sample of the “trail database” that RTI is developing as a part of the Trail Master Plan (page 7). This database has the route name, length, proposed facility type, status (potential, proposed or existing), right-of-way width, any obstructions identified through field work, the owner, agency responsible for maintenance, and potential connections formed by the trail or access point. The streets, easements and access points are those identified in the public open house, and from maps created by various Village Advisory Committees. These maps are included in the Trail Master Plan.

Each Advisory Group representative was asked to share with their group the homework assignment to evaluate a proposed trail based off the prioritization criteria. The more community members who are able to score a route or access, the more broad the buy-in about the process and results will be.
This summary of street conditions is also provided in the trail database spreadsheet, which is included in the CD at the back of this document. The spreadsheet can be modified and updated to reflect changing conditions in the Village, and new in-use routes.

**Street name:** Academy Drive  
**Road type:** public, residential  
**Surfacing:** paved  
**Width:** 30’ ROW (curb to curb)  
**Speed limit:** 25 MPH  
**Parking:** no  
**Posted signage:**

**Connections/access:** access to Corrales Acequia; potential access to Corrales Main Canal; public road ROW continues to MRGCD property, though a fence is currently prohibiting access; location desirable for a pedestrian bridge connection across the Main Canal to connect to back Corrales  
**Obstructions/constraints:** potential linkage to the Corrales Main Canal fenced off  
**Opportunities:** proposed bicycle lane

**Street name:** Alamos Road  
**Road type:** public, residential  
**Surfacing:** paved east of Loma Larga Road; gravel west of Loma Larga Road  
**Width:** 40’ ROW  
**Speed limit:** 15 MPH  
**Parking:** no  
**Posted signage:**

**Connections/access:** connects Loma Larga Road to Rio Rancho/Thompson Fence Line Trail; no current access to Thompson Fence Line Trail; potential access to Thompson Fence Line Trail via undeveloped property on the north side of the west end of the road; connects Loma Larga Road to Corrales Acequia; historically used access to the Corrales Acequia has been blocked by adjacent landowners
**Obstructions/constraints:** curbed drainage inlets installed along gravel roadway west of Loma Larga Road

**Opportunities:** potential trail; potential reversal of access easement vacation

**Street name:** Albino Road

**Road type:** public, residential

**Surfacing:** paved

**Width:** 40’ ROW

**Speed limit:**

**Parking:** no

**Posted signage:**

**Connections/access:** connects to Neighborhood Commercial Office District (NCOD) zone in far NW quadrant; potential connection to Rio Rancho when Access A (intersection of Northern Blvd. and NM 528) is developed

**Obstructions/constraints:**

**Opportunities:** platted trail, as shown in subdivision records

**Street name:** Andrews Lane

**Road type:** public, residential

**Surfacing:** gravel

**Width:** 30’ ROW

**Speed limit:**

**Parking:** no

**Posted signage:** “no parking”

**Connections/access:** Corrales Interior Drain to Corrales Riverside Drain; EMS access bridge in 2009

**Obstructions/constraints:**

**Opportunities:** proposed soft-surface trail

**Street name:** Angel Road

**Road type:** public, residential

**Surfacing:** paved

**Width:** 60’ ROW

**Speed limit:** 15 MPH

**Parking:** no

**Posted signage:** “neighborhood watch”
**Connections/access:** connects Loma Larga Road to border with Rio Rancho; former access between Loma Larga Road and Rio Rancho is blocked off; potential for reconnection to Rio Rancho and the Thompson Fence Line Trail

**Obstructions/constraints:** steep shoulders towards east end; steep grade towards west end

**Opportunities:** proposed bicycle lane

**Street name:** Applewood Road

**Road type:** public, residential

**Surfacing:** paved

**Width:** 40’ – 60’ ROW

**Speed limit:** 15 MPH

**Parking:** no

**Posted signage:**

**Connections/access:** connects Corrales Road to the Corrales Acequia, the San Mateo Drain and the east side of the Corrales Main Canal; current connection at the Corrales Main Canal consists of a narrow, dirt cut-through

**Obstructions/constraints:**

**Opportunities:** proposed soft-surface trail, high equestrian use

**Street name:** Ashley Lane

**Road type:** public, residential

**Surfacing:** paved

**Width:** 40’ ROW

**Speed limit:**

**Parking:**

**Posted signage:**

**Connections/access:** potential access to Thompson Fence Line Trail; existing fence; access easement required

**Obstructions/constraints:** steep towards west end; narrows towards west end; easement required for access to Thompson Fence Line Trail

**Opportunities:** potential trail route or bicycle lane

**Street name:** August Mader Road

**Road type:** public, residential

**Surfacing:** paved

**Width:** 40’ ROW

**Speed limit:**

**Parking:** no
Posted signage:
Connections/access:
Obstructions/constraints:
Opportunities: platted trail, as shown in subdivision records

Street name: Bessom Lane
Road type: private
Surfacing:
Width: 40’ access easement
Speed limit:
Parking: no
Posted signage:
Connections/access: connects Corrales Road to Corrales Interior Drain; connection to Montessori school
Obstructions/constraints:
Opportunities: proposed soft-surface trail, on Safe Routes to School map

Street name: C’ de Baca Road
Road type: public, residential
Surfacing: paved
Width: 40’ ROW
Speed limit:
Parking: no
Posted signage:
Connections/access:
Obstructions/constraints:
Opportunities: platted trail, as shown in subdivision records
Street name: Cabezon Road
Road type: public
Surfacing: paved
Width:
Speed limit:
Parking: no
Posted signage:
Connections/access: connects Corrales Road to Loma Larga and Corrales Main Canal
Obstructions/constraints:
Opportunities: potential bicycle lane; proposed paved trail in MRGCD/AMAFCA channel ROW
Street name: Calle Blanca
Road type: public, originally intended as a bypass road, currently local access only
Surfacing: paved, gravel, and portions unconstructed
Width: 50’ – 100’ ROW intermittent
Speed limit:
Parking: no
Posted signage:
Connections/access: if the right-of-way was fully secured, the corridor connects central Loma Larga to the Arroyo de los Montoyas and Harvey Jones Channel
Obstructions/constraints: not fully constructed
Opportunities: proposed paved trail

Street name: Calle Contenta
Road type: public
Surfacing: paved primarily, some gravel sections
Width: varies
Speed limit:
Parking: no
Posted signage:
Connections/access: connects to Rio Rancho Paved Trail, along Dulce lina Curtis Channel and Harvey Jones Channel to Corrales Road
Obstructions/constraints: road narrows along Harvey Jones Channel
Opportunities: proposed paved trail

Street name: Camino Bajada
Road type: public, residential
Surfacing: gravel
Width: 35’ ROW
Speed limit: 15 MPH
Parking: no
Posted signage:
Connections/access: connects Corrales Road to the Bosque Preserve; Bosque Preserve access via a brushy overgrown area
Obstructions/constraints: loose dogs at the two eastern-most properties
Opportunities: potential trail connection to Sandoval Lateral if there was a pedestrian bridge

Street name: Camino Campo
Road type: public, residential
Surfacing:  paved
Width: 50' ROW
Speed limit:
Parking: no
Posted signage:
Connections/access: connects Cabezon Road to Loma Larga Road/Corrales Main Canal via Quirks Lane; access to the San Mateo Drain via a footpath at the end of Desert Willow Road (private road)
Obstructions/constraints: speed humps
Opportunities:

Street Name: Camino De La Tierra
Road type: public, residential
Surfacing: paved
Width: 45' ROW
Speed limit: 15 MPH
Parking: no
Posted signage:
Connections/access: connects Loma Larga Road to border with Rio Rancho; former access between Loma Larga Road and Rio Rancho is blocked off; potential for reconnection to Rio Rancho; potential for connection to a trail along Arroyo De Los Montoyas
Obstructions/constraints: dead end at block wall at Rio Rancho border
Opportunities: proposed soft-surface trail or bicycle lanes

Street name: Camino De Las Brisas
Road type: public, residential
Surfacing: paved
Width: 40' ROW
Speed limit: 15 MPH
Parking: no
Posted signage:
Connections/access: connects Corrales Road to the Bosque Preserve; private Bosque Preserve access via a locked gate posted “private, no trespassing, keep out”
Obstructions/constraints:
Opportunities: platted trail, as shown in subdivision records; potential connection to Corrales Riverside Drain through 10’ private access easement; potential for public access trail easement
**Street name:** Camino De Lucia  
**Road type:** public, residential  
**Surfacing:** paved  
**Width:**  
**Speed limit:**  
**Parking:** no  
**Posted signage:**  
**Connections/access:** connection from Corrales Road to the Bosque Preserve; no current Bosque Preserve access  
**Obstructions/constraints:**  
**Opportunities:** parallel private road, Moongate Road, could provide an opportunity for a trail easement alongside Camino De Lucia; access to Bosque Preserve allowed by current landowners

**Street name:** Camino Hermosa  
**Road type:** public  
**Surfacing:** paved  
**Width:** 30' ROW  
**Obstructions/constraints:** speed humps  
**Opportunities:**

**Street Name:** Camino De La Tierra  
**Road type:** public, residential  
**Surfacing:** paved  
**Width:** 45' ROW  
**Speed limit:** 15 MPH  
**Parking:** no  
**Posted signage:**  
**Connections/access:** connects Loma Larga Road to border with Rio Rancho; former access between Loma Larga Road and Rio Rancho is blocked off; potential for reconnection to Rio Rancho; potential for connection to a trail along Arroyo De Los Montoyas  
**Obstructions/constraints:** dead end at block wall at Rio Rancho border  
**Opportunities:** proposed soft-surface trail or bicycle lanes

**Street name:** Camino De Las Brisas  
**Road type:** public, residential  
**Surfacing:** paved  
**Width:** 40' ROW
**Speed limit:** 15 MPH  
**Parking:** no  
**Posted signage:**  
**Connections/access:** connects Corrales Road to the Bosque Preserve; private Bosque Preserve access via a locked gate posted “private, no trespassing, keep out”  
**Obstructions/constraints:**  
**Opportunities:** platted trail, as shown in subdivision records; potential connection to Corrales Riverside Drain through 10’ private access easement; potential for public access trail easement

**Street name:** Camino De Lucia  
**Road type:** public, residential  
**Surfacing:** paved  
**Width:**  
**Speed limit:**  
**Parking:** no  
**Posted signage:**  
**Connections/access:** connection from Corrales Road to the Bosque Preserve; no current Bosque Preserve access  
**Obstructions/constraints:**  
**Opportunities:** parallel private road, Moongate Road, could provide an opportunity for a trail easement alongside Camino De Lucia; access to Bosque Preserve allowed by current landowners

**Street name:** Camino Hermosa  
**Road type:** public  
**Surfacing:** paved  
**Width:** 30’ ROW  
**Speed limit:** 25 MPH  
**Parking:** no  
**Posted signage:** “bike route” between Corrales Road and Loma Larga Road  
**Connections/access:** connection from Loma Larga to Rio Rancho/Thompson Fence Line Trail; access to Rio Rancho/Thompson Fence Line Trail via sandy walk-through; connection from Loma Larga/Corrales Main Canal to Corrales Acequia and Corrales Road; designated as bicycle route in MRCOG 2030 Long Range Bicycle Plan  
**Obstructions/constraints:**  
**Opportunities:** proposed soft-surface trail between Corrales Interior Drain to Rio Rancho

**Street Name:** Corrales Road  
**Road Type:** public, State Highway, designated Scenic Byway
**Surfacing:** paved

**Width:** Varies

**Speed Limit:**

**Parking:** no

**Posted Signage:**

**Connections/Access:** connects Southern Corrales to Rio Rancho

**Obstructions/Constraints:**

**Opportunities:** Proposed bicycle lane throughout Village; proposed pathway in Commercial Core

**Street Name:** Coyote Canta Road

**Road Type:** public, residential

**Surfacing:** gravel

**Width:** 40’ ROW

**Speed Limit:**

**Parking:** no

**Posted Signage:**

**Connections/Access:** existing graded road; future platted connection to Rio Rancho

**Obstructions/Constraints:**

**Opportunities:** platted trail, as shown in subdivision records

**Street Name:** Dixon Road

**Road Type:** public, residential

**Surfacing:** paved between Corrales Road and the Corrales Interior Drain; gravel between the Corrales Interior Drain and the Bosque Preserve

**Width:** 23’ – 40’ ROW

**Speed limit:** 25 MPH between Corrales Road and the Corrales Interior Drain; 15 MPH between the Corrales Interior Drain and the Bosque Preserve

**Parking:** no

**Posted signage:** Bosque Preserve regulatory signage and MRGCD “no parking” sign at the Sandoval Lateral gate

**Connections/access:** connects Corrales Road to the Corrales Interior Drain and the Bosque Preserve; public Bosque Preserve access at MRGCD gate with horse walkover; bridge crossings of the Sandoval Lateral and the Corrales Riverside Drain

**Obstructions/constraints:**

**Opportunities:** Proposed trail route; adjacent to Landmark Tree

**Street Name:** Don Julio Road

**Road Type:** public, residential
**Surfacing:** paved

**Width:** 40’ ROW

**Speed Limit:**

**Parking:** no

**Posted Signage:**

**Connections/Access:** serves the Neighborhood Commercial Office District (NCOD) area in the far NW quadrant; future connection to Rio Rancho when Access A (intersection of Northern Blvd. and NM 528) is developed

**Obstructions/Constraints:**

**Opportunities:** platted trail, as shown in subdivision records; high potential for paved or soft-surface trail

**Street name:** East Alary Lane

**Road type:** private, residential

**Surfacing:** paved

**Width:** 50’ ROW

**Speed limit:**

**Parking:** no

**Posted signage:**

**Connections/access:** connection from Corrales Road to Bosque Preserve; private access to Bosque Preserve posted “private property, no trespassing” and “no public access or parking”

**Obstructions/constraints:**

**Opportunities:**

**Street name:** East Ella Drive

**Road type:** public, residential

**Surfacing:** paved

**Width:** 40’ ROW; widens slightly east of the Corrales Interior Drain

**Speed limit:** 15 MPH between the Corrales Interior Drain and the Bosque Preserve

**Parking:** cars parked around the edges of the cul-de-sac at the time of visit

**Posted signage:**

**Connections/access:** connects Corrales Road to the Corrales Interior Drain and the Bosque Preserve; Bosque Preserve access through a narrow walk-through between adjacent property owners’ fences

**Obstructions/constraints:**

**Opportunities:** proposed soft-surface trail; existing bicycle route

**Street name:** East La Entrada
**Road type:** public, residential  
**Surfacing:** paved  
**Width:**  
**Speed limit:**  
**Parking:** no  
**Posted signage:** MRGCD “no parking” sign at the Sandoval Lateral gate  
**Connections/access:** connects Corrales Road to the Corrales Interior Drain and the Bosque Preserve; Bosque Preserve access at MRGCD gate with horse walkover  
**Obstructions/constraints:** large cottonwood trees close to edge of paved roadway  
**Opportunities:** existing bicycle route; proposed general trail route

**Street name:** East Meadowlark Lane  
**Road type:** public, residential  
**Surfacing:** paved between Corrales Road and the Corrales Interior Drain; gravel between the Corrales Interior Drain and the Bosque Preserve  
**Width:**  
**Speed limit:**  
**Parking:** no  
**Posted signage:**  
**Connections/access:** connects Corrales Road to the Corrales Interior Drain  
**Obstructions/constraints:**  
**Opportunities:**

**Street Name:** Griego Court  
**Road Type:** public  
**Surfacing:** gravel  
**Width:**  
**Speed Limit:**  
**Parking:** no  
**Posted Signage:**  
**Connections/Access:**  
**Obstructions/Constraints:**  
**Opportunities:**

**Street Name:** Jacob Court  
**Road Type:** public  
**Surfacing:** paved
Width: 40’ ROW
Speed Limit: 
Parking: no
Posted Signage: 
Connections/Access: drainage easement/trail access easement to Arroyo de los Montoyas
Obstructions/Constraints: 
Opportunities: platted trail, as shown in subdivision records

Street Name: Kjersti Court
Road Type: public
Surfacing: paved
Width: 40’ ROW
Speed Limit: 
Parking: no
Posted Signage: 
Connections/Access: drainage easement/trail access easement to Arroyo de los Montoyas
Obstructions/Constraints: 
Opportunities: platted trail, as shown in subdivision records

Street Name: Loma Larga Road
Road Type: public
Surfacing: paved
Width: varies
Speed Limit: 
Parking: no
Posted Signage: 
Connections/Access: existing bicycle lane; connects Albuquerque and Southern Corrales to Camino Todos los Santos in Northern Corrales
Obstructions/Constraints: 
Opportunities: proposed paved trail along Corrales Main Canal, just east of Loma Larga Road

Street Name: Mariquita Road
Road type: public, residential
Surfacing: paved
Width: 30’ ROW
Speed limit: 15 MPH
Parking: no
**Posted signage:** “Private Access for Subdivision Land Owners” sign on trail connection from Mariquita Road to Mariquita Lane South

**Connections/access:** connects Corrales Road to the bosque preserve via Mariquita Lane South (private road); pedestrian and equestrian access to the bosque preserve via a footpath at the end of Mariquita Lane South (private road)

**Obstructions/constraints:**

**Opportunities:** proposed soft-surface trail to Bosque Preserve

**Street Name:** Mariquita Road South

**Road Type:** public and private

**Surfacing:** paved

**Width:** 20' Equestrian and Pedestrian Access Easement

**Speed Limit:**

**Parking:** no

**Posted Signage:** “Private Access for Subdivision Land Owners”

**Connections/Access:** Connects Mariquita Road (and Corrales Road) to Bosque Preserve

**Obstructions/Constraints:**

**Opportunities:** proposed soft-surface trail to Bosque Preserve

**Street Name:** Mission Valley Road

**Road Type:** public

**Surfacing:** paved

**Width:** 40' ROW

**Speed Limit:**

**Parking:** no

**Posted Signage:**

**Connections/Access:** connects Loma Larga to Calle Blanca

**Obstructions/Constraints:**

**Opportunities:** proposed soft-surface trail

**Street name:** Mockingbird Lane (east of the Corrales Interior Drain)

**Road type:** public, residential

**Surfacing:** paved

**Width:**

**Speed limit:**

**Parking:** no

**Posted signage:** “no parking on pavement” sign at the Sandoval Lateral fence
Connections/access: connects the Corrales Interior Drain and the Bosque Preserve; Bosque Preserve access through a narrow gap in the fence

Obstructions/constraints:
Opportunities:

Street name: Morning Sun Trail
Road type: public, residential
Surfacing: paved
Width: 40’ ROW
Speed limit:  
Parking: no
Posted signage:
Connections/access: connection from Loma Larga to Rio Rancho/Thompson Fence Line Trail; access to Thompson Fence Line Trail via sandy path over undeveloped lot

Obstructions/constraints:
Opportunities: undeveloped land at southwest lot at end of Morning Sun Trail currently being used as a connection to the Thompson Fence Line Trail

Street name: Old Church Road
Road type: public, residential
Surfacing: paved
Width: varies
Speed limit: 15 MPH
Parking: no
Posted signage: “bike route”
Connections/access: connects Corrales Road to the Corrales Acequia and West La Entrada; connection to cemetery, old church, and Museum Casa San Ysidro

Obstructions/constraints: drainage ditch along road shoulder; blind corner where road turns southwest
Opportunities: proposed bicycle lane at Northern end; existing bicycle route to West La Entrada

Street name: Paseo de Dulcelina
Road type: public, residential
Surfacing: paved
Width:
Speed limit: 
Parking: no
Posted signage:
**Connections/access:** connects Corrales Road to the Bosque Preserve; Bosque Preserve access via a closed, but unlocked gate; private equestrian access  
**Obstructions/constraints:**  
**Opportunities:** potential for trail route and public access easement

<table>
<thead>
<tr>
<th>Street Name</th>
<th>Paseo Thomas Montoya</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Road Type:</strong></td>
<td>public</td>
</tr>
<tr>
<td><strong>Surfacing:</strong></td>
<td>paved</td>
</tr>
<tr>
<td><strong>Width:</strong></td>
<td>50’ ROW</td>
</tr>
<tr>
<td><strong>Speed Limit:</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Parking:</strong></td>
<td>no</td>
</tr>
<tr>
<td><strong>Posted Signage:</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Connections/Access:</strong></td>
<td>connects Arroyo de los Montoyas to Corrales Road</td>
</tr>
<tr>
<td><strong>Obstructions/Constraints:</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Opportunities:</strong></td>
<td>Proposed soft-surface trail</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Street Name</th>
<th>Quirks Lane</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Road Type:</strong></td>
<td>public residential</td>
</tr>
<tr>
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<td>paved</td>
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<td><strong>Width:</strong></td>
<td>50’ ROW</td>
</tr>
<tr>
<td><strong>Speed Limit:</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Parking:</strong></td>
<td>no</td>
</tr>
<tr>
<td><strong>Posted Signage:</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Connections/Access:</strong></td>
<td>connects Cabezon Road to Corrales Main Canal, via Camino Campo</td>
</tr>
<tr>
<td><strong>Obstructions/Constraints:</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Opportunities:</strong></td>
<td>proposed soft-surface trail</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Street name</th>
<th>Ranchitos Road</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Road type</strong></td>
<td>public, residential</td>
</tr>
<tr>
<td><strong>Surfacing:</strong></td>
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</tr>
<tr>
<td><strong>Width:</strong></td>
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</tr>
<tr>
<td><strong>Parking:</strong></td>
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</tr>
<tr>
<td><strong>Posted signage:</strong></td>
<td>“slow, children at play”</td>
</tr>
<tr>
<td><strong>Connections/access:</strong></td>
<td>connection from Loma Larga/Corrales Main Canal to the Corrales Acequia and Coronado Road</td>
</tr>
<tr>
<td><strong>Obstructions/constraints:</strong></td>
<td></td>
</tr>
</tbody>
</table>
Opportunities:

Street Name: Rancho Alondra
Road Type: private, residential
Surfacing:
Width: 20’ road easement
Speed Limit:
Parking: no
Posted Signage:
Connections/Access: 20’ equestrian easement to Bosque Preserve
Obstructions/Constraints:
Opportunities: potential trail and access easement

Street Name: Romero Road
Road Type: private (MRGCD)
Surfacing: soft-surface
Width: 20’ ROW
Speed Limit:
Parking: yes
Posted Signage:
Connections/Access: connects Corrales Road to Bosque Preserve
Obstructions/Constraints:
Opportunities: proposed soft-surface trail

Street name: Ruffles Lane
Road type: public, residential
Surfacing: gravel
Width:
Speed limit: 15 MPH
Parking: no
Posted signage:
Connections/access: connection from Loma Larga to Rio Rancho/Thompson Fence Line Trail; no current access to Rio Rancho/Thompson Fence Line Trail; potential for Thompson Fence Line Trail access connection with easement purchase/donation due to vertical proximity of Thompson Fence Line Trail
Obstructions/constraints:
Opportunities:
**Street name:** Sagebrush Drive  
**Road type:** public, residential  
**Surfacing:** paved; gravel east of Calle Blanca North  
**Width:** 50’ ROW  
**Speed limit:** 25 MPH  
**Parking:** no  
**Posted signage:** “bike route”  
**Connections/access:** connects Corrales Road to Corrales Acequia and Loma Larga/Corrales Main Canal; no current connection to Rio Rancho/Thompson Fence Line Trail; potential for connection to Thompson Fence Line Trail  
**Obstructions/constraints:** narrow ‘pinch point’ at crossing of Corrales Acequia; steep grade at western end  
**Opportunities:**

**Street name:** Sego Lane  
**Road type:** public, residential  
**Surfacing:** gravel  
**Width:** 30’ ROW  
**Speed limit:** 15 MPH  
**Parking:** no  
**Posted signage:**  
**Connections/access:** connection from Corrales Road to the Bosque Preserve; no current Bosque Preserve access; potential for Bosque Preserve access through a currently fenced-off non-vehicular and equestrian easement  
**Obstructions/constraints:**  
**Opportunities:** proposed soft-surface trail to Bosque Preserve

**Street Name:** Teresita Way  
**Road Type:** public  
**Surfacing:** paved  
**Width:** 40’ ROW  
**Speed Limit:**  
**Parking:** no  
**Posted Signage:**  
**Connections/Access:**  
**Obstructions/Constraints:**  
**Opportunities:** platted trail, as shown in subdivision records
**Street Name:** Tierra de Corrales  
**Road Type:** public  
**Surfacing:** paved  
**Width:** 40’ ROW  
**Speed Limit:**  
**Parking:** no  
**Posted Signage:**  
**Connections/Access:**  
**Obstructions/Constraints:**  
**Opportunities:** platted trail, as shown in subdivision records

**Street Name:** Todos Juntos Road  
**Road Type:** public  
**Surfacing:** paved  
**Width:** 40’ – 70’ ROW  
**Speed Limit:**  
**Parking:** no  
**Posted Signage:**  
**Connections/Access:**  
**Obstructions/Constraints:**  
**Opportunities:** platted trail, as shown in subdivision records

**Street Name:** Via Oreada  
**Road type:** public, residential  
**Surfacing:** gravel  
**Width:** 50’ ROW  
**Speed limit:** 15 MPH  
**Parking:** no  
**Posted signage:**  
**Obstructions/constraints:**  
**Connections/access:** connects Corrales Road to Nickolls Drain  
**Opportunities:** proposed soft-surface trail

**Street name:** West Ella Drive  
**Road type:** public, residential  
**Surfacing:** paved between Corrales Road and Loma Larga; gravel west of Loma Larga  
**Width:** 30’ – 65’ ROW
**Speed limit:** 25 MPH between Corrales Road and Loma Larga; 15 MPH west of Loma Larga and at crossing of the Corrales Acequia

**Parking:** no

**Posted signage:** “bike route” between Corrales Road and Loma Larga

**Connections/access:** connects Corrales Road to the Corrales Acequia and Loma Larga/Corrales Main Canal; no access to railroad/Thompson Fence Line Trail

**Obstructions/constraints:** narrow ‘pinch point’ at crossing of the Corrales Acequia; steep grade west of Loma Larga

**Opportunities:** proposed soft-surface trail

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**Street name:** West La Entrada

**Road type:** public, residential

**Surfacing:** paved between Corrales Road and Loma Larga; gravel west of Loma Larga

**Width:** 50’ ROW

**Speed limit:** 25 MPH between Corrales Road and Loma Larga

**Parking:** no

**Posted signage:** “bike route” between Corrales Road and Loma Larga

**Connections/access:** connects Corrales Road to the Corrales Acequia, Old Church Road, and Loma Larga/Corrales Main Canal; appears to be a public access point to Rio Rancho/Thompson Fence Line Trail as platted, but the western end of road is posted as a ‘private drive’ on the ground

**Obstructions/constraints:** steep grade west of Loma Larga

**Opportunities:**

---

**Street name:** West Meadowlark Lane

**Road type:** public, residential

**Surfacing:** paved

**Width:** 30’ – 60’ ROW

**Speed limit:** 25 MPH

**Parking:** no

**Posted signage:** “bike route”

**Connections/access:** connects Corrales Road to the Corrales Acequia and Loma Larga/Corrales Main Canal; connects to Rio Rancho and the Thompson Fence Line Trail

**Obstructions/constraints:** speed humps between Loma Larga and Rio Rancho; steep grade west of Loma Larga; some encroachments

**Opportunities:** proposed bike lanes

---

**Street name:** Windover Road

**Road type:** public, residential
**Surfacing:** gravel

**Width:** varies

**Speed limit:** 15 MPH

**Parking:** no

**Posted signage:**

**Connections/access:** connection from Loma Larga to a sandy path that accesses the Intel Trail in Rio Rancho

**Obstructions/constraints:**

**Opportunities:** existing equestrian route; potential unpaved trail
# Appendix D: Prioritization Criteria and Preliminary Rankings

## Corrales Trails Prioritization Evaluation Form

Name of Route: ___________________________________________________

Date Evaluated: ___________________________________________________

Name of Evaluator: ________________________________________________

Affiliation of Evaluator: __________________________________________

Instructions:
Mark the appropriate score (0, 1, or 2) for each attribute in the score column.
Please use the Evaluation Criteria below to score for each attribute.

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Local Links</td>
<td>_____</td>
</tr>
<tr>
<td>2. Loop</td>
<td>_____</td>
</tr>
<tr>
<td>3. Regional Connections</td>
<td>_____</td>
</tr>
<tr>
<td>4. Critical Connection</td>
<td>_____</td>
</tr>
<tr>
<td>5. New Connection</td>
<td>_____</td>
</tr>
<tr>
<td>6. Physical Constraints</td>
<td>_____</td>
</tr>
<tr>
<td>7. Commercial Core</td>
<td>_____</td>
</tr>
<tr>
<td>8. Existing level of Use</td>
<td>_____</td>
</tr>
<tr>
<td>9. Safety</td>
<td>_____</td>
</tr>
<tr>
<td>10. Ease of Maintenance</td>
<td>_____</td>
</tr>
<tr>
<td>11. Trail / Traffic Relationship</td>
<td>_____</td>
</tr>
</tbody>
</table>

Notes:
EVALUATION CRITERIA FOR TRAIL SUITABILITY ANALYSIS

1. Does the proposed route offer links to local destinations? (e.g. a neighborhood park, equestrian center, neighborhood school, local open space corridor, neighborhood commercial center, Bosque, etc.)

0 - No, the trail would not provide any links to local destinations.
1 - Yes, the trail links indirectly to local destinations, or has the potential to link to local destinations.
2 - Yes, the trail links directly to local destinations and/or no other alternate routes exists.

2. Does the proposed route form or facilitate completion of a loop? (incl. bike lanes)

0 - The trail is isolated and not likely to form any larger loops.
1 - The trail has the potential to form part of a local loop.
2 - The trail completes a portion of an existing loop.

3. Does the proposed route offer any connections to regional facilities? (e.g. regional trails, significant open spaces, shopping or employment centers, adjacent communities, Bosque, Arroyo de los Montoyas, etc.)

0 - No, the corridor would not provide a link to any regional destinations.
1 - Yes, the corridor links indirectly to a regional destination (i.e. links to other facility that provides a direct connection) or a potential future connection.
2 - Yes, the trail links directly to one or more major regional destinations or forms a critical link in regional trail.

4. Does the establishment of the proposed route prevent the loss of a critical connection?

0 - No, the route is entirely within the public right-of-way or is already secured by easement.
1 - Yes, establishment of a trail through land purchase, easement acquisition, or license agreement would secure an existing informal connection.
2 - Yes, establishment of a trail through land purchase or easement acquisition would prevent an imminent loss of connectivity through planned or likely development or reestablish a historic connection; or remedy a closed off access point/easement; or re-establish a historic connection

5. Does the proposed route provide a critical connection opportunity where there is currently no physical access or connection? (e.g. bridge or ditch crossing, blocked connection to the Thompson Fence Line Trail)
0 - No, the route does not provide a new connection opportunity.
1 - Yes, establishment of a trail would provide a new public connection to an existing or proposed facility; or clearly identify an existing public trail connection.
2 - Yes, establishment of a trail would provide a new public connection to an existing or proposed facility where there are no other connection opportunities within a ¼ mile.

6. What are the physical constraints of the corridor? (physical width for a trail, right-of-way)

0 – Narrow corridor with many obstacles, encroachments or drainage issues; walls or fences less than six feet from the edge of the roadway.
1 – Moderate width corridor; at least six feet available for a pathway on at least one side of the roadway.
2 – Wide corridor with at least six feet of available space on both sides, or at least 12’ of usable space on one side of the roadway, few encroachments or obstacles.

7. Is the proposed trail route located in central commercial core?

0 - No, the corridor is not located in the commercial core of Corrales.
1 - The corridor provides a link to the commercial.
2 - Yes, the corridor is located in the commercial core of Corrales, and provides connections between destinations within the central core.

8. What is the existing use level of the corridor?

0 - The corridor is not being currently used extensively by any specific user group.
1 - The corridor is primarily used by one known type of user group (e.g. only equestrians).
2 - The corridor is currently being used by multiple different user groups (equestrian, pedestrian, bicycle, strollers, etc.); or the route may be single-use that has historically formed an important connection.

9. What is the current condition of the route? (perception of safety)

0 - The corridor is overly constricted or includes numerous hazards that might create a sense of danger to trail users.
1 - The corridor has existing or potential safety problems that could be mitigated with reasonable effort or an easement acquisition.
2 - The corridor is free of hazards and fosters a sense of safety and security.

10. What is the ease of maintenance/volunteer support?
0 – Corridor has steep grades, sandy terrain, or other condition that would indicate a high level of maintenance required.
1 – Corridor has flat grades and no issues which would require special maintenance; or, there is the potential for a volunteer group to maintain.
2 – Corridor has low maintenance requirements and volunteer groups or landowners who actively maintain trail.

11. Trail/traffic relationship

0 - There is significant existing or potential conflict resulting from trail proximity to high-speed traffic or forced at-grade crossing without a signal or sign.
1 - There is some existing or potential conflict resulting from relative trail proximity to some traffic or at-grade crossing with stop sign or crosswalk.
2 - There is minimal existing or potential conflict (comfortable set-back from street and connections through grade-separated crossings or low risk at-grade crossings).
APPENDIX E: FUNDING OPPORTUNITIES
APPENDIX F: REFERENCES AND RESOURCES

TRAIL RESOURCES


Rails to Trails. http://www.railstotrails.org

Trail Intersection Design Guidelines. 1996. Florida Department of Transportation, 605 Suwannee St., MS-82, Tallahassee, FL 23299-0450.


EQUESTRIAN FACILITY DESIGN RESOURCES

PEDESTRIAN FACILITY DESIGN RESOURCES

AASHTO Guide to the Development of Pedestrian Facilities. 2000. AASHTO. (currently under discussion)


Implementing Pedestrian Improvements at the Local Level. 1999. FHWA, HSR 20, 6300 Georgetown Pike, McLean, VA.


Pedestrian Compatible Roadways-Planning and Design Guidelines. 1995. Bicycle / Pedestrian Transportation Master Plan, Bicycle and Pedestrian Advocate, New Jersey Department of Transportation, 1035 Parkway Avenue, Trenton, NJ 08625, Phone: (609) 530-4578.


Planning and Implementing Pedestrian Facilities in Suburban and Developing Rural Areas, Report No. 294A. Transportation Research Board, Box 289, Washington, DC 20055, Phone: (202) 334-3214.


BICYCLE FACILITY DESIGN RESOURCES


Implementing Bicycle Improvements at the Local Level. 1998. FHWA, HSR 20, 6300 Georgetown Pike, McLean, VA.


Selecting Roadway Design Treatments to Accommodate Bicyclists. 1993. FHWA, R&T Report Center, 9701 Philadelphia Ct, Unit Q; Lanham, MD 20706. (301) 577-1421 (fax only)

BICYCLE AND PEDESTRIAN RESOURCES


ADA-RELATED DESIGN RESOURCES


TRAFFIC CALMING DESIGN RESOURCES

Florida Department of Transportation's Roundabout Guide. Florida Department of Transportation, 605 Suwannee St., MS-82, Tallahassee, FL 23299-0450.
Making Streets that Work. City of Seattle, 600 Fourth Ave., 12th Floor, Seattle, WA 98104-1873, Phone: (206) 684-4000, Fax: (206) 684-5360.


Traffic Calming. 1995. American Planning Association, 122 South Michigan Avenue, Chicago, IL 60603


Traffic Control Manual for In-Street Work. 1994. Seattle Engineering Department, City of Seattle, 600 4th Avenue, Seattle, WA 98104-6967, Phone: (206) 684-5108.

FUNDING RESOURCES


APPENDIX G: DESIGN GUIDELINES BACKGROUND

NATIONAL TRAIL DESIGN GUIDELINES BACKGROUND

In 1981, the American Association of State Highway and Transportation Officials (AASHTO) first attempted to create a comprehensive set of guidelines for accommodating bicyclists in various riding environments. Although it was not intended to set forth strict standards, the AASHTO Guide for the Development of Bicycle Facilities (revised in 1991 and 1999 and currently undergoing a third revision) has been the predominant source of information in this area.

Until recently, bicycle-related safety issues (such as appropriate widths, turning radii, sight distances, and avoiding conflicts with vehicular traffic) have been the dominant trail design concerns. While these remain vital concerns, the presence of accepted standards such as the AASHTO guidelines have led to a shift in focus toward providing more “inclusive” and accessible outdoor recreational settings, especially in the urban environment. Rather than focusing solely on the cyclist and/or pedestrian, our collective awareness has been broadened to include all types of users, including children, parents with strollers, people in wheelchairs, and those with other special needs. Alas, this is where the real difficulty begins. It is relatively easy to design for one or two user groups; however, our current challenge is to design for every user group! And while this goal may not be easily attainable (for instance, providing a smooth curb ramp transition for wheelchair access may make it difficult for a visually-impaired person using a cane to determine where the sidewalk stops and the street begins), modern sensibilities (not to mention the current legal climate) demand that every effort be made to accommodate all potential users in the design of any new facility, and that appropriate modifications be made to existing facilities insofar as possible.

ADA

“Accessibility” was brought to the attention of the design community in no small part through the passage of the 1990 “Americans with Disabilities Act” (ADA) [28 CFR Part 36: Nondiscrimination on the Basis of Disability by Public Accommodations and in Commercial Facilities, Revised as of July 1, 1994], and its accompanying implementation guide, the ADA Accessibility Guidelines (ADAAG). ADA outlines requirements and enforcement procedures for providing access to and within public and certain commercial buildings, while ADAAG presents the specific minimum design criteria to ensure accessibility. Together they provide national accessibility regulations for buildings and related urban environments. However, when designing
outdoor recreational facilities, the application of strict ADA standards often proves impractical. Therefore, the need arose for new and/or additional guidelines to address specific concerns for outdoor design.

To address this, the U.S. Architectural and Transportation Barriers Compliance Board (a.k.a. the “Access Board” -- the agency which administers and develops accessibility design guidelines) formed the Recreation Access Advisory Committee (RAAC) to study the issues and develop federal standards for outdoor recreational facilities. The Access Board has prepared a ‘proposed rule’ based on the RNC’s report, which was available for public comment in 2007. The next anticipated step is publication of the guidelines in the Federal Register, at which time they would become law. While no time frame has been set for this process, common practice and historic precedent indicate that use of these guidelines on an interim basis is legally defensible as the ‘best information available’ at the present. The proposed guidelines for trails and outdoor recreation access routes are incorporated herein by reference.

**FHWA BEST PRACTICES GUIDELINES**

In 2001 the FHWA issued the latest in its series of technical guides intended to help designers at the state level more easily integrate bicycle and pedestrian projects into mainstream transportation projects. Designing Sidewalks and Trails for Access, Part 2: Best Practices Design Guide followed their earlier compendium of existing guidelines and practices. The guide reflects recognized ‘best practices’ in effect at the time of publication, and also incorporates recommendations from the Access Board’s 1999 final report from the Regulatory Negotiation Committee on Accessibility Guidelines for Outdoor Developed Areas.

**DESIGNING FOR MULTIPLE-USE**

The concept of combining user groups on single trail facilities is not without its difficulties. Multi-purpose trail design is faced with the challenge of allowing for the freedom of choice essential to a satisfactory outdoor recreation experience, on one hand, while at the same time minimizing conflicts between different trail users. In order for multi-use trails to function effectively, the various user groups need to be cognizant and respectful of the needs of other users. Public education is an important element in reducing conflicts often associated with multi-use trails.

A number of studies have been undertaken at various levels to try to understand the underlying causes of trail conflicts. In 1994 the Federal Highway Administration and the National Recreational Trails Advisory Committee sought to summarize this information and “establish a baseline of the current state of knowledge and practice and to serve as a guide for trail managers and researchers.” Their resulting report, Conflict on Multiple-Use Trails, offers a useful summary of possible management strategies that adhere to the “minimum tool rule,” which advocates using the least intrusive measures possible. Some of their suggestions include:
• Build trails wide enough to accommodate expected levels of use
• Provide adequate trail mileage and a variety of trail opportunities
• Provide appropriate signage and/or educational material
• Design in adequate sight distances and provide pullout areas
• Paint a centerline on heavily used multi-purpose trails
• Have an effective maintenance program appropriate to trail type and use.

ACCESSIBLE SURFACING

According to the ADA, an accessible surface must be “stable, firm, and slip-resistant” [28 CFR Part 36, Appendix A, Section 4.5.1; 1994, p. 513]. The 2007 Proposed Accessibility Guidelines for Outdoor Developed Areas advises that “There is a spectrum of surfaces considered firm and stable and appropriate surfaces are not limited to surfacing materials such as asphalt and concrete. Many naturally occurring surfaces, such as crushed aggregate or soils containing some clay and a spectrum of sieve sizes, are considered firm and stable. Other natural surfaces may also become firm and stable when combined with a stabilizing agent. … The degree of firmness and stability may vary depending on the intended use and the expected direction and length of travel. Trail or path surfaces which meet these criteria can accommodate bicyclists, in-line skaters, individuals using wheelchairs, and other trail users who need or prefer the security of a firm surface.”

RELATED DOCUMENTS

The AASHTO Guide for the Development of Bicycle Facilities (1999 edition) has an extensive section of design guidelines for Shared Use Paths, covering the following categories:
• Separation between Shared Use Paths and Roadways
• Width and Clearance
• Design Speed
• Horizontal Alignment
• Grade
• Sight Distance
• Path-Roadway Intersections
• Signing and Marking
• Other issues, such as Lighting; Restriction of Motor Vehicles; Railroad Crossings; etc.

The material from the AASHTO Guide is incorporated herein by reference. In the event of a conflict with this or future versions of the AASHTO Guide, the more stringent criteria will apply.

The Federal Highway Administration’s Manual on Uniform Traffic Control Devices (MUTCD), Part 9: Traffic Control for Bicycles, is the accepted reference for most matters relating to signage, signalization, and striping of bicycle lanes, trails, and intersections. The MUTCD offers three levels of information: Standards, which must be followed; Guidance, which is recommended, but
not required; and Options, which are permitted, and may or may not be followed, at the discretion of the local authority. The guidelines presented in the MUTCD should be followed in the design and implementation of Corrales’ multi-use trails and bikeways.

SAFETY AND VISIBILITY

In addition to design factors such as stopping sight distances and trail widths, safe trail design must also take into consideration environmental factors such as local weather conditions, location (surroundings), and visibility. There is usually a strong correlation between a trail user’s sense of safety and the level of visibility, both into and out from the trail. Therefore, trail designers should strive to maintain a balance between the privacy of adjacent landowners, and safety concerns of trail users.

Design considerations for maximizing visibility include location, height, and type of access control and adjacent fencing; clear lines of sight into and through tunnels, underpasses, and bridges; elimination of blind corners at intersections and other locations; and the addition of lighting in appropriate areas.

Weather-related safety design consists primarily of maximizing solar orientation to minimize dangers from ice and snow accumulation. In some cases, protection from potentially gusty winds may be appropriate for open, exposed stretches of trail. Discussion of potential safety issues related to storm water runoff is contained in the Drainage section below.

TRAIL DIMENSIONS

Refer to the Trail Classifications section above for a description and widths of Soft-surface Multi-use Trails, On-street Bike Lanes, and Paved Multi-use Trails.

The following section (text in gray) is based on existing AASHTO and ADA guidelines but does not reflect proposed new guidelines for Outdoor Developed Areas. RTI will consult with the Village to determine the suitability of the proposed guidelines and may modify this section accordingly.

Trails should be of sufficient width to accommodate expected numbers of users without excessive interference. Side slopes and clearances from adjacent obstacles should be designed to minimize danger to cyclists who may inadvertently stray from the paved surfacing. Shoulders should provide a stable recovery surface in those instances. Railings (addressed later) may also be used to keep trail users from leaving the paved path, and may be placed within the 3’ clear zone illustrated below. Refer to the AASHTO Guide for additional information not addressed here.
Trail Alignment

Although multi-use trails are, by definition, intended for many modes of use, the design of those trails is effectively determined by only a few user groups – those with the most stringent requirements. In the case of paved trails, this presents something of a conundrum, in that the design must accommodate two sometimes-conflicting extremes. Bicycles, on the one hand, are a very efficient means of transportation, capable of fairly high speeds and long distances. Wheelchairs, on the other, are relatively inefficient and slow. While both have wheels, and therefore share some basic requirements in terms of surfacing, most other design requirements for the two are quite different. In order to accommodate wheelchairs, trails must meet the requirements of the Americans with Disabilities Act (ADA), which emphasizes shorter travel distances with frequent rest stops. In contrast, AASHTO guidelines for bicycle design focus on higher travel speeds, and efficiency of movement. Nonetheless, the two are not mutually exclusive. Trail designers must find the common ground between the two seemingly contradictory sets of criteria, and work within those parameters. In the simplest of terms, while the overall design of a trail facility should obviously take both modes into consideration, bicycles tend to dictate horizontal alignment criteria, while wheelchair requirements drive the vertical alignment.

Paved Multi-use Trails

The information which follows is a summary of trail design criteria which should satisfy both ADA and AASHTO for use in the design of Corrales’ Paved Multi-use Trails.

Grade

Primary network trails should be designed to provide running grades of 5% (20H:1V) or less wherever possible. If necessary, due to existing terrain or right-of-way constraints, grades up to 8.33% (12H:1V) are permissible, provided that a rest area is provided for every 30” (77 cm) of vertical rise. Such rest areas may be integral with the trail (i.e. a landing with a maximum grade of 2%), or, where space permits, may be offset alongside the trail, in order to provide a more even surface for bicycles and other faster-moving uses. Table 1 below lists recommended maximum distances for various trail grades.

Horizontal Curves

Many factors, including design speed, tire friction, lean angles, sight distances, and braking capabilities, are involved in determining minimum acceptable dimensions for
horizontal alignments of bicycle facilities. These are covered in detail in the AASHTO Guide [pp. 37-46]. By default, facilities which are designed to facilitate the turning movements of two-way bicycle traffic would easily accommodate the spatial requirements of wheelchairs and other slower modes of travel. However, the same is not true for vertical alignment. It is, in fact, difficult to separate horizontal and vertical alignment criteria, so the designer should carefully weigh the impact that any changes to one might have on the other. As can be seen in the tables below, the grade selected for a vertical alignment affects design speed, which in turn affects the minimum turning radius.

Curves sharper than those in the table below may be necessary in circumstances of limited right-of-way or other physical constraints. If so, such curves should be identified by solid centerline striping and warning signs per the MUTCD.

**Vertical Curves**

Vertical curves are used to make a smooth transition at changes in trail grade. This issue comes most sharply into focus in the design of ramps which meet the letter of ADA requirements, but also must serve bicycles. The typical alternating 30-foot, 12:1 (8.33%) ramp and 5- to 10-foot level landing configuration (often seen on bridge approaches and other areas of significant grade change) makes for abrupt transitions and runs contradictory to the 30 mph design speed recommended in the AASHTO Guide for such grades. Adding at least a short vertical curve at each change in grade will provide a much smoother travel surface, and increase user safety by minimizing the chance of bicycles (and even some other modes of wheeled use) becoming airborne.

The most recent AASHTO Guide provides tables listing minimum lengths of Crest Vertical Curves (e.g. over the top of a hill) [pp. 43, 44], but no longer provides that information for sag curves (e.g. at the bottom of a valley), stating only that the minimum length of a sag vertical curve should be one meter (3 ft.). The previous (1991) AASHTO publication did not differentiate between the two types, offering a single graph [p. 29] that presented minimum lengths for any vertical curve based upon grade differential and design speed. The current differentiation is due to the fact that crest and sag curves are governed by different criteria. While crest curves can occur either at the top of a hill or in the middle of a slope, in both cases approach speeds are generally slower than exit speeds. Nonetheless, stopping sight distance (the distance that the trail surface is visible ahead) is usually the primary concern, since the slope is breaking away from the user. Sag curves represent the opposite conditions, and usually see the highest speeds on the approach to the grade change.
Visibility is rarely an issue; instead, user comfort and ease of negotiation (due to resultant “G” forces) are the main criteria. So while the AASHTO guide has relaxed its recommendations for vertical sag curves, the resultant abrupt change in some instances might make for uncomfortable riding conditions for cyclists. In lieu of the 3’ minimum requirement, Table 3 below suggests vertical curves which will make for a more pleasant trail experience.

In general, vertical curve grade transitions should be designed to provide as gentle a transition as possible, given the physical constraints of a site. The table below provides suggested lengths of vertical curves for various conditions, based on 2% increments in grade change. These numbers are generalized and should provide acceptable results in most cases; however, if more detailed information is required, please refer to the current AASHTO Guide.

As with horizontal curves described above, there will undoubtedly be instances when such lengths cannot be achieved in designing vertical curves. In the case of the accessible ramp design described above, provision of even a short vertical curve at each grade transition will permit easier negotiation by bicycles.

Table 1: Maximum Recommended Running Grade Lengths

<table>
<thead>
<tr>
<th>Max. Running Grade</th>
<th>For Distances Up To:</th>
</tr>
</thead>
<tbody>
<tr>
<td>3%</td>
<td>Unlimited</td>
</tr>
<tr>
<td>4%</td>
<td>1200 ft.</td>
</tr>
<tr>
<td>5%</td>
<td>800 ft.</td>
</tr>
<tr>
<td>6%</td>
<td>42 ft.*</td>
</tr>
<tr>
<td>7%</td>
<td>35 ft.*</td>
</tr>
<tr>
<td>8.33%</td>
<td>30 ft.*</td>
</tr>
</tbody>
</table>

* Defined under ADA accessibility guidelines
Table 2: Minimum Recommended Curve Radii for Paved Trails

<table>
<thead>
<tr>
<th>Grade</th>
<th>Design Speed</th>
<th>Min. Centerline Radius*</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;3%</td>
<td>20 mph</td>
<td>95 ft. (29 m)</td>
</tr>
<tr>
<td>3% - 5%</td>
<td>25 mph</td>
<td>160 ft. (49 m)</td>
</tr>
<tr>
<td>&gt;5%**</td>
<td>30 mph</td>
<td>265 ft. (81 m)</td>
</tr>
</tbody>
</table>

* Assumes 2% superelevation (cross slope in direction of curve)
** Running grade for accessible multi-use trails should not exceed 8.33% (12H:1V)

Table 3: Recommended Vertical Curve Radii for Paved Trails

<table>
<thead>
<tr>
<th>Grade Change (Algebraic Dif.)</th>
<th>Min. Length for Crest Curve</th>
<th>Min. Length for Sag Curve</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;2%</td>
<td>None Required</td>
<td>None Required</td>
</tr>
<tr>
<td>2% - 4%</td>
<td>10 ft.</td>
<td>30 ft.</td>
</tr>
<tr>
<td>&gt;4% - 6%</td>
<td>60 ft.</td>
<td>80 ft.</td>
</tr>
<tr>
<td>&gt;6% - 8%</td>
<td>100 ft.</td>
<td>160 ft.</td>
</tr>
<tr>
<td>&gt;8%</td>
<td>160 ft.</td>
<td>240 ft.</td>
</tr>
</tbody>
</table>
APPENDIX I:
Current Years ICIP
(Infrastructure Capital Improvement Plan)