

Bachechi Open Space Master Plan

September 2008

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The following people provided valuable guidance and support for this project. We greatly appreciate their assistance. (*Listed in alphabetical order*)

- Larry Abraham, Village of Los Ranchos de Albuquerque
- David Albright, Bernalillo County Public Works
- Theresa Baca, Greater ABQ Recreation Trails Committee
- Pat Bachechi & the Bachechi Family
- Ray Balduini, Bernalillo County Parks & Recreation
- Debbie Bauman, New Mexico Department of Transportation
- Chip Berglund, Bernalillo County CIP Department
- Jackie Bouker, New Mexico Horse Council & Greater ABQ Recreation Trails Committee
- Sherri Brueggemann, Bernalillo County Public Arts
- Martin Candelaria, Bernalillo County Parks & Recreation
- Mark S. Chavez, Bernalillo County Parks & Recreation
- Val Cole, New Mexico Horse Council
- Paul Engelstad, RMCI, Inc.
- Jonathan Gabesa, Bernalillo County Deputy Fire Marshall
- Ray Gomez, Middle Rio Grande Conservancy District
- Art Gonzalez, Rio Grande Estates Neighborhood Association
- Jake Grandy, Middle Rio Grande Conservancy District
- Manuel Griego, Bernalillo County Parks & Recreation
- Susan Jones, Bernalillo County Public Works
- James Lewis, City of Albuquerque Open Space Division
- Bob McCarthy, Village of Los Ranchos de Albuquerque
- Yasmeen Najmi, Middle Rio Grande Conservancy District
- John Ryan, State Senator, District 10
- Mary A. Salazar, Bernalillo County Commission Office
- Diana Scena
- Matt Schmader, City of Albuquerque Open Space Division
- Lynn Siverts, Corrales Parks & Recreation Department
- John Stomp, Albuquerque Bernalillo County Water Utility Authority
- Juan Vigil, Village of Los Ranchos de Albuquerque
- Chris Weller, North Valley Coalition
- Steve Wentworth, Alameda North Valley Association
- Teresa Zanetti, State Representative, District 15





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I. Overview

The Bachechi Open Space is located in Bernalillo County's North Valley on the southwest corner of Rio Grande and Alameda Boulevards. Once developed, this Open Space will be open to the public for passive recreational uses such as wildlife viewing, hiking, equestrian trails and other like pursuits. Bachechi Open Space consists of a total of 27 acres, 19 of which were purchased from the Bachechi family and 8 of which were purchased in a joint land acquisition with the City of Albuquerque Open Space Division. The City owns the 7 acres, known as Alameda Open Space, along the north and west boundaries of the Bachechi Open Space. Combined, the Open Space parcels amount to 34 acres. There is also an NMDOT maintained detention pond along the northern boundary of the Open Space. Lastly, a portion of the land now houses the San Juan Chama Pump Station, owned and maintained by the Albuquerque Bernalillo County Water Utility Authority.

The City of Albuquerque property is currently used for trailhead parking, a constructed wetland and a paved trail that links to Alameda Boulevard on the east and to the Paseo del Bosque multi-use trail on the west.

To ensure site integration, this master plan includes the City-owned acreage and proposes uses for the entire area of the

property. Currently, the City and County share responsibility for maintenance of the City land, which is expected to continue after the construction of improvements. In the Alameda trailhead area, the City maintains the parking, fencing, and portapotties, while the County maintains the irrigation, trees, and trash removal.

Several agencies with jurisdiction are within the master plan area. Alameda Boulevard is under the jurisdiction of the New Mexico Department of Transportation (NMDOT). Rio Grande Boulevard is maintained by Bernalillo County. The Middle-Rio Grande Conservancy District (MRGCD) has jurisdiction over three acequias on or surrounding the property – the Albuquerque Eastside Drain to the west, the Lane Lateral running parallel to Rio Grande Boulevard and then east-west through the center of the Bachechi Open Space and the easement of an abandoned acequia along the south property line. The Bernalillo County Public Art Program is responsible for the planning and installation of the public art sculpture in the northeast corner of the site. Coordination among these agencies, as well as City of Albuquerque Open Space Division, the Village of Los Ranchos de Albuquerque, and Corrales Parks and Recreation staff, has been central to the master planning effort. Continued cooperation is expected for successful implementation and on-going maintenance in the future.



Goals

Bernalillo County established specific programmatic goals to improve this valuable Open Space for public use. These include providing safe access to the Rio Grande Bosque for all users, enhancing the buffer along the adjoining San Juan Chama Pump Station, maximizing the usefulness of the Open Space as an urban forest, and incorporating the site's historical and cultural ties to provide educational and interpretive opportunities on the site.

Current access to the Bosque and City Open Space amenities is somewhat restricted due to the crowded existing parking and access. However, the Master Plan is intended to provide citizens with improved access to the Rio Grande Bosque, not more parking, and a respite from an urban setting. The layout of trails, amenities, and activities is planned to increase safety for all users of the Open Space, the parking area, and the Alameda trailhead. A diversity of public spaces has been integrated into the open space to provide an enjoyable experience for a wide range of visitors.

By providing an urban forest on-site, Bernalillo County receives several benefits, including increased potential habitat, reduced carbon dioxide levels, and an opportunity for visitors to experience nature within a growing urban area. The plan proposes using sustainable principles such as use of local materials, native plants, water harvesting and wicking systems to sustain trees. This will conserve water and minimize maintenance requirements.

The Bachechi Open Space includes several opportunities for educational and cultural memory, recognizing the Bachechi family would provide a high historical reference for the site. Revitalizing the existing pecan grove presents an interpretive opportunity for visitors. The nursery allows visitors to understand the site's tree farming past. Other artifacts from the site's history can also be planned as interpretive elements.

The Master Plan also proposes planting a variety of trees to help to mitigate the visual impact and screen the view of the San Juan Chama Pump Station for site visitors.

Planning Approach

The Bachechi Open Space Master Plan was developed between May and November 2007. The project team was led by Becky Alter of Bernalillo County Parks and Recreation with support from Sites Southwest, the consultants for the Master Planning effort. The Master Plan was developed to capture the community's vision and provide a blueprint for implementation, including funding needs and proposed phasing for future improvements.

The project team met with public officials and technical staff from several relevant jurisdictions and agencies at several points throughout the process to ensure thorough planning and coordination for proposed improvements to the regional Open Space.

The master planning process included three public meetings to present the draft master plan concepts, ideas and sketches and gather feedback. One focus group was also conducted in order to address the concerns of equestrians. The public process took place between May and August 2007.

The County made a concerted effort to obtain neighbors' feedback as well as the immediate impact is on residents living adjacent to the property. Because it will be a public facility, input was also gathered from the larger community. The master plan addresses resulting mitigation and buffering needed to protect adjacent properties.

Several key definitions shaped the programming constraints of the Master Plan. These include BCPR's working definition of Open Space, language of the Purchase Agreement finalizing the land sale, and information from a legal settlement regarding use of the property .

- *Open Space includes lands and waters that have or will be developed or maintained to retain their natural character and benefit people throughout the County by conserving resources related to the natural environment, providing opportunities for appropriate outdoor education and resource-based recreation, or defining the boundaries of the urban environment. [combined from Albuquerque/Bernalillo County Comprehensive Plan, Facility Plan for Open Space (F.P.O.S.), and The Parks, Open Space and Trails Plan (P.O.S.T.)]*
- *Property will be called "Bachechi Open Space," and the County agrees to "maintain a memorial monument on the property provided that the design is approved by the Bernalillo County Arts Board..." (Purchase Agreement, December 1999)*
- *"Property shall be limited to preserving watershed and groundwater recharge areas, public access to the Bosque, preserving land for wildlife and native plants, trails, recreational, educational and scenic purposes." (Settlement Agreement, Oct., 2006)*

The first of three public meetings for the Master Plan took place on May 17, 2007 at the Alameda Elementary School cafeteria. Approximately 65 people attended. In general, participants represented the following interest groups: neighbors, equestrians, residents, open space advocates, elected officials, and agency representatives. The meeting focused on providing an update about the Open Space and planning efforts, reviewing opportunities and constraints, and engaging participants in an exercise to gain a sense of what the community envisioned for the property. This meeting also included large and small group work to discuss topics of interest.

The second public meeting took place at the Raymond G. Sanchez Community Center on June 28, 2007. Approximately 45 people attended. In general, participants were represented by the same advocate groups. A conceptual master plan was presented to participants at that time, and the participants were divided into small groups with varying interest group



representation in each. Discussions followed on what worked and what should be improved in the draft master plan. The final public meeting took place at the Raymond G. Sanchez Community Center on August 30, 2007. Approximately 50 people attended. In general, participants were represented by the same advocate groups. A final proposed master plan for the Bachechi Open Space was presented, and participants gave comments and asked questions in a large-group discussion. This meeting ended with commendations on a plan that responded to and achieved an agreeable compromise among a variety of interests.

One of the key issues addressed in this master planning process was finding an acceptable balance between the low-impact open space mandate for the site, neighbors' interest and provisions for equestrian use. Overall, throughout the process, participants were interested in additional nature trails, incorporating art opportunities, and protecting the current bike path and walking trail. Having trails accessible to all, including families, children, horses and individuals with disabilities, was important to many participants.

There was also some interest in including a vegetation/ landscape component to the site, perhaps for a local planting area. Several participants recommended modifying the New Mexico Department of Transportation (NMDOT) detention pond to better use the space for additional parking or additional landscape buffer planting. Participants also requested that the access road for maintenance on the pump station be integrated as much as possible with the proposed master plan to provide usable space. Some of the key community issues raised during the public process included the following:

- Enhancing the Natural/Open Space characteristics of the site
- Minimizing dust / dirt / noise / smell for adjacent neighborhood

- Providing adequate parking while managing increased traffic and user impacts
- Continuing maintenance of the property in terms of both ease and responsibility
- Including adequate buffering between property use and neighborhoods
- Avoiding duplication of existing amenities
- Addressing the interest in continued equestrian use of the property and connection to existing surrounding horse facilities

After the second public meeting, the project team determined a focus group with a range of equestrians would be beneficial in clarifying the variety of equestrian interests expressed in the public process. The project team met with approximately ten equestrians on August 8, 2007 at the Bernalillo County Parks and Recreation office. The variety of equestrian interests ranged from:

- A small warm-up arena
- Trailhead access to the Bosque, including adequate trailer parking
- A large-scale horse-show arena, including overnight tack stalls
- Additional bridges to provide access to the Bosque , hitching posts near restrooms and picnic areas

In general, neighbors of the Open Space and other residents did not support additional large-scale equestrian facilities on the site. However, residents agreed horse trails would be acceptable if adequate buffers were installed to mitigate smell, dust, and flies.



June 28, 2007 Public Meeting



August 30, 2007 Public Meeting



II. Existing Conditions

Field Reconnaissance

The project team conducted two site visits, initially on March 29, 2007 and a follow-up field visit on June 12, 2007. The field visits were performed to examine specific areas within the site and take supplemental photographs in order to determine condition of land, orientation, general health of landscape and assess other environmental conditions. The team also collected some additional information in order to inform the Master Plan.

As aforementioned, the Bachechi family originally owned and operated the southern portion of the site as a farm, with a pecan grove, barn, stables, and apple orchard. The northern portion of the site also housed a plant nursery and tree farm. At one time, the site had a small pond (most likely man-made). The pecan grove is still visible, although some trees are either dead or missing; some apple trees are also evident. The remaining trees still produce fruit and nuts. All the existing trees are in need of pruning and regular irrigation.



Pecan Grove

The original Bachechi ranch house and detached garage still remains on the site. The building for the plant nursery was razed during Alameda Road re-construction. The barn and stables were razed by Bernalillo County after an inspection by the Building Enforcement Officer found them unsafe in 2006. The residence has housed a caretaker for the property. An inspection by the County determined that the existing buildings needed too much remediation and has recommended replacement. The Bachechi family has indicated that it does not object to the house's demolition. The County currently stores maintenance equipment in the detached garage, although it will not be large enough to store all of the equipment needed to maintain the property once Open Space improvements are implemented.



Bachechi Ranch House Looking Towards Southwest



Bachechi Detached Garage

Two old well structures provide a visible reminder of the property's water use and/or irrigation history. Underground fuel storage tanks were at one time present at the site. Groundwater monitoring wells have been in place since 2000 and a new round of groundwater monitoring by the New Mexico Environment Department will be underway later in 2008. Elevated levels of Naphthalene, iron, and manganese were found in the soil near the existing structure and point towards sensitive treatment and restricted public activity in the soil at this location. It is expected that non-edible landscaping will be added to this area, with the plant palette geared toward plants that remediate poor and unhealthy soil conditions. Further testing and monitoring will determine the specific remediation solutions that will be included in the construction plans to implement the master plan.



Old Turbine Pump



For several years, the southern portion of the property was leased and used as an equestrian facility. As a result of the management and boarding too many horses on the site, several trees were destroyed or damaged, and most grasses and ground-cover was lost due to overgrazing. This contributed to dust problems for the surrounding area. During this time, adjacent neighbors reported accompanying smells and flies. The open field on the southern end of the property has since been seeded and the property complies with conditions for the Air Quality permit obtained in 2007.



Re-seeding Efforts Underway in 2007

The Albuquerque Bernalillo County Water Utility Authority recently constructed a masonry wall along the southern boundary of the site to buffer residential properties to the south. Equestrians currently access the property from the southeast corner of the site and cross along the southern border to connect to the soft-surface maintenance road along the Albuquerque Eastside Drain. Equestrians lobbied for this temporary southern access to the property, which indicates both the demand and current use of the property by equestrians for accessing the Bosque.



Masonry Wall Buffer



Equestrian Fence Opening on Southeast Corner of Site

The project team noted mature Siberian Elms and Cottonwood trees on the property near the ranch house. While the trees need pruning, they provide excellent opportunities for shade and habitat.



Mature Shade Trees on Site



Mature Cottonwood on Site



In the open areas, there are currently many invasive exotic plants and annual weeds. Salt cedar, Russian Olive, and upstart Siberian Elms have cropped up in wooded areas.

On the northeastern portion of the property reside the old plant nursery and tree farm. What remains from this period is a stand of trees that naturalized from the tree farm. These old nursery woods are an opportunity for continued wildlife habitat and bird watching and a potential interpretive trail.



Old Tree Farm Area

The existing asphalt trail extending from the Rio Grande/Alameda Boulevard intersection to the Bosque trail to the west is well-used and seems adequately maintained. Some utility lines are located beneath the trail.

The existing parking lot for the Alameda trailhead, which is owned and operated by the City of Albuquerque, is full on weekends and may be too small for future use levels. The City plans to replace the current portapotties with restroom facilities in the future.

On the northwestern portion of the property, just south of the Alameda trailhead and parking lot, the City has constructed a wetland. Nearby residents report having seen a wide variety of waterfowl and wildlife using the area, including birds, beaver, small mammals, and coyote.



Existing Wetland

Irrigation ditches are maintained by the Mid-Rio Grande Conservancy District (MRGCD). The Albuquerque Eastside Drain makes up the western boundary and the Lane Lateral crosses the site east/west. Except for the buried portion of the Lane Lateral there is no formal crossing over the acequia. Bernalillo County pays fees to the MRGCD for irrigation privileges, although it has not yet been used for active irrigation (except by the City for the wetland). An existing footbridge over the Albuquerque Eastside Drain west of the site provides Bosque access from the Alameda trailhead. This channel is stocked with trout in winter and provides an important opportunity for fishing.



Lane Lateral

Pedestrian, equestrian, and bicycle access west of the Albuquerque Eastside Drain to the Bosque trail is also provided by the old Alameda bridge, located just to the north of the Bachechi Open Space property and Alameda Blvd.

The San Juan Chama Pump Station property is owned and maintained by the Albuquerque Bernalillo County Water Utility Authority (ABCWUA). After completion of construction, maintenance crews will access the pump station from the existing paved parking lot on the City property and along an access easement west of the wetland. Screening the pump station from view will be important for visitors and neighbors. At the same time, preparation for the pump station included some tree removal, which resulted in the opening of beautiful views to the mountains and Bosque.



Pump Station Construction

Vehicular access to the County property is from Rio Grande Boulevard. Bernalillo County intends to allow one access point for motor vehicles just south of the existing ranch house.



New Fence Line along Rio Grande Blvd.

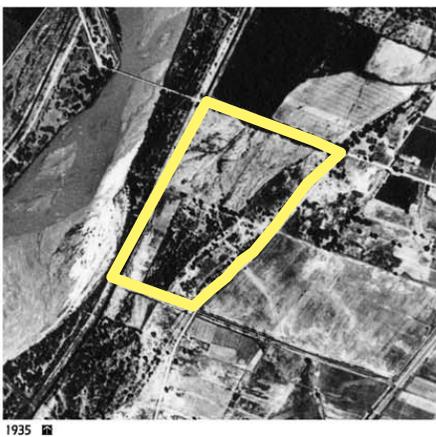
Traffic on Rio Grande and Alameda Boulevards is quite heavy and constant, confirming public comments about the difficulty of crossing Alameda to access the existing City parking area.

The drainage pond area on the north portion of the site just east of the parking lot is within NMDOT jurisdiction. This is the detention pond that accommodates runoff from Alameda Boulevard.

Physiography

The Bachechi Open Space sits on an alluvial fan in a broad rift valley of the Albuquerque Basin between the volcanoes on the west and the Sandia Mountains in the east. The elevation is between 4,900 to 5,000 feet above sea level. The land is relatively flat. It lies south of Alameda Boulevard, an existing major arterial, and north and west of residential neighborhoods. Situated between Rio Grande Boulevard and the Albuquerque Eastside Drain, the property has been home to a family residence, a nursery, natural vegetation, and varying equestrian facilities.

The geology of the area includes Quaternary gravel terraces and sand deposits. According to the National Cooperative Soil Survey, (NRCS), the three predominant soil types are: Aqua loam, Brazito fine sandy loam, and Brazito silty clay loam. A small portion of the property in the center along Rio Grande Boulevard consists of Gila clay loam (*web soil survey on October 23, 2007*). All these soils are derived from igneous and sedimentary rock, are common to alluvial fans and flood plains and exist on 0-1 percent slopes. Of the four soil types, the Brazito fine sandy loam is poorly drained, the others are well drained, all are nonsaline to very slightly saline. The soils survey lists no limitations related to the soils suitability for recreation for all but the Aqua loam soils. The limiting feature of the Aqua Loam soils is the tendency to create dust. This limitation is rated as only somewhat limited and can be easily overcome by the installation of stabilization techniques (e.g. on foot paths).



1935



1982



2006

Historical Context: Aerial Views

The depth to the water table ranges from 5 feet to over 6.5 feet. This factor does not present any challenges to the proposed Master Plan; rather it offers opportunities for revegetation and interpretive/educational demonstrations.

The climate is characterized as arid continental-hot summers with a large diurnal range in temperature. Average annual rainfall is approximately seven to eight inches the majority of which falls in the monsoon season that typically lasts from July through September. Snow seldom stays on the ground for more than a few days. Surface winds, controlled by valley topography, are from the south in the summer and the north in the winter with average wind velocity of ten miles per hour. The average growing season is about 165 days.

As described in the text and illustrated in the photographs in the preceding section, the existing vegetation consists of remnants of a former nursery, trees, grassland and riparian plants around the wetlands. Although the property currently contains little native vegetation, typical dominant species for the area of the Plains and Great Basin Grassland biotic community as defined by Brown and Lowe (1980), are: black grama, New Mexico feathergrass, western wheatgrass, galletta, sand dropseed, ring muhly, four wing saltbush, and sand sagebrush. Closer to sources of water the dominant species are: Rio Grande Cottonwood, Silver Buffaloberry and New Mexico Olive with an understory of coyote willow and saltgrass.



Fence Line along Rio Grande Blvd.





III. Site Assessment

Constraints

Following an assessment of existing conditions, the development of a Master Plan requires a thorough and methodical analysis of the site opportunities and constraints. The Bachechi Open Space property offers few constraints: the visual impacts of the pump station, the existence of noxious vegetation, and the traffic on Alameda and Rio Grande Boulevards as indicated on the Opportunities and Constraints plan (see end of chapter). While the traffic with its associated noise, congestion and pollution is for the most part outside the scope of the property's master plan, the other two can be substantially mitigated.

Sculpting the land and designing landscaping around the pump station will attenuate the visual impact of the two-story structure. The earthen color of the structure will allow it to fade into the background once the vegetation matures. There has been no official noise reading from the pump station operation, however, the engineers have publicly stated noise levels will be low. Once the site has been developed according to the Master Plan, the human and animal activity and ambient environmental noise should help to obscure any noises emitted from the pump station.

Noxious vegetation such as Siberian elm, Russian olive, salt cedar, bind weed and other annuals that have become established on the property can be eradicated by removal and disposal efforts followed by vigilant maintenance practices. Once the desirable vegetation has become established, it should out-compete the weeds making weed control less problematic.



Russian Olives Invading Area Around existing Conditions

Opportunities

Due to the location of the property with its abundant transportation and trail connections, and the rich natural resource base upon which re-introduced forest land can thrive, combined with the historical and cultural aspects of the property, there are ample opportunities for enhancing the recreational, educational, and environmental potential of the Open Space.

Access to ABCWUA water, existing acequias and the potential to utilize harvested water will help the County realize its goal of creating a sustainable urban forest on the site. Part of the property was a former plant nursery of which remnants remain. There is the possibility to rehabilitate the tree farm and develop an environmentally-friendly historical/interpretive reference. The southern portion of the property is open and restorative landscaping can help establish an urban forest. Adding trees to this portion of the site will provide a respite from the urban environment, a passive outdoor experience, and assist in the mitigation of the visual impacts of the pump station.

The existing completed wetland has significant habitat value. The wetland (if a blind were added) could have increased viewing opportunities for visitors while decreasing the potential disturbance to waterfowl. Other wildlife viewing could also be accommodated when the Open Space is revegetated with a diversity of native plants and trees that will attract numerous woodland and meadow species of birds and other animals.

The original Bachechi house still exists toward the middle of the property close to Rio Grande Boulevard. While the structure is not sufficiently sound to use, a new building could be utilized for community purposes, Open Space office space, and a caretaker's unit. A nearby structure could accommodate Open Space service vehicles and equipment to assist with maintenance and management.

There are several opportunities to improve access to the Rio Grande Valley State Park, to the Paseo del Bosque Trail and to the Bosque itself. There is also room to increase the number of parking spaces at the existing Alameda trailhead. Albuquerque's public transportation system could allow visitors to enjoy the property without the use of private vehicles. Bernalillo County has proposed an extension of the Alameda Boulevard Trail which will provide a link to the North Diversion Channel Trail and connections from Edith Boulevard, and Second and Fourth Streets. Well-organized trails and/or paths within the Open Space could enable multiple users to utilize the site while minimizing potential user conflicts.

Fishing in the drain is a popular cold weather pastime for residents when it is stocked with trout. There is the potential to increase the fishing opportunities with universally accessible improvements.





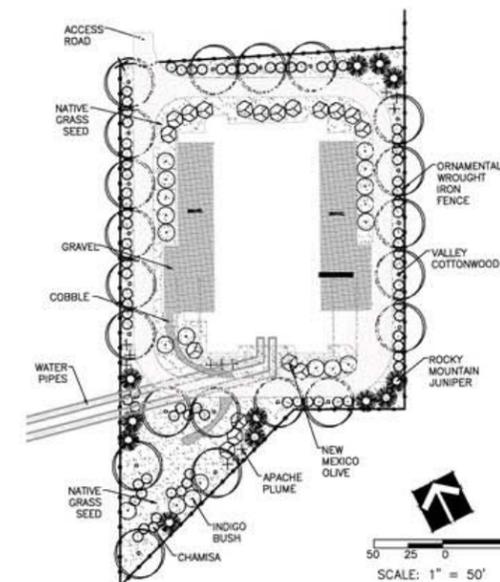


EXISTING CONDITIONS

- EXISTING ASPHALT TRAIL
- VEHICULAR PATH (NOT ASPHALT)
- EXISTING VEGETATION (PREDOMINANTLY ELMS)
- EXISTING VEGETATION (FROM NURSERY)
- ACCESS POINT FOR EQUESTRIAN, PEDESTRIAN, AND CYCLISTS
- VEHICULAR ACCESS POINT
- RESIDENTIAL NEIGHBORHOODS
- RIO GRANDE VALLEY STATE PARK
- COMMERCIAL USE
- EXISTING BIKE LANE

AIR QUALITY - DISTURBED AREAS HAVE BEEN RE-SEED & ARE GROWING AND AN AIR QUALITY PERMIT HAS BEEN OBTAINED

PUMP STATION LANDSCAPE



OPPORTUNITIES

- EXISTING IRRIGATION DITCHES (MRCGD)
- INFORMAL ACCESS POINT FOR EQUESTRIAN, PEDESTRIAN, AND CYCLISTS
- BIRD WATCHING & WILDLIFE HABITAT
 - WATERFOWL
 - WOODLAND
 - MEADOW
- PROPOSED BIKE LANE (AS PER 2030 MTV DOCUMENT)

FISHING - OPPORTUNITIES WHERE THE CHANNEL IS STOCKED EACH WINTER

VIEWS - OF THE SANDIAS TO THE EAST AND THE BOSQUE TO THE WEST

WATER- PUMP STATION "FLUSHING" COULD PROVIDE WATER FOR LANDSCAPE SUSTENANCE

A PROPOSED BECHECHI MEMORIAL MONUMENT

CONSTRAINTS

PUMP STATION- VISUAL

TRAFFIC - THE TRAFFIC ON RIO GRANDE AND ALAMEDA IS HEAVY CAUSING NOISE, CONGESTION, AND POLLUTION

NOXIOUS VEGETATION - SALT CEDAR, RUSSIAN OLIVE, AND ANNUAL WEEDS EXIST ON SITE

SOIL REMEDIATION NEEDED

Existing Conditions, Opportunities and Constraints



IV. Framework, Concepts and Ideas

As an existing Open Space property, the opportunity to increase public enjoyment in perpetuity is tantamount. According to the Bernalillo County Parks and Recreation Department, the definition of Open Space is:

Open Space includes lands and waters that have or will be developed or maintained to retain their natural character and benefit people throughout the County by conserving resources related to the natural environment, providing opportunities for appropriate outdoor education and resource-based recreation, or defining the boundaries of the urban environment.

The Functional Relationship Plan included in this section of the report shows the proposed uses for the Bachechi Open Space. The Plan is the product of programmatic information derived from the public meetings, the Opportunities and Constraints Plan described in the preceding section, field visits and ideas generated by the project team. It illustrates the flows and interactions of proposed activities and users of the Open Space facility.

The bulk of users will enter the property either on foot or by motor vehicle. The existing parking area located on the north extent of the open space will serve as a staging area for visitors whether accessing the Rio Grande Bosque or activities offered on the Bachechi Open Space. Trails should lead outward from this area, providing access to the rest of the property as well as to the Bosque and river.

The old Plant Nursery site and Tree Farm “woods” will accommodate an interpretive path and bird watching. The adjacent Wetlands also provides bird watching opportunities. A linkage that runs between the two areas will both connect as well as separate them.

A secondary and limited access point to the site should be located at the Community Area and offer visitors and staff a few additional parking spaces near the proposed community building/caretaker’s unit. Connections to all other areas of the Open Space, either directly or indirectly by foot, can be made from this location. The Community Area is proposed to accommodate historical and educational functions for small groups.

Busier activities (such as parking) are limited to the northern portion of the site while the majority of the site (southern portion) is dedicated to passive uses typical of Open Space. The landscape treatments for the urban forest envisioned in the southern area will serve quieter and slower activities such as birdwatching, sketching, or contemplative activities. Limited access in and out are planned in order to discourage loud activities. At the far southwestern and southeastern corners of the property, designated access could be made available for those entering the property on horseback or on foot.

Developing concepts and themes for the Master Plan occurs simultaneously with understanding how the activities and areas will function together. The major components of the Open Space could include: Landscapes and Forests; Trails and Other Access for hikers, bikers and equestrians; Picnicking; Parking; Wetlands; Wildlife Viewing; Interpretive Features; Community Uses; and Artwork. Each of the components features concepts that focus upon sustainability for the urban forest, improved wildlife habitat, valuable environmental educational opportunities that accommodate resource-based recreation and possible venues for public art.

Rehabilitation of the existing trees on site and the pecan grove will be the first priority. Rehabilitation consists of assessing the health of the trees, followed by selective removal and disposal and judicious pruning of the remaining trees. Invasive species will be removed. New pecan trees could be planted to bring new vitality and diversity to the pecan grove. Bernalillo County and the County’s Agricultural Extension Agency are already addressing the bagworm problem that struck the pecan grove in 2008 and will be continually monitoring the condition of trees.

Forestation of the site will likely be more successful using permaculture techniques including grading the land to collect water in depressions, and forming undulating terrain with berms. Swales and depressions will create microclimates for specific plant communities. Installing wicking systems to retain and slowly release water for plants that prefer more moisture will be part of the vision to create a sustainable open space.



Taking advantage of the opportunity to educate by creating a loop walkway between the rows of trees in the former nursery could create a “mini-maze” for visitors. The addition of a boardwalk, and a wildlife blind along the pathway between the nursery and the wetland could furnish more educational experiences and protect wildlife from obtrusive observation.

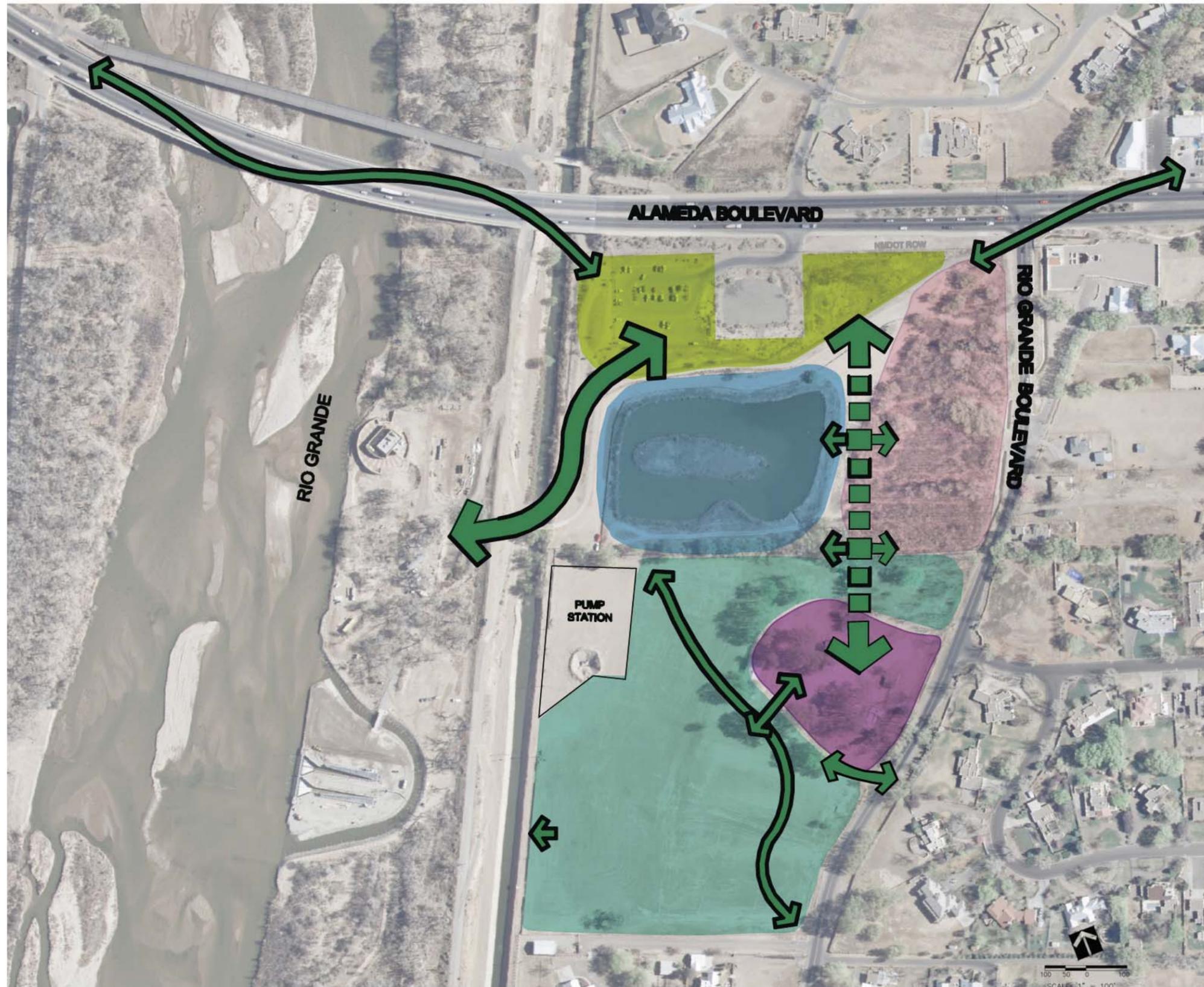


Boardwalks & Overlooks

A primary concern for the Bachechi Open Space is to safely accommodate the different types of trail users without degrading the property with a complicated web of trails and paths. Depending upon the location and the function, a variety of trail experiences were contemplated. One approach to providing safe and enjoyable trails is to layout routes for bicyclists, runners and other quick moving users that are separate, but maybe parallel, to routes for slower moving users. Horses are unpredictable by nature and may startle when confronted with a novel situation. Where possible, trails will be separated to accommodate equestrians. One option discussed is to provide an alternative route for crossing the East Riverside Drain for equestrians or to provide a wider bridge at the existing crossing. A separate parking/staging area for equestrians was another scenario considered for minimizing potential incidences between horses and other Open Space visitors. Educating all users about sharing trails is a respected method for minimizing potential trail user conflicts.

The Community Area is conceived for a building that provides a space for visitor information, for County Parks and Recreation Open Space staff to perform their duties, a small meeting area for limited community use, restroom facilities, and a caretaker’s unit. A separate building could provide storage for maintenance vehicles and equipment. Surrounding these structures, picnic amenities could add to community uses.

Functional Relationships Plan



PARKING

- STAGING AREA
- EQUESTRIAN PARKING
- MAIN ACCESS TO SITE

OLD NURSERY WOODS

- TRAILS
- BIRD WATCHING
- INTERPRETIVE

WETLANDS

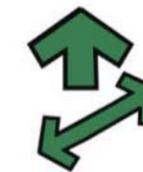
- WILDLIFE HABITAT
- OBSERVATION
- INTERPRETIVE

COMMUNITY

- HISTORICAL/CULTURAL
- EDUCATIONAL
 - MEETING AREA
 - MUSEUM
 - REST ROOM
 - PICNIC AREA
 - PLANTING AREA
 - MEMORIAL

OPEN SPACE

- TRAILS
- WILDLIFE HABITAT
- EQUESTRIAN ACCESS/TRAILS
- URBAN FOREST



CIRCULATION & ACCESS

- POSSIBLE TRAILS/PATHS FOR EQUESTRIANS, CYCLISTS, PEDESTRIANS
- CONNECTION & ACCESS TO OFF-SITE DESTINATIONS

Functional Relationship Plan



V. Preliminary Master Plan and Preferred Plan

Preliminary Plan

The Master Plan presented at the public meeting on June 28th was preliminary and conceptual in nature. This plan showed proposed horse trailer parking close to the bosque access as an addition to the existing parking and additional general parking near the Alameda and Rio Grande Boulevard intersection. A multi-use path was shown to traverse the property diagonally from the southeast corner, over the irrigation acequia, to the existing pedestrian bridge then over the East Riverside Drain. Another, but smaller, path connected the existing ranch house to the southwest corner. The landscape plan is not developed to the point of plant communities, but the sustainability and permaculture concepts are presented. The plan shows conscientious attention to the residential neighbors on the south and east sides of the property by the creation of berms and copses of trees and shrubs to protect views and minimize the impact of Open Space activities. These buffers have the added benefit of screening the view of the pump station.

Preferred Plan

Following the June and August public meetings, the planning team reconvened to discuss the public comments and make revisions to the plan based on the direction from County staff. The Master Plan was changed in several ways.

First, some of the key features were revised. The equestrian parking was moved to the northeast corner of the property (separated from other vehicular parking) and a small warm-up pen was included. Note that the warm-up pen is not intended to be used as a holding pen.

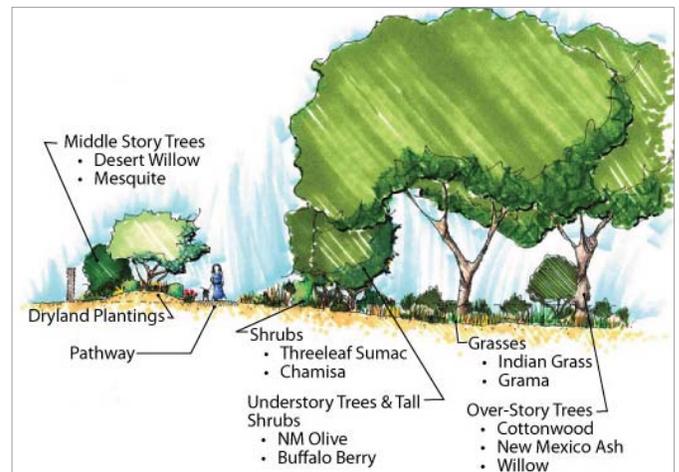
Additional parking was added to the existing parking lot and a restroom facility was included by the Open Space Division of the City of Albuquerque Parks and Recreation Department.

The Open Space Area to the south is no longer divided by a trail or path. Instead a very minor forest walk winds through the trees. This maintains the desire for a quiet contemplative space away from more active pursuits. Additionally, materials were suggested for differentiating the types of trails and paths.

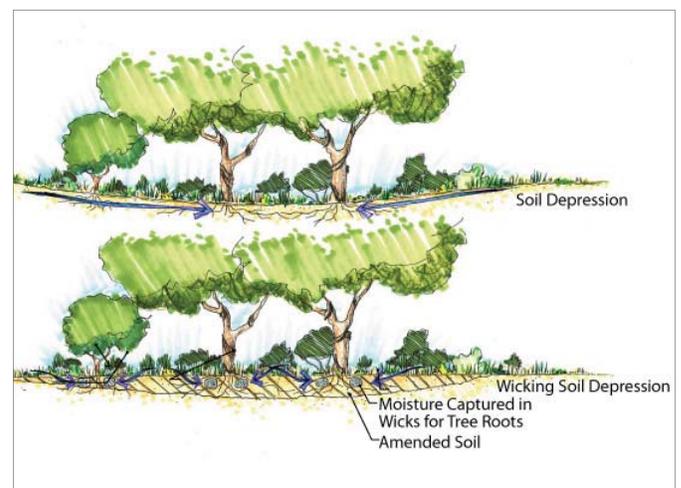
The illustrations to the right show other revegetation strategies such as grouping plants as they are found in nature, called plant communities, and harvesting water to add to the water needs of plants.



Rehabilitated Pecan Grove



Dryland Berm And Soil Depression Section



Soil Depression/Wicking System



Secondly, the planting concepts were fully developed defining the spaces by the types of plants installed. Plants were specified by common name and listed under classifications. The berms and depressions are more clearly defined regarding layout and plant communities.

Expansion of the existing bridge over the East Riverside Drain is the preferred option; however, an option for an additional bridge for equestrians is shown at the southwestern corner of the property. The realization of this bridge will depend upon approval by the MRGCD as will the proposed modifications to the existing bridge that were offered as an alternative to a new

bridge in the same location. Examples of possible bridges are shown below. The chief concern regarding shared uses on bridges is the possibility of a horse becoming startled on or near the bridge and injuring someone or becoming injured itself. Many equestrians feel safe using the existing bridge, but would prefer a separate bridge. This presents management challenges, as it is difficult to enforce separation of uses in areas that are used by pedestrians, cyclists and equestrians. At a minimum, most equestrians would prefer a soft surface on the bridge approaches as opposed to concrete, which can be slick. However, soft surface approaches are not as friendly to wheelchair users and can become slippery when wet. Visual clearance on approaches benefits all bridge users.



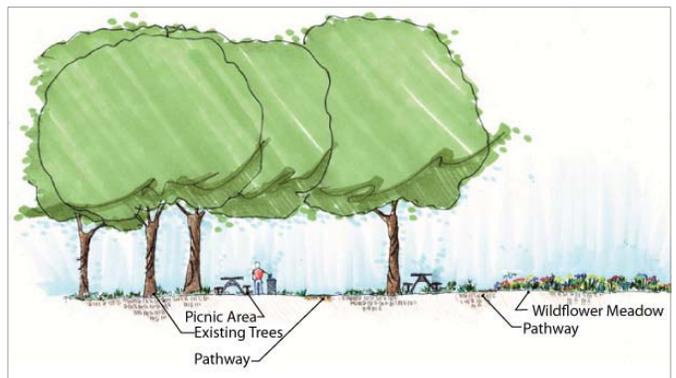
Wildflower Meadow



Pedestrian Bridges



Ephemeral Wetland



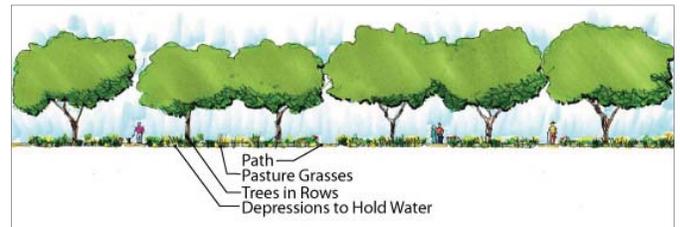
Picnic Areas

Master Plan

In general the Bachechi Open Space will be a model of sustainability in terms of water use, resource conservation and regionally appropriate vegetation and other materials. The open space will add to the forested lands of urban Bernalillo County and the Albuquerque metropolitan area. It will act as a staging area for the Rio Grande Valley State Park and provide citizens with features that will help educate about the environment and provide context-sensitive art. It will also act to clean the air by utilizing the natural processes that trees and vegetation provide. Major features of the Preferred Plan for the Bachechi Open Space include:

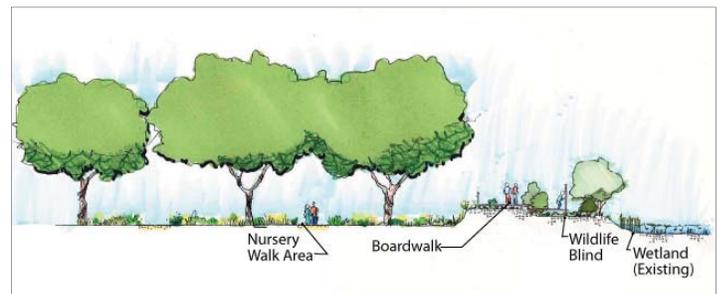
- Urban Forest** – perhaps the most important feature of the Open Space is the rehabilitation of trees and vegetation as an extension of the gallery forest that makes up the bosque along the Rio Grande. This urban forest is made up of primarily plants native to the Bosque and the Rio Grande Valley such as Cottonwoods and Black Willow at the upper story; Black Walnut, Mexican Elder, Silver Buffaloberry, New Mexico Olive, and Coyote and Peachleaf Willow in the middle ground; and shrubs and ground covers such as False Indigo Bush, Chamisa, Broom Baccharis and Asters, Mexican Hat and Yerba Mansa. Grasses will include Saltgrass, Indian Grass, Vine Mesquite, Grama Grasses and others. The Urban Forest will be made up of specific typologies of forest areas:
 - Bosque Depressions** – these areas will utilize collected water and higher levels of groundwater to sustain the trees and other plants within the depression. The upper to lower stories will be layered to accommodate the specific microclimate necessary to sustain plant health.
 - Dryland Buffers** – the dryland buffers are located along the edges of the open space and in areas nearest neighboring residents and the roadways that border the property on two sides. They will be exemplified by plant communities more specific to the deserts of central New Mexico and because of the berming which is used in some areas will help to create noise and visual buffers and screening. Plant communities will include Desert Willow, Juniper, Mesquite and others.

- Groves and Orchards** – the Pecan Grove and remnants of Apple Orchards and other trees still left from the Tree Farm have survived the years and in the case of the mini-maze have regenerated juvenile vegetation as well as sustained older growth forest. These areas will be rehabilitated and redeveloped into healthier ecosystems. The nursery walk is planned to re-create the experience of walking among alleys of mature trees in a flood irrigated garden. (This walkway will be limited to a select portion of the nursery to leave undisturbed the majority of the habitat provided in the area.)



Nursery Walk

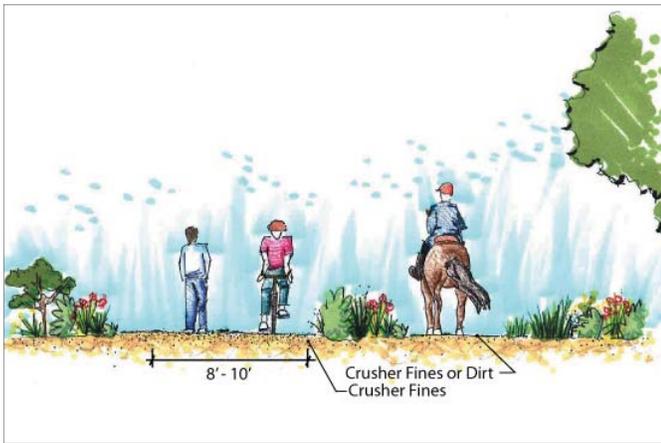
- Wildflower Meadows** – a wildflower meadow is planned for an area in the northernmost extent of the Open Space as a learning experience and as a colorful foil for the boardwalk also along the wetland .
- Boardwalk and Wildlife Viewing Blind** – a boardwalk is planned to connect the southern and northern portions of the Open Space via a dirt path leading to a bridge across the Lane Lateral. The boardwalk acts to provide access to the existing wetland for wildlife viewing by way of a blind and to the nursery. The raised boardwalk will provide visitors with a “walk-through” experience and protect the vegetative habitats in both locations.



Wildlife Viewing Blind



- **The Community Area** – the Community Area provides minimal parking in the southern half of the Open Space. It will house County offices, maintenance facilities, a small meeting room and potentially interpretive exhibits, and a caretaker’s unit. It is also planned to provide restrooms, and a planting area. Fire access will be near this midpoint location of the Open Space via the driveway for the building. Lastly, we have planned for a Memorial or Monument to the Bachechi Family in the Community Area to symbolize their importance to the Albuquerque/ Bernalillo County area and the Open Space in particular.
- **Trails** – the trails create a hierarchy of access and linkages throughout the Open Space. From Equestrian Paths to Forest Walks and multi-use trails the Open Space will allow access throughout and to surrounding destinations.
- **Parking and Equestrian Facilities** – the parking area in the northern portion of the site will be improved with a separation between the general and equestrian parking areas. The general parking will be expanded and improved in terms of circulation and the equestrian parking lot will accommodate six parking stalls including one for larger trailers. The area will also include a fenced in warm-up area. The larger equestrian area will be buffered from Alameda Boulevard with landscaping.
- **Artwalk** – the trail which currently connects the Alameda and Rio Grande intersection with the Rio Bosque Trail has been conceived as a subtle Artwalk to display a handful of local and regional public artworks. Any additional artworks would add to pieces already existing on site.



Pedestrian And Equestrian Trail

BACHECHI OPEN SPACE - Master Plan



LANDSCAPE TYPOLOGIES

- EXISTING TREES**
COTTONWOODS
PECANS
SIBERIAN ELMS
MIXED FOREST
- BOSQUE DEPRESSIONS**
LARGE AND SMALL TREES
GRASSES AND SHRUBS
- DRYLAND BUFFERS**
BUFFER TREES
GRASSES AND SHRUBS
(BERMS ARE ONLY ASSOCIATED WITH DRYLAND PLANTING WHERE SHOWN)
- GROVES AND ORCHARD**
EXISTING PECAN TREES
PECANS, CRABAPPLES
- WETLAND EDGE REVEGETATION**
BUFFER TREES
GRASSES AND SHRUBS
- WILDFLOWERS**
- UNDERSTORY GRASSES**
- GRASSLAND**

PLANT LIST

- | | | | | | |
|---|--|---|---|---|---|
| LARGE TREES
COTTONWOODS
BLACK WILLOW
NEW MEXICO ASH | SMALL AND MEDIUM TREES
BLACK WALNUT
BUFFALOBERRY
DESERT WILLOW
DESERT HACKBERRY
MEXICAN ELDER
MESQUITE
NEW MEXICO LOCUST
NEW MEXICO OLIVE
PEACHLEAF WILLOW | SHRUBS, PERENNIALS, GROUND COVERS, AND VINES
FALSE INDIGO BUSH
BROOM BACCHARIS
GOLDEN CURRENT
COYOTE WILLOW
WOODBINE
VIRGINS BOWER | GRASSES
SALT GRASS
VINE MESQUITE
INDIAN GRASS | WETLAND EDGE REVEGETATION
NEW MEXICO OLIVE
SEDGES
HORSETAIL
YERBA MANSA
WILD IRIS | CHAMISA
THREE LEAF SUMAC
WOLFBERRY |
| WILDFLOWER MEADOW | NURSERY WALK | ACEQUIA | PECAN GROVE | PLANTING AREA | FIRE ACCESS GATE |
| BLIND | VIEWING PLATFORM | BOARDWALK | ACEQUIA | PLANTING AREA | FIRE ACCESS GATE |
| ACCESS TO ALAMEDA | ADDITIONAL PARKING | PROPOSED REST ROOM | ACEQUIA | PLANTING AREA | FIRE ACCESS GATE |
| EXISTING WETLANDS | EXISTING BRIDGE AND BOSQUE PATH | POTENTIAL BRIDGE EXPANSION UPON APPROVAL BY MRGCD | ACEQUIA | PLANTING AREA | FIRE ACCESS GATE |
| EXISTING MASONRY WALL | ALTERNATIVE EQUESTRIAN BRIDGE UPON APPROVAL BY MRGCD | EXISTING MASONRY WALL | ACEQUIA | PLANTING AREA | FIRE ACCESS GATE |

MATERIALS LEGEND

- MULTIUSE PATHS (PAVED OR UNPAVED)
- FOREST TRAILS AND PATHS
- EQUESTRIAN PATHS
- BOARDWALK
- BRIDGES
- PICNIC AREAS
- BUILDINGS
- PARKING AREAS
- EQUESTRIAN AMENITIES
- POSSIBLE ARTWORK/INTERPRETIVE LOCATIONS
- PROPERTY LINE

SEPTEMBER 15, 2008



Master Plan





VI. Phasing and Costs

Improvements are generally phased from the north to the southern reaches of the Open Space. Cleanup will dominate the efforts in the northern extreme of the project with the removal of noxious and exotic species. This effort will also include the selective pruning and shaping of the existing forest areas. Access and the provision of linkages will follow and the regeneration of the urban forest in the southern extent of the project are proposed as the final phases of work. Costs for the implementation of the Master Plan have been provided on the table below.

Bachechi Open Space Master Plan Parametric Opinion of Cost

Prepared by: Sites Southwest

September 16, 2008

Item Description	Estimated Quantity	Unit	Unit Price	Amount
Demolition and Removal of Exotic Species	1	LS	\$50,000.00	\$50,000.00
Pruning and Other Clean-Up	1	LS	\$50,000.00	\$50,000.00
Grading (For Roads, Parking and Soil Depressions, etc.)	1	LS	\$100,000.00	\$100,000.00
Pedestrian Bridges (Large)	2	EA	\$80,000.00	\$160,000.00
Pedestrian Bridge (Small)	1	LS	\$30,000.00	\$30,000.00
Fishing Piers	2,025	SF	\$50.00	\$101,250.00
Boardwalk	5,975	SF	\$20.00	\$119,500.00
Soft Surface Trails (ADA Accessible)	2,885	SF	\$2.50	\$7,212.50
Soft Surface Trails	25,960	SF	\$1.25	\$32,450.00
Enhanced or Multi-Use Trails	11,725	SF	\$1.25	\$14,656.25
Revegetation (Seed and Planting)	850,000	SF	\$0.80	\$680,000.00
Formal Landscape (Irrigated Landscape in Parking Lots/ Community Area)	44,845	SF	\$3.00	\$134,535.00
Agricultural Landscape (Orchard, Community Garden, etc.)	174,360	SF	\$1.00	\$174,360.00
Wildflower Meadow (Seeding, Irrigated)	17,030	SF	\$1.00	\$17,030.00
Parking Lot (Surfaces, Bumpers, Signage, etc.)	43,635	SF	\$3.00	\$130,905.00
Site Furnishings	1	LS	\$30,000.00	\$30,000.00
Buildings: Restroom, Maintenance, Visitor Center	4,000	SF	\$225.00	\$900,000.00

Construction Subtotal \$2,731,898.75

25% Contingency \$682,974.69

Construction Total \$3,414,873.44

Notes

*Approximately 20% in additional funding should be pursued for preparation of surveying, detailed construction design plans, permitting, and other fees

* Construction Opinion of Cost Includes County Property Only



