

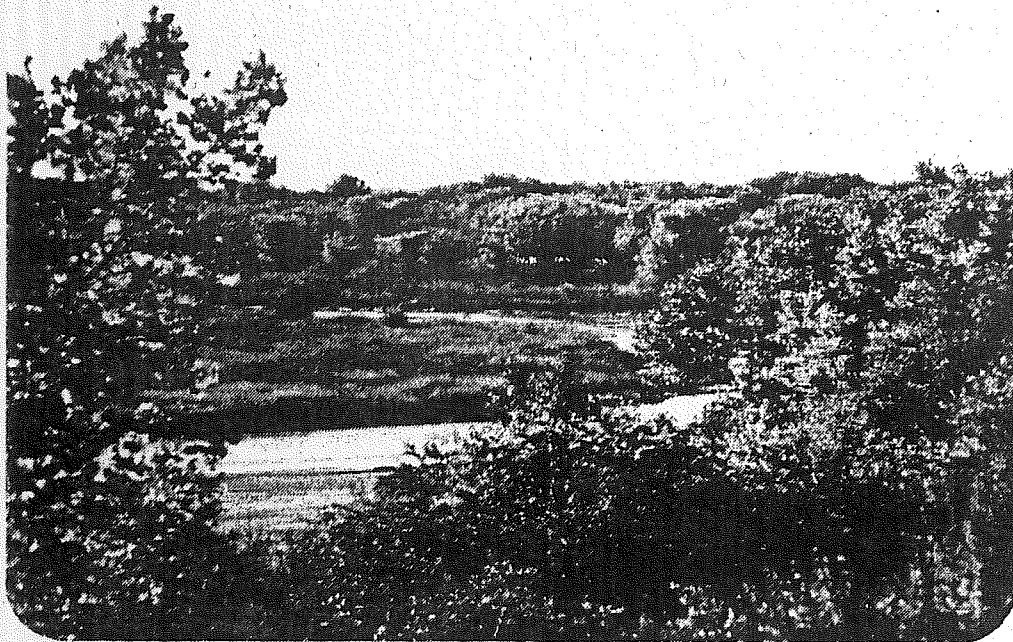
City of Albuquerque

Parks and General Services Department

BOSQUE ACTION PLAN

Rio Grande Valley State Park

Final Plan



January 1993

CITY of ALBUQUERQUE

TENTH COUNCIL

R-306

111-1993

COUNCIL BILL NO.

ENACTMENT NO.

SPONSORED BY:

Vincent E. Suigo

RESOLUTION

ADOPTING THE BOSQUE ACTION PLAN AS A RANK TWO FACILITY PLAN AND ADOPTING STANDARDS FOR MANAGEMENT OF THE RIO GRANDE VALLEY STATE PARK.

WHEREAS, the City Council, the governing body of the City of Albuquerque, has the authority to adopt plans for physical development within the planning jurisdiction of the City as authorized by New Mexico Statutes; and

WHEREAS, the Albuquerque/Bernalillo County Comprehensive Plan identifies the Rio Grande Bosque be managed to retain and enhance its natural values; and

WHEREAS, the Bosque Action Plan, a Rank Two Facility Plan, provides the framework and direction for specific planning of the Rio Grande Valley State Park; and

WHEREAS, the City has prepared the Bosque Action Plan to guide future management by addressing resource and wildlife protection, recreation, education and specific uses, environmental enhancement and implementation; and

WHEREAS, the Bosque Action Plan has been developed with the assistance of citizens and the official planning bodies having jurisdiction over the plan area in accordance with the Rio Grande Valley State Park Management Plan; and

WHEREAS, the Bosque Action Plan includes lands within the municipal limits and outside of those limits but within the City's planning and platting jurisdiction; and

WHEREAS, the Environmental Planning Commission, in its advisory role on all matters related to planning, zoning and environmental

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1 protection recommended the adoption of the Bosque Action Plan at a
2 public hearing on April 1, 1993, finding the plan consistent with the
3 provisions of the Albuquerque/Bernalillo County Comprehensive Plan and
4 other adopted City plans and policies.

5 BE IT RESOLVED BY THE CITY COUNCIL, THE GOVERNING BODY OF THE CITY OF
6 ALBUQUERQUE THAT:

7 Section 1. The Bosque Action Plan, attached hereto and made a
8 part hereof, is hereby adopted as a Rank Two Facility Plan.

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1 PASSED AND ADOPTED THIS 2nd DAY OF AUGUST, 1993.

2 BY A VOTE OF: 8 FOR 0 AGAINST.

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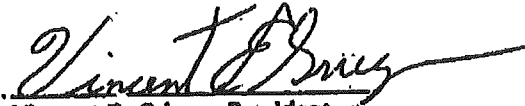
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Vincent E. Griego, President
City Council

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APPROVED THIS 10th DAY OF AUGUST, 1993.

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Louis E. Seavedra, Mayor
City of Albuquerque

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ATTEST:

City Clerk

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JOINT POWERS AGREEMENT

This Agreement, made and entered into this 4th day of April, 1997, by and between the CITY OF ALBUQUERQUE, NEW MEXICO, a municipal corporation ("City"), and the MIDDLE RIO GRANDE CONSERVANCY DISTRICT, a special district organized pursuant to NMSA §73-14-1 et seq. ("MRGCD").

WHEREAS, the Legislature of the State of New Mexico approved on March 15, 1983 the Rio Grande Valley State Park Act ("Act"), which requires the operating party for the park created by the Act, the Rio Grande Valley State Park ("Park"), to enter into a Joint Powers Agreement with the MRGCD; and

WHEREAS, the City has entered into an agreement pursuant to the Act with the Parks and Recreation Division of the Natural Resources Department of the State of New Mexico, whereby the City is designated to be the operating party pursuant to the terms of said Act; and

WHEREAS, the purpose of this Agreement as understood by each of the parties hereto is to formalize the means by which the parties will effectuate the provision of the Act; and

WHEREAS, the City's representative for the purpose of administration of this Agreement shall be the City Parks and General Services Department ("Department").

NOW, THEREFORE, in consideration of the premises, the parties agree as follows:

1. Monitoring of Operations

The City will not interfere with nor obstruct the duties, operations, obligations, construction of new works, functions of the MRGCD in the areas of flood control, irrigation, and drainage, nor will it interfere in the MRGCD's performance of its contracts with any federal agency. Any plans or new policies to be implemented by the City in the Rio Grande Valley State Park, will be submitted to the MRGCD for review and approval, which approval shall not be unreasonably withheld. The MRGCD agrees to cooperate to review said plans in an expeditious manner; however, if the City receives no response to a plan submitted for approval within three (3) months, such approval will be deemed granted.

The MRGCD agrees to abide by the Act and cooperate with the City to insure that the integrity and recreational opportunities of the State Park are maintained to the greatest extent possible consistent with the other duties of MRGCD. The MRGCD will inform the City of projects which will affect the recreational features and

the natural character of the area, and will cooperate to minimize any adverse impact to the Park as a result of its operations.

Any existing or future drainage or flood control projects approved by Bernalillo County, the City or Albuquerque Metropolitan Area Flood Control Authority which affect the Park, shall be reviewed and approved by the MRGCD, pursuant to the requirements of the Act. The goal shall be to minimize adverse impact on the Park or the MRGCD caused by such a project.

The City and MRGCD will have joint approval over utility easements within the Park subject to the guidelines of the Act.

2. Management Plan Adopted

The MRGCD and the City hereby agree and stipulate that the Rio Grande Valley State Park Management Plan ("Management Plan") will be a guiding policy document for management of the Park. Updates of the Management Plan must be approved by both the City and the MRGCD and these updates must occur within one (1) year of the date of this Agreement. Such City, County or State statutes as apply to the management of the Park will be enforced by the City, County or State in accordance with the Management Plan. As part of the Management Plan, the City and the MRGCD will develop a facilities plan which outlines proposed construction of picnic areas, trails, gates, vehicle access barriers, and other appropriate facilities. Such facilities plan will be submitted to the City and MRGCD for review and approval, which approval shall not unreasonably be withheld. Nothing in the plan shall be construed to prevent MRGCD from performing its other duties and functions and from developing other relevant plans as necessary.

3. Jurisdiction

To the extent allowed by law, the City will through its Open Space Rangers, and the MRGCD will through its Bosque Patrol Officers, exercise concurrent jurisdiction to enforce Park rules, the Open Space Ordinance, and State Criminal Statutes. MRGCD will inform the City of their adoption of any rules and regulations with regard to the Park. Those officers will not exercise primary jurisdiction over major crimes and homicides nor be involved in a position of authority for fire control, rescue operations, and environmental health. Those responsibilities will be treated as they have in the past by the respective authorities for City, County and State open space lands.

The City recognizes the primary importance of MRGCD's functions of flood control, irrigation, and drainage and agrees not to interfere with MRGCD operations within the boundaries of their works which include adjacent levees, service roads or riverside drains. If the City requires use of MRGCD works consistent with the Park Act the MRGCD may issue a license to the City for such use. The City shall have

no jurisdiction over such works with the exception of law enforcement purposes as stated above. Any modifications to City facilities must be agreed to by both parties before any modifications occur.

The MRGCD, consistent with the Park Act, may grant use of portions of its property to any public entity for use to further the public welfare. The City shall be notified in advance of any such granted use. Any improvements made by the City within the Park boundaries will remain the property of the City.

The City shall erect signs at all entrances to the Park which identify the MRGCD and the City as cooperating managers of the Park.

4. Rules Governing Use

The City and MRGCD may formulate and post rules regulating the recreational use of the Park in order to accomplish maximum recreational use and visitors' safety. Such rules must be approved by both the City and MRGCD or they shall have no effect. Subject to those rules, the City will issue permits for and monitor any special use recreational activities in the Park and will coordinate such activities so as not to interfere with MRGCD operations.

5. Motor Vehicle Restrictions

The parties agree that it is in their mutual interest to control unauthorized access by motorized vehicles within the Park. The City agrees to erect and maintain vehicle barriers subject to the approval of the MRGCD. The parties agree to keep these barriers locked or otherwise secured, to prevent vandalism, theft of flood control jetties, levee deterioration, and to control dumping, shooting, fires, resource removal and other illegal or nuisance activities.

6. Wood Cutting

The MRGCD grants the City the authority to issue wood cutting permits. Each wood cutting permit will be coordinated with the MRGCD.

7. Dumping

The City agrees to be responsible for the removal and disposal of all trash, waste and debris within the boundaries of the Park. The MRGCD agrees to be responsible for the removal and disposal of all trash, waste and debris within the boundary of the works, as set forth in Section (3) above .

The parties agree to work together to minimize the widespread dumping of trash, waste and debris within the Park. The parties will cooperate to select

mutually agreeable storage sites for construction materials at periodic intervals within the Park. Thereafter, all such material may only be stored at said sites, except during a construction or maintenance project where materials may be stockpiled at the site of said project prior to or during the construction of the project.

8. Safety

The parties will cooperate in formulating and executing a plan to maximize the safety of Park visitors. This may involve public education, signage, written handouts, visitor information programs, public service announcements, the erection of barriers, and other reasonable precautions. Each party agrees to take such safety measures as are feasible to cooperate with the other party in general safety measures in the Park.

9. Liability and Property Damage

Neither party will seek to hold the other responsible for any damage done by third parties to their respective property. If damage is caused by one of the parties to this Agreement, the party shall be responsible for such property damage, unless due to an emergency situation, such damage cannot be prevented.

10. Designated Personnel

The City and the District will designate liaison personnel to coordinate on matters arising out of this Agreement or on matters of mutual interest. The parties agree to exchange plans and reports which affect facilities or programs within the Park. At least on a quarterly basis, the City will make a report to the MRGCD Board of Directors concerning the operations of the Park, the status of City plans which affect the Park and other matters of mutual interest.

11. Modification

This Agreement may be modified from time to time in writing approved by the City of Albuquerque and the Board of Directors for the MRGCD.

12. Termination

The Agreement shall remain in force so long as the Act is in force and not modified in any manner and the City of Albuquerque is the designated operating party pursuant to the terms of the Act.

MIDDLE RIO GRANDE CONSERVANCY
DISTRICT

Lawrence C. [Signature]

Chairman, Middle Rio Grande Conservancy
By: District

Date: March 11, 1997

CITY OF ALBUQUERQUE

[Signature]

Chief Administrative Officer, City
By: of Alb.

Date: 4/15/97

City of Albuquerque

Louis E. Saavedra, Mayor

Art A. Blumenfeld, Chief Administrative Officer
Lawrence Rael, Deputy Chief Administrative Officer

Jay J. Czar, Director, Parks and General Services Department
Pat Westbrook, Superintendent, Design and Development Division
Rex Funk, Superintendent, Open Space Division
Sandy Zuschlag, Assistant Superintendent, Design and Development Division
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Open Space Advisory Board

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James Fitzgerald, Vice-Chair
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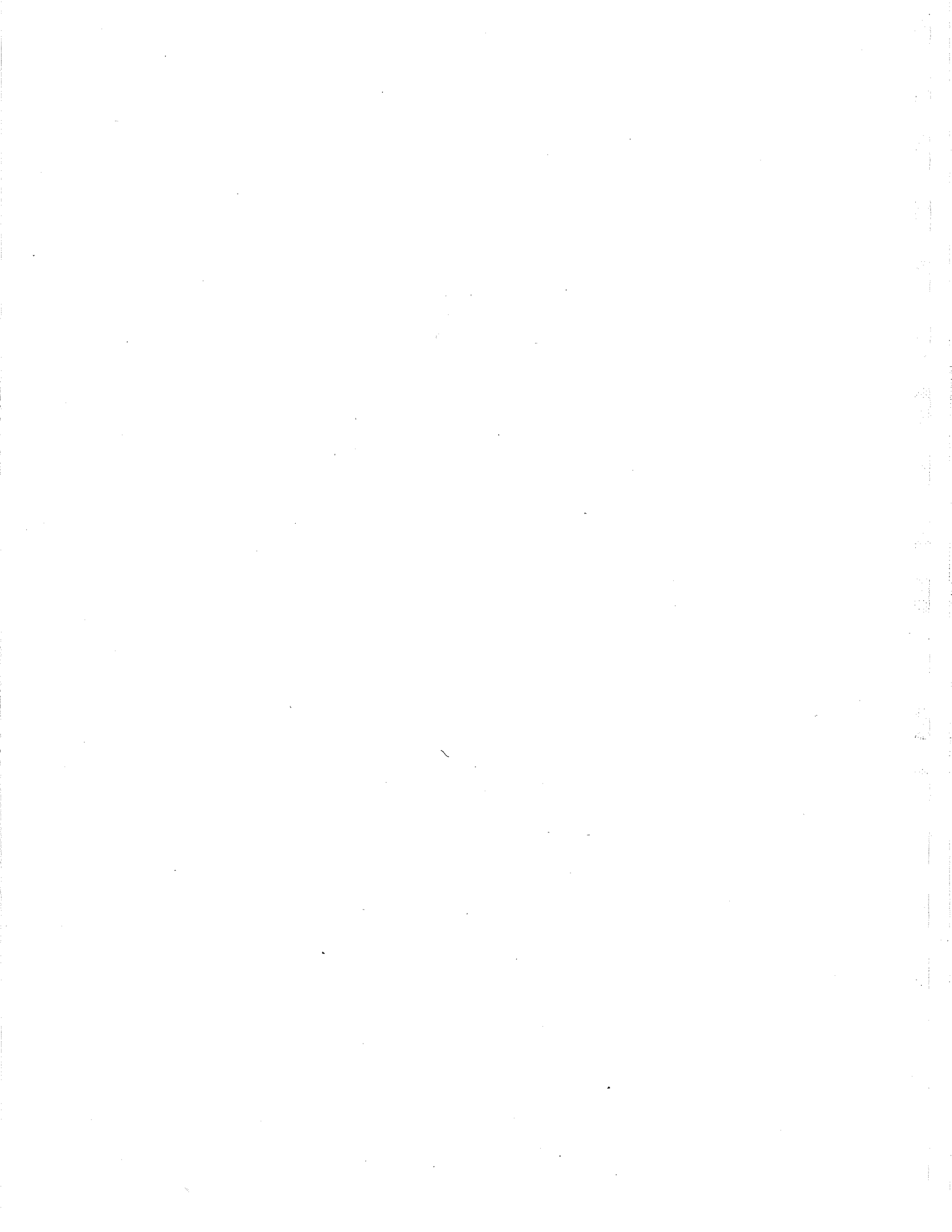


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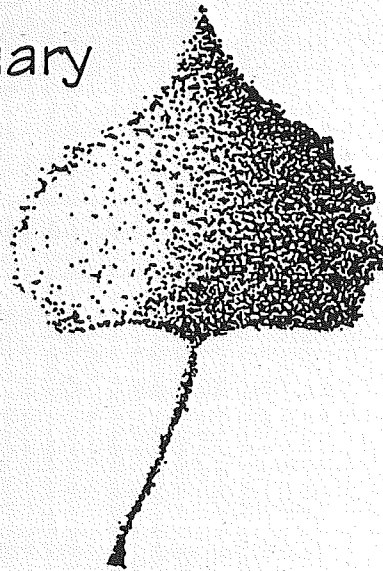
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- A. STATE LEGISLATIVE ACT
- B. BIOPHYSICAL LAND UNITS
- C. CITIZEN PARTICIPATION
- D. RANGE OF REASONABLE ALTERNATIVES

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Executive Summary



EXECUTIVE SUMMARY

The Rio Grande Valley State Park is one of the few remaining riparian habitat in the southwest. The increasing urbanization of the Albuquerque area has been accompanied by a shift in the perceived value of the Rio Grande and the bosque as a unique resource within a major metropolitan area.

The purpose of the Bosque Action Plan is to identify specific environmental and recreational improvements for the Rio Grande Valley State Park. In this plan, policies have been developed to help minimize impacts on the bosque environment and to ensure the continued survival of the plants and animals of the bosque habitat.

The Plan is divided into four major sections. The first section is a description of the park, and the following three sections specify policies, actions and implementation procedures.

Section I. provides an overview of the purpose of the Plan, research techniques, definitions, policy and planning processes.

Section II. enumerates 24 policies for improvements to the park. These include environmental restoration and preservation (Policies 1-7), recommendations for improved mixed-use recreation and accessibility (Policies 8-16), and environmental education and administrative direction (Policies 17-24).

Section III. includes detailed descriptions of the 21 project locations and the proposed actions at these locations.

Section IV. sets out the guidelines for plan implementation through project phasing and cost estimates.

Projects identified in this plan will be implemented by the City of Albuquerque, Parks and General Services Department. The Parks and General Services Department will coordinate projects with the Middle Rio Grande Conservancy District, State Highway Department, Albuquerque Metropolitan Arroyo Flood Control Authority, Corp of Engineers, Bureau of Reclamation and other City departments.

Some projects will be funded through the remaining 1/4 Cent Quality of Life. In the draft 1993 CIP Decade Plan, an additional \$400,000 was identified for the Rio Grande Valley State Park. (This funding is contingent on final approval from the City Council, the City Administration and the voters in October 1993). Individual projects have been prioritized for implementation as part of this Plan. (See IV. Plan Implementation).



LEGEND

NEW: Solid line with arrowhead

EXISTING: Dashed line with arrowhead

STREET: Dotted line

SCHC: Dotted line with cross-ticks

RAILROAD: Dashed line with cross-ticks

WATER: Wavy line

PARK: Area with diagonal hatching

PARKWAY: Area with horizontal hatching

CITY LIMITS: Area with vertical hatching

NOTES

1. The Rio Grande Nature Center access is controlled by the center. Access to the Paseo del Bosque trail is limited to pedestrians only from the center.

DESCRIPTION OF BOUNDARIES

State Park shall include lands adjacent to the floodway of the river; adjacent to the floodway of the river; adjacent to the floodway of the river;

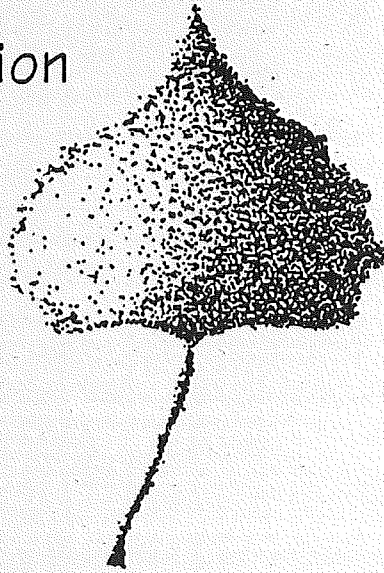
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Introduction



1. INTRODUCTION

Rio Grande Valley State Park (RGVSP) is in the heart of Albuquerque (see Map 1). It is 22 miles in length, and includes approximately 5,000 acres of bosque and river. The northern boundary is Sandia Pueblo, the southern boundary is Isleta Pueblo, and the east and west boundaries are the riverside drains. Land uses adjacent to the park vary from urban industrial, residential to agricultural.

Prior to the designation of the Rio Grande Valley State Park and the subsequent development to the RGVSP Management Plan, the bosque and river had many uses. Uses have ranged from household and commercial garbage and cleared stands of forest can be found throughout the park. Historically it has always been a place for recreation and the livelihood of many area farmers who depended on the water of the river and ditches for crop irrigation.

The bosque's unique and fragile environment has generated a growing desire to preserve and enhance this valuable resource within the center of a growing city. The designation of the RGVSP has permitted the City to take steps toward protecting the bosque and river. Today, compatible uses such as walking, bicycling, horseback riding and canoeing are encouraged in most areas of the park. As stated in the State enabling legislation, "the designation of the Rio Grande Valley State Park will enable people to enjoy the recreational, environmental, educational and wildlife benefits of the river."

A. PURPOSE OF THE BOSQUE ACTION PLAN

The Plan identifies specific environmental and recreational improvements for the RGVSP. The type of improvements vary from area to area in the park based on the existing conditions within the bosque environment. In some areas, established trail networks for pedestrians, equestrians, bicyclists and people who use wheelchairs are provided. In other areas, protection of wildlife habitat and restoration of the bosque will require limited public access.

B. BIOPHYSICAL LAND UNITS

The identification of biophysical land units (BLUs) within the park integrates important information into a database for environmental and recreational planning. (See Map 2) Since the BLU constitutes an inventory of the existing environment, it provides information on the fundamental natural capabilities of the land to support different resource management proposals (trails, access points, etc.). Also, BLUs make it possible to identify and quantify human impact on a given park area over time. This information is further described in the Rio Grande Valley State Park Biophysical Land Unit Analysis and Management Implications.

BLUs are ecological response units. They represent a "snapshot in time". With sequential, or historic snapshots in time, area specific monitoring within the RGVSP is possible. Because BLU data are delineated with a computerized geographic

information system (GIS), multi-temporal modeling can be accomplished on a specific area of interest, or on the whole area contained in the database.

C. POLICY FRAMEWORK

The Bosque Action Plan establishes a framework specifying how to effectively manage the Rio Grande Valley State Park without neglecting the ecological system of the bosque. The policy framework was developed using issues and concerns identified by the Citizen and Technical Planning Teams (see Planning Process section for more information), comments received from the public and recommendations from the following studies:

- Botanical Inventory of the Middle Rio Grande Bosque
- Evaluation of Archeological Potential for Rio Grande Valley State Park
- A Survey of Mammal Populations in the Rio Grande Valley State Park
- Bosque Biological Monitoring Program: Bird Population Surveys in Rio Grande Valley State Park (1987 – 1990)
- Rio Grande Valley State Park Biophysical Land Unit Analysis and Management Implications.

D. PLANNING PROCESS

In early 1989, Citizen and a Technical Planning Teams were organized to assist in the development of the plan. The Citizens' Planning Team included representatives from adjacent neighborhood associations, environmental organizations, interested individuals and teachers, and recreational enthusiasts. Representatives from the Technical Planning Team were from various federal, state and local agencies. (See Technical and Citizen Planning Team list.)

Several biological studies were conducted to provide base information on the park. In addition, an intensive field investigation was conducted by staff with the assistance of several Citizen and Technical Planning Team members through the Spring and Summer of 1990. The field investigations identified past and present human uses of the park such as trails, old dump sites and burned areas. The collected information was digitized into the geographic information system.

Meetings with the Citizen and Technical Planning teams were held to introduce the work program of the plan and to discuss issues facing the Rio Grande Valley State Park. They identified various environment, recreation, education, wildlife, protection and maintenance and management issues. These issues were incorporated into the Range of Reasonable Alternatives. In the Fall of 1990, the Range of Reasonable Alternatives (see Appendix D) was presented to the planning teams. After carefully reviewing the biological reports and BLU report recommendations, the various aspects of the four alternatives supported by the planning team members were incorporated to develop the Bosque Action Plan.

E. DEFINITIONS

Biophysical Land Unit –

A method of computer modeling on an ecosystem utilizing Geographic Information System. It allows an integration of environmental and recreational information that produces data representing a "snapshot in time". Also, this is designed to examine the fundamental natural capabilities of the land to support different management proposals.

Conservation –

The use of natural resources in a way that assures their continuing availability to future generations; the protection of natural resources.

Cryptogamic Soils –

A crust of blue-green algae and fungi often associated with a silty sand soil. This dark crust inhibits the germination of herbaceous plants.

Ecosystem –

A natural unit that includes living and non-living parts interacting to produce a stable system in which the exchange of materials between the living and non-living parts follows closed paths.

Edge Effect –

The tendency of wildlife to use the areas where two vegetative types come together forming an edge.

Exotic –

A foreign plant or animal, one that has been introduced into the area.

Habitat –

The arrangement of food, water, shelter or cover, and space suitable to animals' needs.

Preservation –

Protection which emphasizes non-consumptive values and uses, including no direct use by humans.

Snag –

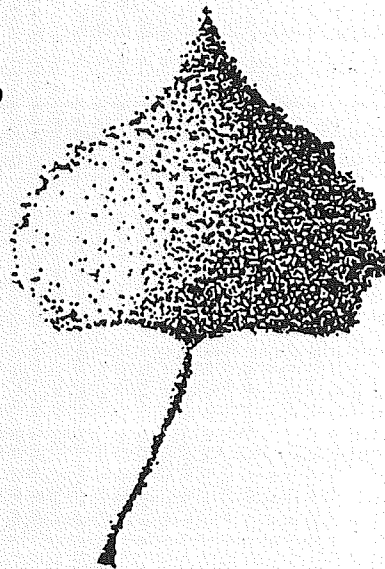
A standing dead tree from which the leaves and most of the branches have fallen. Important as wildlife habitat.

Transect –

A linear strip, approximately 2,500 feet in length, parallel to the river used to survey plants and animals on and adjacent to the strip.

Goals, Policies and Implementation

Actions



II. GOALS, POLICIES AND IMPLEMENTATION ACTIONS

A. ENVIRONMENT AND WILDLIFE

THE GOAL is to protect and enhance the natural resources of the Rio Grande Valley State Park.

POLICY 1:

Land use decisions shall be compatible with the ecological opportunities and constraints characteristic of the identified biophysical land units (BLUs).

Actions:

- A. Re-inventory BLUs every 3 to 5 years.
- B. Establish wildlife preserves where limited access is allowed in Native Species and Sensitive Woodland. (See Appendix B for explanation of this term.)
- C. Establish temporary reclamation preserves with temporary limited access in burned and other damaged areas.
- D. Close and revegetate existing trails through the most sensitive areas to control access. Natural barrier (wetlands, trees, or brush) piles will be used where possible. Man-made or physical barriers (fences or jetty jacks) will also be used where necessary.
- E. Create additional wetlands by excavating shallow ponds and planting marsh vegetation in selected portions of potential wetland (low meadows). (See Map 2 and Project Locations)
- F. Create additional open meadows in potential wetland (low meadows) and other appropriate areas. (See Map 2 and Project Locations)
- G. Develop specific management plans for the Oxbow and other sensitive areas identified by this plan.
- H. Evaluate the ecological impacts of facility development proposals that fall within and adjacent to the Rio Grande Valley State Park, prior to any surface disturbing action. Recommendations will be based on policies and actions set forth in this document.

POLICY 2:

Comprehensive programs shall be established for monitoring environmental ecological systems.

Actions:

- A. Maintain and continue monitoring original 1989 transects.
- B. Locate transects in relatively undisturbed areas which include a representative sample of all biophysical land units including existing wetland, open meadow/low woodland, burned areas, forest edges, native species, wildlife preserves and drains. Restrict public access to these areas and maintain the transect as a baseline for comparing data to other transects.
- C. Locate a transect in a public use area within a variety of BLUs. Make comparison to transects located in undisturbed areas. Monitor any impacts or changes on a yearly basis, or more frequently, depending on the ecological variables selected for monitoring.
- D. Conduct an amphibian and reptile survey every 5 years during the spring and summer.
- E. Conduct vegetation surveys within the transects every 2 to 5 years. Use the methodology of Hink and Ohmart (1984) and Sivinski, Fitch and Cully (1990) to measure the density, cover, frequency, and height of perennial plant forms.
- F. Conduct vegetation surveys within monitoring plots established by Sivinski, Fitch and Cully every 3 to 5 years.
- G. Monitor the bird population within the transects by direct count every 5 years during the fall, winter and spring. Measure survival and reproductive success by netting and banding during the breeding season.
- H. Monitor the structure and density of mammal populations within the transects every 5 years during spring and fall. Measure by marking, releasing, and recapturing.
- I. Using the methodology employed in the 1990 field surveys, conduct human use field investigations every 3 years along all designated trails and other high impact areas.
- J. Have a biologist/ecologist evaluate and interpret data from the transects and high impact areas.
- K. Limit access and surface disturbance in areas where studies indicate a decline in ecological conditions.

L. Have a biologist/ecologist assess the impacts of beaver on the cottonwood bosque and recommend selected mitigation measures to implement. If necessary, provide temporary measures by wrapping wire around cottonwood trees in impacted areas.

M. Every 5 year monitor potential habitats where the following threatened, endangered and rare species could be found: Meadow Jumping Mouse, Tawny-bellied Cotton Rat, Southwestern Willow Flycatcher, Yellow Warbler, Yellow-billed Cuckoo, Long-eared Owl, Virginia Rail, Sora, Summer Tanager.

N. Monitor ground water throughout the park, track water and nitrate levels.

O. Monitor breeding bird rookeries every 5 years. Conduct survey in the month of May to locate new rookeries or monitor the health of known rookeries.

POLICY 3:

The Rio Grande Valley State Park shall be managed to preserve and enhance its ecological diversity.

Actions:

A. Control exotic plant materials that compete with native species and have little wildlife value with these objectives:

- To control the growth of Siberian elm and salt cedar in cottonwood woodland.
- To control the growth of Siberian elm and other exotic plant species in and adjacent to native species, sensitive woodland, and open meadow/low woodland areas.
- To control exotic plants in areas with threatened and endangered plant species. (Refer to "Botanical Inventory of the Middle Rio Grande Bosque" [Sivinski, Fitch and Cully] and other updated reports relating to the RGVSP.)
- To recover areas from fire.

B. Where feasible, reintroduce native plants and animals that historically occurred in the RGVSP. (Refer to the "Rio Grande Valley State Park Biophysical Land Unit Analysis and Management Implications" [Dames & Moore] and "Botanical Inventory of the Middle Rio Grande Bosque").

C. Improve wildlife habitat by leaving large fallen trunks, herbaceous vegetation, leaf litter in areas with low fire potential and snags as wildlife habitat and nest site.

D. Establish clearings near woodlands most susceptible to fire devastation.

Locate fire breaks in open meadows/low woodlands.

E. Test the feasibility of controlled burns that reduce fuel loads and brushy understory in open meadow/low woodland.

F. Manage regrowth of vegetation in burn areas. (Refer to Dames & Moore reclamation recommendations and Sivinski, Fitch and Cully).

G. Close trails where public use patterns are impacting the health and diversity of the bosque.(See Trails and Project Location maps.) Immediately begin restoration of those areas.

H. Close trails in areas with cryptogamic soils.

I. Expand native species habitat. Control access to these areas by providing interpretive trails.

J. Create wetland by utilizing storm water outfall. Other governmental agencies will assist in wetlands construction and the Open Space Division will provide maintenance of wetland.

POLICY 4:

Regeneration of cottonwood trees shall be emphasized to perpetuate their existence.

Actions:

A. Maintain genetic diversity in cottonwood poles to avoid losing genetically similar trees.

B. Maintain genetic diversity by collecting cottonwood poles from 40 – 50 different trees.

C. Use temporary flooding of selected portions of open meadow/low woodland to facilitate native plant germination and deter the spread of Siberian elm and salt cedar. Coordinate flooding efforts with the Corp of Engineers and other agencies.

D. Reforestation of areas by pole plantings will be based on the following criteria:

- Areas recovering from fire.
- Areas requiring garbage clean up.
- Areas requiring exotic plant control.
- Areas of past wood cutting.

- Areas requiring noise screen.
- Areas requiring visual screen.
- Areas needing an edge between open meadows & wooded areas.
- Areas not designated for future wetlands.

E. Collect cottonwood poles from both sexes of trees to ensure the occurrence of seed production.

POLICY 5:

Habitat for rare and endangered plant and animal species shall be protected.

Actions:

- A. Restrict access into sensitive habitats by diverting uses into less sensitive areas.
- B. Expand the existing habitat of rare and endangered plants and animals.
- C. Control the use of chemically-based insecticides and herbicides in all marshy areas and heavy public use areas.

POLICY 6:

All submittals for development, both private and public on property located on or adjacent to the boundaries of the Rio Grande Valley State Park shall include a complete extraordinary facilities form to be submitted to the Open Space Advisory Board for their action.

Action:

- A. These submittals will be checked for compliance with this plan and other adopted plans, ordinances and policies.

POLICY 7:

Any disturbance within the Rio Grande Valley State Park not approved by the Open Space Division shall be mitigated by the party responsible for the disturbance.

Actions:

- A. Removal of native vegetation smaller than six (6) inches in diameter shall be replaced on a 3 to 1 basis.

B. Removal of native vegetation larger than six (6) inches in diameter shall be replaced on a 10 to 1 basis.

C. Identify seedling thru mature cottonwood trees remaining within the construction site. The party is responsible to identify and report the presence of these trees to the Open Space Division. The Division will take steps to invoke a fine for unauthorized removal.

D. Impact to the bosque from construction occurring outside of the transportation corridors (defined by the State Legislative Act) will have a three to one land replacement. Land mitigation must be in Bernalillo County, preferably adjacent to the Rio Grande Valley State Park.

E. An organization or agency with a special use permit will be required to replace resources. Damages to the park amenities will be replaced at cost as determined by the Open Space Division.

B. RECREATION AND OTHER PUBLIC USES

THE GOAL is to protect and enhance the natural character by facilitating appropriate management practices and public uses.

POLICY 8:

Improvements shall be located in non-sensitive areas that are appropriate for such developments, considering ecological sensitivity as well as user satisfaction.

Actions:

- A. Acquire adjacent properties to provide access and additional parking outside the Riverside Drains.
- B. Acquire property to accommodate low impact recreational uses and educational center(s) adjacent to the park.

POLICY 9:

Encourage developed recreation and other public uses between the area north of Barelás Bridge and south from Interstate 40.

Actions:

- A. Establish an information booth at Central Bridge.NE
- B. Provide trails to meet Uniform Federal Accessibility Standards (UFAS) as required by American Disability Act (ADA) of 1990 standards.
- C. Develop picnic areas.
- D. Develop trail connections to the proposed Biological Park and the Rio Grande Zoological Park.
- E. Coordinate proposed Biological Park with projects in the RGVSP.

POLICY 10:

Access points shall be developed in appropriate areas.

Actions:

- A. Establish formal access points to portions of cottonwood woodlands, open meadow/low woodlands, and in areas of potential wetlands not considered for wetland development.

- B. Make handicapped accessible access points wherever possible meeting UFAS as required by ADA of 1990 standards.
- C. Develop informational signs at each access point.
- D. Provide horse tie-ups, bicycle racks, and garbage receptacles at appropriate access points.
- E. Increase Open Space ranger patrols in areas surrounding access points.
- F. Identify links between access points and existing or proposed trails that extend beyond the boundaries of the park.
- G. Evaluate for feasibility three parking alternatives to be located nearby the Rio Grande Nature Center (RGNC). The three locations are:
 - 1) at the end of Decker Avenue
 - 2) near the RGNC entrance
 - 3) at the north end of Trellis Drive.

POLICY 11:

An ecologically compatible, multi-use trail system shall be developed.

Actions:

- A. Avoid locating trails in woodland with deep, loose soils.
- B. Develop stabilized trail surface and loop trails from access points into non-sensitive areas of the bosque as identified in this document and other updated BLU reports. Wheelchair accessible areas must meet UFAS as required by ADA of 1990 standards.
- C. Close or move trails if monitoring determines that excess degradation to the area has occurred.
- D. Provide informational and interpretive signs in areas where educational interests should be emphasized.
- E. All signs will be consistent with the low impact philosophy of the RGVSP, minimizing visual intrusion into the natural landscape.
- F. Use existing trails when developing new trails in the same location.

POLICY 12:

The Paseo Del Bosque Trail shall be extended outside the bosque north and south of the existing trail. (See Project Location Map 22)

Actions:

- A. Develop a continuous stabilized, surface trail that traverses the park from north to south. Avoid sensitive areas and use drain levees where appropriate. Identify the facility as the Paseo del Bosque Trail.
- B. Provide natural material seating and bike racks in areas that offer scenic views.
- C. Locate the trail outside of the bosque, either on or adjacent to the levee road or maintenance road from the Riverside Drain. Widening of the levee may be necessary in order to accommodate both the trail and MRGCD maintenance vehicles. Widening to the non-bosque side of the levee is the preferred alternative, but if not feasible, widening toward the bosque is acceptable. Any variation for this policy or a proposal to route a segment of the trail into the bosque, due to technical constraints, must be approved by the State Park Division in consultation with the City.
- D. Provide mile marker and next access/egress information at intervals along the trail.
- E. Adjacent to the trail extension provide a natural surface trail for equestrian use.
- F. Realign trail between the Campbell Road bridge and the Rio Grande Nature Center foot bridge to the levee road. Close the existing trail between Campbell Road and the Rio Grande Nature Center to horses and bicycles.

POLICY 13:

Appropriate fishing areas shall be developed.

Actions:

- A. Establish appropriate locations along the riverside drains as fishing areas (as identified in the projects).
- B. Develop wheelchair accessible fishing pier drain at drain access points at Rio Bravo, SE. Construction of the fishing piers must meet Uniform Federal Accessibility Standards (UFAS) as required by Americans with Disabilities Act (ADA) of 1990 standards.

POLICY 14:

Non-motorized boating areas shall be developed.

Actions:

- A. Develop put-in and take-out sites for public rafts, canoes, and kayaks in non-sensitive areas.
- B. Prohibit boating access by providing signage and enforcement in sensitive areas along the Rio Grande.
- C. Prohibit use of motorized boating except in matters of public emergencies and safety.
- D. Prohibit home-made crafts constructed from oil and chemical drums.

POLICY 15:

Special use permits shall be required for all organized events.

Actions:

- A. Allow events that are compatible with the goals and management policies for the Rio Grande Valley State Park.
- B. Evaluate each special event based on the following criteria:
 - Dispersed activity.
 - Minimal ecological impact.
 - Compatible with the Plan's goals.
 - Open Space Division evaluation form and special use permit completed and approved.
 - Compatibility with the recreation opportunity designated for that section of the RGVSP.
- C. Require staggered scheduling or other measures to reduce the noise and ecological impacts of approved events.
- D. Monitor events to determine their impact. Prohibit events that result in negative impacts.
- E. Unauthorized surface disturbance will require mitigation by the responsible party (See Policy 7 in this document).

POLICY 16:

Trails shall be re-routed in areas where emergency vehicles cannot access the levee roads.

Actions:

- A. Designate trails onto lower maintenance road or into appropriate areas of the bosque.

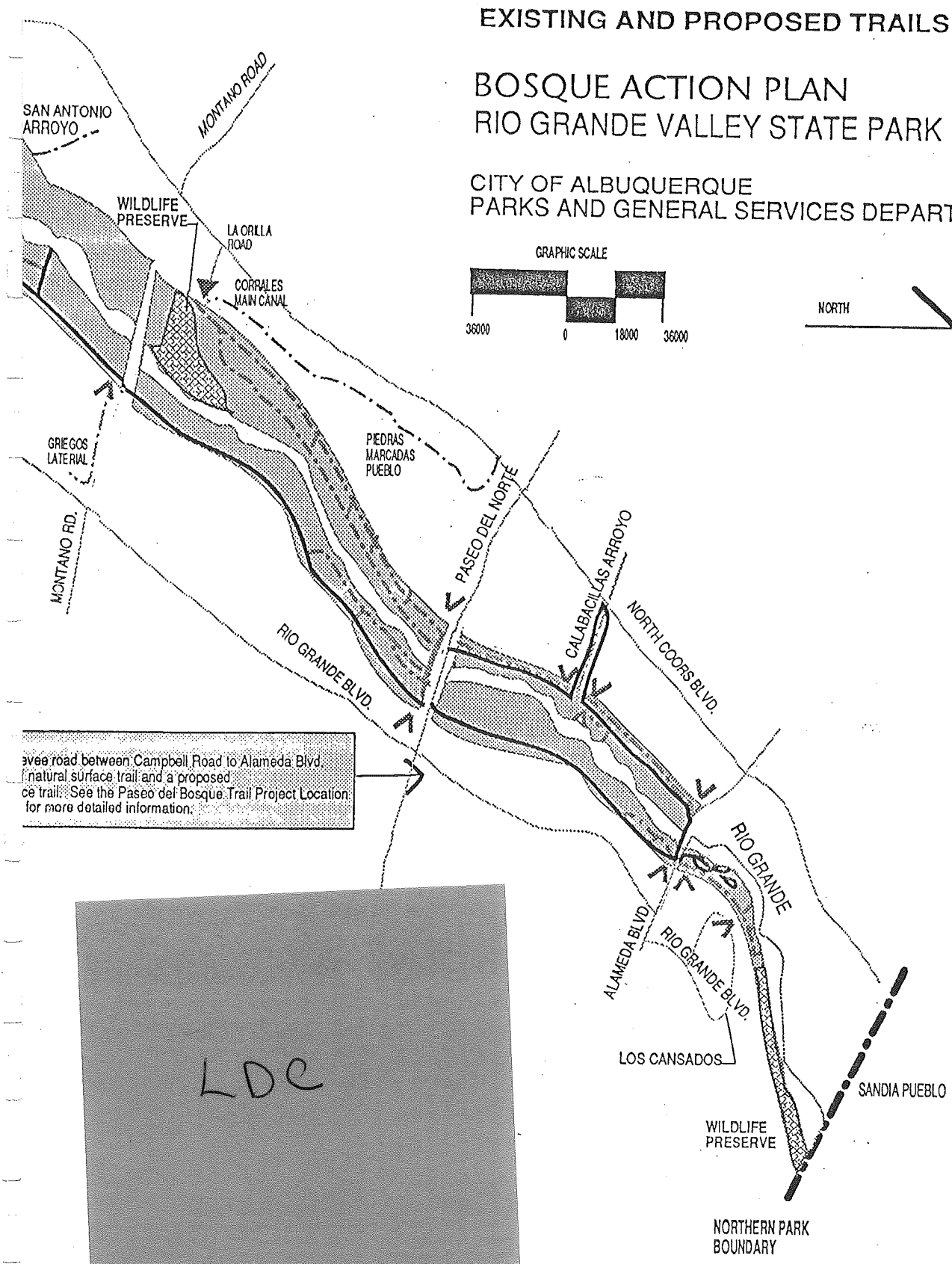
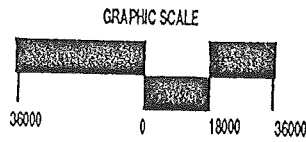
- B. Maintain a compacted levee road surface to assure they remain passable for emergency vehicles.

MAP #3 TRAILS MAP

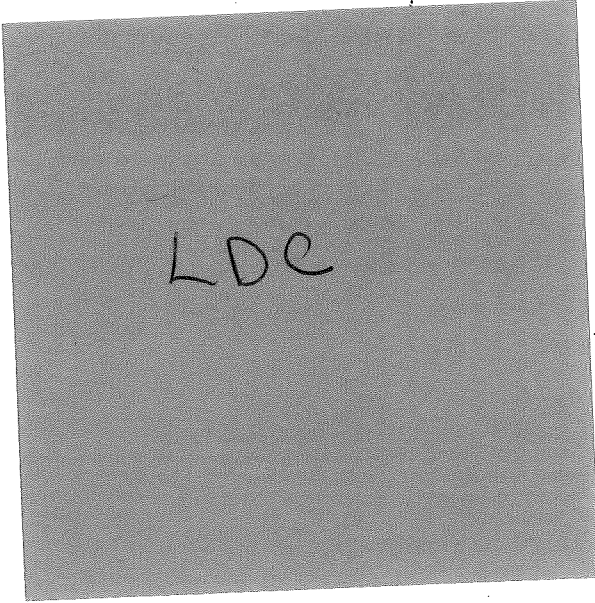
EXISTING AND PROPOSED TRAILS

BOSQUE ACTION PLAN RIO GRANDE VALLEY STATE PARK

CITY OF ALBUQUERQUE
PARKS AND GENERAL SERVICES DEPARTMENT



avenue road between Campbell Road to Alameda Blvd.
natural surface trail and a proposed
ce trail. See the Paseo del Bosque Trail Project Location
for more detailed information.



C. EDUCATION

THE GOAL is to enhance environmental education within the Rio Grande Valley State Park.

POLICY 17:

Educational opportunities and improvements shall be identified in appropriate areas.

Actions:

- A. Provide interpretive trails in the area extending from Interstate 40 to north of the Barelvas Bridge.
- B. Provide for an environmental education area. (See Map 4) This area will be used as an outdoor classroom for schools in coordination with the Open Space Division.
- C. Develop wheelchair accessible interpretive trails complying with the UFAS as required by ADA of 1990 standards.
- D. Develop observation blinds adjacent to wildlife habitat in the following locations:
 - Candelaria Farms (Northeast of the Rio Grande Nature Center parking lot)
 - Constructed wetlands
 - Oxbow (Contingent upon consent from landowners.)
- E. Acquire property and develop an educational center or overlooks outside the riverside drains.
- F. Develop an interactive digital database to visually display information about individual species, critical habitat, wildlife trends, and other related information. Use this information as part of environmental education and interpretive tours.
- G. Actively seek additional funding sources for educational programs.
- H. Coordinate with the New Mexico State Park and Recreation Division, Rio Grande Nature Center for the environmental education efforts.

POLICY 18:

Educational programs and materials shall be developed and implemented.

Actions:

- A. Develop a public awareness program that emphasizes the fragile nature of the bosque, promotes responsible visitor behavior, and ditch and water safety program.
- B. Develop trail etiquette materials and trail guides. Coordinate with the Greater Albuquerque Recreational Trails Committee.
- C. Develop general educational signs at access points.
- D. Develop a program of scheduled workshops, lectures and nature tours with the Open Space Division, Visitor Services Section.
- E. Coordinate with the University of New Mexico Biology Department to establish class projects for a monitoring program.
- F. Use youth development and volunteer programs for environmental projects where possible.
- G. Develop interpretative training for the Open Space Division, Visitor Services Section staff.

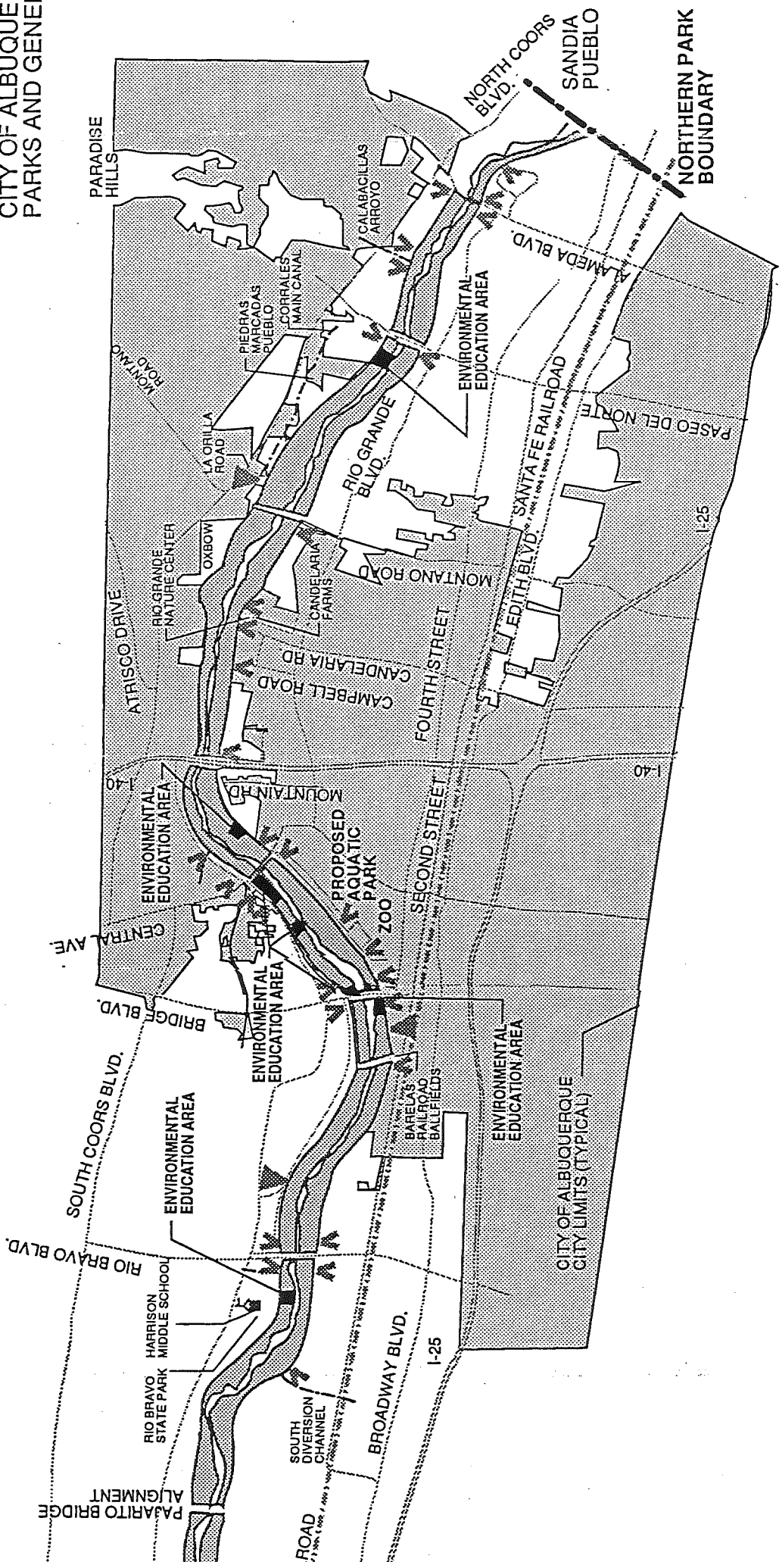
POLICY 19:

Use of the Environmental Education Area shall be coordinated with the Open Space Division prior to that use. (See Map 4)

Actions:

- A. Use areas designated on Map 4. Alternative locations may be identified for areas identified as sensitive by the updated monitoring programs.
- B. Develop programs that emphasize restoration and enhancement of wildlife habitat.
- C. Teachers will share the designated area for their schools.

ENVIRONMENTAL
BOSQUE ACTIVO
RIO GRANDE VALLEY
CITY OF ALBUQUERQUE
PARKS AND GENERAL SERVICES



LEGEND

	NEW ACCESS POINT
	EXISTING ACCESS POINT
	STREET
	SCHOOL
	RAILROAD
	WATER CONVEYANCE SYSTEM
	PARK BOUNDARY
	PARK LIMITS

NOTES

The New Mexico State Land Office owns approximately 149 acres within the RGVSP north of Interstate 25. They have identified their land as an education easement. The purpose of this easement is to provide schools with an opportunity to teach environmental education as it pertains to New Mexico's ecosystem. They encourage teachers to take students out of the classroom and onto the land where they can do hands-on projects in land restoration, soil analysis, reforestation, wildlife preservation and nature observation. Because the State land is located within the wildlife preserve, it was necessary to

D. ADMINISTRATION

THE GOAL is to protect and enhance the natural character by facilitating appropriate management practices and public use.

POLICY 20:

Construction methods and materials used shall be compatible with the preservation of the natural character of the Rio Grande Valley State Park.

Actions:

- A. Wherever possible, control access and direct visitor use by means of wetlands, vegetative screens, brush piles, or other natural materials.
- B. Minimize the removal of vegetation at all construction sites. Require revegetation where removal is unavoidable.
- C. Wherever possible, use natural and recycled materials for facility improvements.
- D. Continuously monitor construction projects for compliance with this plan and other relevant documents and policies.
- E. Proposed methods and materials used on projects must be reviewed and approved by the Open Space Division prior to application.
- F. Completed improvements should comply with the design requirements identified in this document.
- G. Prior to construction, site boundaries must be identified and approved by the Open Space Division. Construction equipment is required to stay within the boundaries, unless otherwise approved by the Open Space Division.

POLICY 21:

Construction methods and materials used shall preserve the cultural character of the park.

Actions:

- A. Provide field documentation of all historic sites that are more than 60 years old.

B. Conduct a full pedestrian survey prior to surface disturbance in Archeological Zone One. (Refer to Evaluation of Archeological Potential for Rio Grande Valley State Park)

C. Conduct a partial survey prior to surface disturbance in Archeological Zone Two. (Refer to Evaluation of Archeological Potential for Rio Grande Valley State Park)

D. Monitor all surface disturbance for archeological deposits or artifacts.

E. Protect significant cultural resources from being destroyed. Wherever possible, control access to these areas by providing interpretive trails.

POLICY 22:

Emergency training shall be allowed to occur consistent with the policies of the Rio Grande Valley State Park.

Actions:

A. Request that the State institute a regulation requiring authorization of all emergency training programs occurring within the Rio Grande Valley State Park.

B. A Special Use Permit from the Albuquerque Fire Department and Bernalillo County Fire Department for emergency training programs using motorized boats is required prior to the training.

C. All emergency boats must have clear identification.

D. Emergency training programs are prohibited particularly in sensitive areas. Native Species stands, Sensitive Woodlands, and areas identified as having threatened and endangered plants and animals. Coordinate training with the Open Space Division.(See Map 3 and Project Location maps.)

E. Emergency training in the river must be coordinated with the Albuquerque Fire Department and Bernalillo County Aquatic Rescue teams. Training in areas where threatened and endangered birds are breeding will be restricted. Coordinate training with the Open Space Division. (See Map 3 and Project Location maps.)

F. Designate entry points for the aquatic rescue teams. (Refer to Project Location maps 2, 11, 18 and 19.)

POLICY 23:

The principle use of the area within the Rio Grande levee roads shall be recognized for conveyance of water for beneficial use, and as a floodway.

Actions:

- A. Acknowledge Section 6 of the 1983 Rio Grande Valley State Park Act.(See Appendix A)
- B. Recognize the existence of, and need for future stormwater discharge facilities.

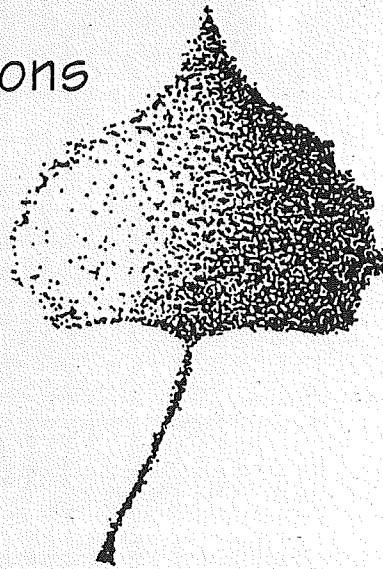
POLICY 24:

A volunteer patrol shall be formed and coordinated by the Open Space Division to provide a safe environment for the park users and protection to the natural resources.

Actions:

- A. Volunteers will patrol the park on foot and on personal horse or bicycle.
- B. Provide uniforms or badges to identify their presence as an Open Space volunteer.
- C. Provide radios to maintain contact with the Open Space dispatcher and rangers.
- D. Require volunteers be trained in basic first aid and CPR.
- E. Train volunteers to assist in tours.
- F. Assure all volunteers activities are compatible with the policies of the RGVSP.

Project Locations



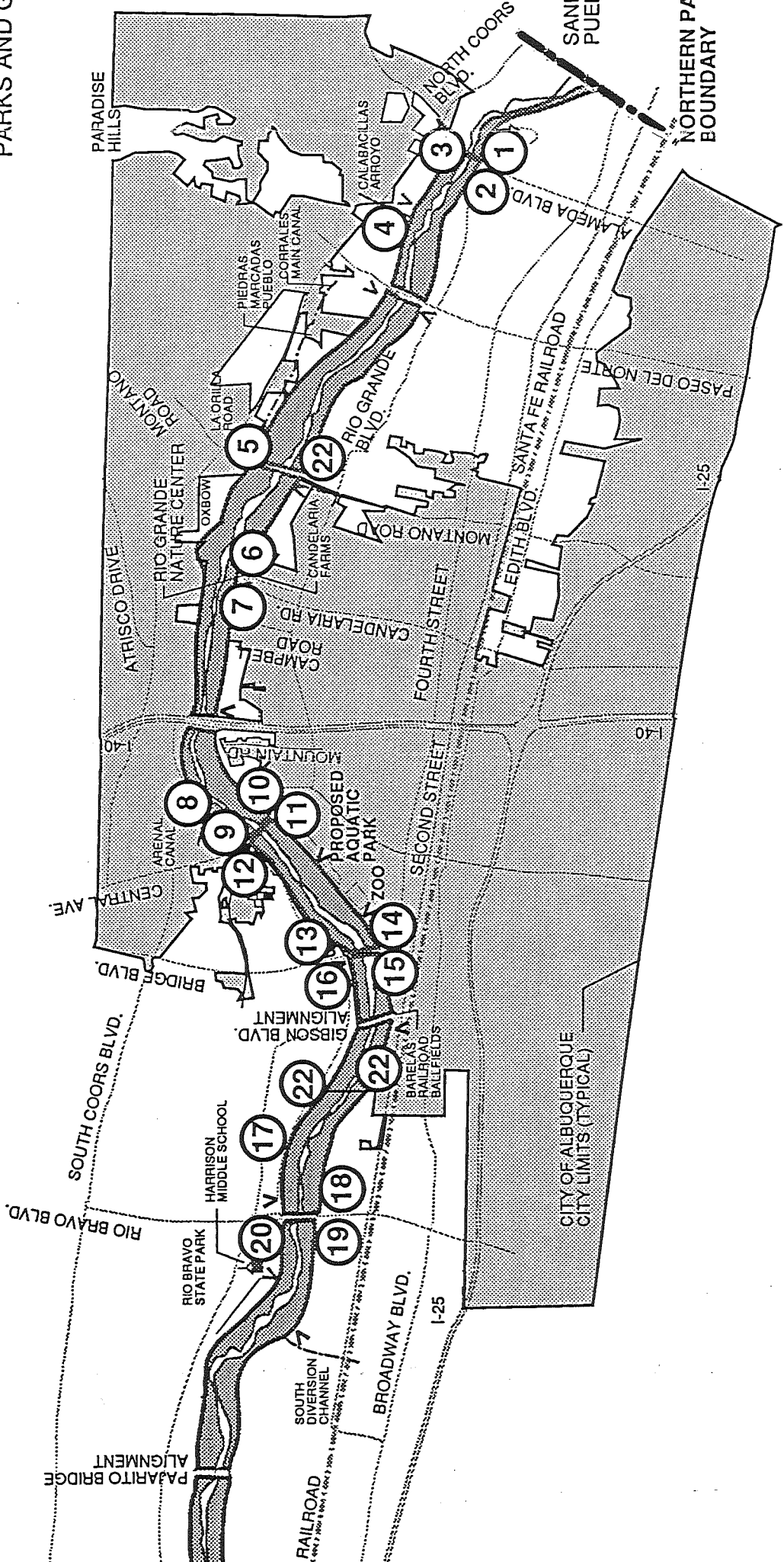
III. PROJECT LOCATIONS

INTRODUCTION

The Rio Grande Valley State Park (RGVSP) includes, within its geographical area, the floodway, the levees and the drain canal rights-of-way on both sides of the Rio Grande, extending from the Bernalillo County line and Sandia Pueblo grant boundary on the north, to the northern Isleta Pueblo boundary on the south (Map 1, see page 5). The land within the incorporated boundaries of the Village of Corrales and a two-hundred foot strip on either side of the final center line of existing and proposed bridges (as approved by the Urban Transportation Policy Planning Board of the Middle Rio Grande Council of Governments) are not included as part of the RGVSP. (Excerpts from the Rio Grande Valley State Park Management Plan, 1987, Background Information)

The project locations are divided into six sections. Sections A to E contain an overall description of the existing trail connections, access points and adjacent land use from the RGVSP. The five sections from north to south are:

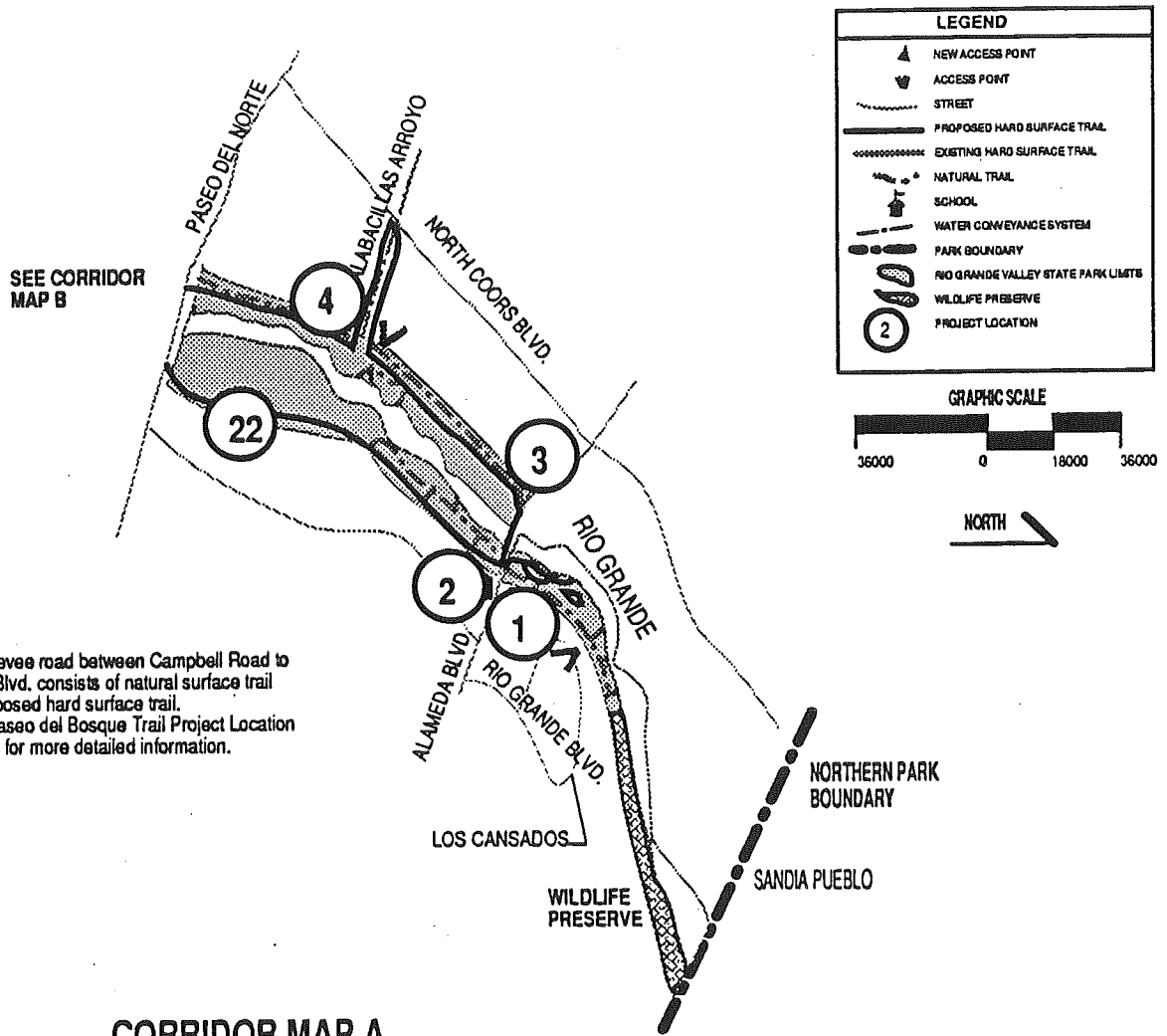
- A. Northern boundary to the north of Paseo Del Norte
- B. South of Paseo Del Norte to the north of Interstate 40
- C. South of Interstate 40 to the north of Barelvas Bridge
- D. South of Barelvas Bridge to the north of Rio Bravo Bridge
- E. South of Rio Bravo to the southern boundary.
- F. Paseo del Bosque Trail



PROJECT LOCATIONS	
1	Alameda Bridge NE
2	Alameda Bridge SE
3	Alameda Bridge SW
4	Calabacillas Arroyo
5	La Orilla Road Access*
6	Candelaria Farms *
7	Campbell Road Access*
8	Atrisco NW Access*
9	Central Bridge NW*
10	Central Bridge NE*
11	Central Bridge SE*
12	Central Bridge SW*
13	Barelas Bridge NW
14	Barelas Bridge NE*
15	Barelas Bridge SE*
16	Barelas Bridge SW
17	Rio Bravo Bridge NW
18	Rio Bravo Bridge NE
19	Rio Bravo Bridge SE
20	Rio Bravo Bridge SW
21	Property North of I-25 Interstate
22	Proposed Aquatic Zoo Park

NOTE:

- * Projects located within the City of Albuquerque.
- ** A portion of the project is located within the City of Albuquerque.



SEE CORRIDOR MAP B

NOTE:
 The east levee road between Campbell Road to Alameda Blvd. consists of natural surface trail and a proposed hard surface trail. See the Paseo del Bosque Trail Project Location Map (#22) for more detailed information.

CORRIDOR MAP A
Northern Boundary to Paseo del Norte

CORRIDOR "A" DESCRIPTIONS

The new Alameda Bridge is under construction south of the existing bridge. After completion of the bridge, the existing Alameda Bridge will be designated for non-vehicular use providing an east/west multi-use trail connection. This trail will have direct access into the RGVSP from the southwest and northeast corners of the bridge.

Main access points into this northern section of the park are located at the Alameda Bridge at the northeast, southeast and southwest corners. Other access points are located at the east end of the Calabacillas Arroyo and through the Cansados Subdivision in Alameda: South of the Calabacillas Arroyo is an access road which enters directly into the park. A trail easement off of Los Cansados Road enters onto the trail east of the Albuquerque Riverside Drain.

A majority of the land surrounding the RGVSP is zoned A-1 (rural agricultural) with a few areas zoned R-1 (single family residential).



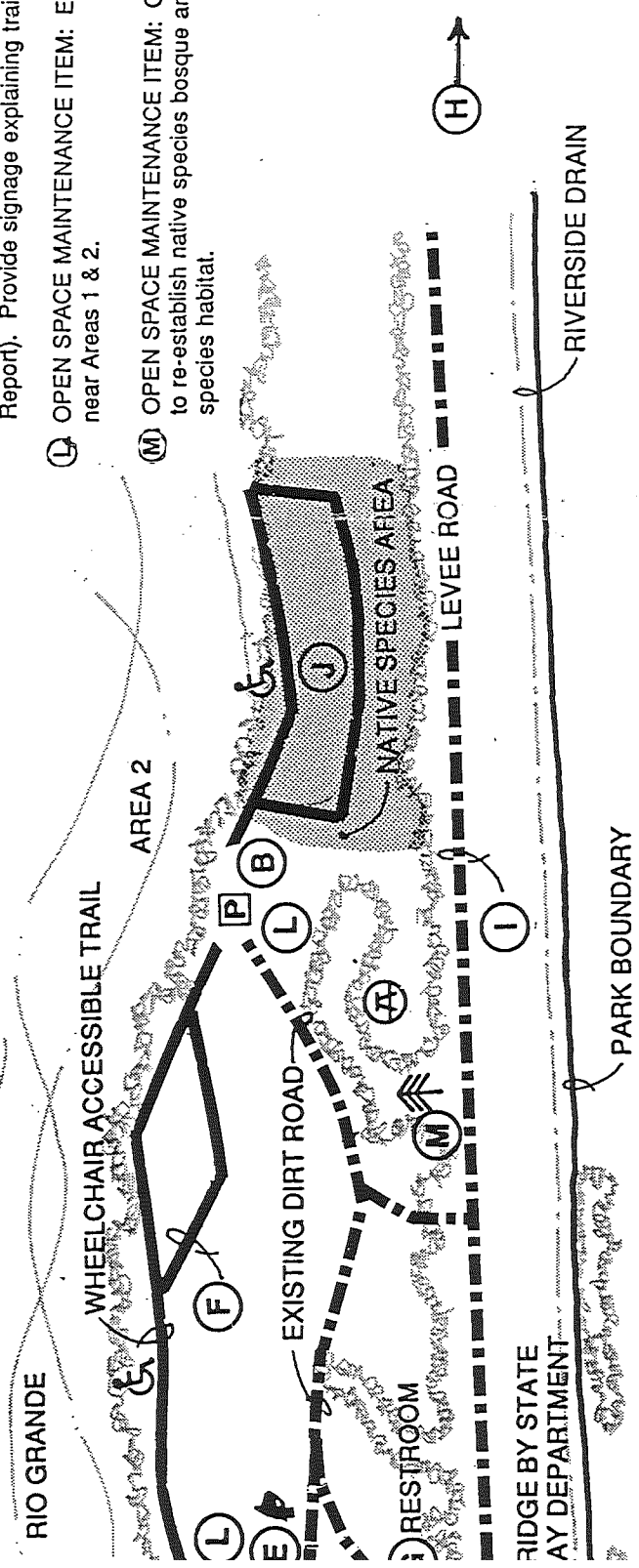
PROJECT LOCATION

1 A1a

- spaces in Area 1, and 20 to 25 parking spaces in Area 2. Designate (2) handicap space in each parking area with a prepared surface and signage. All parking spaces shall have concrete bumper barriers.
- (B) Install (2) trailhead, (1) introductory and (2) Open Space regulation signs.
- (C) Establish picnic grounds near both parking areas. Provide up to (4) picnic tables in Area 1, and up to (7) picnic tables in Area 2. (Open Space staff to utilize existing natural material on site to provide seating wherever possible).

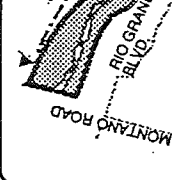
D. Separate parking from picnic grounds in Area 1 with guard rails.

- (G) Provide wheelchair accessible restroom facility.
- (H) Construct multi-use bridge approximately 3/4 miles north of Alameda Bridge over the Riverside Drain, adjacent to the Cansados Subdivision access.
- (I) Existing natural surface trail atop the levee road.
- (J) Provide interpretive signs along the wheelchair accessible trail within the bosque that accesses the native species bosque.
- K. OPEN SPACE MAINTENANCE ITEM: Use brush piles to close existing trails which are not part of the planned bosque trail network, including the area identified as Native Species bosque (See RGVSP BLU & Management Implications Report). Provide signage explaining trail closure.
- (L) OPEN SPACE MAINTENANCE ITEM: Establish pole plantings near Areas 1 & 2.
- (M) OPEN SPACE MAINTENANCE ITEM: Control exotic species to re-establish native species bosque and expand the native species habitat.



NORTH
NTS

PA	WA	TR	EX	PR	PA	PI	BIC	BR	WH	HC	PC	NA
[Symbol]	[Symbol]	[Symbol]	[Symbol]	[Symbol]	[Symbol]	[Symbol]	[Symbol]	[Symbol]	[Symbol]	[Symbol]	[Symbol]	[Symbol]





PROJECT

2 A

- A.** Establish trailhead parking area. Provide 20 to 30 parking spaces. Designate (2) handicap parking spaces with a prepared surface and signage. Designate (5) spaces for horse trailer parking and sign. All parking spaces shall have concrete bumper barriers.
- B.** Install (1) trailhead, (1) introductory, and (1) Open Space regulation sign.
- C.** Develop public and emergency use launch site kayak and canoe under PNM power lines. Grading necessary to allow for entry.
- D.** Existing natural surface trail within the bosque and atop the levee road.
- E.** OPEN SPACE MAINTENANCE ITEM: Establish pole plantings. Plant balled and burlapped cottonwood trees adjacent to existing Alameda Bridge (future multi-use bridge to separate pedestrians from the vehicle bridge).

- C.** OPEN SPACE MAINTENANCE ITEM: Expand the native species habitat.
- H.** TRAIL PROJECT: (Not part of this project development). Proposed hard surface Paseo del Bosque Trail adjacent to levee road.

EXISTING ALAMEDA (PROPOSED MUL

"NEW" ALAMEDA

RIO GRANDE

SCENIC VIEW

POLE PLANTING

EXISTING NATURAL SURFACE TRAIL

RIVERSIDE DRAIN

PROPOSED HARD SURFACE PASEO DEL BOSQUE TRAIL

PARK BOUNDARY

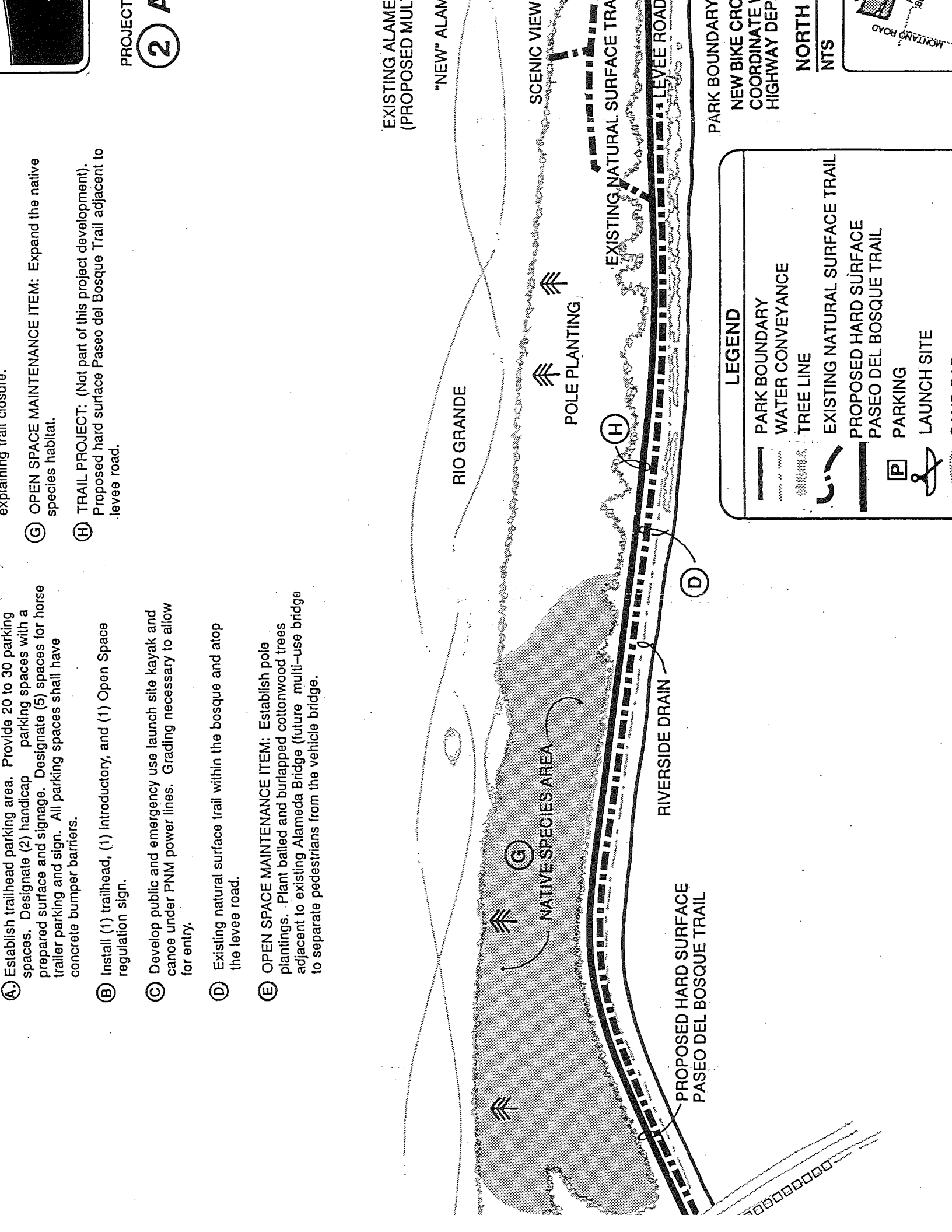
NEW BIKE CIRC COORDINATE HIGHWAY DEP

NORTH NTS

LEGEND

- PARK BOUNDARY
- WATER CONVEYANCE
- TREE LINE

- EXISTING NATURAL SURFACE TRAIL
- PROPOSED HARD SURFACE PASEO DEL BOSQUE TRAIL
- PARKING
- LAUNCH SITE



regulation sign, at SW area of existing natural surface trail. Coordinate with New Mexico State Highway Department to access bosque from existing Alameda Bridge (future multi-use bridge).

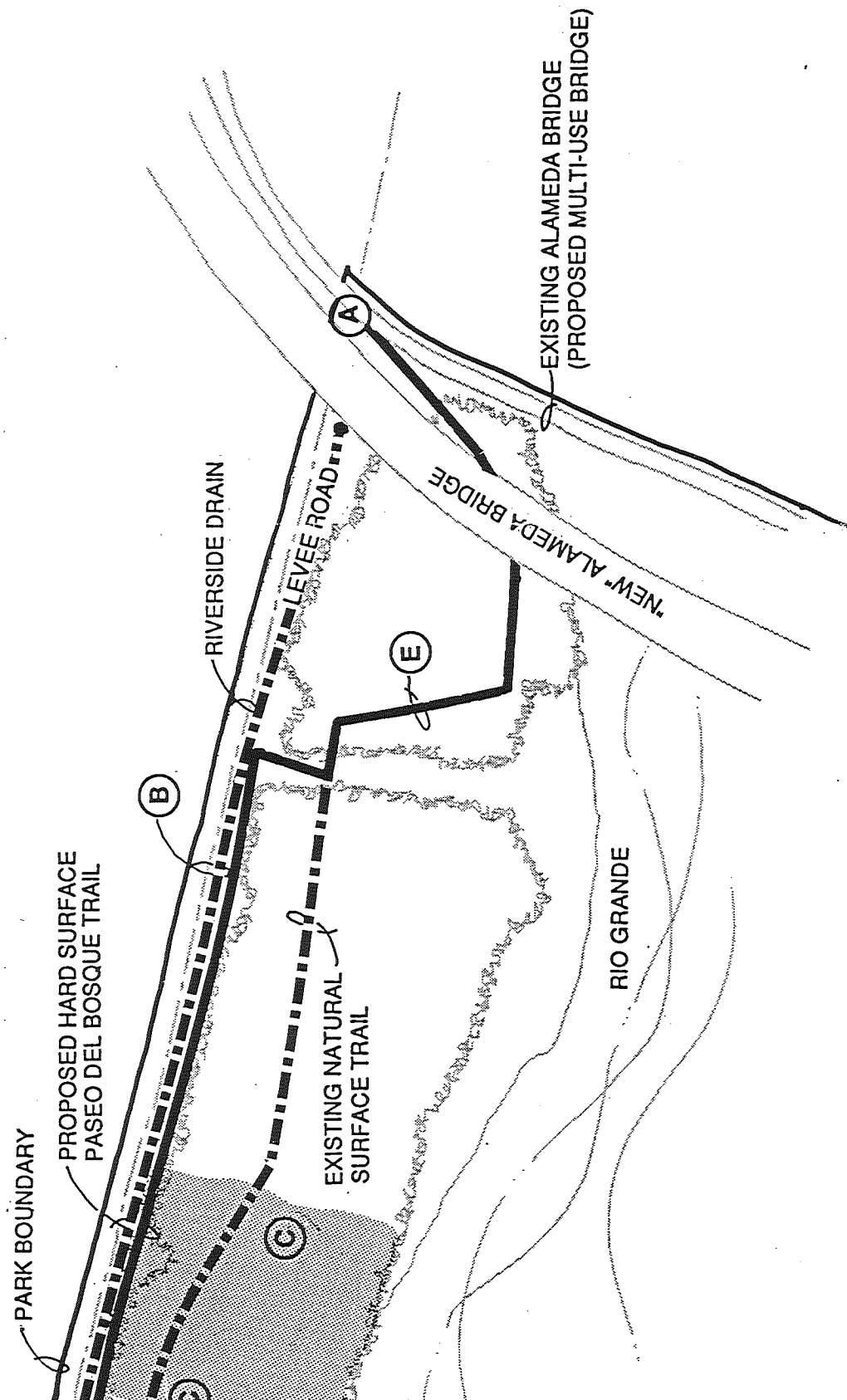
(B) Existing natural surface trail atop the levee road and to connect to the Calabacillas Arroyo.

(C) Sign location of environmental education area.

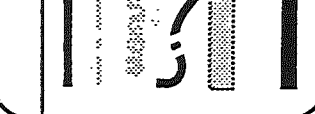
D. OPEN SPACE MAINTENANCE ITEM: Use brush pile to close existing trails which are not part of the planned bosque trail network. Provide signage explaining trail closure.

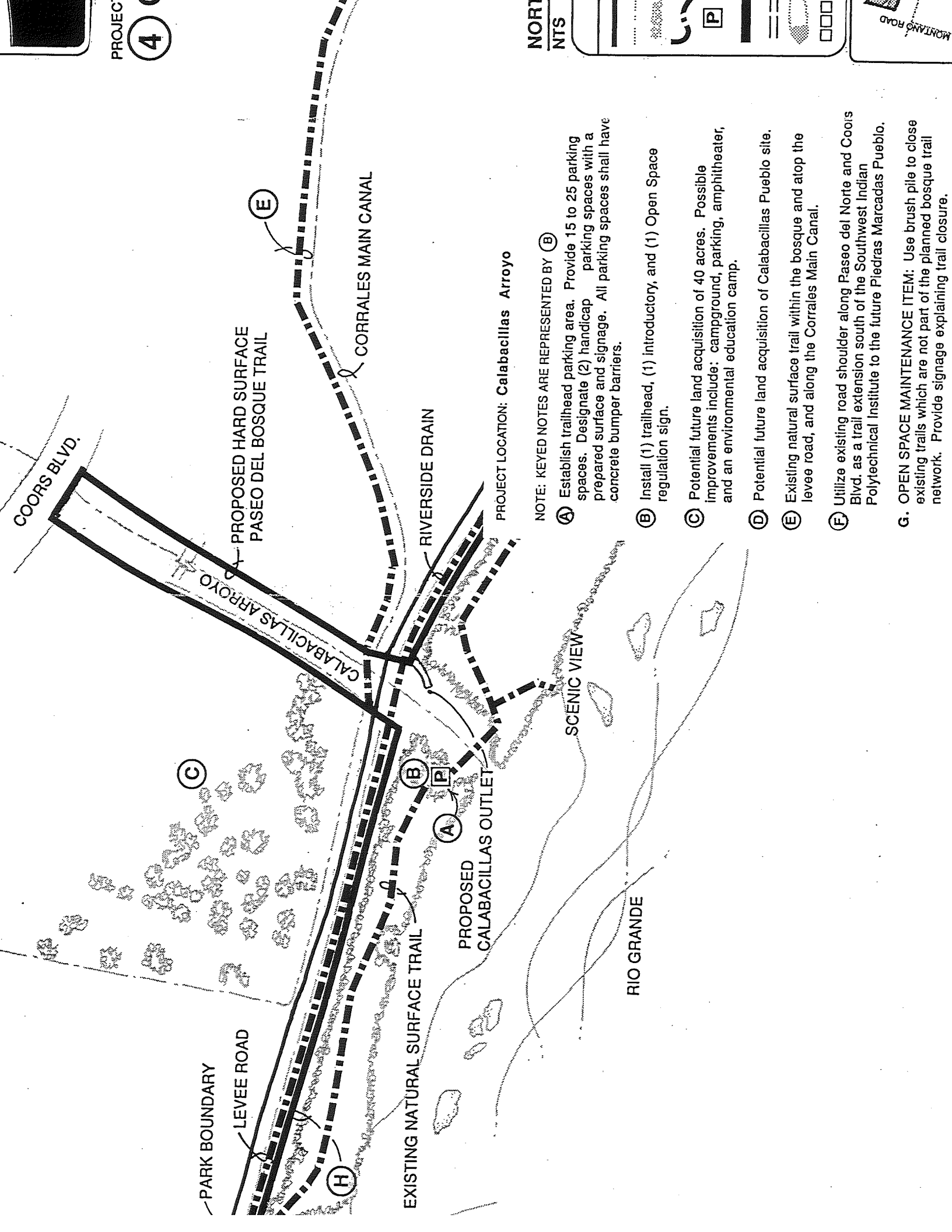
(E) TRAIL PROJECT: (Not part of this project development.) Proposed hard surface Paseo del Bosque Trail adjacent to levee road.

PROJECT
3



NORTH
NTS

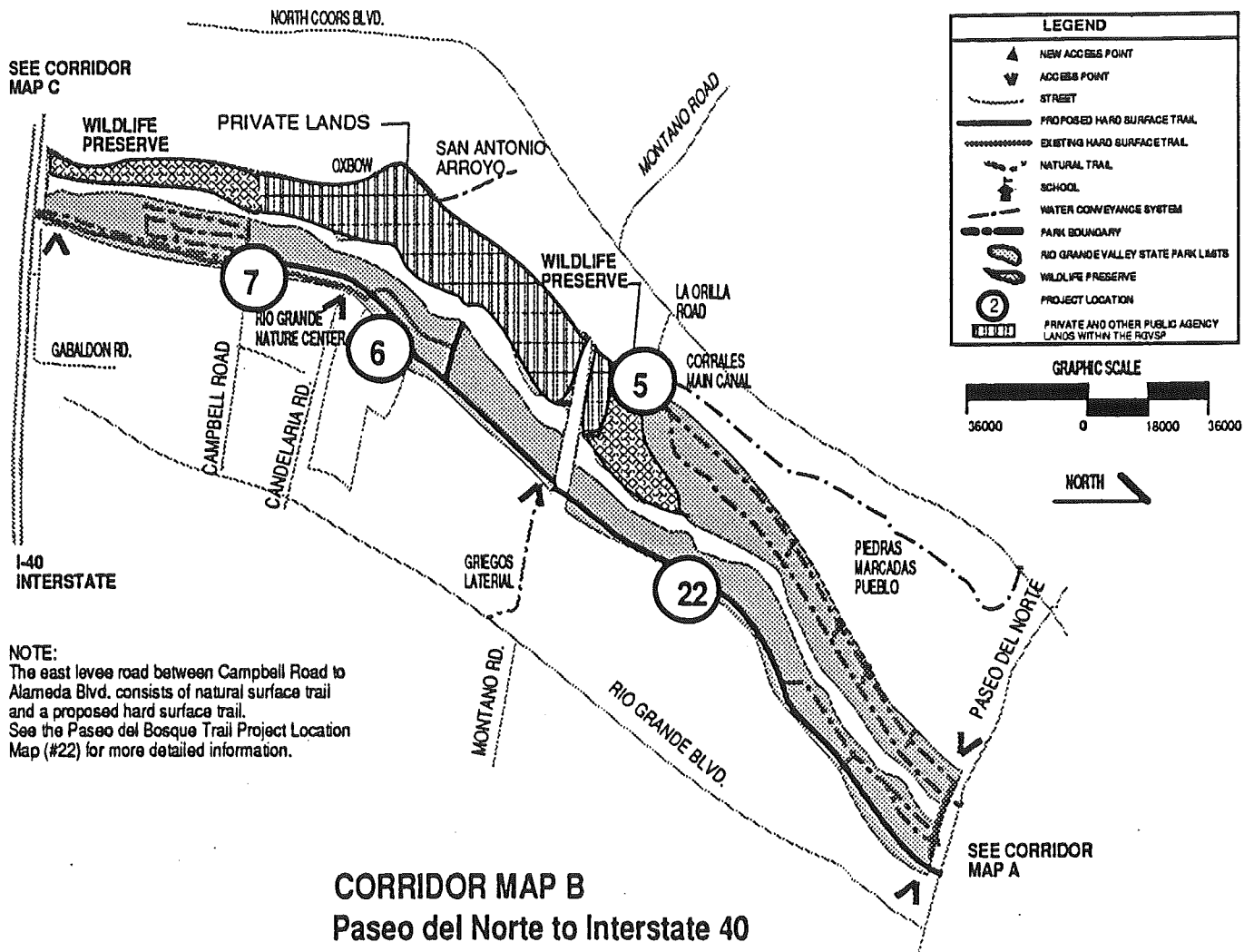




PROJECT LOCATION: Calabacillas Arroyo

NOTE: KEYED NOTES ARE REPRESENTED BY (B)

- (A) Establish trailhead parking area. Provide 15 to 25 parking spaces. Designate (2) handicap parking spaces with a prepared surface and signage. All parking spaces shall have concrete bumper barriers.
- (B) Install (1) trailhead, (1) introductory, and (1) Open Space regulation sign.
- (C) Potential future land acquisition of 40 acres. Possible improvements include: campground, parking, amphitheater, and an environmental education camp.
- (D) Potential future land acquisition of Calabacillas Pueblo site.
- (E) Existing natural surface trail within the bosque and atop the levee road, and along the Corrales Main Canal.
- (F) Utilize existing road shoulder along Paseo del Norte and Coors Blvd. as a trail extension south of the Southwest Indian Polytechnical Institute to the future Piedras Marcadas Pueblo.
- (G) OPEN SPACE MAINTENANCE ITEM: Use brush pile to close existing trails which are not part of the planned bosque trail network. Provide signage explaining trail closure.



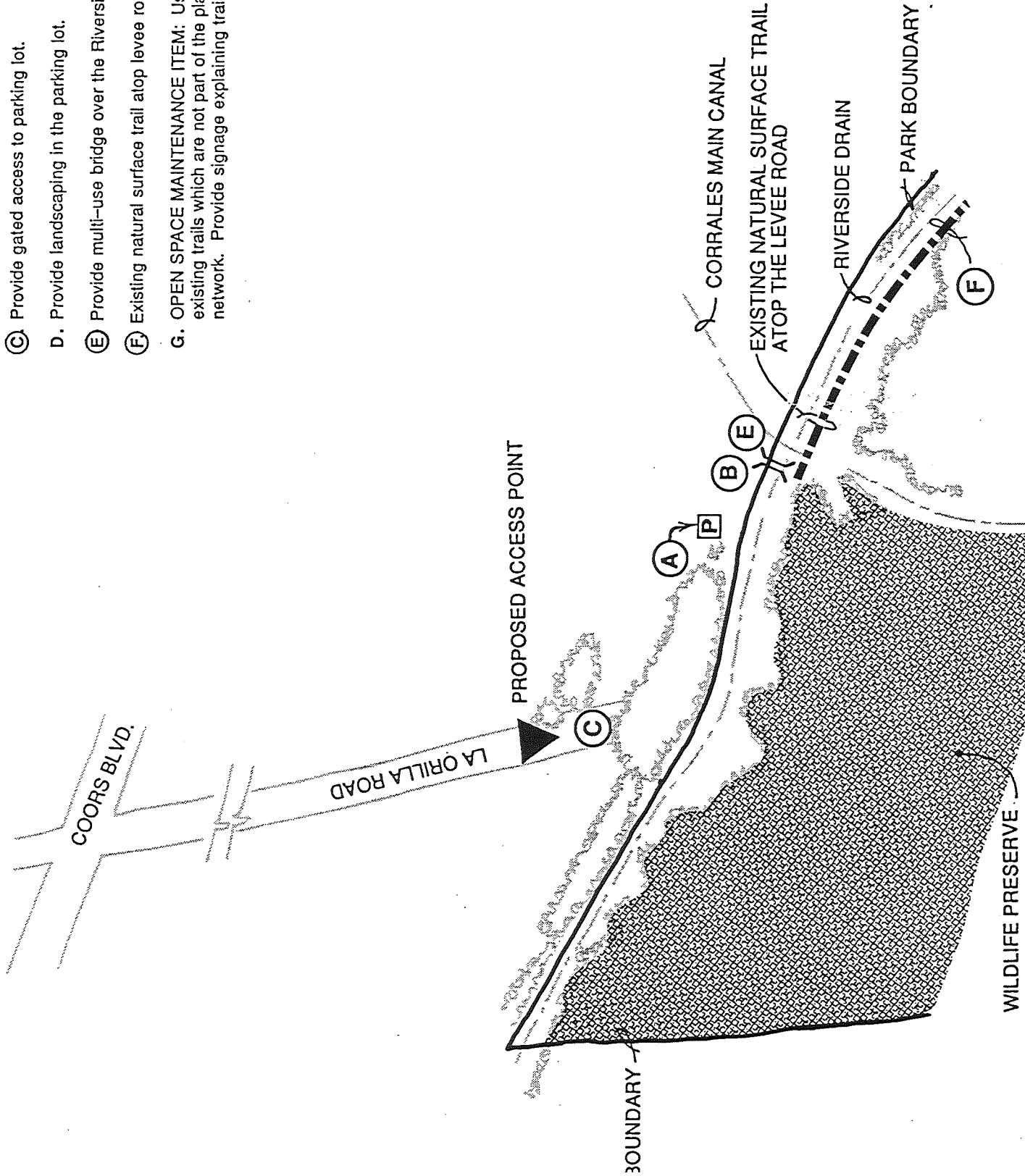
CORRIDOR "B" DESCRIPTION

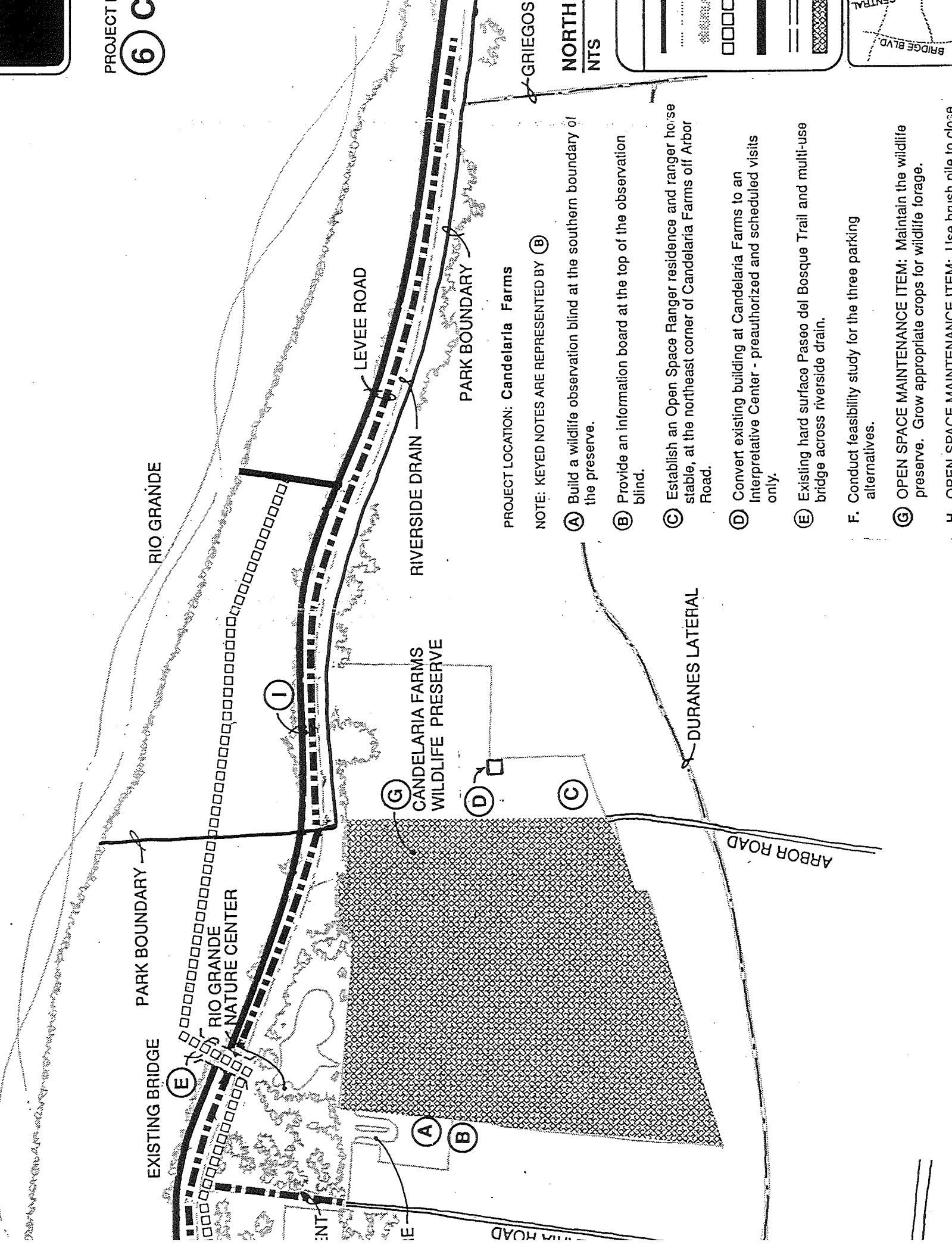
On the south side of the Paseo Del Norte bridge is a trail easement. This easement provides direct access into the park from Coors Boulevard. Other access points into the park are from Candelaria Road, Campbell Road, and Gabaldon Road. The Albuquerque Main Canal and Griegos Lateral Wasteway provide access into the park. In addition, the Paseo Del Bosque Bike Trail runs through this portion of the RGVSP, ending just north of the Rio Grande Nature Center.

Most of the land surrounding this section of the RGVSP is zoned R-1, except for a few areas of A-1 zoning. A portion of the bosque south of La Orilla Road to north of the Oxbow is in private ownership. Adjacent to the Rio Grande Nature Center is the approximately 100 acre Candelaria Farms, managed by the Open Space Division. A large section of the farm is designated as a wildlife preserve.

parking spaces. Designate (7) handicapped parking spaces and sign. Designate (5) spaces for horse trailer parking and sign. All parking spaces shall have concrete bumper barriers.

- (B) Install (1) trailhead, (1) introductory, and (1) Open Space regulation sign.
- (C) Provide gated access to parking lot.
- D. Provide landscaping in the parking lot.
- (E) Provide multi-use bridge over the Riverside Drain.
- (F) Existing natural surface trail atop levee road.
- G. OPEN SPACE MAINTENANCE ITEM: Use brush pile to close existing trails which are not part of the planned bosque trail network. Provide signage explaining trail closure.





RIO GRANDE

PARK BOUNDARY

EXISTING BRIDGE

RIO GRANDE NATURE CENTER

LEVEE ROAD

RIVERSIDE DRAIN

CANDELARIA FARMS WILDLIFE PRESERVE

PARK BOUNDARY

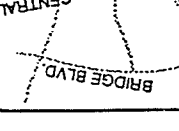
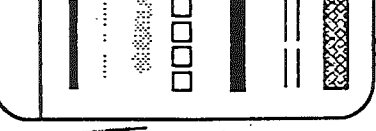
DURANES LATERAL

ARBOR ROAD

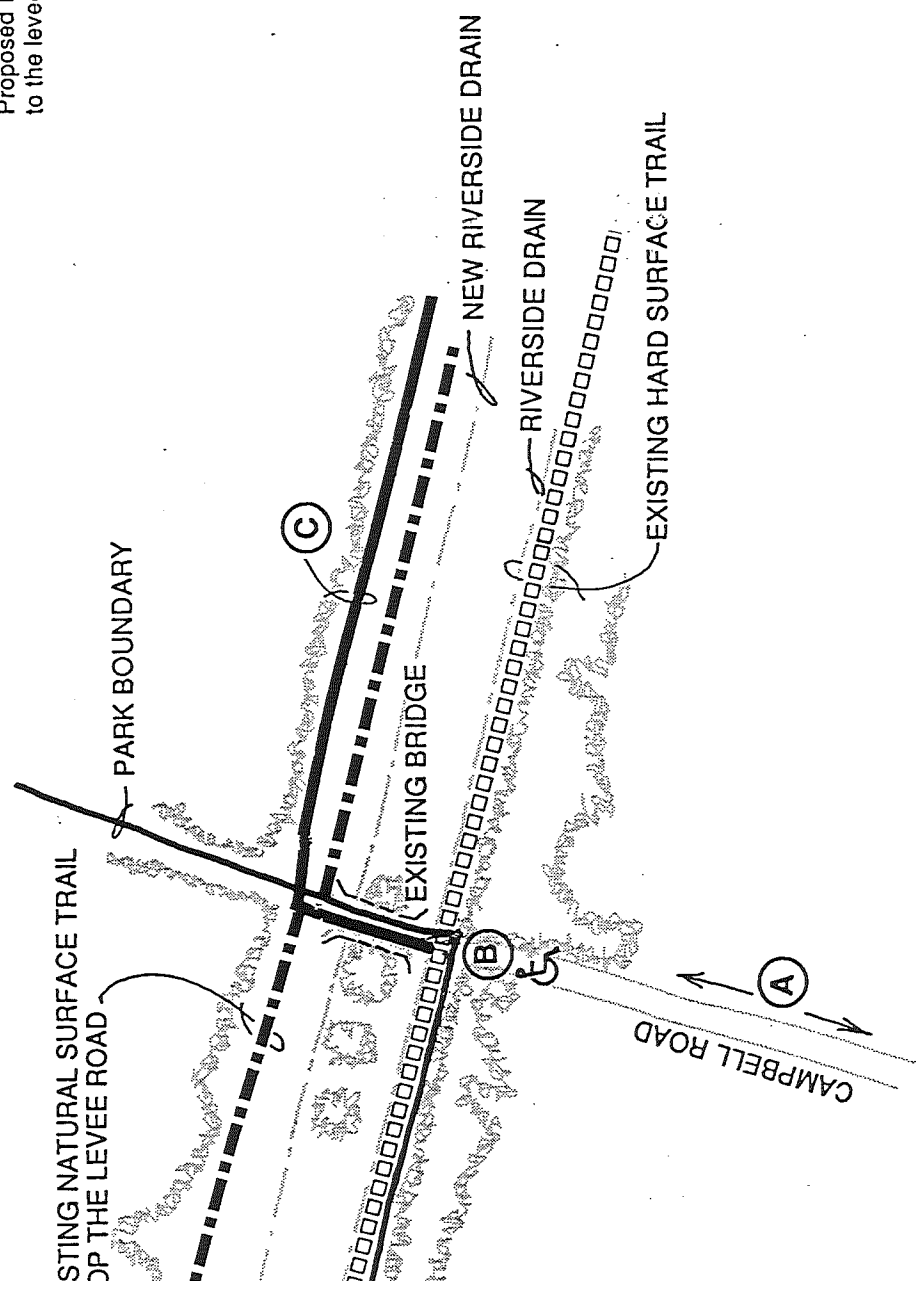
PROJECT LOCATION: Candalaria Farms

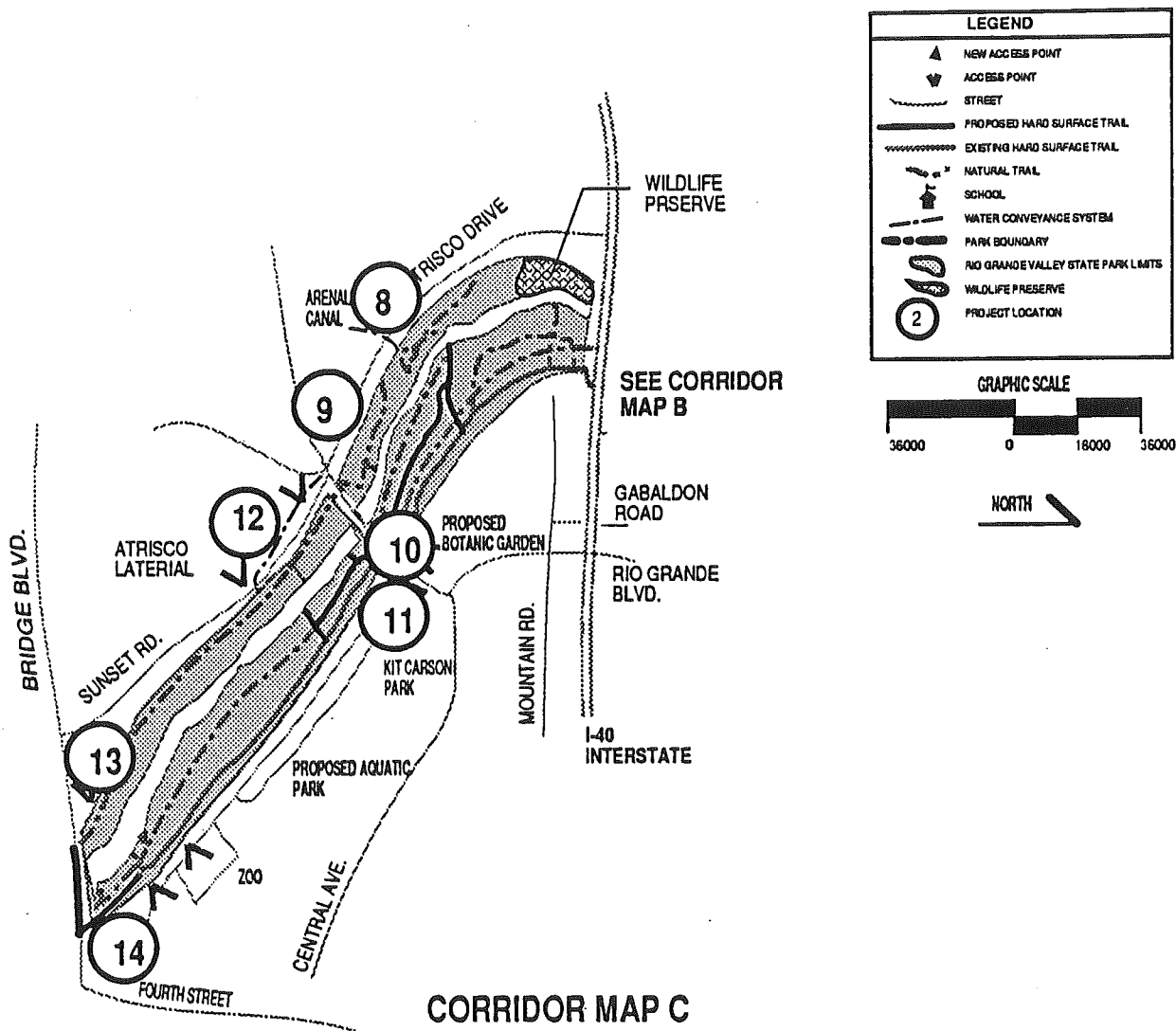
NOTE: KEYED NOTES ARE REPRESENTED BY (B)

- (A) Build a wildlife observation blind at the southern boundary of the preserve.
- (B) Provide an information board at the top of the observation blind.
- (C) Establish an Open Space Ranger residence and ranger horse stable, at the northeast corner of Candalaria Farms off Arbor Road.
- (D) Convert existing building at Candalaria Farms to an Interpretative Center - preauthorized and scheduled visits only.
- (E) Existing hard surface Paseo del Bosque Trail and multi-use bridge across riverside drain.
- (F) Conduct feasibility study for the three parking alternatives.
- (G) OPEN SPACE MAINTENANCE ITEM: Maintain the wildlife preserve. Grow appropriate crops for wildlife forage.
- (H) OPEN SPACE MAINTENANCE ITEM: Use brush pile to close



- Ⓑ Install (1) trailhead, (1) introductory and (1) Open Space regulation sign.
- Ⓒ TRAIL PROJECT: (Not part of this project development.) Proposed hard surface Paseo del Bosque Trail adjacent to the levee road.





SEE CORRIDOR MAP D

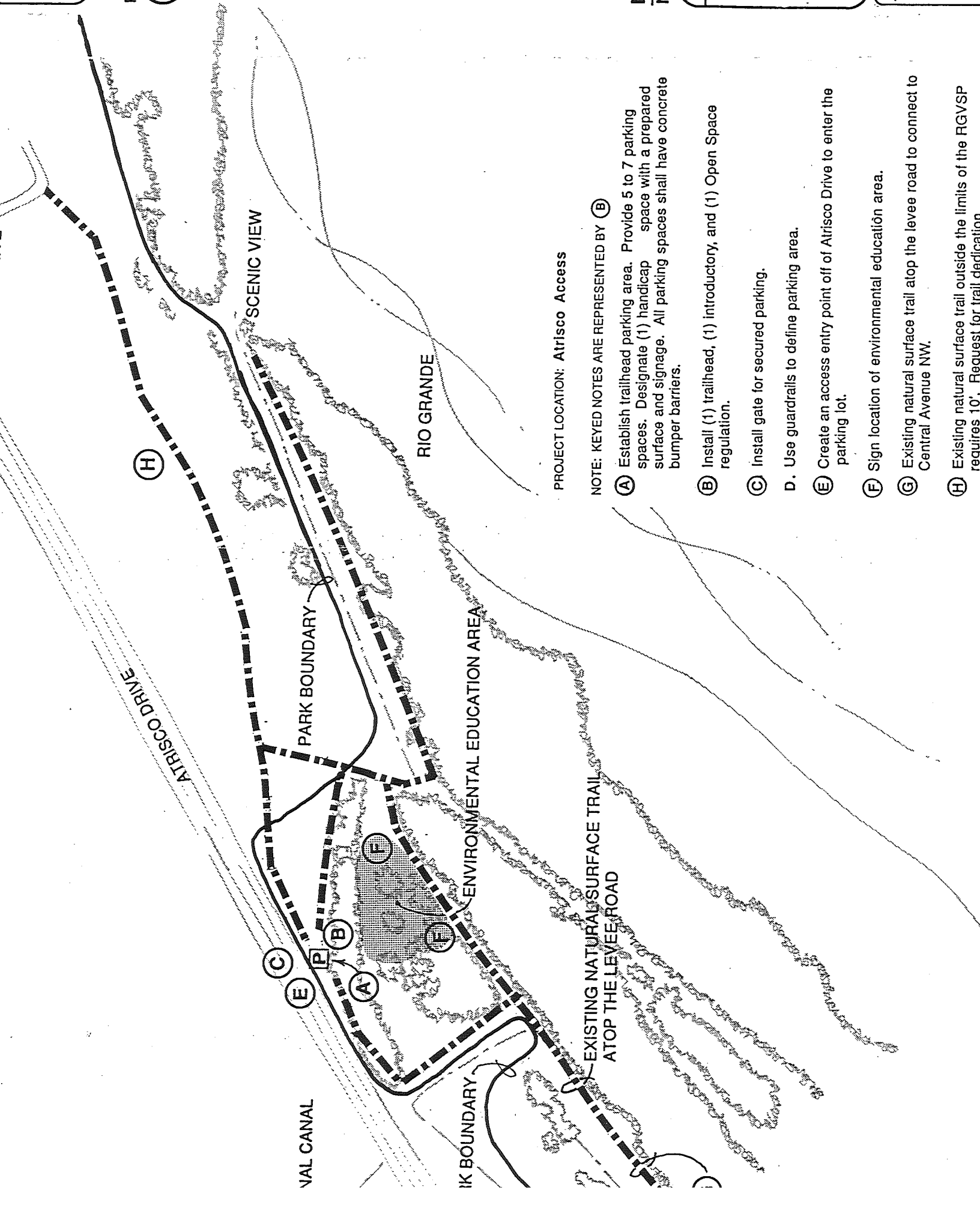
CORRIDOR MAP C
Interstate 40 to Barelvas Bridge (Bridge Street)

CORRIDOR "C" DESCRIPTION

Main access points into this section of the park are located at all four corners of the Central Avenue Bridge and at the Barelvas Bridge on the northeast and northwest corners. Neighborhood access is located adjacent to Atrisco Drive, across from the Arenal Canal. The Atrisco Lateral provides a drainage easement into the park.

The Paseo Del Bosque Multi-Use Trail begins near the south end of Tingley Drive and continues north under the Central Avenue Bridge along the Albuquerque Riverside Drain.

Most of the land surrounding the park is zoned R-1 with some C-1 (neighborhood commercial) parcels.



PROJECT LOCATION: Atrisco Access

NOTE: KEYED NOTES ARE REPRESENTED BY (B)

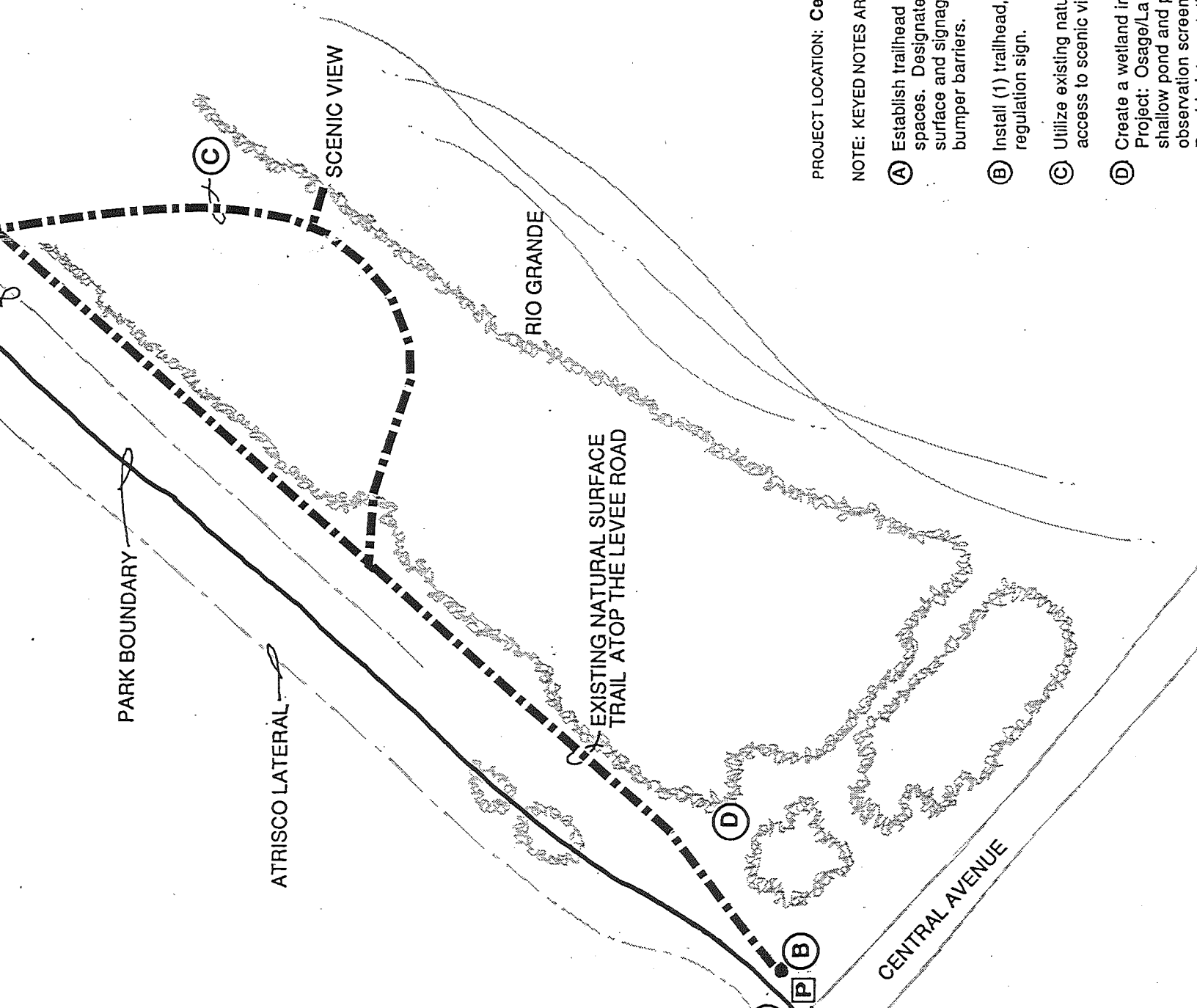
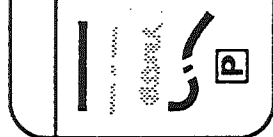
- (A) Establish trailhead parking area. Provide 5 to 7 parking spaces. Designate (1) handicap space with a prepared surface and signage. All parking spaces shall have concrete bumper barriers.
- (B) Install (1) trailhead, (1) introductory, and (1) Open Space regulation.
- (C) Install gate for secured parking.
- D. Use guardrails to define parking area.
- (E) Create an access entry point off of Atrisco Drive to enter the parking lot.
- (F) Sign location of environmental education area.
- (G) Existing natural surface trail atop the levee road to connect to Central Avenue NW.
- (H) Existing natural surface trail outside the limits of the RGVSP requires 10'. Request for trail dedication



PROJECT L

9 C

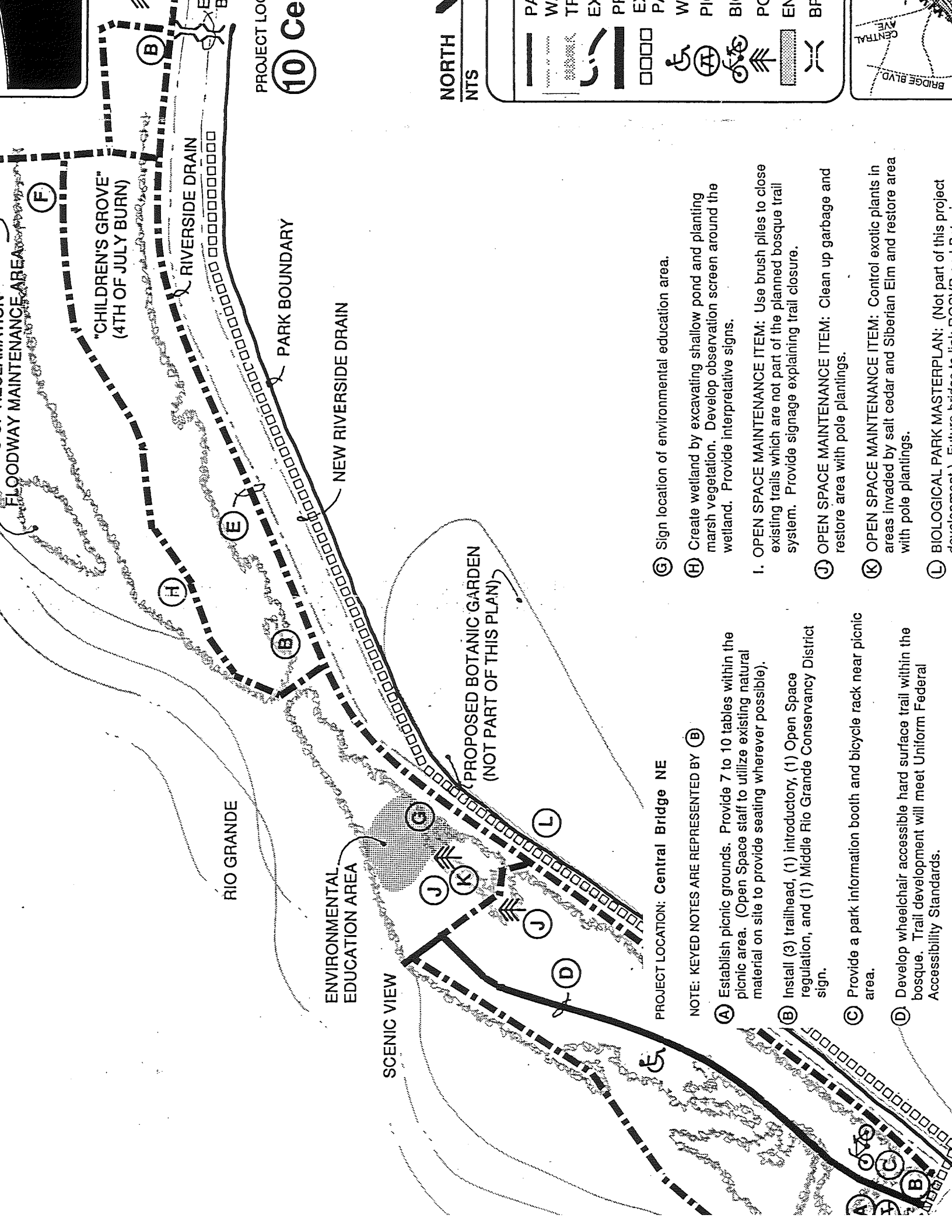
NORTH
NTS



PROJECT LOCATION: Central Bridge NW

NOTE: KEYED NOTES ARE REPRESENTED BY (B)

- (A) Establish trailhead parking area. Provide 15 to 25 parking spaces. Designate (2) handicap spaces with a prepared surface and signage. All parking spaces shall have concrete bumper barriers.
- (B) Install (1) trailhead, (1) introductory, and (1) Open Space regulation sign.
- (C) Utilize existing natural surface trail within the bosque for access to scenic view points.
- (D) Create a wetland in conjunction with Public Works Department Project: Osage/La Media Stormwater Outfall. Excavate a shallow pond and plant marsh vegetation. Develop an observation screen around the wetland using vegetation.



PROJECT LOCATION: Central Bridge NE

10 Ce

NORTH
NTS

P/	W	TF	EX	PI	E	P/	W	PI	BI	PC	EN	BF
—	—	—	—	—	—	—	—	—	—	—	—	—

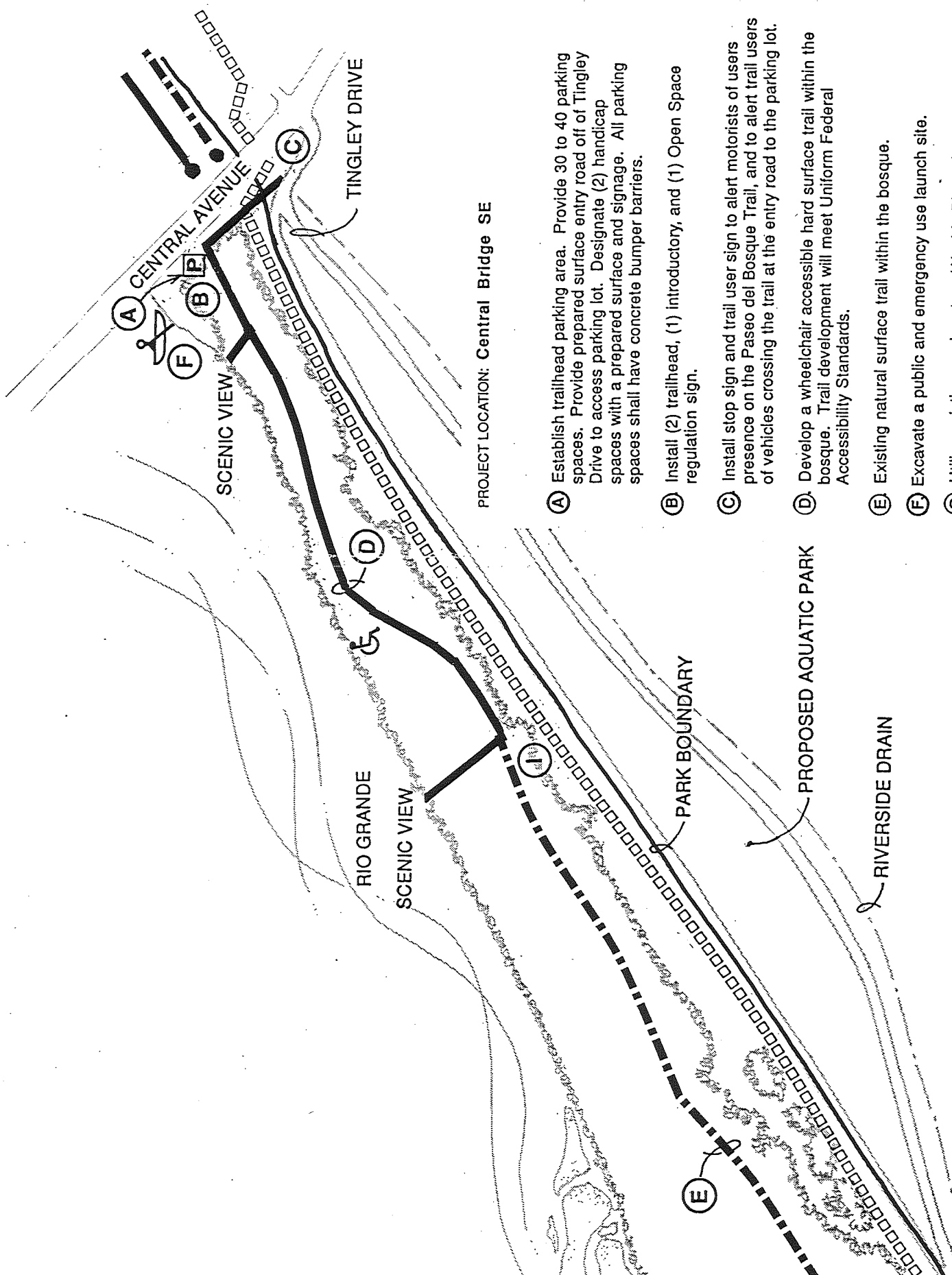
- (G) Sign location of environmental education area.
- (H) Create wetland by excavating shallow pond and planting marsh vegetation. Develop observation screen around the wetland. Provide interpretative signs.
- I. OPEN SPACE MAINTENANCE ITEM: Use brush piles to close existing trails which are not part of the planned bosque trail system. Provide signage explaining trail closure.
- (J) OPEN SPACE MAINTENANCE ITEM: Clean up garbage and restore area with pole plantings.
- (K) OPEN SPACE MAINTENANCE ITEM: Control exotic plants in areas invaded by salt cedar and Siberian Elm and restore area with pole plantings.
- (L) BIOLOGICAL PARK MASTERPLAN: (Not part of this project development). Future bridge to link Rio Grande and Central Bridge NE.

- (A) Establish picnic grounds. Provide 7 to 10 tables within the picnic area. (Open Space staff to utilize existing natural material on site to provide seating wherever possible).
- (B) Install (3) trailhead, (1) introductory, (1) Open Space regulation, and (1) Middle Rio Grande Conservancy District sign.
- (C) Provide a park information booth and bicycle rack near picnic area.
- (D) Develop wheelchair accessible hard surface trail within the bosque. Trail development will meet Uniform Federal Accessibility Standards.

PROJECT LOCATION: Central Bridge NE

NOTE: KEYED NOTES ARE REPRESENTED BY (B)

NORTH
N.T.S.

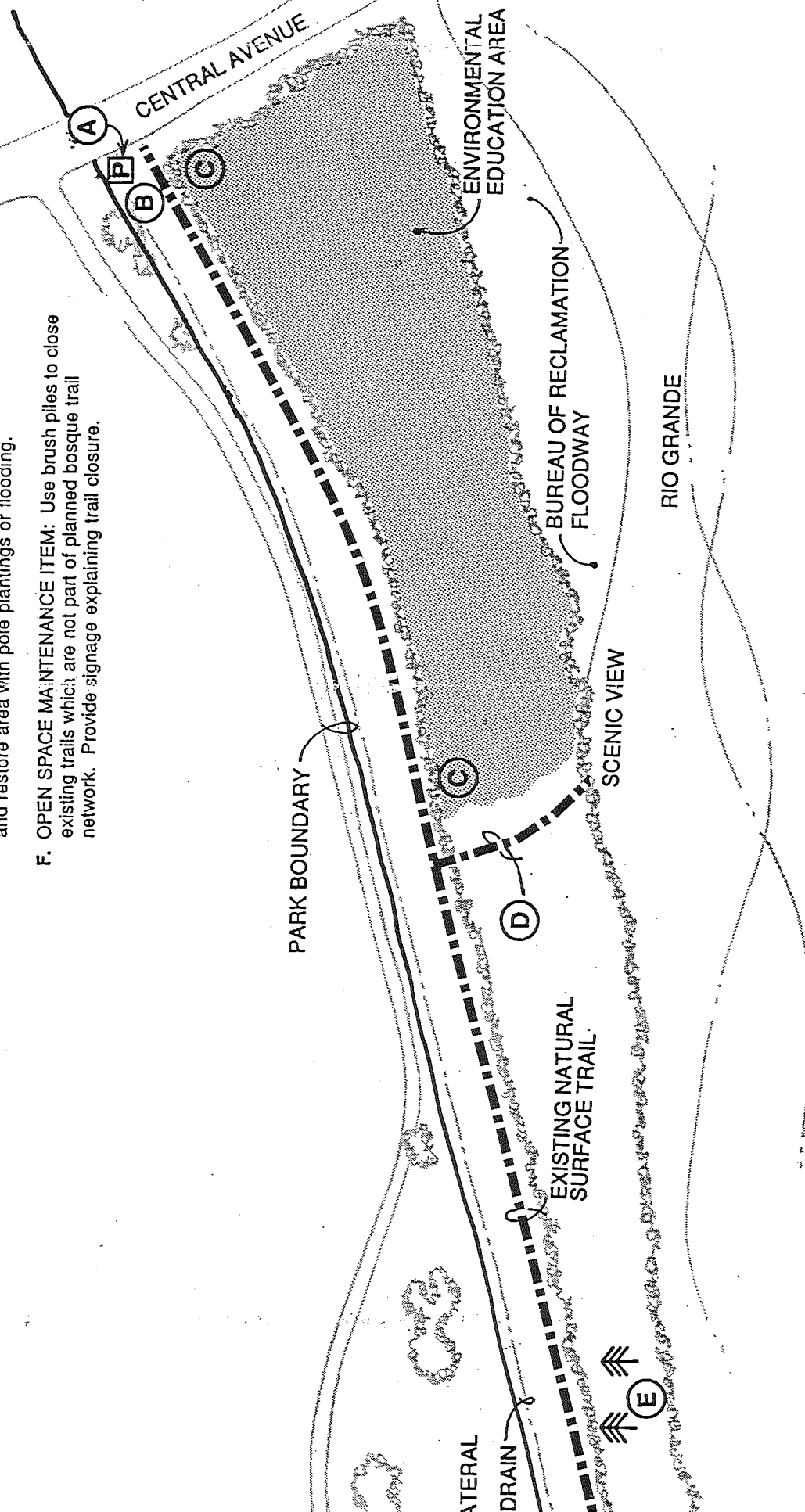
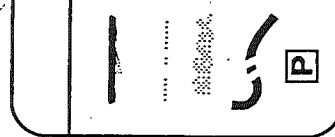


IT CARSON PARK
 RIO GRANDE ZOOLOGICAL PARK

H. OPEN SPACE MAINTENANCE ITEM: Use brush piles to close

surface and signage. All parking spaces shall have concrete bumper barriers.

- (B) Install (1) trailhead, (1) introductory and (1) Open Space regulation sign.
- (C) Sign location of environmental education areas.
- (D) Existing natural surface trails within the bosque and atop the levee road. Existing natural surface trail within the bosque to access scenic view point.
- (E) OPEN SPACE MAINTENANCE ITEM: Control exotic plants and restore area with pole plantings or flooding.
- F. OPEN SPACE MAINTENANCE ITEM: Use brush piles to close existing trails which are not part of planned bosque trail network. Provide signage explaining trail closure.



CENTRAL AVENUE

ENVIRONMENTAL EDUCATION AREA

BUREAU OF RECLAMATION FLOODWAY

RIO GRANDE

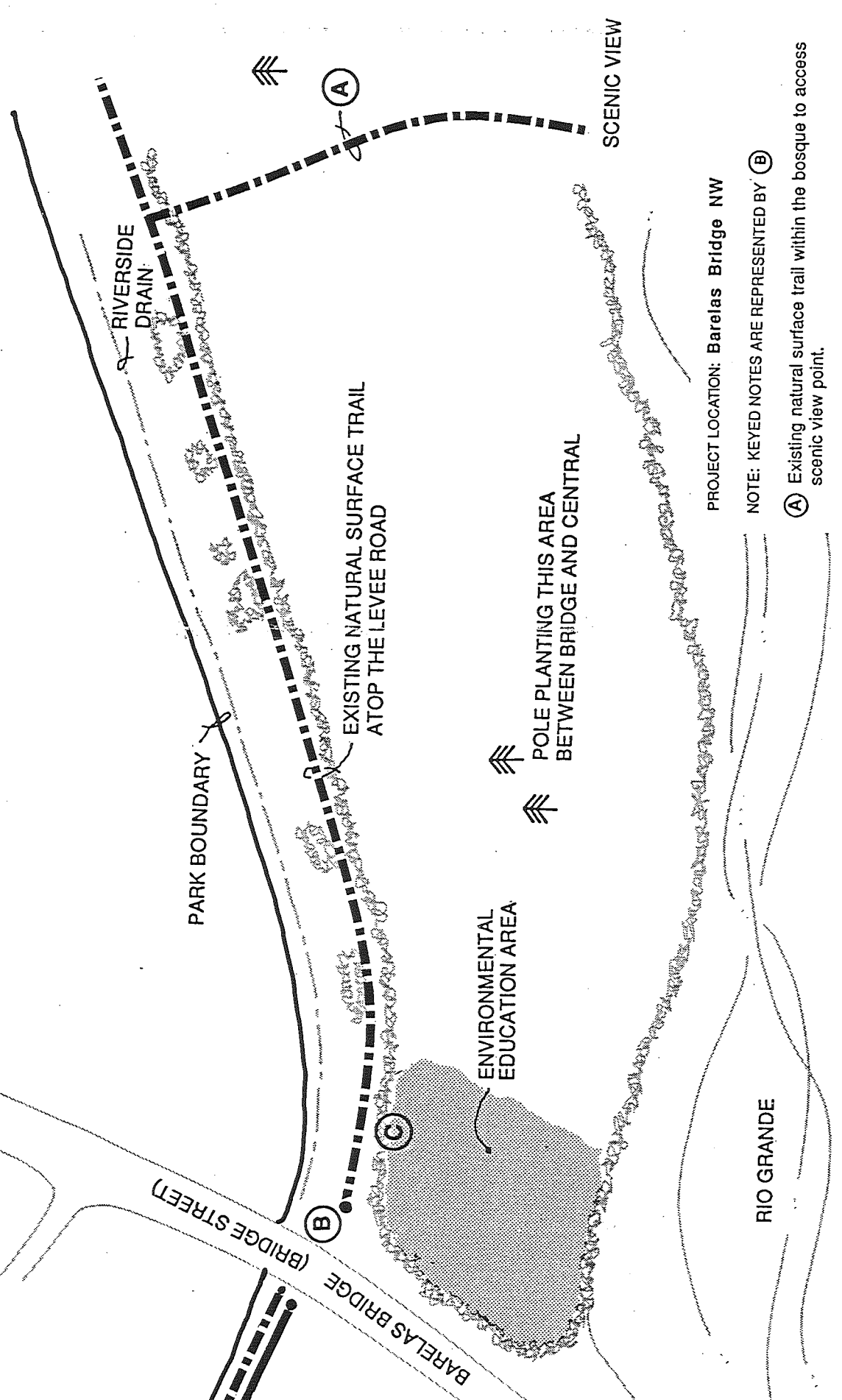
PARK BOUNDARY

SCENIC VIEW

EXISTING NATURAL SURFACE TRAIL

ATERAL DRAIN

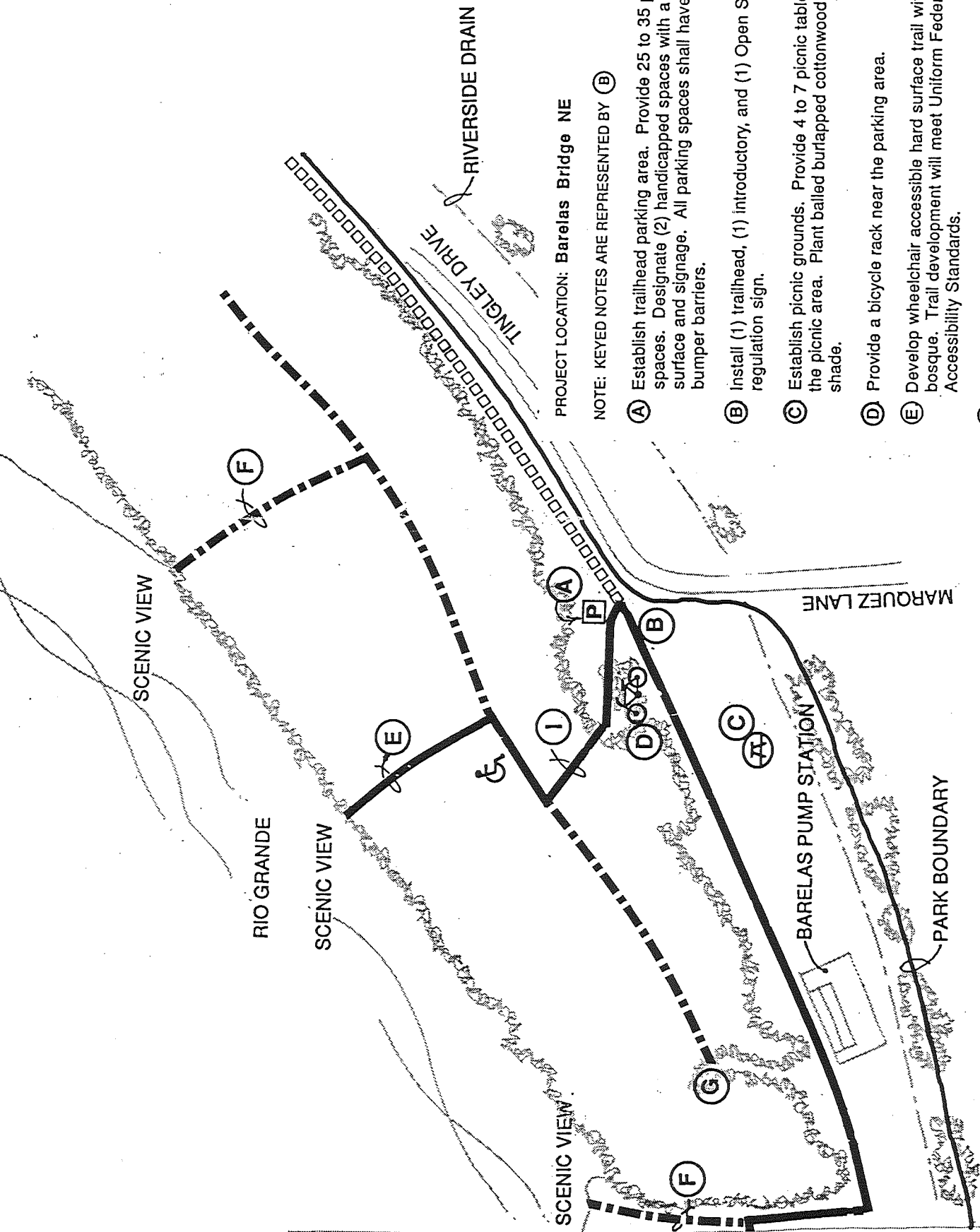
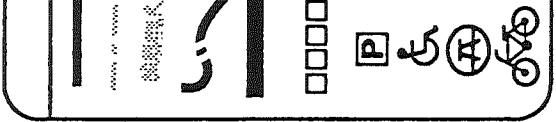




PROJECT LOCATION: Barelas Bridge NW

NOTE: KEYED NOTES ARE REPRESENTED BY (B)

- (A) Existing natural surface trail within the bosque to access scenic view point.
- (B) Install (1) trailhead, (1) introductory, and (1) Open Space regulation sign.
- (C) Sign location of environmental education area.
- (D) OPEN SPACE MAINTENANCE ITEM: Control exotic plants and restore area with pole plantings.
- (E) OPEN SPACE MAINTENANCE ITEM: Use brush piles to close existing trails which are not part of planned bosque trail network. Provide signage explaining trail closure.



PROJECT LOCATION: Barelas Bridge NE

NOTE: KEYED NOTES ARE REPRESENTED BY (A) THROUGH (F)

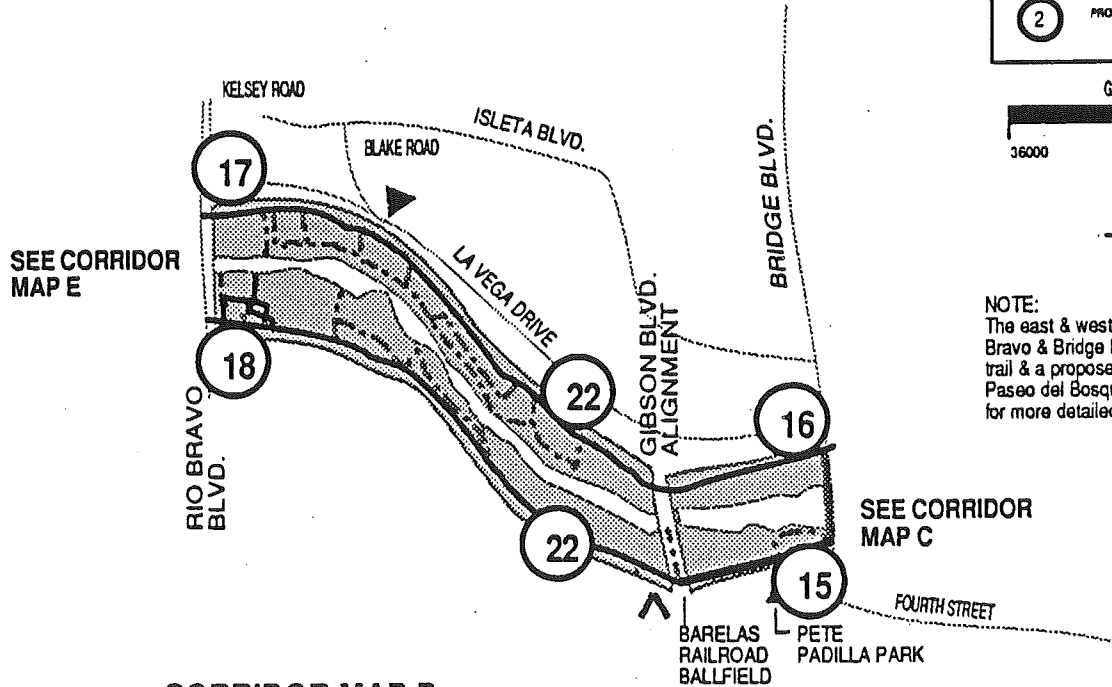
- (A) Establish trailhead parking area. Provide 25 to 35 parking spaces. Designate (2) handicapped spaces with a prepared surface and signage. All parking spaces shall have concrete bumper barriers.
- (B) Install (1) trailhead, (1) introductory, and (1) Open Space regulation sign.
- (C) Establish picnic grounds. Provide 4 to 7 picnic tables within the picnic area. Plant balled burttapped cottonwood trees for shade.
- (D) Provide a bicycle rack near the parking area.
- (E) Develop wheelchair accessible hard surface trail within the bosque. Trail development will meet Uniform Federal Accessibility Standards.
- (F) Utilize existing natural surface trail within the bosque to access scenic view points and to connect to existing Paseo del Bosque Trail atop and the proposed hard surface trail.
- (G) Construct a wetland by using Barelas Pump Station storm water. Provide interpretive signs regarding wetlands.
- (H) OPEN SPACE MAINTENANCE ITEM: Use brush piles to close existing trails which are not part of the planned bosque trail.

BARELAS BRIDGE (BRIDGE STREET)

LEGEND	
	NEW ACCESS POINT
	ACCESS POINT
	STREET
	PROPOSED HARD SURFACE TRAIL
	EXISTING HARD SURFACE TRAIL
	NATURAL TRAIL
	SCHOOL
	WATER CONVEYANCE SYSTEM
	PARK BOUNDARY
	RIO GRANDE VALLEY STATE PARK LIMITS
	WILDLIFE PRESERVE
	PROJECT LOCATION



NOTE:
The east & west levee roads between Rio Bravo & Bridge Blvd. consists of a natural surface trail & a proposed hard surface trail. See the Paseo del Bosque Trail Project Location Map for more detailed information.

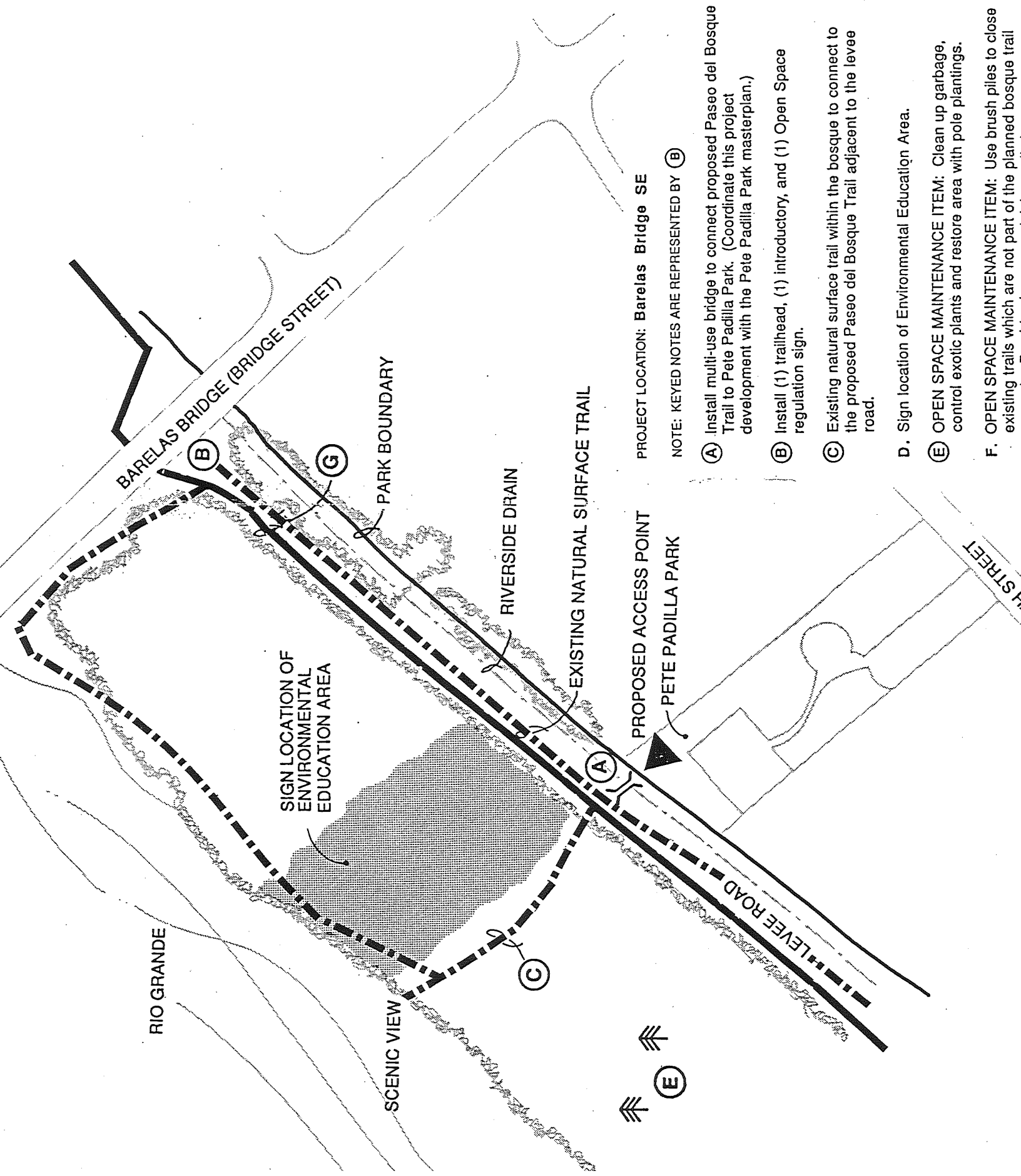
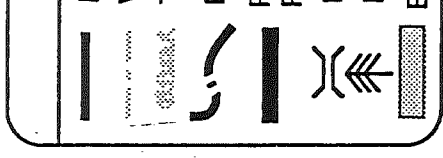


CORRIDOR MAP D
Barelas Bridge to Rio Bravo Bridge

CORRIDOR "D" DESCRIPTION

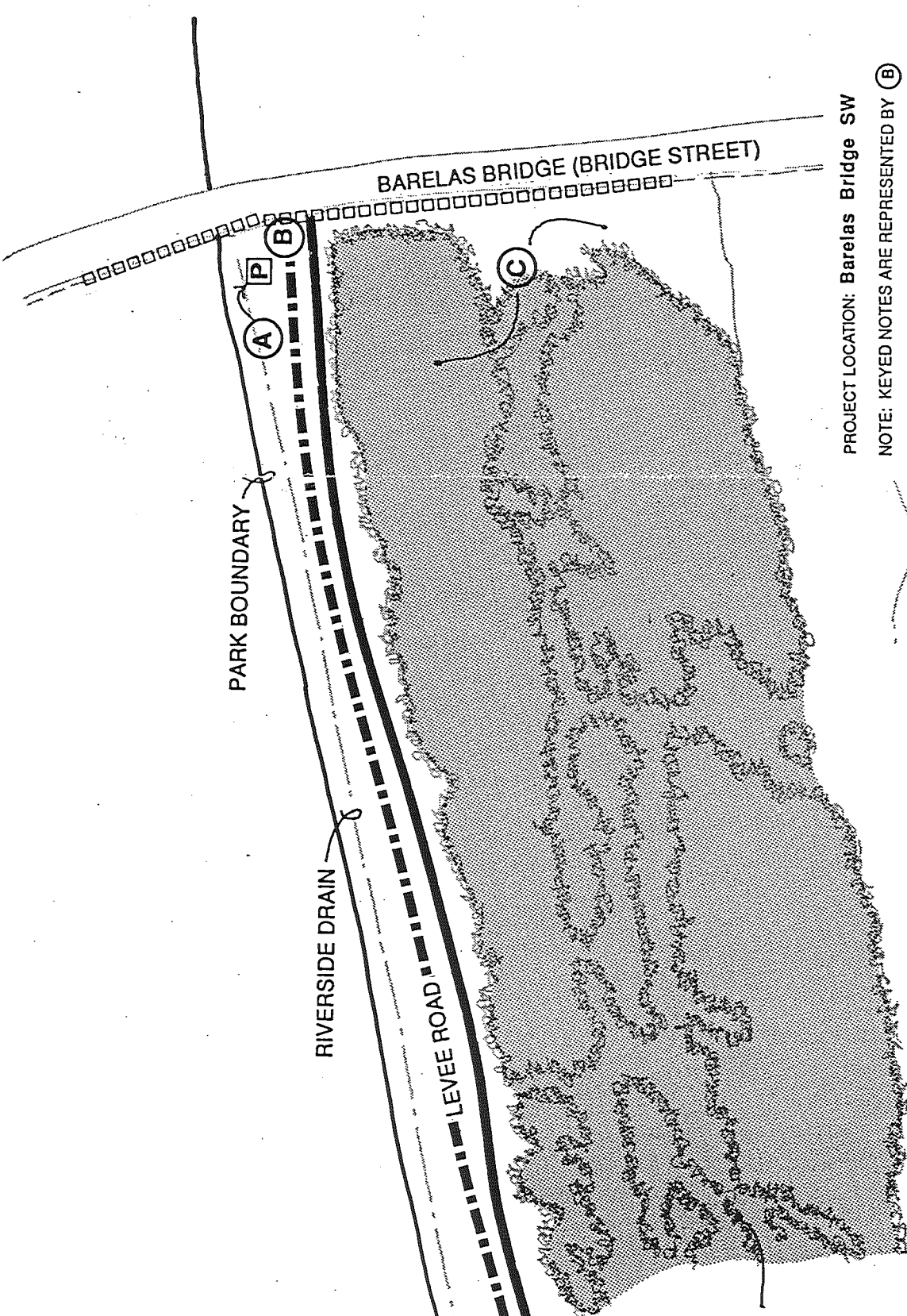
Main access points into this section of the the park are located at the southeast and southwest corners of the Barelas Bridge, and at the northeast and northwest corners of the Rio Bravo Bridge. Neighborhood access is located near La Vega Drive. Another access point is located just south of the softball field near Second Street.

A mixture of R-1, A-1 and M-2 (heavy manufacturing) zoning surrounds the section of the park.



PROJECT LOCATION: Barelas Bridge SE
 NOTE: KEYED NOTES ARE REPRESENTED BY (B)

- (A) Install multi-use bridge to connect proposed Paseo del Bosque Trail to Pete Padilla Park. (Coordinate this project development with the Pete Padilla Park masterplan.)
- (B) Install (1) trailhead, (1) introductory, and (1) Open Space regulation sign.
- (C) Existing natural surface trail within the bosque to connect to the proposed Paseo del Bosque Trail adjacent to the levee road.
- (D) Sign location of Environmental Education Area.
- (E) OPEN SPACE MAINTENANCE ITEM: Clean up garbage, control exotic plants and restore area with pole plantings.
- (F) OPEN SPACE MAINTENANCE ITEM: Use brush piles to close existing trails which are not part of the planned bosque trail



PROJECT LOCATION: Barelas Bridge SW

NOTE: KEYED NOTES ARE REPRESENTED BY (B)

- (A) Establish trailhead parking area. Provide 5 to 10 parking spaces. Designate (1) handicapped space with a prepared surface and signage. All parking spaces shall have concrete bumper barriers.
- (B) Install (1) trailhead, (1) introductory, and (1) Open Space regulation sign.
- (C) OPEN SPACE MAINTENANCE ITEM: Protect sensitive areas to maintain cryptogamic crust.
- D. OPEN SPACE MAINTENANCE ITEM: Use brush piles to close existing trails which are not part of the planned bosque trail network. Provide signage explaining trail closure.

bumper and signage. 7m parking spaces would have concrete bumper barriers.

F. OPEN SPACE MAINTENANCE ITEM: Use brush piles to close existing trails which are not part of the planned bosque trail network. Provide signage explaining trail closure.

G. TRAIL PROJECT: (Not part of this project development.) Proposed hard surface Paseo del Bosque Trail adjacent to levee road.

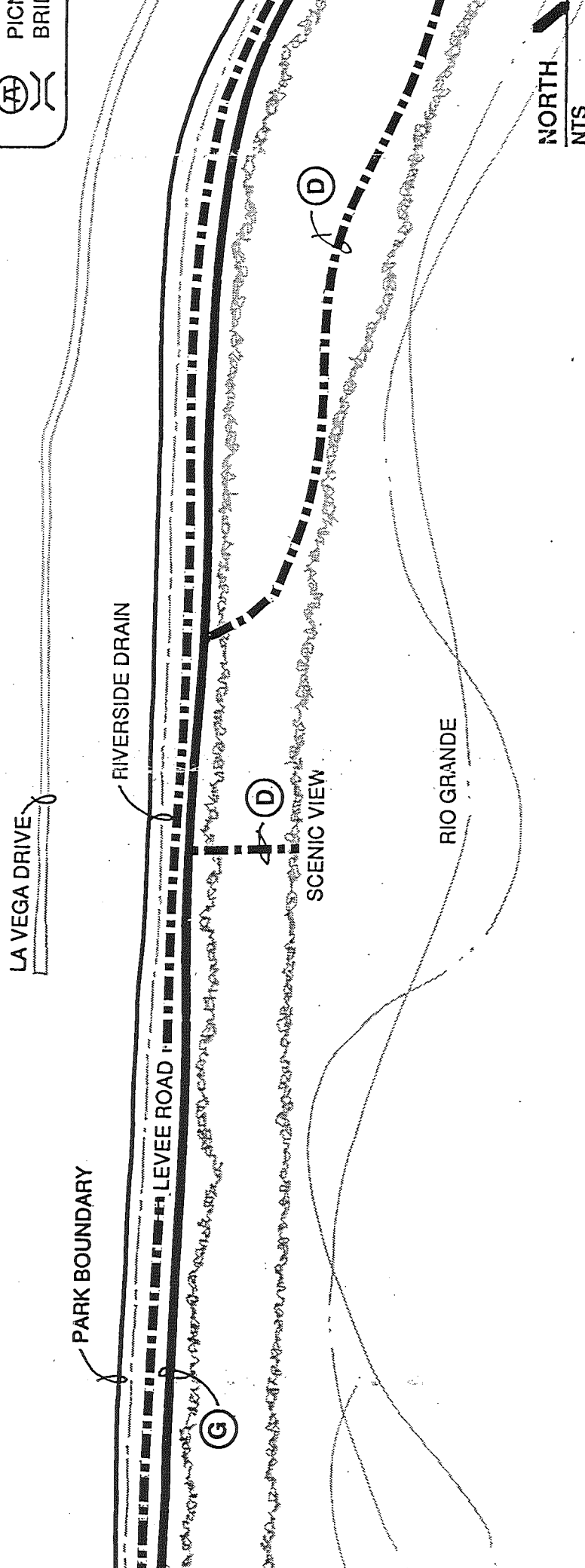
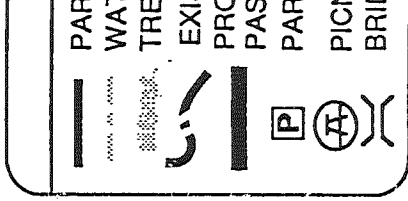
in Area 1 off of Kelsey Road. Provide 5 parking spaces in Area 2. Designate (1) handicap space with a prepared surface and signage. All parking spaces shall have concrete bumper barriers. Upgrade ramp into parking Area 2.

B. Install (2) trailhead, (2) introductory, and (2) Open Space regulation sign.

C. Establish picnic grounds. Provide 2 to 3 picnic tables. (Open Space staff to utilize existing natural materials on site to provide seating where possible.)

D. Existing natural surface trail within the bosque to access scenic view point to connect to the proposed hard surface Paseo del Bosque Trail adjacent to the levee road.

PROJECT LOCATION
17 Rio



NORTH
 NTS

17
 BRAVO BLVD

concrete bumper barriers.

- (B) Install (2) trailhead, (1) introductory, and (1) Open Space regulation sign.
- (C) Establish picnic grounds. Provide 3 to 7 tables within the picnic area.
- (D) Develop wheelchair accessible hard surface trail within the bosque. Trial development will meet Uniform Federal Accessibility Standards.
- (E) Existing natural surface trail to access scenic view points and to connect to the proposed Paseo del Bosque Trail adjacent to the levee road.
- (F) Public "take-out" and emergency launch site.
- G. OPEN SPACE MAINTENANCE ITEM: Use brush piles to close existing trails which are not part of the planned bosque trail network. Provide signage explaining trail closure.
- (H) TRAIL PROJECT: (Not part of this project development.) Proposed hard surface Paseo del Bosque Trail adjacent to levee road.

PROJECT

18

NORT
NTS



RIO BRAVO BLVD.

RIO GRANDE

SCENIC VIEW

SCENIC VIEW

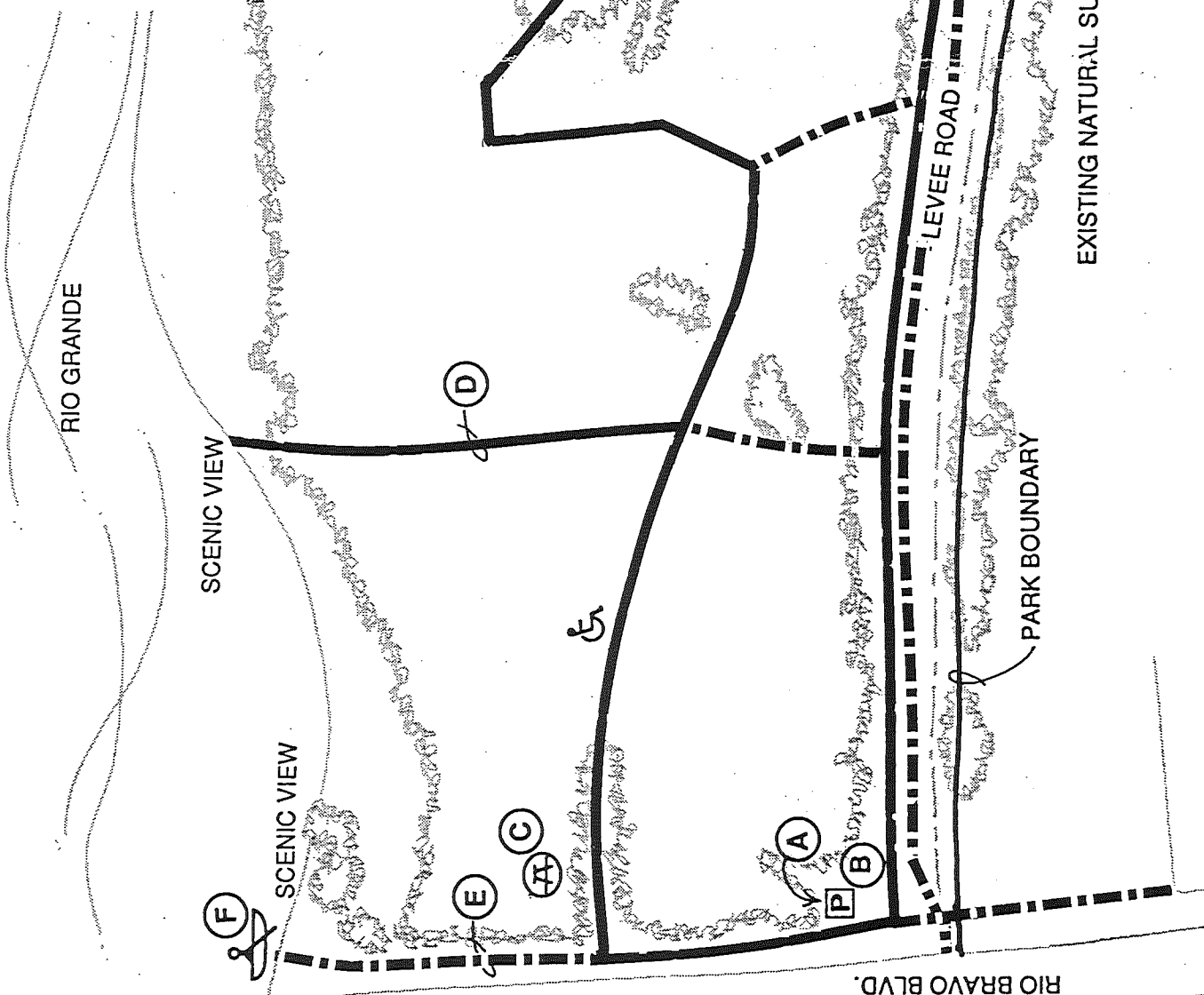
LEVEE ROAD

PARK BOUNDARY

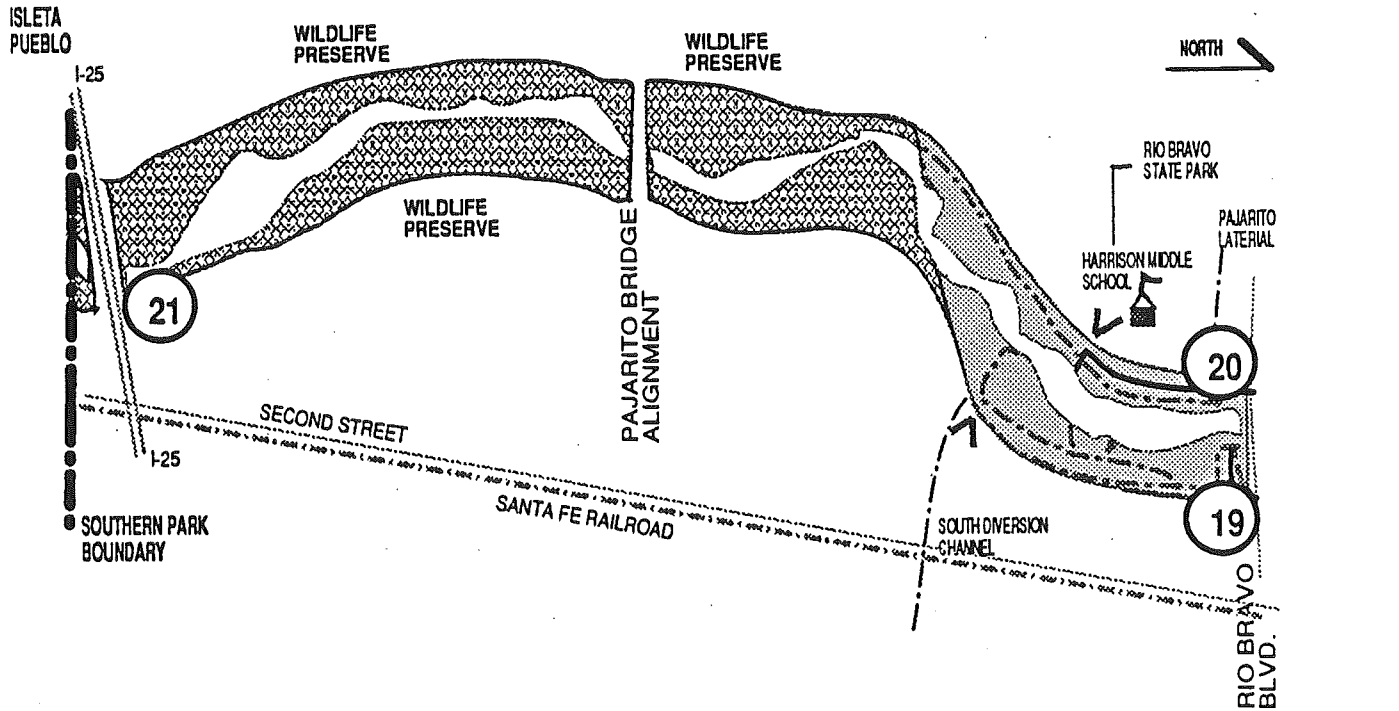
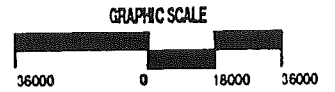
RIVERSIDE DRAIN

EXISTING NATURAL SURFACE TRAIL

RIO BRAVO BLVD.



LEGEND	
	NEW ACCESS POINT
	ACCESS POINT
	STREET
	PROPOSED HARD SURFACE TRAIL
	EXISTING HARD SURFACE TRAIL
	NATURAL TRAIL
	SCHOOL
	WATER CONVEYANCE SYSTEM
	PARK BOUNDARY
	RIO GRANDE VALLEY STATE PARK LIMITS
	WILDLIFE PRESERVE
	PROJECT LOCATION



CORRIDOR MAP E
Rio Bravo Bridge to the Southern Boundary

SEE CORRIDOR
MAP D

CORRIDOR "E" DESCRIPTION

Main access points into the southern section of the park are located at the southeast and southwest corners of the Rio Bravo Bridge. Neighborhood access points are located at Harrison Middle School and near Valley High Street.

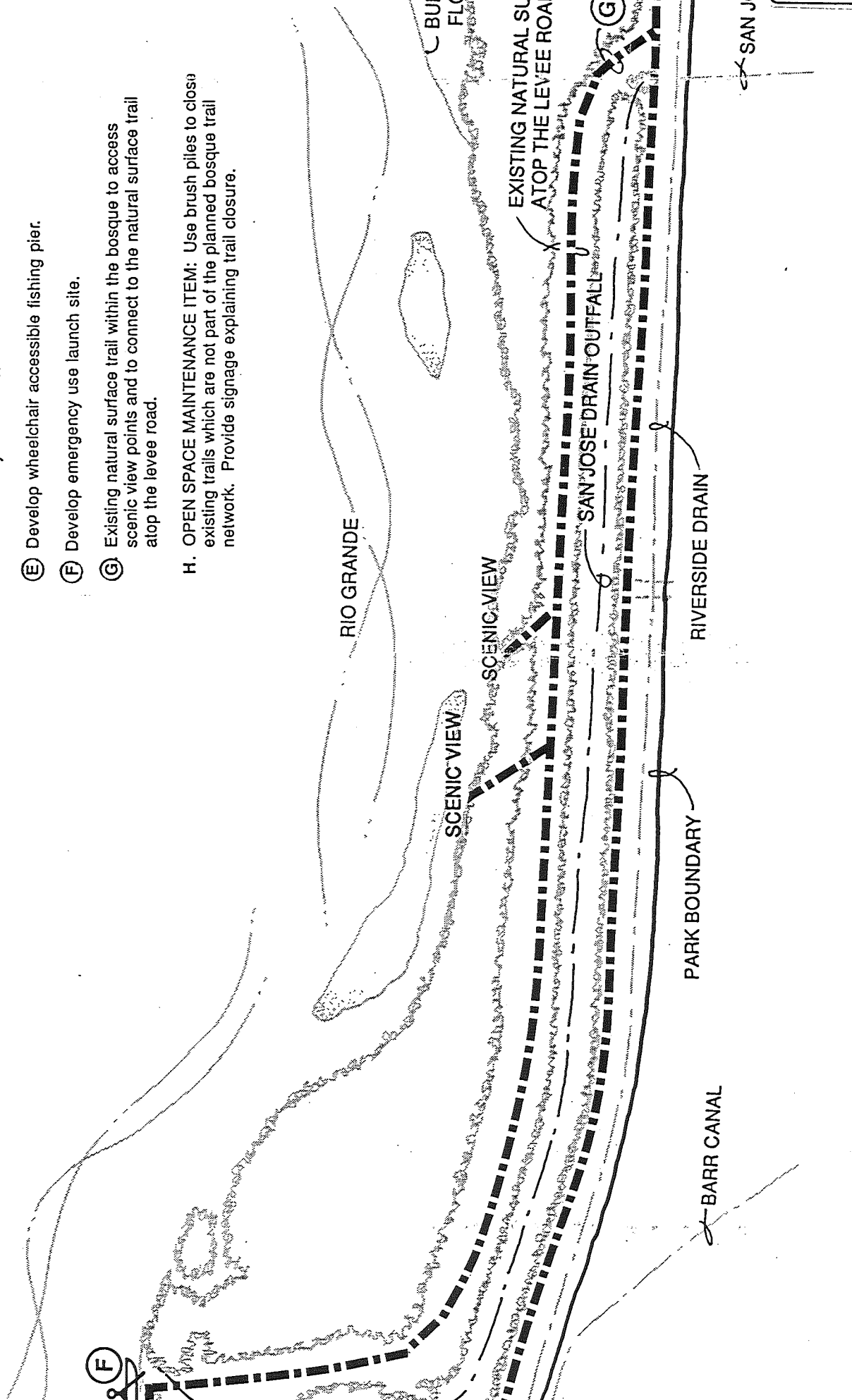
A majority of the land surrounding the park here is zoned A-1 with a few areas zoned R-1 and M-2. Most of the land northeast of Interstate 25 is currently used for farming. The bosque adjacent to these areas has few trails and is ideal for wildlife.

with a prepared surface and signage. All parking spaces shall have concrete bumper barriers.

- (B) Install (1) trailhead, (1) introductory, and (1) Open Space regulation sign.
- (C) Establish picnic grounds. Provide 3 to 5 tables within the picnic area.
- (D) Develop wheelchair accessible hard surface trail within the bosque. Trail development will meet Uniform Federal Accessibility Standards.
- (E) Develop wheelchair accessible fishing pier.
- (F) Develop emergency use launch site.
- (G) Existing natural surface trail within the bosque to access scenic view points and to connect to the natural surface trail atop the levee road.
- H. OPEN SPACE MAINTENANCE ITEM: Use brush piles to close existing trails which are not part of the planned bosque trail network. Provide signage explaining trail closure.

PROJE

19



BUREAU OF FLOODWA

EXISTING NATURAL SURFACE TRAIL ATOP THE LEVEE ROAD

SAN JOSE DRAIN OUTFALL

RIVERSIDE DRAIN

PARK BOUNDARY

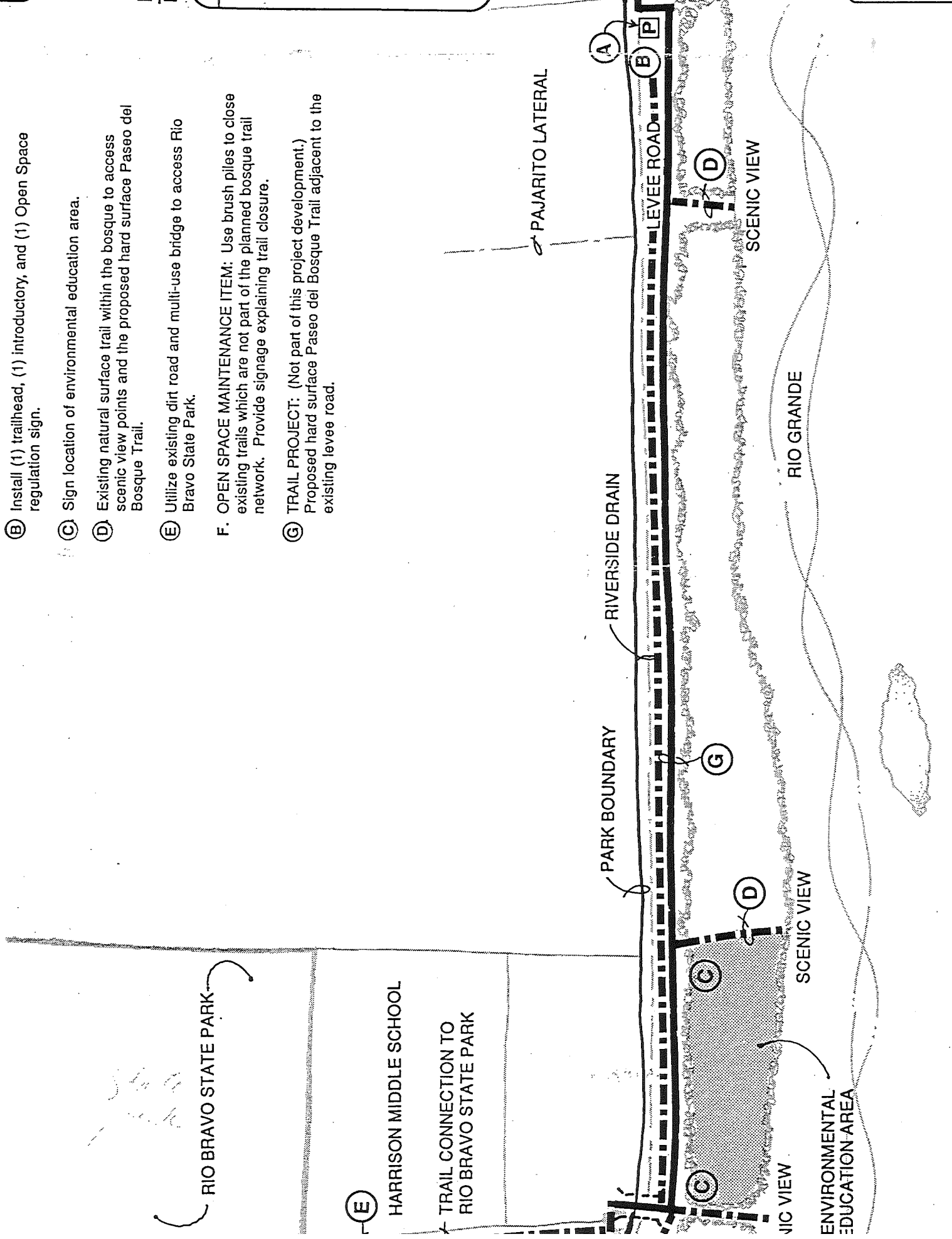
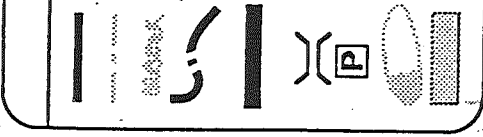
BARR CANAL

SAN JOSE DRAIN

ISLETA PUEBLO

spaces. Designate (1) handicap space with a prepared surface and signage. All parking spaces shall have concrete bumper barriers.

- (B) Install (1) trailhead, (1) introductory, and (1) Open Space regulation sign.
- (C) Sign location of environmental education area.
- (D) Existing natural surface trail within the bosque to access scenic view points and the proposed hard surface Paseo del Bosque Trail.
- (E) Utilize existing dirt road and multi-use bridge to access Rio Bravo State Park.
- F. OPEN SPACE MAINTENANCE ITEM: Use brush piles to close existing trails which are not part of the planned bosque trail network. Provide signage explaining trail closure.
- (G) TRAIL PROJECT: (Not part of this project development.) Proposed hard surface Paseo del Bosque Trail adjacent to the existing levee road.



preserve. Possible improvements include: creating a wetland by excavating shallow ponds and planting marsh vegetation and developing a vegetation screen around the wetland; and establishment of an Open Space Ranger and/or sharecropper residence.

WILLIAMS LATERAL

PARK BOUNDARY

LEVEE ROAD

PRIVATE DIRT ROAD

(A)

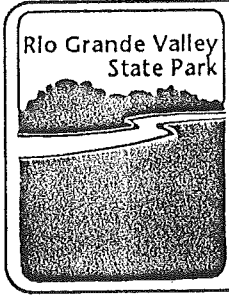
(A)

BARR INTERIOR DRAIN

NANNINGA INTERIOR DRAIN

INTERSTATE 25





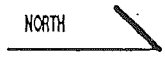
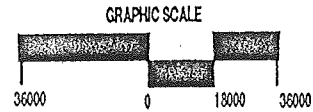
BOSQUE ACTION PLAN

CITY OF ALBUQUERQUE

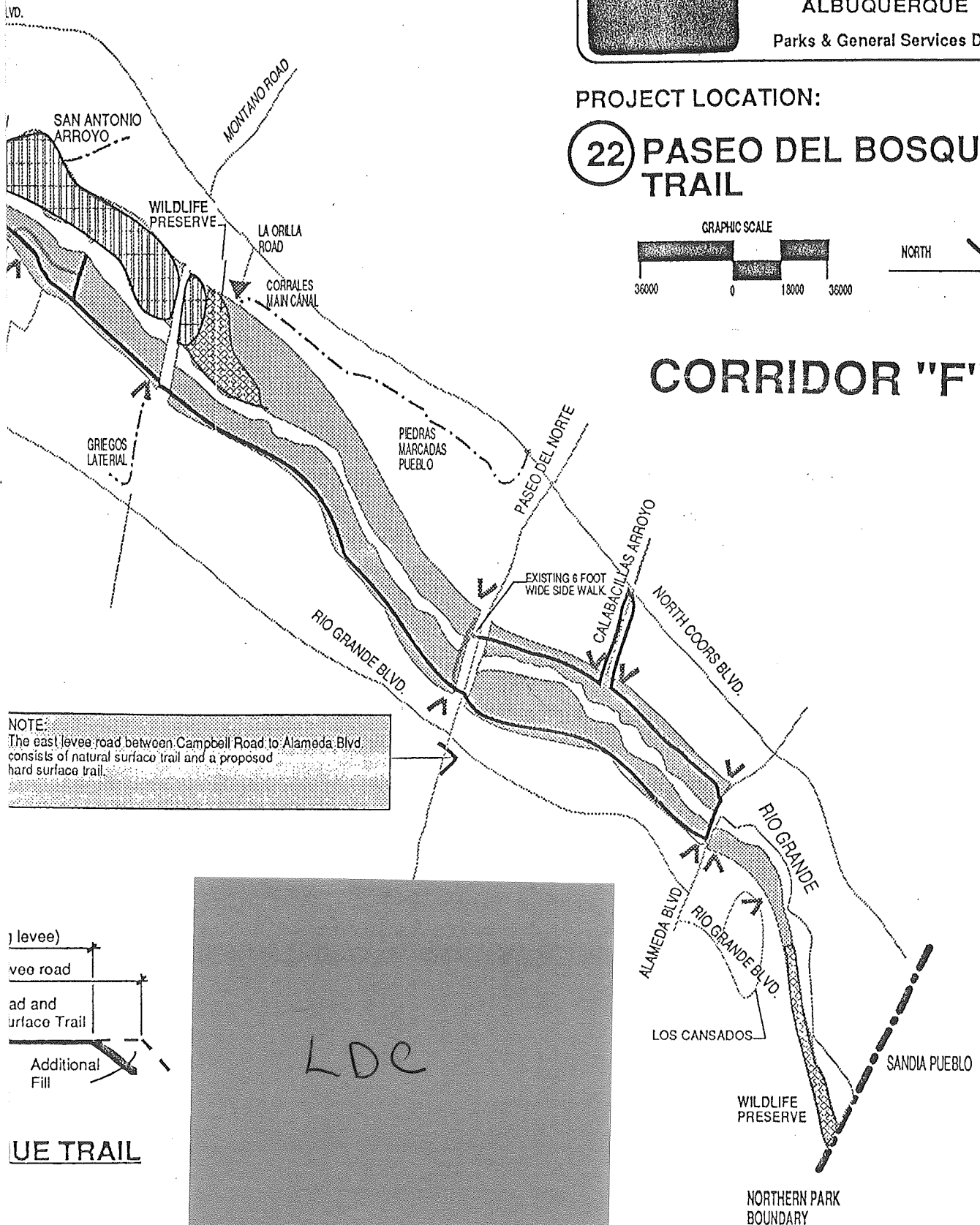
Parks & General Services Dept.

PROJECT LOCATION:

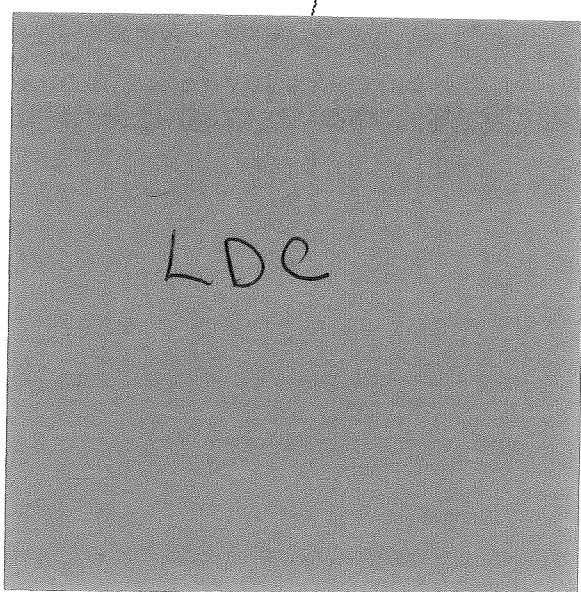
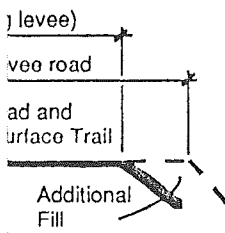
22 PASEO DEL BOSQUE TRAIL



CORRIDOR "F"

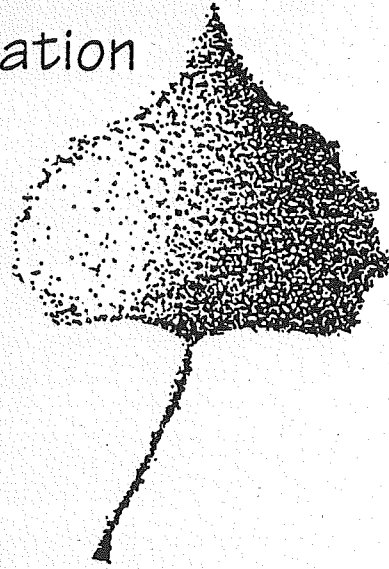


NOTE:
The east levee road between Campbell Road to Alameda Blvd. consists of natural surface trail and a proposed hard surface trail.



TRAIL

Plan Implementation



IV. PLAN IMPLEMENTATION

A. PHASING OF PROJECTS

Phasing of projects and listing of improvements are determined by current use and future demand of area. Because of limited funding, a minimum of one access point from the existing road bridges will be developed within the first phase. There are three phases identified to implement this Plan. However, a number of improvements may require on-going implementation, such as planting Cottonwood poles, closing trails not part of the network, controlling exotic plants and monitoring the ecological system. These improvements will extend beyond the third phase.

Time frame for the three phases will direct the Open Space Division to implement the identified improvements for each location. The first phase will be funded by the 1/4 cent Quality of Life Fund which begins once the plan has been adopted by both the Albuquerque City Council and the Bernalillo County Commission. The first phase shall be completed in a two year period. The second phase could possibly be funded by the proposed 1993 CIP Decade Plan where \$400,000 was identified for the Rio Grande Valley State Park. However, this funding is contingent on the final approval from the City Council, the City administration and the voters in October 1993. Funding for the third phase has not yet been identified and could possibly come from outside the City.

B. ALLOCATION OF REMAINING 1/4 CENT QUALITY OF LIFE FUND

In September of 1987, the Albuquerque City Council approved a 1/4 cent gross receipts tax which is being collected over a ten year period to fund a number of Quality of Life projects. The Open Space Division received \$1.2 million from this 1/4 cent tax for the Rio Grande Valley State Park. The first major capital improvements will be implemented in Phase 1 utilizing this fund. Other expenditures for the park were used to fund the biological studies, to repair damages to the park resources which has resulted from years of neglect and to provide a safer park environment by controlling access and illegal activities.

The following identifies the locations of projects that will be funded with the remaining 1/4 cent Quality of Life Fund.

1. Paseo del Bosque Trail (North of the Nature Center to Alameda Bridge)
2. Alameda Bridge NE
3. La Orilla Road Access
4. Candelaria Farms: Wildlife Observation Blind
5. Central Bridge NE
6. Central Bridge SE
7. Barelás Bridge NE
8. Rio Bravo Bridge NE

**SUMMARY OF PROJECTS
(PHASING AND OVERALL COSTS)**

LOCATION	TOTAL COST OF PROJECT	PHASE		
		1	2	3
CORRIDOR A: North Boundary to Paseo Del Norte Bridge				
1. Alameda Bridge N.E.	\$69,339	x	x	x
2. Alameda Bridge S.E.	\$35,582		x	x
3. Alameda Bridge S.W.	\$1,689		x	x
4. Calabacillas Arroyo	\$209,127			x
5. La Orilla Road Access	\$52,444	x	x	x
CORRIDOR B: Paseo Del Norte Bridge to I-40				
6. Candelaria Farms	\$235,471	x		x
7. Campbell Road Access	\$6,236		x	
CORRIDOR C: I-40 to Barelvas Bridge				
8. Atrisco N.W. Access	\$29,632		x	
9. Central Bridge N.W.	\$12,180		x	
10. Central Bridge N.E.	\$99,333	x	x	x
11. Central Bridge S.E.	\$58,276	x	x	x
12. Central Bridge S.W.	\$25,934			x
13. Barelvas Bridge N.W.	\$10,230		x	x
14. Barelvas Bridge N.E.	\$43,087	x	x	x
CORRIDOR D: Barelvas Bridge to Rio Bravo Bridge				
15. Barelvas Bridge S.E.	\$32,315		x	x
16. Barelvas Bridge S.W.	\$7,889		x	x
17. Rio Bravo Bridge N.W.	\$13,185			x
18. Rio Bravo Bridge N.E.	\$24,268	x	x	x
CORRIDOR E: Rio Bravo Bridge to South Boundary				
19. Rio Bravo Bridge S.E.	\$25,465		x	x
20. Rio Bravo Bridge S.W.	\$4,981		x	
21. Property North of I-25	\$99,188			x
CORRIDOR F: Paseo del Bosque				
22. Paseo del Bosque Trail	\$520,000	x	x	x
OTHER GENERAL PROJECTS				
23. Flooding of the Bosque	Cost Unknown			x

C. COST ESTIMATES

The following rough cost estimates were developed by the Open Space Division and the Design and Development of the Parks & General Services Department. These estimates include materials and labor to develop necessary improvements for the Rio Grande Valley State Park. Cost estimate for land acquisition have not been developed.

DETAIL COST SUMMARY & PHASING INFORMATION

LOCATION	TOTAL COST OF PROJECT	QUANTITY	SUBPROJECT COST	PHASE		
				1	2	3
CORRIDOR A: North Boundary to Paseo Del Norte Bridge						
1. Alameda Bridge N.E. \$69,339 (incl. OH, design & contingency)						
Concrete Bumper Barrier		45	\$2,475	X	X	
Handicap Parking Prepared Surface		4	\$1,200	X	X	
Pole Plantings		1 Ac.	\$2,500	X	X	X
Multi-Use Bridge		1	\$15,000		X	
Interpretative Trail and Sign		16	\$320		X	
Trail Closures		36	\$3,600	X	X	X
Picnic Table		11	\$8,250	X		
Signs		5	\$480	X		
Bicycle Rack		1	\$250	X		
Wheelchair Accessible Trail (Road Oyl)		1400 L.F.	\$4,200	X		
Horse Tie-Up		1	\$75	X		
Guard Rails		100 L.F.	\$1,500	X		
Accessible Restroom (rented portable)		1	\$5,000	X		
Expand Native Species Habitat		1.5 Ac.	\$7,500	X		
Handicap Parking Signs		4	\$80	X		
2. Alameda Bridge S.E. \$35,582 (incl. OH, design & contingency)						
Concrete Bumper Barrier		30	\$1,650		X	
Handicap Parking Prepared Surface		2	\$600		X	
Signs		3	\$415		X	
Balled Burlapped Trees		5	\$1,000		X	
Pole Plantings		2 Ac.	\$5,000		X	X
Handicap & Horse Trailer Parking Signs		2	\$40		X	
Launch Site (Coordinate with State Highway)					X	
Trail Closures		32	\$3,200		X	X
Expand Native Species Habitat		3 Ac.	\$15,000		X	
3. Alameda Bridge S.W. \$1,689 (incl. OH, design & contingency)						
Signs		3	\$390		X	
Environmental Education Area Sign		1	\$20		X	
Trail Closures		10	\$1,000		X	X
4. Calabacillas Arroyo \$209,127 (incl. OH, design & contingency)						
Concrete Bumper Barrier		25	\$1,375			X
Handicap Parking Prepared Surface		2	\$600			X
Signs		3	\$415			X
Handicap Parking Signs		2	\$40			X
Trail Closures		27	\$2,700			X
Acquisition: Property South Of Arroyo						X
Calabacillas Pueblo						X
Environmental Education Camp		1	\$50,000			X
Group Reservation Campground		1	\$100,000			X
Amphitheater		1	\$3,000			X

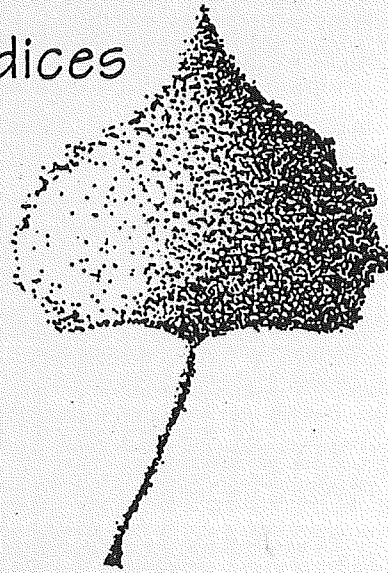
LOCATION	TOTAL COST OF PROJECT	QUANTITY	SUBPROJECT COST	PHASE		
				1	2	3
5. La Orilla Road Access		\$52,444 (incl. OH, design & contingency)				
Trail Closure		22	\$2,200	X	X	X
Concrete Bumper Barrier		30	\$1,650	X		
Bridge Installation		1	\$6,500	X		
Sign		3	\$415	X		
Gate		1	\$750	X		
Prepared Surface Parking			\$18,000	X		
Parking Lot Landscaping			\$10,000	X		
Handicap Parking Signs		2	\$40	X		
Horse Trailer Parking Signs		5	\$100	X		
CORRIDOR B: Paseo Del Norte Bridge to I-40						
6. Candelaria Farms		\$235,471 (incl. OH, design & contingency)				
Ranger Residence		1	\$60,000			X
Ranger Horse Stable		1	\$20,000			X
Utilities & Grading		1	\$15,000			X
Trail Closure		19	\$1,900			X
Wildlife Observation Blind		1	\$5,000	X		
Information Boards		1	\$250	X		
Prepared Trail Surface to Observation Blind		1	\$900	X		
Interpretative Center			\$75,000			X
Parking			\$19,500			X
7. Campbell Road Access		\$6,236 (incl. OH, design & contingency)				
Signs		3	\$415		X	
Trail Closure		43	\$4,300		X	
CORRIDOR C: I-40 to Barelvas Bridge						
8. Atrisco N.W. Access		\$29,632 (incl. OH, design & contingency)				
Concrete Bumper Barrier		7	\$385		X	
Gate		1	\$750		X	
Sign		3	\$415		X	
Guard Rail		300 L.F.	\$4,500		X	
Entire Parking - Prepared Surface W/ Entry Point		1	\$13,816		X	
Handicap Parking Sign		1	\$20		X	
Environmental Education Area Signs		1	\$20		X	
Trail Closure		25	\$2,500		X	
9. Central Bridge N.W.		\$12,180 (incl. OH, design & contingency)				
Concrete Bumper Barrier		25	\$1,375		X	
Signs		3	\$415		X	
Shrubs For Observation Screen			\$2,000			X
Interpretative Sign		1	\$20			X
Constructed Wetland (Coordinate with PWD)						X
Trail Closure		54	\$5,400		X	

LOCATION	TOTAL COST OF PROJECT	QUANTITY	SUBPROJECT COST	PHASE		
				1	2	3
10. Central Bridge N.E.	\$99,333	(incl. OH, design & contingency)				
Bicycle Rack		1	\$250		X	
Information Booth		1	\$32,000			
Pole Planting		3 Ac.	\$7,500	X	X	X
Trail Closure		55	\$5,500	X	X	X
Picnic Tables		10	\$7,500	X		
Wheelchair Accessible Trail		2200 L.F.	\$6,600	X		
Signs		6	\$400	X		
Constructed Wetland		1	\$15,000	X		
Interpret. & Environ. Education Area Signs		18	\$360	X		
11. Central Bridge S.E.	\$58,276	(incl. OH, design & contingency)				
Wheelchair Accessible Trail		800 L.F.	\$2,400		X	
Trail Closure		15	\$1,500		X	X
Concrete Bumper Barrier		40	\$2,200	X		
Signs		6	\$475	X		
Constructed Wetland		1	\$15,000			X
Entire Parking To Be Prepared Surface			\$22,300	X		
Handicap Parking Signs		2	\$40	X		
Excavate Launch Site		1	\$150	X		
12. Central Bridge S.W.	\$25,934	(incl. OH, design & contingency)				
Concrete Bumper Barrier		25	\$1,375			X
Signs		3	\$415			X
Pole Planting		4 Ac.	\$15,000			X
Handicap Parking Prepared Surface		1	\$300			X
Handicap Parking Signs		1	\$20			X
Trail Closure		25	\$2,500			X
13. Barelás Bridge N.W.	\$10,230	(incl. OH, design & contingency)				
Environmental Education Area Sign		1	\$20		X	
Signs		3	\$415			X
Pole Planting		2 Ac.	\$5,000			X
Trail Closure		23	\$2,300			X
14. Barelás Bridge N.E.	\$43,087	(incl. OH, design & contingency)				
Picnic Tables		7	\$5,250		X	
Wheelchair Accessible Trail		400 L.F.	\$1,200		X	
Bicycle Rack		1	\$250		X	
Wetland/Plant Vegetation		1	\$1,000		X	
Trail Closure		59	\$5,900		X	X
Concrete Bumper Barrier		35	\$1,925	X		
Handicap Parking Prepared Surface		2	\$600	X		
Signs		3	\$415	X		
Balled Burlapped Trees		5	\$1,000	X		
Constructed Wetland		1	\$15,000			X
Handicap Parking Sign		2	\$40	X		

LOCATION	TOTAL COST OF PROJECT	QUANTITY	SUBPROJECT COST	PHASE		
				1	2	3
CORRIDOR D: Barelmas Bridge to Rio Bravo Bridge						
15. Barelmas Bridge S.E.	\$32,315	(incl. OH, design & contingency)				
Signs		3	\$415		X	
Pole Planting		4 Ac.	\$15,000		X	
Multi-Use Bridge		1	\$5,000			X
Environmental Education Area Sign		1	\$20		X	
Trail Closure		40	\$4,000		X	
16. Barelmas Bridge S.W.	\$7,889	(incl. OH, design & contingency)				
Pole Planting		1 Ac.	\$2,500			X
Signs		3	\$415		X	
Concrete Bumper Barrier		10	\$550			X
Trail Closure		25	\$2,500		X	X
17. Rio Bravo Bridge N.W.	\$13,185	(incl. OH, design & contingency)				
Parking Ramp		1	\$2,000			X
Picnic Tables		2	\$1,500			X
Signs		3	\$415			X
Concrete Bumper Barrier		30	\$1,650			X
Handicap Parking Sign		1	\$20			X
Multi-Use Bridge		1	\$5,000			X
Acquisition		1/3 Ac.				X
Trail Closure		30	\$3,300			X
18. Rio Bravo Bridge N.E.	\$24,268	(incl. OH, design & contingency)				
Concrete Bumper Barrier		25	\$1,375	X		
Handicap Parking Prepared Surface		2	\$600	X		
Picnic Table		7	\$5,250	X		
Wheelchair Accessible Trail		2600 L.F.	\$7,800	X		X
Signs		4	\$435	X		
Handicap Parking Sign		2	\$40	X		
Grade Launch Site		1	\$150	X		
Trail Closure		27	\$2,700	X	X	X
CORRIDOR E: Rio Bravo Bridge to South Boundary						
19. Rio Bravo Bridge S.E.	\$25,465	(incl. OH, design & contingency)				
Concrete Bumper Barrier		20	\$1,100		X	
Handicap Parking Prepared Surface		2	\$600		X	
Picnic Tables		5	\$3,750		X	
Wheelchair Accessible Trail		600 L.F.	\$1,800		X	
Signs		3	\$415		X	
Wheelchair Fishing Pier		1	\$6,000		X	
Relocate Existing Guard Rails		75	\$750		X	
Handicap Parking Signs		2	\$40		X	
Wheelchair Ramp			\$2,000		X	
Trail Closure		28	\$2,800		X	X

LOCATION	TOTAL COST OF PROJECT	QUANTITY	SUBPROJECT COST	PHASE		
				1	2	3
20. Rio Bravo Bridge S.W.	\$4,981	(incl. OH, design & contingency)				
Environmental Education Area Sign		1	\$20		X	
Concrete Bumper Barrier		7	\$410		X	
Signs		4	\$536		X	
Handicap Parking Prepared Surface		1	\$300		X	
Trail Closure		25	\$2,500		X	
21. Property North of I-25	\$99,188	(incl. OH, design & contingency)				
Acquisition		45				X
Constructed Wetland		1	\$15,000			X
Ranger Residence		1	\$60,000			X
22. PASEO DEL BOSQUE TRAIL	\$520,000	(incl. OH, design & contingency)				
Design (Nature Center north to Alameda)			\$100,000	X		
Construction (Nature Center north to Alameda)			\$140,000		X	
Design & Construction (Remaining Trail)			\$280,000			X
23. Other General Projects						
Flooding of Bosque			Cost unknown			X

Appendices



APPENDIX A
State Legislative Act

The Legislature
of the
State of New Mexico

36TH Legislature, FIRST Session

LAWS 1983

CHAPTER 18

HOUSE GOVERNMENT AND URBAN AFFAIRS COMMITTEE SUBSTITUTE FOR

HOUSE BILL 210, AS AMENDED

Introduced by



CHAPTER 18

ALL ACT

RELATING TO STATE PARKS; GRANTING AUTHORITY AND ESTABLISHING PROCEDURES FOR THE CREATION OF THE RIO GRANDE VALLEY STATE PARK.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF NEW MEXICO:

Section 1. SHORT TITLE.--This act may be cited as the "Rio Grande Valley State Park Act".

Section 2. DECLARATION OF POLICY.--The preservation, protection and maintenance of the natural and scenic beauty of a designated portion of the Rio Grande and its immediate corridor is in the public interest. The designation of the Rio Grande Valley state park will enable people to enjoy the recreational, environmental, educational and wildlife benefits of the river. Therefore, the legislature declares it to be in the public interest, in furtherance of sound environmental policy and for the good of the people to establish the Rio Grande Valley state park.

Section 3. DEFINITIONS.--As used in the Rio Grande Valley State Park Act:

A. "conservancy district" means the middle Rio Grande conservancy district;

B. "division" means the state park and recreation division of the natural resources department; and

C. "operating party" means the party designated by the division to manage the state park.

Section 4. DESIGNATION OF BOUNDARIES.--The Rio Grande Valley

House Bill 210

Approved March 15, 1983

1 state park shall include lands owned and controlled by the middle
2 Rio Grande conservancy district in the floodway of the Rio Grande,
3 adjacent levees, service roads, riverside drains and conservancy
4 district lands contiguous to the river in Bernalillo county, with
5 the following exceptions:
6 A. private land in and adjacent to the floodway of the
7 river;
8 B. lands held by public agencies other than the conser-
9 vancy district;
10 C. lands of the Sandia and Isleta Indian pueblos in
11 Bernalillo county;
12 D. lands within the municipal boundaries of the village
13 of Corrales unless the governing body of the village of Corrales
14 subsequently requests inclusion; and
15 E. a two-hundred foot strip on either side of the final
16 center line of existing and proposed bridges whose alignment has
17 been or may be approved by the urban transportation policy planning
18 board of the middle Rio Grande council of governments.

19 Section 5. MANAGEMENT.--

20 A. The provisions of the Rio Grande Valley State Park Act
21 shall not take effect until the division has fully executed a man-
22 agement agreement with an operating party, and shall cease to be in
23 effect if the management agreement is terminated. The management
24 agreement shall include a map delineating the boundaries of the
25 park. The park shall be established when the management agreement

1 is signed by the representative of the division and the designated
2 representative of the operating party. A provision of the manage-
3 ment agreement shall require twelve months' written notice prior to
4 any termination taking effect.

5 B. The operating party shall administer the Rio Grande
6 Valley state park. The operating party shall develop, after public
7 hearings, a management plan for approval by the division which is
8 consistent with the provisions of the feasibility study previously
9 prepared that satisfies the requirements of Subsection G of Section
10 16-2-11 NMSA 1978, to realize the objectives of the Rio Grande
11 Valley State Park Act. The plan shall be prepared in cooperation
12 with the appropriate federal, state and local agencies and shall
13 include among other things:

- 14 (1) consideration for cooperative management
- 15 arrangements between state, federal, conservancy, flood control and
- 16 municipal authorities;
- 17 (2) measures to control recreational use of the
- 18 designated river to protect the river's natural values; and
- 19 (3) measures to minimize any adverse impact to the
- 20 park caused by public transportation or other public improvement
- 21 projects to be located in close proximity to the park.

22 C. The operating party may seek the assistance and aid of
23 the department of game and fish for resource and wildlife management
24 within the Rio Grande Valley state park.

25 Section 6. LAND USE AND ACQUISITION.--

1 A. The division shall not condemn any land or interests
2 in lands within the Rio Grande Valley state park under state juris-
3 diction.

4 B. The operating party may acquire, in furtherance of the
5 objectives of the Rio Grande Valley State Park Act and on behalf of
6 the state, land, improvements or any interest within the boundaries
7 of the Rio Grande Valley state park by purchase, lease, exchange or
8 gift and enter into agreements with private landholders concerning
9 the same at fair market value.

10 C. The division or operating party may accept and receive
11 gifts and bequests of money or other property, including funds from
12 the federal government, for purposes consistent with the Rio Grande
13 Valley State Park Act.

14 D. The Rio Grande Valley state park shall be administered
15 in such a manner as to protect and enhance the scenic and natural
16 values of the Rio Grande.

17 E. Nothing in the Rio Grande Valley State Park Act shall
18 be construed as being incompatible with existing state property
19 laws. Nothing shall be construed to be incompatible with regulation
20 of river flow for flood control, sediment control or beneficial uses
21 of water or with the need for life saving, fire suppression, public
22 health or emergency flood management.

23 F. Future public utility crossings, including but not
24 limited to sewer lines, sewer outfalls, and water lines and facili-
25 ties, are permitted uses in the park, subject to the following:

1 such facilities shall be placed underground or in existing ease-
2 ments, provided that if such placement is determined by the utility
3 not be practical due to unusual environmental, economic or technical
4 problems, the utilities shall make such findings and present them to
5 the division for approval of placing the proposed facilities above
6 ground or outside existing easements. The utility shall also demon-
7 strate to the division that location of the proposed facility out-
8 side the park would cause undue hardship to the utility.

9 G. The Rio Grande Valley State Park Act shall not pro-
10 hibit existing or future drainage or flood control projects approved
11 by a county, municipality or flood control agency. Such projects
12 shall be reviewed by the division, and the division, the operating
13 party and the county, municipality or flood control agency shall
14 cooperate to minimize adverse impact on the park caused by such
15 projects.

16 Section 7. VIOLATIONS--INJUNCTIONS.--Any person may be
17 restrained and enjoined by proceedings instituted in the name of the
18 state or the operating party by the attorney general or any district
19 attorney of the state or by a special attorney of the division or
20 the operating party at the request of the division or the operating
21 party from engaging or continuing in an act which violates any pro-
22 vision of the Rio Grande Valley State Park Act or any rule or regu-
23 lation of the division or any additional rule or regulation adopted
24 pursuant to the Rio Grande Valley State Park Act.

25 Section 8. JOINT POWERS.--The operating party, subsequent to

1 satisfying the provisions of Subsection A of Section 5 of the Rio
2 Grande Valley State Park Act, and the conservancy district shall
3 enter into a joint powers agreement to effectuate the provisions of
4 the Rio Grande Valley State Park Act; provided, however, that
5 nothing in the Rio Grande Valley State Park Act shall be construed
6 in such a way as to obstruct or interfere with the duties, opera-
7 tions, obligations, construction of new works or functions of the
8 middle Rio Grande conservancy district as provided in Chapter 73,
9 Articles 14 and 18 MHSA 1978 or the duties and obligations of the
10 state of New Mexico under the Rio Grande Compact or agreements or
11 contracts between the conservancy district and federal agencies such
12 as the United States department of interior, the bureau of reclama-
13 tion and the United States army corps of engineers.

14 In the event the operating party and the conservancy district
15 fail to negotiate a mutually acceptable joint powers agreement
16 within one year from complying with the provisions of Subsection A
17 of Section 5 of the Rio Grande Valley State Park Act, the operating
18 party and the conservancy district shall submit any unresolved dis-
19 putes to a mutually agreeable impartial arbitrator for binding arbi-
20 tration.

21 Section 9. NO STATE APPROPRIATIONS.--It is the intent of the
22 Rio Grande Valley State Park Act not to call upon this or future
23 legislatures for state financial help.

APPENDIX B

Biophysical Land Units

SECTION 1

PROJECT OVERVIEW

APPLICATION OF THE BLU MODEL

The *Bosque Action Plan* is a blueprint for guiding the management of the environmental systems and recreational improvements planned for the Rio Grande Valley State Park (RGVSP). In order to conserve, protect, enhance and diversity existing ecosystems, the Open Space Division (OSD) must consider the relationship of the varied bosque ecosystems to both natural and social phenomena. To assist in this objective, a method of computer modeling utilizing a Geographic Information System (GIS) has been applied. The result is the identification of Biophysical Land Units (BLUs), a manifestation of the geographic concept of regionalism. The term "biophysical" is meant to emphasize classification of ecological landscapes by both "biotic" (living) and "physical" (non-living) elements.

Once delineated, BLUs can be used in the RGVSP as planning zones to show the natural environments that would be affected by the *Bosque Action Plan* proposal. They are the basis for an ecotype modeling strategy designed to examine the fundamental natural capabilities of the land to support different resource management proposals.

Many natural resource plans have been written using a description and analysis of the natural environment that is based on separate elements of the environment, such as: terrain/landform, soils, vegetation/landcover, and surface water/drainage. Analyzing separate elements can make it difficult to readily see that the environmental elements or ecological variables are interrelated.

Other resources plans have grouped these variables to allow a more integrated picture of the existing natural resources. This has helped to show how management proposals affect a complex natural environment. Because the *Bosque Action Plan* will make recommendations for all natural resource uses in the RGVSP, a system have been developed for analyzing all resources. This system uses the Biophysical Land Units (BLUs).

Zoning by BLUs can achieve a more integrated overview of the relationship between terrain/landform, soils, vegetation/landcover, and surface water/drainage. They act as a framework for an ecologically integrated inventory and readily display the complexity and diversity of the RGVSP's existing environment. Because of this integration each proposed action can be analyzed in terms of its impact on individual aspects of the environment such as soils or vegetation, as well as to each ecotype as a whole.

Appendix A contains a map of the BLUs and effectively displays the "patchwork" nature of the existing environment in the RGVSP. Zoning by BLU also displays and quantifies those ecotypes that are small within the RGVSP, such as BLU

A Native Species (1.2%), and F Existing Wetland (2.7%). These can be an important considerations for all resource proposals.

The concept of using BLUs for analysis will help the OSD to understand the dynamic nature of the bosque ecotypes. Over time, the geographic model of the bosque ecotypes will be analyzed with other data layers through a variety of modeling exercises. Results of this analysis will assist in establishing appropriate management practices within the park. The modeling and application of BLUs can also lay the foundation for a meaningful monitoring program based on the natural carrying capacity of each BLU as it relates to wildlife populations and habitat, or recreational use and many other resource management questions. BLUs, along with other layers of data, can be used to determine the most productive techniques for managing the bosque vegetation and wildlife, and for managing appropriate recreational uses within Rio Grande Valley State Park.

DESCRIPTION OF BLUs

The Rio Grande Valley State Park is described by eight BLUs or ecotypes. A BLU is a piece of land that has characteristic soils, vegetation, landform, and drainage patterns. Each BLU is a distinctive integration of terrain/landcover, and surface waters/drainage, and is the basic zone used to describe the existing environment in the RGVSP that would be affected by planning proposals. Each BLU reflects part of the ecological situation on the ground in the RGVSP.

A description of each BLU follows in Table 1 (see page 1-3). Appendix A contains a map of the BLUs within the RGVSP. Each BLU description also lists the color on the map that corresponds to that BLU.

Each BLU is an interactive response unit, based on the dynamic relationship of its biological and physical components. Therefore, the BLUs describing the RGVSP are named generically to emphasize that each is a unique set of individual attributes.

Terrain/landform in the RGVSP is generally level with low, gently sloping areas dispersed throughout. Within the RGVSP the river drops in elevation approximately 90 feet, sloping from the north to the south. Elevation typically rises gently as it moves away the river.

BLU soils in the RGVSP are grouped by information on their degree of erodibility by wind or water, and on their parent materials and structures. Vegetation/landcover in the BLUs of the RGVSP is described by 19 vegetation types.

Each of these combinations is unique and results in an ecotype that exhibits its own distinct set of ecological capabilities and limitation. For example, some BLUs have terrain that has very little change in elevation or slope, while others are gently sloping and hilly. Some have soils that are highly susceptible to erosion, while others do not. The different vegetation types overlying the soils and terrain add to the RGVSP's ecological complexity.

BLUs of the RGVSP

BLU	Foliage Structure*	Vegetation*	Soils+	Slope & Elevation
A-Native Species	2 and 4	Native Species • Cottonwood Overstory • N.M. Olive • Native Willow	Any	Any
B-Potential Wetland (Low Meadow)	3, 5, and 6	Willow, annuals, young Cottonwoods	Sandy, clayey, silty, sometimes flooded	0 to 1% slope, lowlands
C-Sensitive Woodland	2 and 4	Cottonwood overstory, some understory plants of special interest*	Moist clayey, silty, loam	Lowland
D-Woodland on deep, loose soils	1, 2, and 4	Cottonwood, Siberian Elm, shrubby understory	Deep loose sand	Any
E-Cottonwood Woodland	1, 2, and 4	Cottonwood, shrubby understory, some elm	Sandy silty loam	Gently sloping to hilly, over 4 feet above channels.
F-Existing Wetland	3, 5, and 6	Cattails, annuals, willow, young Cottonwoods	Moist silty clayey, sandy loam	0 to 1% slope lowland
G-Upland	1 and 3	Four-wing saltbush, some Cottonwood	Loamy fine sand	0 to 9% slope, hilly
H-Open	3, 5, and 6	Annuals, Willow, young Cottonwood	Sandy silty clay	Slope varies, over 4 feet above channels

Symbols

* = Complete descriptions of foliage density classes (Foliage Structure) and vegetation is found in the 1990 *Botanical Inventory of the Middle Rio Grande Bosque* final report by Sivinski et al.

+ = Descriptions of soils is available from the City of Albuquerque soils map and 1977 USDA Soil Survey of Bernalillo County. Some slope information came from the USDA survey.

APPENDIX C
Citizen Participation

Following is the distribution list for the Bosque Action Plan Citizen Planning Team and those individuals who have signed the attendance list at the planning team meetings and field trips. Attendance lists from general public meetings are not included.

Citizen Planning Team

Robert Arber
Amos Arber
Rudy Baca
San Felipe Old Town Association
Robert Barela
Alameda North Valley Association
Richard Barish
Sierra Club
Sarah & Dick Baumgartner
Jane Bennett
Angela Berger
Gordon Bernal
Mayor's Committee on Handicapped Concerns
Donna Broudy
Audobon Society
Astrid Brown
Corrales Bosque Advisory Committee
Pat Bryan
Thomas Village Neighborhood Association
Tamie Bulow
Michael Casey
Greater Albuquerque Bicycle Advisory Committee
Val Cole
Horseways, Inc.
Ross Coleman
Jim Craft
Jean Davis
Charles Ervin
Mountain Bike Network
Roger Flegel
Roger Floppe
Nat Gifford
Donna Griffin-Hicks
Sterling Grogan
Mary Hewitt
Michael Hightower
Huning Castle Neighborhood Association
Yolanda Homann
Hank Jenkins-Smith
Mayor Gary Kanin
Village of Corrales

Dr. Craig Kelsey
UNM Physical Education & Recreation Department
Dick Kirschner
Bosque del Rio Grande Nature Center Preserve Society
Larry Logan
La Luz Del Sol Homeowner's Association
Mrs. Beau McCormick
Baja Corrales Community Association
Jim McCullough
Pajarito Elementary School
Ian McLeod
Ellie Mitchell
Open Space Advisory Board
Dan Morris
E.A. Morris
David Morrison
Don Newton
Taylor Ranch Neighborhood Association
Lou Nicholas
Rob Robbie
Adobe Whitewater Club
Frances Sanchez
West Area Community Association
Carl Smith
John Sparks
Alvarado Gardens Neighborhood Association
Stephen Sprague
Friends of the Rio Grande Nature Center
Richard Spray
Julie Stephans
South Valley Improvement Coalition
Jim Talley
Division of Vocational Rehabilitation
Bob Turman
Open Space Task Force
Dolores Varela-Phillips
Los Padillas Elementary School
John Vitale
American Lung Association
Frank Walsh
Old Town Elementary School
Steve Wentworth
Alameda North Valley Association

APPENDIX D

Range of Reasonable Alternatives

OCTOBER 30, 1990
RANGE OF REASONABLE ALTERNATIVES
FOR
THE BOSQUE IMPROVEMENT PLAN
A PLAN FOR ENVIRONMENTAL AND RECREATIONAL IMPROVEMENTS TO
THE RIO GRANDE VALLEY STATE PARK

At this point in the development of the Bosque Improvement Plan, data has been collected in the form of public opinion and extensive field work. The resulting information gives us a clear, up-to-date look at the existing conditions of the Rio Grande Valley State Park. We also have a very good idea of what recreational uses currently occur within the Bosque and what some of the citizen preferences are for continued recreational use in the Bosque.

The next step in the planning process is to determine the best method of providing for both the protection of the resource as well as providing for recreational use within the Rio Grande Valley State Park. To that end, a "Range of Reasonable Alternatives" has been developed by the Open Space Planners. These alternatives have been developed based on all of the public input received up to this point. This includes suggestions from both the Citizen and the Technical Planning Teams, issues identified in the "Issues Work Sheet" and input from the larger Citizen Preference Survey which was completed at the initial stage of this planning process (May 1989).

Most importantly, the existing policy for managing the Rio Grande Valley State Park has set the parameters for each alternative. This existing policy is summarized in The Rio Grande Valley State Park Act as follows: ..."The designation of the Rio Grande Valley State Park will enable people to enjoy the (1)recreational, (2)environmental, (3)educational and (4)wildlife benefits of the river." Each of the alternatives, therefore, has been listed in an outline form that relates back to these four categories.

The terminology "Reasonable" alternatives, indicates that each alternative has the potential to be a reasonable selection as the final or "preferred alternative". All of the alternatives will be analyzed based on the natural ecosystems of the Bosque and their ability to support the different resource and recreational management proposals.

Site specific locations for any of the suggested improvements will be determined through the analysis of the Biophysical Land Units which are being developed for the entire Bosque within the Rio Grande Valley State Park. (Please review pages 7 and 8 which describe Biophysical Land Units (BLUs).

The following descriptions of the Range of Reasonable Alternatives should serve as the starting point for both discussion and analysis. These alternatives are conceptual and will serve as a guideline for the final recommendations.

RANGE OF REASONABLE ALTERNATIVES

ALTERNATIVE "A"

No Action - This alternative would include vehicular barricades and Open Space signage only. No additional programs for resource management or recreational management would be developed. No additional "physical improvements" would be considered. No additional access, no additional crossings of riverside drains.

ALTERNATIVE "B"

No "physical improvements" or significant alterations of the terrain or vegetation within the Bosque (inside levees).

1. Environmental/Wildlife Actions:

- Close and revegetate existing bosque trails (inside levees)
- *Continue long-term monitoring programs of Bosque Biology
- *Flood selected areas within the Bosque
- *Restore damaged areas through pole planting and reseedling
- *Identify areas which are set aside for wildlife use only
- *Stabilize and reseed riverside drain banks, cover exposed rip-rap
- *Acquire lands outside RGVSP to allow for recreational use outside of the bosque and the riverside drains

2. Recreational Actions:

- Locate trails on levee roads and maintenance roads only
- Improve existing access points, create no additional access points
- Create no additional crossings of riverside drains
- Develop permit system limiting number of people allowed into bosque
- Allow no special events of more than 25 participants within the bosque
- *Provide horse tie-ups and bicycle racks at access points
- *No motorized boating on river (except for the purpose of search and rescue)
- *Locate picnic areas outside of bosque and levees on adjacent park land
- *Provide hard surfaced, handicapped accessible trails on levees or maintenance roads
- *Locate restrooms and developed facilities on adjacent parks

3. Educational Actions:

- *Locate all improvements based on the educational potential provided by the surrounding environment
- *Develop educational materials and provide classroom instruction
- *Develop trail etiquette materials
- *Develop volunteer program for horse, pedestrian or bike patrol
- *Increase Conservation Officer Patrols

ALTERNATIVE "C"

Concentrate environmental and recreational improvements and use within focal points along the Rio Grande Valley State Park. The focal points would be chosen based on recommendations from the bosque environmental reports, the Biophysical Land Units, and existing use patterns.

This alternative would include all proposals in Alternate B marked with an * asterisk as well as the following actions.

1. Environmental/Wildlife Actions:

- Develop "buffer areas" between focal points to protect wildlife areas from human use areas
- *Change grade and flood selected low lying areas
- *Develop wetland areas at storm water outfalls
- *Remove exotic species that compete with natives and have little significant value to wildlife
- *Acquire land and develop an alternative public facility to nature center, or educational centers, or overlooks adjacent to the RGVSP
- *Develop observation blinds outside bosque on edge of levees
- *Develop a system to monitor use on designated trails to control intense use

2. Recreational Actions:

- Develop loop trails into the bosque using the levee when appropriate and using the bosque when appropriate avoiding sensitive areas
- Focal point development within bosque (inside levees), other than bridge locations, will consist only of trails and informal seating or viewing areas along nature trails, developed picnic areas at bridges only
- Locate restrooms in areas visible from the levee at bridges only
- Special events will be allowed and will require a special use permit; events will be organized to cluster participants in smaller groups that proceed through the bosque at intervals, or waves
- *Identify a trail network utilizing existing trails, and close all trails which are not part of the network
- *Develop hard surfaced, handicapped trails which also follow a loop system at focal points
- *Develop formal access points and focus attention to those points
- *Acquire property and develop additional parking areas outside of the levees
- *Develop additional crossings of the riverside drain in appropriate areas; these crossings should be located with enough distance from parking areas to avoid intense use
- *Utilize riverside drains as primary boating and fishing areas; develop put-ins and take-outs where appropriate (designate official water trail)
- *Develop improvements in a phased manner beginning at bridges

ALTERNATIVE "C" (continued)

3. Educational Actions:

- *Access points/signs should introduce visitor to bosque environment
- *Locate an on site residence for an Open Space Conservation Officer
- *Increase Officer patrol as focal points are developed
- *Develop interpretive trails for the handicapped
- *Acquire land and develop educational center outside of levees

ALTERNATIVE "D"

Maximum allowable use - Like all of the other alternatives, the improvements included in this proposal will be allowed based on the Biophysical Land Units analysis.

This alternative would include all proposals in Alternate B and C marked with an * asterisk as well as the following actions.

1. Environmental/Wildlife Actions:

- Develop additional wetlands through the excavation of ponds and through the planting of marsh vegetation
- Reintroduce native plant and animal species which no longer occur in the bosque but which occurred in the middle Rio Grande Valley historically

2. Recreational Actions:

- Develop continuous linear trails within bosque
- Develop access at bridges including picnic areas, restrooms, beach areas, controlled fire rings
- Locate small, rustic rest stops in appropriate places along trails within bosque
- Locate one hard surfaced trail the full length of the RGVSP
- Locate hard surfaced handicapped accessible trails in each quadrant of the park
- Locate crossings of the riverside drain to allow access equitably to neighborhoods in each quadrant of the City
- Allow for large special events
- Develop fishing piers on riverside drains
- Designate an "off leash" dog run area
- Allow for motorized water craft for recreational use
- Permit concession operations for recreational use

3. Educational Actions:

- Develop a "working farm" as educational attraction adjacent to RGVSP
- All educational proposals from alternatives B and C would be included in this alternative.

