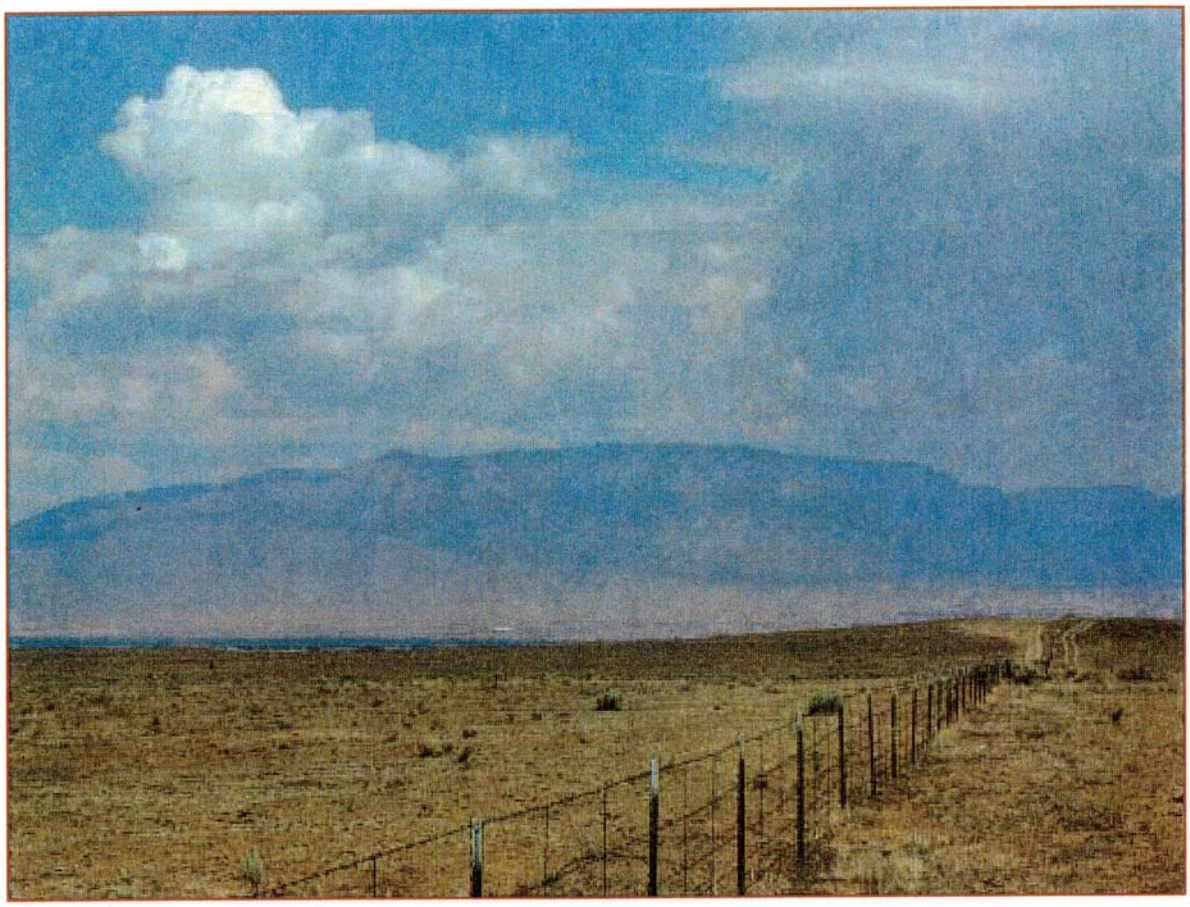
PARADISE WEST MASTER PLAN



Opportunity, Place, and Vision

Prepared for:
Paradise West, Inc.

Prepared by:
Consensus Planning, Inc.
D. Mark Goodwin & Associates, P.A.

June 2004

CITY OF RIO RANCHO

RESOLUTION NO. 67 **ENACTMENT NO. 04 -066**

ADOPTING THE PARADISE WEST MASTER PLAN AND AMENDING THE VISION 2020-ICP PREFERRED SCENARIO MAP 5.11

WHEREAS, The State of New Mexico has granted the City of Rio Rancho the power, authority, jurisdiction and duty to enforce and carry out the provisions of law relating to planning, platting and zoning pursuant to 3-19-1, NMSA, 1978; and

WHEREAS, The Governing Body of the City of Rio Rancho, State of New Mexico, has the authority to adopt, amend, extend and carry out a general municipal plan, "Vision 2020 Integrated Comprehensive Plan"; and

WHEREAS, The Governing Body of the City of Rio Rancho has adopted a Comprehensive Plan that determines that the Hierarchy of Plan Development, Level 4: Master Plans, consider issues relative to a specific geographic area of the City and generally detail Principles, Policies and Actions as well as the components of the comprehensive plan specific to a defined City area; and

WHEREAS, On June 27, 2004, the City's Planning and Zoning Board recommended approval of the Paradise West Master Plan to the Governing Body; and

WHEREAS, The Governing Body of the City of Rio Rancho recognizes the need for long range, integrated comprehensive planning to direct future growth and development of the City over the next two decades; and

WHEREAS, The Governing Body of the City of Rio Rancho has reviewed and considered the Paradise West Master Plan attached hereto as **Exhibit A**, and incorporated herein by this reference.

THEREFORE, BE IT RESOLVED BY THE GOVERNING BODY OF THE CITY OF RIO RANCHO:

The Governing Body does hereby approve the Paradise West Master Plan, as attached hereto as **Exhibit A** and incorporated herein by this reference.

THEREFORE, BE IT FURTHER RESOLVED BY THE GOVERNING BODY OF THE CITY OF RIO RANCHO:

The Governing Body does hereby approve an amendment to the Vision 2020-ICP Preferred Scenario Map 5.11 as identified within **Exhibit A** and incorporated herein by this reference.

ADOPTED THIS 28TH DAY OF JULY, 2004

Jim Owen, Mayor

7/29/04
Date

ATTEST:

Cheryll A. Johns, Acting City Clerk
[SEAL]

CITY OF RIO RANCHO

ORDINANCE NO. 03-018 **ENACTMENT NO. 03-020**

ANNEXATION OF REAL PROPERTY INTO THE CORPORATE BOUNDARIES OF THE CITY OF RIO RANCHO, NEW MEXICO, AS DESCRIBED IN THE RANCH JOINT VENTURE ANNEXATION PETITION AND ESTABLISHMENT OF ZONING CLASSIFICATIONS FOR THE ANNEXED PROPERTY.

BE IT ORDAINED BY THE GOVERNING BODY OF THE CITY OF RIO RANCHO:

Section 1. Intent. This ordinance approves and accepts the annexation of real property into the corporate boundaries of the City of Rio Rancho, as requested in the Ranch Joint Venture Annexation Petition.

Section 2. Legal Requirements Met. The Annexation Petition and Annexation Map (Attachment I) having been presented to the Governing Body of the City of Rio Rancho, in full compliance with state law as set forth in §3-7-4, §3-7-17 and §3-7-18 NMSA 1978, and the Governing Body having considered the Petition and presentations of petitioner, the Governing Body finds as follows:

A. The Annexation petition seeks to have annexed into the corporate boundaries territory that is contiguous to the City of Rio Rancho.

B. The Annexation petition is signed by the owners of a majority of the number of acres in the contiguous territory and is accompanied by a map that shows the external boundary of the territory proposed to be annexed and the relationship of the territory proposed to be annexed to the existing boundary of the City of Rio Rancho.

C. The Annexation Petition has been presented for consideration and is recommended for approval pursuant to the standards and requirements for annexation set forth in the City's Vision 2020 Integrated Comprehensive Plan.

Section 3. Consent And Approval. The Governing Body hereby annexes the property described in the Ranch Joint Venture Annexation Petition and hereby consents to and approves the annexation of such contiguous territory being more particularly described in metes and bounds attached hereto and incorporated herein by reference in its entirety.

Section 4. Zone Map Amendment. Purpose: That the property described as Black Ranch West; Tract A-1 and Tract B, consisting of 6,492.3 acres, more or less; the property referred to as "Bernalillo County East Portion" which is approximately 3,528.6 acres and; several platted lots in Sandoval County comprising of 1,926.2 acres (Portions of Units 3, 4, and 9) referred to as "Rio Rancho Estates Portion", shall be annexed into the City of Rio Rancho and zoned as follows and as provided in the annexation and zoning map attached hereto and incorporated herein as Exhibit A.

A. Black Ranch West
E-1, R-1, R-4, R-6, MU-A, SU/Sports Complex, M-1, OS and PR

B. Rio Rancho Estates Portion
TZ/Transitional Zoning

C. Bernalillo County East Portion
TZ/Transitional Zoning, except for, Tract 15 within Section 5, T11N, R2E, NMPM, 40 acres located within Bernalillo County East Portion to be zoned SU/Cemetery and Related Uses. Development shall occur for Tract 15 as provided in the Site Development Plan, Exhibit B. The SU/Cemetery zoning shall require approval of an amended site plan if significant changes, such as, road reconfiguration is necessary.

Section 5. Findings. The following are findings for Annexation and Zoning approval:

A. All state statutory requirements for approval of annexation have been met.

B. A fiscal impact study conducted on the proposed annexation property demonstrates a positive cost benefit reflecting significant potential for increasing municipal revenue generation. As a result, the proposed annexation meets one of the policy standards or requirements for annexation into the City as set forth in 5.1.11 of the Vision 2020-Integrated Comprehensive Plan's Section 5.1 Land Use & Fiscal Analysis – Annexations.

C. Development of and within the annexation area and including Quail Ranch Master Plan shall be reviewed for continued consistency with the Vision 2020-ICP's Principles, Policies and Action Statements as more detail is provided. Review and approval of development plans shall be implemented through Development Agreements, Specific Area Plans, and the subdivision process.

D. The zoning designations proposed for the Quail Ranch Master Plan area are in conformance with the City's Vision 2020 Integrated Comprehensive Plan and City Ordinance 87-1, (R.O. 1987) Chapter 9, Article 1, Planning, Zoning, Land Use Management.

E. The zoning designations proposed for the properties outside the Quail Ranch Master Plan area are in conformance with the City's Vision 2020 Integrated Comprehensive Plan and the City's Ordinance 87-1, (R.O. 1987) Chapter 9, Article 1, Planning, Zoning, Land Use Management.

F. The zoning for the Quail Ranch Master Plan properties set forth in this ordinance is approved conditioned upon adherence to and enforcement of the conditions for approval of the Quail Ranch Master Plan.

Section 6. **Severability Clause.** If any section, paragraph, clause, or provision of this Ordinance, or any section, paragraph, clause, or provision of any regulation promulgated hereunder shall for any reason be held to be invalid, unlawful, or unenforceable, the invalidity, illegality, or unenforceability of such section, paragraph, clause, or provision shall not affect the validity of the remaining portions of this Ordinance or the regulation so challenged.

Section 7. **Compiling Clause.** This Ordinance shall be incorporated in and compiled as part of the Revised Ordinances of the City of Rio Rancho, (R.O. 1987)

Section 8. **Effective Date.** This Ordinance becomes effective ten days after adoption.

ADOPTED THIS 25TH DAY OF JUNE 2003.

Jim Owen, Mayor

6/25/03

Date

ATTEST:

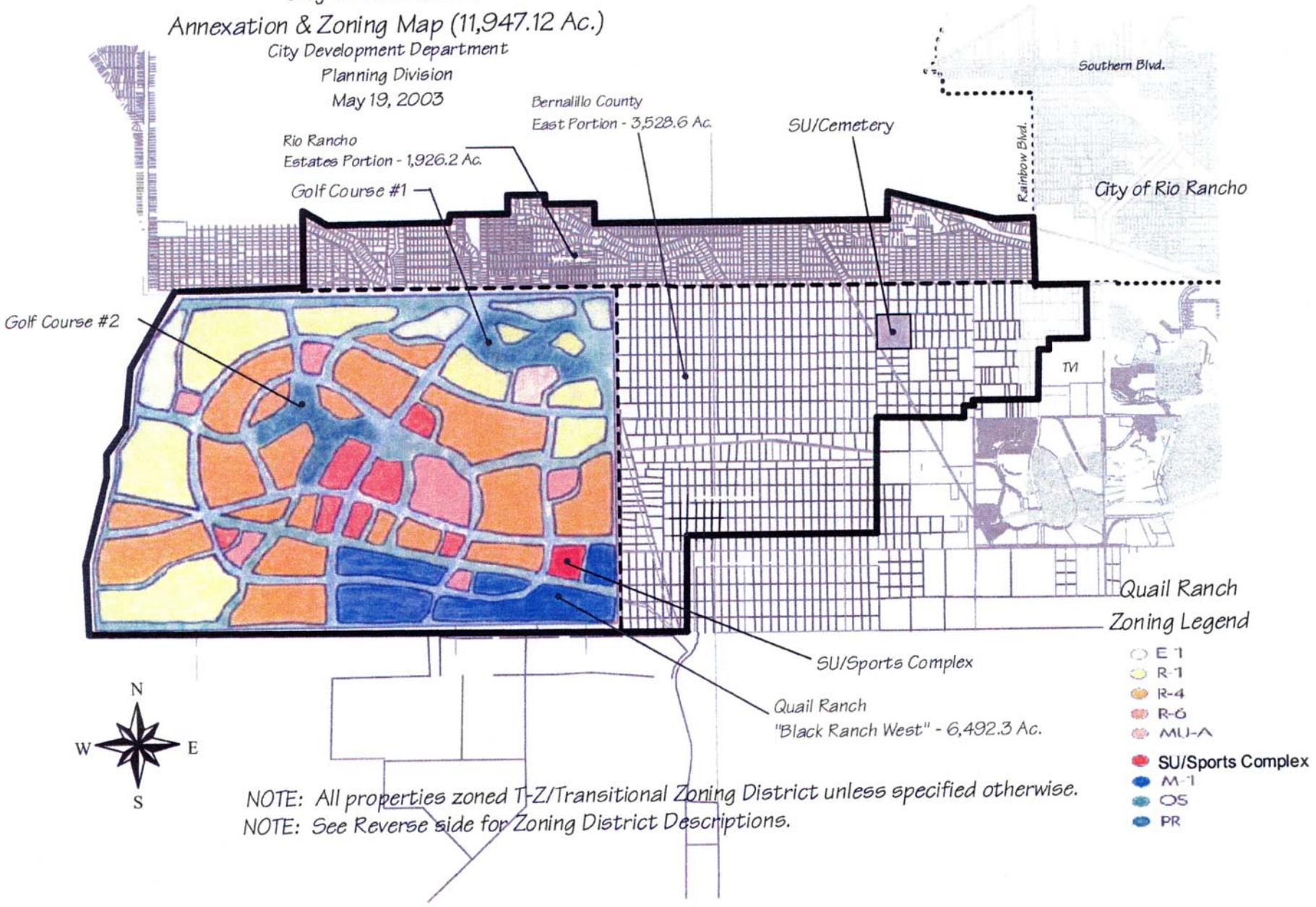
Cheryl Johns, Deputy City Clerk

SEAL

Exhibit A

City of Rio Rancho
Annexation & Zoning Map (11,947.12 Ac.)

City Development Department
Planning Division
May 19, 2003



NOTE: All properties zoned T-Z/Transitional Zoning District unless specified otherwise.
NOTE: See Reverse side for Zoning District Descriptions.

Paradise West
Master Plan

June 9, 2004

Prepared for:

City of Rio Rancho

Prepared by:

Consensus Planning, Inc.
D. Mark Goodwin and Associates, P.A.

Paradise West

Sections:

1. Introduction

2. Benefits and Constraints

3. Land Use and Zoning

4. Vision 2020 Integrated Comprehensive Plan

5. Implementation

6. Design Guidelines

7. Transportation

8. Drainage

9. Utilities

10. Phasing

1. INTRODUCTION

This document is prepared as a Master Plan for the area known as Paradise West, located at the southwestern border of Rio Rancho, in Bernalillo County. Paradise West is an area of approximately 3,500 acres, and was recently annexed into the City of Rio Rancho by the Governing Body on June 11, 2003. The area is adjacent to Albuquerque's Ventana West community, the TVI campus and east of Quail Ranch. Paradise West is zoned TZ Transitional Zone, with the exception of a 50 acre in-holding zoned SU/Cemetery and owned by the Catholic Cemetery Association for the Vista del Fe cemetery. This Master Plan provides detail in the areas of:

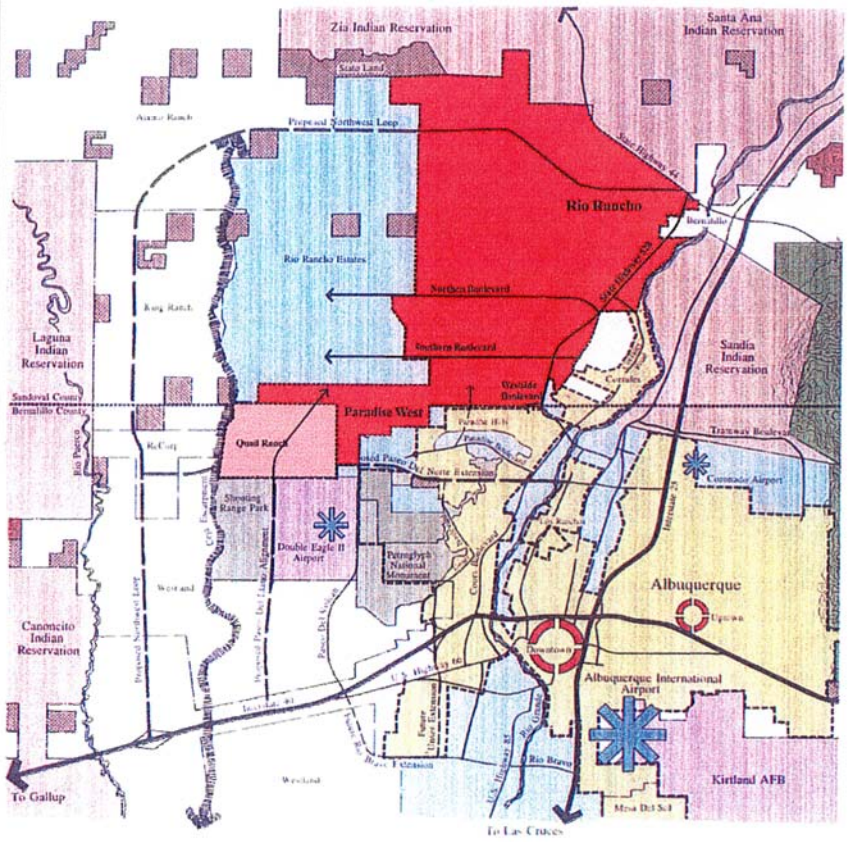
- Ø The Plan designates land uses, and anticipated zoning categories for those land uses (including schools, parks, and open space as well as other developed areas) and a generalized phasing plan for the area;
- Ø Is designed to be flexible, with roadways and boundaries following existing platted lots when possible, and designates anticipated future road alignments;
- Ø Reduces the number of times the roadways cross major and minor arroyos;
- Ø Provides for compliance with the Vision 2020 Integrated Comprehensive Plan;
- Ø Provides implementation scenarios for development;
- Ø Provides design guidelines for future residential and commercial development;
- Ø Provides a utility master plan and report (New Mexico Utilities Service Area);
- Ø Provides a drainage master plan and report (Albuquerque Metropolitan Arroyo Flood Control Authority jurisdiction); and
- Ø Provides a transportation facilities master plan and report

The intent of this Master Plan is to amend the Rio Rancho Vision 2020 Integrated Comprehensive Plan to include the land use designations for Paradise West. After the plan is amended, applications for zone map amendment by individual property owners will occur. Subdivisions, plats and property consolidation can then be created to begin the development process. Subsequent approvals will be needed for subdivisions and site plans in Village Center areas and for infrastructure as the community develops over time in an orderly phased approach.

Master Planning Process

This Master Plan was accomplished through a collaborative effort utilizing planning and engineering consultants who met with the City of Rio Rancho Community Development and Public Works staff, local service providers, including New Mexico Utilities, Inc., the Albuquerque Metropolitan Flood Control Authority, Albuquerque Public Schools, Rio Rancho Department of Public Safety, the Mid Region Council of Governments, and property owners within and adjacent to Paradise West. Included with cover letter of this submittal are letters of support from various property owners.

VICINITY MAP



LEGEND

- Incorporated Land
- Previously Subdivided or Developed County Land
- State Land
- Federal Land
- National Forest
- Indian Reservation
- **Rio Rancho**

2. BENEFITS AND CONSTRAINTS

By analyzing the benefits and constraints of the 3500 acre area of Paradise West, two main challenges surfaced. The first, is the antiquated platting and diverse ownership patterns that result in development challenges. However, having a Master Plan for the area will help to make planned development possible, and provide the City of Rio Rancho with a guide for making future land use decisions for the area. The second constraint is environmental and includes the floodplains, which bisect the landscape and can result in costly drainage solutions and right-of-way construction issues. However, these constraints are also benefits to the project.

Antiquated Platting

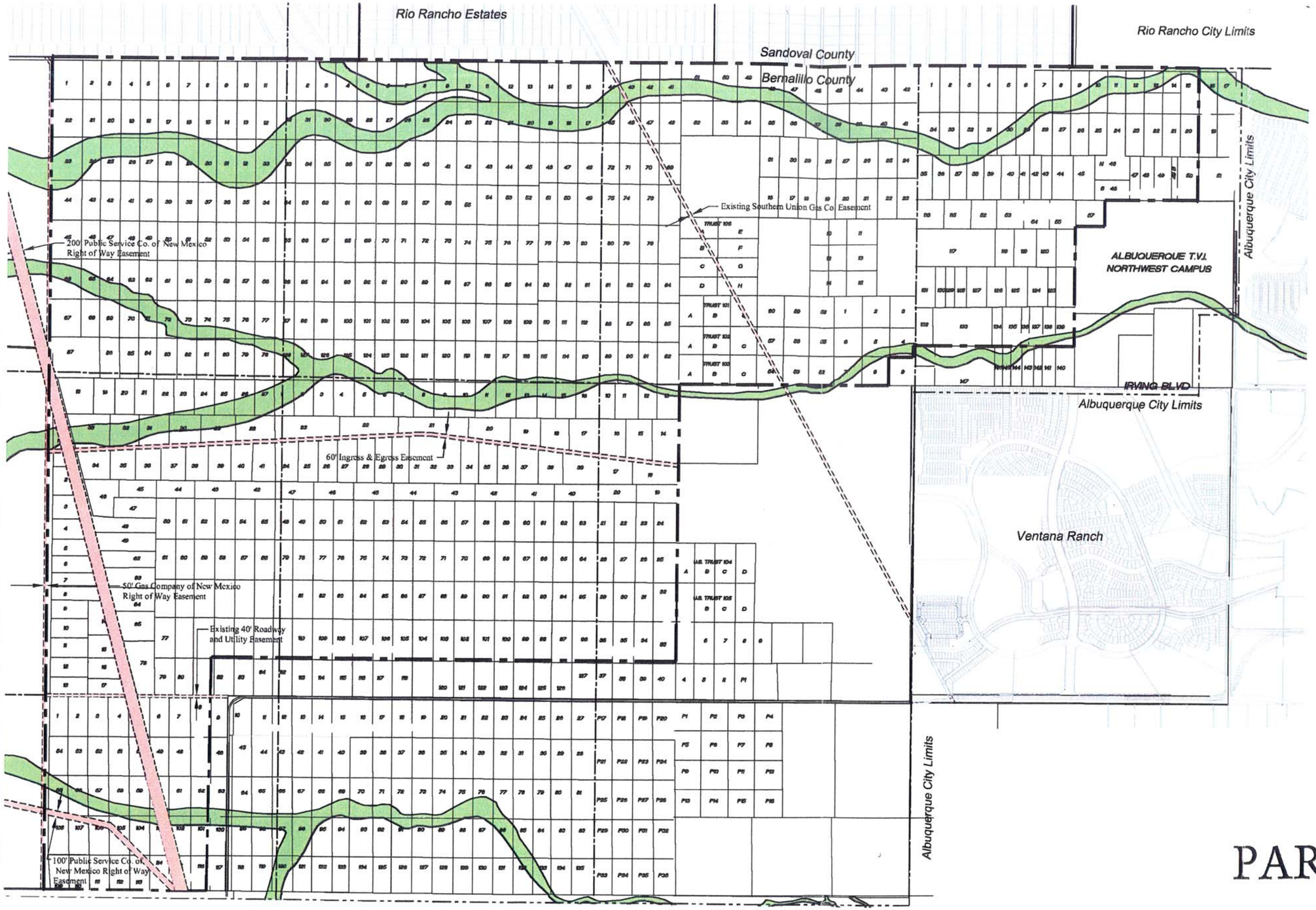
The antiquated platting and diverse land ownership patterns, a common constraint faced within Rio Rancho, can be handled by land assemblage. The Paradise West area is platted into 5-acre and larger parcels, which will make land assemblage easier than most of the City of Rio Rancho. Land assemblage is a policy in the 2020 Integrated Comprehensive Plan and this Master Plan will help facilitate the process by defining major transportation corridors and land uses. The existing platted lots also include 60 foot roadway easements which will help to implement most of the transportation connections.

Floodplains

The floodplains, as identified as development constraints, help to form a trail network throughout Paradise West, which is another policy from the 2020 Integrated Comprehensive Plan. A developed trail network will be an amenity for young and old, residents and visitors. One challenge is that the existing flood plains do not correspond to the existing platting. In some areas these flood plains will need to be channelized and/or diverted in order to allow for orderly development of the transportation facilities and adjacent land uses.

Transportation Corridors

Finally, the existing and neighboring Master Planned developments allow for aligning a compatible primary circulation network throughout Paradise West that can facilitate the eventual acquisition of right-of-way. Several planned arterials pass through the Paradise West Master Plan area. The arterials include Paseo del North, Paseo del Volcan (old), Del Oeste, Rainbow, Irving Boulevard, and McMahon Boulevard. The Master Plan provides an opportunity for the City of Rio Rancho to define alignments for these facilities.



LEGEND

- FLOOD ZONE
- UTILITY/R.O.W. EASEMENTS
- Parcels
- PROJECT BOUNDARY

GENERAL NOTES

1. Not shown on this graphic are the existing 40' right of way easements adjacent to lots and parcels, as described in Deeds granted by Horizon Corporation within the area sometimes known as "PARADISE WEST", an unrecorded subdivision, with deed descriptions prepared by John Leverton, PE and PS.

BENEFITS & CONSTRAINTS

PARADISE WEST

Prepared for:
Paradise West, Inc.
5016 La Fiesta Drive
Albuquerque, NM 87109

Prepared by:
Consensus Planning, Inc.
924 Park Avenue SW
Albuquerque, NM 87102

north

CONSENSUS PLANNING

400 0 800 1600

3. LAND USE AND ZONING

The land use and zoning section of this Master Plan details land uses, the percent of each land use to the total project area, and the proposed future zoning categories. Entirely vacant and currently zoned TZ, which corresponds to the densities allowed in R-1 Single Family residences of 8,000 square feet at a minimum, Paradise West is primed for master planning to accommodate future employment centers, schools, parks and open space and a mix of residential housing products. Due to the unique topography and drainage patterns, the Paradise West area can serve a continuing need for recreational amenities along the southern boundary of Rio Rancho, along arroyos.

The overall goal of the land use mix is to comply with the intent of the Rio Rancho Vision 2020 ICP, while offering a variety of land use types compatible with the neighboring communities: Ventana West to the east and Quail Ranch to the west. The design guidelines provided are general and refer to residential and nonresidential development.

Population projections for the area are calculated using the average household size as provided by the US Census and the City of Rio Rancho. The City calculates an average household size for single family residential at 2.8, and the average household size for multi-family residential at 1.68 persons per unit.

Land Use Table

The following page includes land use distribution amounts, estimated densities and population projections.

Land Use Distribution for Paradise West									
	Acres	% of Total	Density	SF DU's	MF DU's	Commercial	Office	Industrial	Total Sq. Ft.
Low Density Residential	491.4	13.7%	3.0	1,474					
Medium Density Residential	1,873.1	52.4%	6.0	11,239					
High Density Residential	279.3	7.8%	12.0		3,352				
Town Center*	34.6	1.0%	0.25		31	131,878	131,878		263,756
Village Center*	101.9	2.9%	0.25		41	443,876	443,876		887,753
Industrial	154.4	4.3%	0.25					1,681,416	1,681,416
Middle School	25.0	0.7%	N/A						
Elementary School	30.1	0.8%	N/A						
Well Site	5.3	0.1%	N/A						
Cemetery	37.9	1.1%	N/A						
ROW	203.5	5.7%	N/A						
Open Space	337.5	9.4%	N/A						
TOTAL	3,574.0	100.0%		12,713	3,424	575,754	575,754	1,681,416	2,832,925

* Development assumptions: 25% FAR for activity centers with 30% of developed acreage dedicated to multi-family housing at 12 DU's per acre in the town center, compared to 20% of the developed acreage dedicated to multifamily housing in the village centers at 8 DU's per acre.
The developed non-residential acreage in both centers is assumed to be divided between commercial and office space at 25% FAR.
** Parks are shown as astrisks and shall conform to Rio Rancho Park standards of seven acres per 1000 people.
There will be over 200 acres of parks and open space in Paradise West based on the land use plan.

Vision 2020 Land Use		Population Estimates		
1. Single Family---59%		Single family	Multi-family	Total
2. Public Facilities---16%	DU	12,713	3,424	16,136
3. Right-of-Way---15%	HH Size	2.81	1.68	2.57
4. Non-residential---8%	Pop	35,723	5,751	41,474

RESIDENTIAL LAND USES

Low Density Residential

This land use covers approximately 491 acres of land within Paradise West and is located along the northern and western portion of the plan area and is found along the floodplain, which is to develop as a trail network. The Low Density Land Use designation is compatible with the Rio Rancho Zone category of R-1, (Section 9-1-5) and allows for neighborhoods with 2-4 dwelling units per acre.

Medium Density Residential

This land use designation covers approximately 1,873 acres of land within Paradise West, and is the most predominant land use category. Clearly a residential community, Paradise West will develop with a high quality residential product, with commercial areas designated as Village Centers at the intersections of major roadways. Medium Density Residential corresponds to the R-4 zoning category, as defined in the Rio Rancho Zoning Ordinance. Development standards including lot size, height, and setback requirements will be governed by the R-4 zone. The intent is to provide a range of lot sizes from 4000-8000 square feet, and an overall density of 4-8 dwelling units per acre. There will be a range of housing types available by multiple home builders, including some custom homes. Walls, entries, gateways, landscaping and streetscapes will be attractive and designed to meet Rio Rancho standards and provide a high quality residential area.

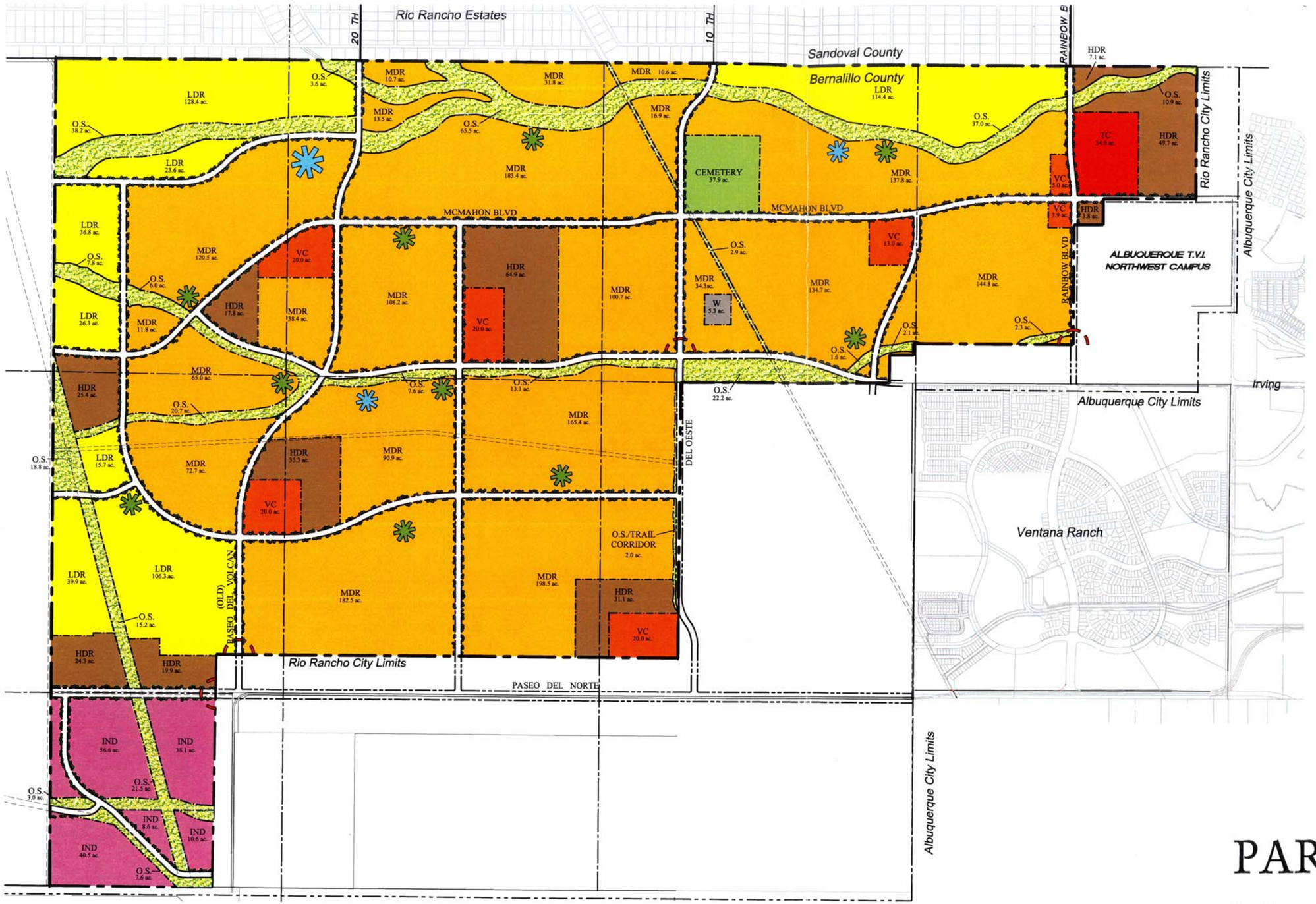
High Density Residential

High Density Residential land uses cover approximately 279 acres of land within Paradise West. High Density development includes development from 8 to 24 dwelling units per acre, and accommodates multifamily residential development. Apartments, condominiums, and town homes shall be located in High Density Residential areas, which are often located along major circulation corridors.

NONRESIDENTIAL LAND USES

Commercial

Commercial areas within Paradise West are called out as Town Center and Village Center areas. Town Center and Village Center designations are similar to the Village Center and Mixed Use Community Center designation in the Rio Rancho Zoning Ordinance. Village Centers, as defined in the 2020 ICP, are neighborhood scale activity areas, with retail, office, and commercial uses. Multifamily units are not permissive. There are 135 acres of Village and Town Center commercial lands. The Village Centers shall comply with the design guidelines as called out in section 5.2.4 of the 2020 ICP, and contained within Table 5.21-Design Criteria for Mixed Use Nodal Activity Centers. The Town Center designation compares with the Mixed Use Community Center designation in the 2020 ICP, and shall follow the design criteria set forth on Table 5.21 as well.



MASTER PLAN CONCEPT

PARADISE WEST

Prepared for:
Paradise West, Inc.
5016 La Fiesta Drive
Albuquerque, NM 87109

Prepared by:
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924 Park Avenue SW
Albuquerque, NM 87102

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CONSENSUS PLANNING

400 0 800 1600

June 8, 2004

School Sites

The area known as Paradise West falls within the Albuquerque Public School district. Therefore, we have designated two fifteen acre sites for Elementary Schools and one twenty-five acre site for a middle school. The Elementary School sites are generally located along trail corridors, providing for easy access to bicycle and pedestrian corridors. These sites are also large enough to provide for current and future recreational needs for students. The Master Plan shows the schools sites as asterisks allowing for Albuquerque Public Schools to locate a site to best meet their needs.

Industrial

Industrial Land Uses represent approximately 154 acres of land within Paradise West, and is clustered into the southwest portion of the project area. In keeping with the land use plan for Quail Ranch, which borders Paradise West, the Industrial land lies adjacent. This area is particularly conducive to industrial development for two reasons. First, the area is easily accessed by major arterials, and the Old Paseo del Volcan alignment, Second, the area is closest to Double Eagle II Airport, where an Aerospace Technology Park is being planned for future air carriers to locate manufacturing facilities.

Parks and Developed Open Space Trails

The Paradise West Master Plan calls for several parks. Parks are designated as asterisks and shall be developed at a rate of 7 acres per 1000 people. Based on an average household size of 2.6, we can anticipate over 255 acres total of parks and developed open space trails. Inclusive in this amount are the developed open space trails, which are linear/corridor parks that can be used for walking, biking and other active sports. It is anticipated that the developed neighborhood parks, developed to Rio Rancho specifications, will be located adjacent to the trail system whenever possible in order to provide for maximum accessibility to the surrounding neighborhoods.

4. VISION 2020 INTEGRATED COMPREHENSIVE PLAN

The Paradise West Master Plan adheres to the Rio Rancho 2020 Integrated Comprehensive Plan (2020 ICP). The 2020 ICP is a policy document which lays out broad goals, objectives and policies to guide the growth and development of Rio Rancho. General development principles provide guidelines which all development must adhere. The 2020 ICP is organized around eight fundamental principles, including:

- Land Use-Fiscal Analysis
- Urban Design
- Transportation and Circulation
- Infrastructure and Capital Facilities
- Environmental Sustainability
- Housing
- Community Services and Public Facilities
- Economic Development

The Paradise West Master Plan will help to carry out the principles of the 2020 ICP. How the Plan meets the overall principle and intent of the policies and action statements is included below.

Land Use-Fiscal Analysis

The land use principal calls for "the development of high density, mixed-use activity centers within master planned growth nodes...growth nodes are meant to capture a significant share of the City's future jobs and housing." Nodal activity centers include a village center (10-20 acres), a mixed-use community center (20-100 acres), and a mixed use regional center (> 100 acres).

The Paradise West Master Plan assures compatible land uses, provides development guidelines, coordinates land uses with transportation systems, and suggests phasing and implementation to assure adequate infrastructure. Future residential and commercial development nodes will provide future retail development and employment opportunities. Intersections at Mc Mahon and Irving, Mc Mahon and Rainbow and along Camino del Oeste adjacent to Ventana Ranch West provide commercial Village Centers, which should be designated as growth nodes.

Urban Design

Design features within Paradise West will highlight textures, colors, and materials, streetscapes, multiuse paths, walls, gateways, arroyos, and parks and public places. Landscaping requirements shall apply to streetscapes, arroyos and retention/detention ponds, walls and screening patterns. Native and xeric plant species are encouraged. Water harvesting and irrigation requirements shall be included in plans, as wells as discussions pertaining to landscaping parking lots and creating buffers between zone designations.

Open space and trails along arroyos is an objective of the 2020 ICP. The Paradise West Master Plan calls for developed trails along arroyos to provide a trail corridor and linear parks which can be easily accessed by pedestrians and bicyclists.

Transportation

The transportation principal hopes to establish a long-range transportation network to meet local and regional circulation needs. A multi-modal transportation system to move people and goods is encouraged.

The road network is designed to accommodate the 2020 ICP Preferred Land Use Scenario. Major commercial development is located along arterial streets and corridors. Large-scale development proposals are required to include a Traffic Impact Analysis prior to plan approval. Future right-of-way acquisition should be prioritized along the designated transportation routes through Paradise West. Walkways and pedestrian corridors are provided both as sidewalks and bikeways along major, minor and local arterials, as well as through the developed trail network along arroyos.

Infrastructure and Capital Facilities

The infrastructure and capital facilities principle hopes to promote public health, safety and general welfare, and to preserve and enhance the natural systems that contribute to a safe and efficient water supply.

Planning and design of infrastructure within Paradise West minimizes the alteration of natural flood plains, stream channels and natural protective barriers. Flooding, grading and development activities are managed to prevent flood or erosion damage. Development is prohibited in areas that would inhibit storm water flow and infiltration. A Drainage Master Plan is found in section 8 and includes drainage design system standards. Water conservation through greywater reuse is encouraged, as well as xeriscape design for landscaping.

Environmental Sustainability Principle

The basic tenet of the environmental sustainability principle is to maintain and improve natural resources in Rio Rancho for generations to come. Ways to achieve this, as suggested by the 2020 ICP, are through the support for recycling, water conservation and recycling, low-impact transportation alternatives, and the use of renewable resources.

The design guidelines in this Master Plan call for night sky compliant lighting, the use of drought tolerant, native landscaping materials, an Open Space network which connects to other developed trails in the City, including those that will be developed as part of Quail Ranch. Also, the views and vistas of the Sandia Mounts will be protected. Once zoning is established for Paradise West, land development will follow those physical development guidelines, including building height and bulk, found in the Rio Rancho Zoning Ordinance.

Housing Principle

Providing adequate and affordable housing, with a variety of housing options and projects is the intent of the housing principle. Quality residential neighborhoods are encouraged. Service and quality of life amenities are provided. Residential neighborhoods must be appropriately sited and protected from incompatible land uses.

The design guidelines found in this Master Plan help to ensure compatibility with surrounding neighborhoods. A variety of housing types and densities will be provided as per the land use plan. Diverse housing options will locate near utilities, services and amenities, and neighborhoods will have access to parks, open space, and other neighborhood scale commercial services.

Community Services and Public Facilities Principle

All residents should be assured proper access to police, fire and emergency services. Policy, fire and emergency rescue services impacts should be considered in development plans.

Residential neighborhoods are preserved by separating them from non-local street traffic, and providing buffering to separate incompatible uses. Paradise West is located within the Albuquerque Public School district, while community services are provided through the City of Rio Rancho and the Department of Public Safety.

Economic Development Principle

The primary goal of the economic development principle to expand employment opportunities, provide a mix of jobs, support existing retail and service needs as well as provide infrastructure to support and attract existing and new businesses.

Redevelopment and infill projects are encouraged. Developing Paradise West is considered infill development and will provide a southern gateway into Rio Rancho.

5. IMPLEMENTATION

Unique to Paradise West is the predominance of 5 acre lots, especially when compared to other redevelopment areas in the City. Cabezon and Dos Amigos, both redevelopment areas, contained lot sizes of one acre and under. In Paradise West, with lot sizes of 5 acres and greater, redevelopment through consolidation, without using the tool of blighting and condemnation, becomes all the more attainable. Five acre lots are economically feasible for residential and commercial development. The following implementation policies should guide future land use and development decisions for Paradise West:

1. All land use decisions shall be in compliance with the adopted Master Plan, this includes zone map amendments, platting, and right-of-way acquisition.

2. All infrastructure shall be planned and coordinated with the water and wastewater provider (New Mexico Utilities), City of Rio Rancho Departments of Public Safety and Transportation, PNM, and any other established entities working with Bernalillo County and the City of Rio Rancho.

3. All applications for zone map amendments shall require a site plan, which details lot layout, size, density and the adherence to the approved design guidelines in this Master Plan, as well as City of Rio Rancho plans and polices.

4. The City of Rio Rancho shall play an active role in the acquisition of public right of way, through purchase and condemnation, in order to facilitate roadway connections with adjacent planned and developed communities, including Ventana West and Quail Ranch. Road alignments have followed lot lines and easements. Right-of-way shall be acquired or dedicated at the time of development.

5. National standards for emergency response times shall be upheld, therefore facility planning shall be coordinated as subdivisions occur.

6. Corridor and linear trails shall be developed and a portion of which shall count towards the parks requirements established by the City of Rio Rancho.

7. The City of Rio Rancho shall consider consolidation incentives for areas within Paradise West to encourage phased and planned development, particularly adjacent to infrastructure.

8. Lot Pooling, Public Improvement Districts and Improvement Districts shall be considered as tools for implementing this Master Plan. A brief explanation follows:

Lot Pooling

The practice of lot pooling supports the process of redevelopment through bottom up approach. Lot pooling is a property-owner driven

method of planning and consolidating contiguous lots with different ownership patterns, to facilitate development.

A land pooling scenario follows:

a. A group of adjacent landowners form a consortium
b. The landowners assess the value of each land holding
c. A consultant or the landowners draft a pooling scheme where land uses are identified
d. The draft land use scheme is reviewed by the local government and revised, followed by a presentation to the governing bodies for approval
e. Public works projects are designed
f. The landowners and/or the local government works to acquire right-of-way
g. Landholdings are consolidated and purchased by the consortium
h. Land is replatted and subdivided, the consortium works to provide infrastructure to the area
i. Building pads are sold and proceeds are allocated to landowners proportionally
j. Other pads can be sold to members of the consortium
k. Adjustments are made to ensure each member receives their share of the return on investment

The land pooling scenario is feasible for Paradise West. The consortium would either sell undeveloped land to developers who could provide necessary infrastructure, or, the consortium could pool funds and borrow monies for infrastructure.

Public Improvement District

There are two types of improvement districts, one called a Public Improvement District (PID), which is organized and executed by the property owner, and the other is simply an Improvement District, which is organized and executed by the governing body.

For a PID, a petition requesting the Governing Body adopt a resolution for the creation of a Public Improvement District must be signed by 25% of land owners occupying contiguous and non contiguous property. The governing body then has the authority to enact a resolution declaring the intention of the municipality to from a Public Improvement District for the purposes of creating a special levy to cover costs of infrastructure. Once proper notice is given, a public hearing is scheduled to hear comment and make a decision about the creation of a Public Improvement District. If approved, a Public Improvement District may elect a Board of five members who are elected by the landowners within the boundaries of the District, which, according to NMSA 5-11-12, has the authority to carry out the following:

1. Enter into contracts and expend money for any public infrastructure purpose with respect to the district;

2. Enter into development agreements with municipalities, counties or other local government entities in connection with property located within the boundaries of the district;
3. Enter into intergovernmental agreements as provided in the Joint Powers Agreements Act [11-1-1 to 11-1-7 NMSA 1978] for the planning, design, inspection, ownership, control, maintenance, operation or repair of public infrastructure or the provision of enhanced services by the municipality or the county in the district and any other purpose authorized by the Public Improvement District Act;
4. Sell, lease or otherwise dispose of district property if the sale, lease or conveyance is not a violation of the terms of any contract or bond covenant of the district;
5. Reimburse the municipality or county in which the district is located for providing enhanced services in the district;
6. Operate, maintain and repair public infrastructure;
7. Establish, impose and collect special levies for the purposes of funding public infrastructure improvements or enhanced services;
8. Employ staff, counsel and consultants;
9. Reimburse the municipality or county in which the district is located for staff and consultant services and support facilities supplied by the municipality or county;
10. Accept gifts or grants and incur and repay loans for any public infrastructure purpose;
11. Enter into agreements with owners concerning the advance of money by owners for public infrastructure purposes or the granting of real property by the owner for public infrastructure purposes;
12. Levy property taxes, impose special levies or fees and charges for any public infrastructure purpose on any real property located in the district and, in conjunction with the levy of such taxes, fees and charges, set and collect administrative fees;
13. Pay the financial, legal and administrative costs of the district;
14. Enter into contracts, agreements and trust indentures to obtain credit enhancement or liquidity support for its bonds and process the issuance, registration, transfer and payment of its bonds and the disbursement and investment of proceeds of the bonds;
15. With the consent of the governing body of the municipality or county that formed the district, enter into agreements with persons outside of the district to provide enhanced services to persons and property outside of the district; and
16. Use public easements and rights of way in or across public property, roadways, highways, streets or other thoroughfares and other public easements and rights of way, whether in or out of the geographical limits of the district, the municipality or the county.

For Paradise West, the creation of a Public Improvement District is feasible because although there is a scattered ownership pattern, one property owner controls over 25% of the land holdings and could sign a

petition requesting a resolution for the creation of a District. Also, if strategic boundaries of the District are drawn, and the majority owner collaborates with other large-scale owners (over 20 acres), it may increase the likelihood of approval by the Governing Body. There are several products that must accompany a request for the creation of a Public Improvement District, including a General Plan. Collaboration amongst property owners may allow for cost sharing inherent in the planning and formation of the District, especially for the creation of a General Plan and the design of infrastructure improvements.

Currently, there is one Public Improvement District proposed within Rio Rancho. Lessons learned in the creation of the Cabezon PID will only improve the process for creating additional PIDs in the City. Due to the 5 acre minimum lot size within Paradise West, and the fact that there is one major landowner in the area, accomplishing the task of having a petition signed by 25% of the landowners is feasible. However, the cost of preparing the General Plan may cause a financial burden to the majority landowner.

Another potential outcome, assuming the PIDs are approved, is that the current landowners, now levied a special tax for infrastructure, may realize they no longer can afford to keep their land, and look to sell it to developers, including the majority landowner within Paradise West. This scenario would facilitate coordinated development of the area.

Improvement Districts

Improvement Districts are similar to PIDs. The creation of an improvement district requires the owners of sixty-six percent or more of the total assessed valuation of the property to be benefited, to petition the Governing Body to create and construct an Improvement District. The costs of the improvement within the District can be imposed as property tax. An improvement district may also be created as authorized in Section 3-33-1 NMSA 1978 in order to construct or acquire, repair, operate and maintain one or more of the following inadequacies necessary to bring a premature subdivision into compliance within an improvement district within a municipality:

a. street right-of-way or street access control;
b. drainage easements or right-of-way;
c. park, recreation, or open space areas;
d. overall grading and drainage plan; and/or
e. adequate subdivision grading both on or off the public right-of-way.

The creation of an Improvement District allows the municipality to issue bonds to finance improvements and can be created via provisional order or through the petition method. The Improvement District method is the most feasible for Paradise West because it allows the City to issue

bonds for infrastructure improvements and in turn, passes that cost onto the individual property owners through special levy of property taxes.

Based on the analysis provided by the above scenarios, the final implementation policy for Paradise West Master Plan requests that the City support landowners in the creation of an Improvement District.

9. The City of Rio Rancho shall provide administrative support, whenever possible, for the implementation of an Improvement District to facilitate the development of Paradise West in a coordinated and planned manner.

6. DESIGN GUIDELINES

A. INTRODUCTION

The Paradise West Master Plan recognizes the importance of promoting a sense of cohesiveness within the entire community. The purpose of these design guidelines is to provide a flexible framework for community design intent with general goals that encourage innovative and creative solutions, rather than setting a rigid set of requirements. The desired character of design features common to the community such as grading, landscape, signage, lighting, walls, and architecture are generally expressed in these guidelines. It is anticipated that the City of Rio Rancho will maintain the regional trails along arroyos and the developed City parks within the area. These guidelines will be included within the Master Plan adopted by the City of Rio Rancho.

This section of the guidelines is primarily intended as a generalized guide for end users that will participate in the development of Paradise West. These guidelines do not supercede specific requirements under the Rio Rancho Zoning Code, and City staff are only required to enforce the existing zoning regulations.

The layout of roads and arroyo corridors provides excellent potential for creating a coordinated system of bikeways and pedestrian trails to serve the community with alternative modes of transportation. The system is designed to create a cohesive network that links various neighborhoods to community facilities, both active and passive, and enhances the recreational opportunities for residents. Paradise West will be designed and oriented with an open space and trail network that encourages active and passive recreation. This open space and trail network is also supplemented with community parks of varying sizes. Drainage ways will be jointly used as recreational/trail facilities wherever possible.

B. RESIDENTIAL DESIGN GUIDELINES

Each residential neighborhood may have a unique identity that will be established through tailored development standards, design guidelines, and signage parameters. This approach will enable Paradise West to carve out its own identities and niches within the overall context of Rio Rancho thereby avoiding the generic, sterile, cookie cutter appearance found in subdivisions elsewhere.

SITE PLANNING

A primary focus in specific site design within Paradise West will be the creation of a community that is pedestrian and bicycle oriented. All developments should provide convenient pedestrian circulation through and between parcels, and to parks and open space corridors. Safe, convenient and pleasant pedestrian circulation may be accomplished with walkways, bike paths, viewpoints, special pavings, shade, rest areas, and other pedestrian amenities.

The relationship of building to street contributes to how the environment is perceived and experienced and as such is an important design issue to consider in site planning for all types of land uses. Site plans for residential subdivisions

should provide variety and visual interest in the streetscape. Pedestrian connections to the arroyo/trail system should be planned for efficient pedestrian movement.

- Ø In general, long, straight roads are discouraged. The use of short block lengths is encouraged to provide variety and visual interest in the streetscape. These concepts also promote the creation of "neighborhoods within neighborhoods."

- Ø Fronting single family units on collector or major local streets is discouraged.

- Ø Setbacks shall be as identified in the Rio Rancho Zoning Code, and if variations are needed, they must be sought from the City at the time of subdivision.

- Ø Uniform front yard setbacks (either across the front facade or along the block length) in residential areas should be avoided. Varied setbacks add visual interest and avoid creating a "garagescape" effect.

- Ø Varying the placement and orientation of garages also helps to avoid the creation of a monotonous streetscape visually dominated by garage doors. The visual impact of garage doors may be minimized by placing them set back from the house fronts, rather than projecting out from the house. Side-entry garages may be used for wide lots (including corner lots). Rear garages with street or alley access are also encouraged.

- Ø Pedestrian openings at the end of cul-de-sacs or openings in perimeter walls are encouraged to allow pedestrian connections between subdivisions, commercial areas, adjacent streets or adjacent arroyo/trail corridor.

- Ø The design of vehicular circulation and parking areas within multi-family developments should provide for safe and convenient movement of vehicles, limit vehicular/pedestrian conflicts, limit paved areas, and soften their visual impact. Parking areas should be sufficient to serve the complex without utilizing adjacent streets.

- Ø Bicycle parking should be provided in multi-building developments in a manner that provides convenient access by each building.

SIGNAGE

Signage should enhance the overall attractive character of the community, as well as provide information and direction to residents and visitors. Effective site signage functions not as a separate entity but as a coordinated element of its environment. Size and placement of all signage should be considered an integral part of the site development process. Signs must conform to existing Rio Rancho regulations, and will be further restricted by private covenants and reviewed by the DRC.

LIGHTING

The objective of the lighting guidelines is to preserve the "dark sky" while providing lighting that enhances the safety, security, and visual aesthetics of the area. Careful attention to lighting detail will contribute to the sense of a cohesive community image. Lighting design and features will differ according to the land use. In all cases, light fixtures and standards shall conform to state and local safety illumination standards and existing City regulations. Additional restrictions on lighting may be imposed through privately enforced covenants, conditions and restrictions (CC&Rs).

Ø Street Lighting

- Lighting should be located to enhance the safety of pedestrian and vehicular flows at key points along roadways. Light should be limited to intersections, cul-de-sacs, and pedestrian crosswalks. The maximum height of street light fixtures shall be as required by the City of Rio Rancho.

- Excessive light spillage on adjacent properties shall not be allowed. Light fixtures should be recessed and shielded.

Ø Pedestrian Lighting

- Lighting should be pedestrian oriented in districts with high pedestrian movement, such as the commercial, mixed use, and community center areas. Bollard or wall pocket lighting is encouraged along community center sidewalks and other public areas.

- Lighting may be used to accent certain landscape features. This type of lighting should be of a low-level intensity and only illuminate the intended landscape feature. Concealed lighting sources are recommended.

- Lighting for the trail system should be provided at an appropriate spacing to create a safe and secure environment.

SITE UTILITIES

The purpose of these guidelines is to promote the coordinated development of utilities to minimize utility costs and visual impacts associated with utility structures.

Ø Utility easements shall be provided as required.

Ø All permanent utilities shall be located underground.

Ø Transformers should be grouped with utility meters and screened from view where possible.

LANDSCAPE and STREETSCAPE

The environmental, as well as aesthetic, value of landscaping in an arid region cannot be overstated. Landscaping should be used to buffer residential from noise or undesirable views, to break up large expanses of parking, to provide wind protection, shade, and relief from the heat and glare generated by development, to control soil erosion, and enhance pedestrian and vehicular traffic and safety.

Recognizing the increased public awareness of water conservation, this Plan promotes the use of native and naturalized plant species that perform well in an arid environment. Major arterials should be landscaped with native species and can serve as a demonstration project to the rest of the community.

Residential Landscape

- Ø Individual homebuilders will be required to provide front yard landscaping for each house through the developer's CC&Rs.

- Ø Accent materials, such as river cobble and/or boulders are encouraged.

- Ø Landscaping in accordance with an approved plan, by development phase for residential subdivision perimeter landscaping, must be installed in a timely manner in accordance with the CC&Rs.

Common Landscape Areas

- Ø Turf use limitations will be restricted to no more than 20% of landscaped area.

- Ø If turf is to be used in non-pedestrian areas, it should be one or a combination of the drought tolerant grass species.

- Ø Undeveloped areas held in reserve for future building or pavement should be seeded with a mixture of native grasses/wildflowers.

- Ø Coverage of the common landscape areas with living vegetative material will be governed by existing City regulations.

Streetscapes

Streetscape design is another key factor in determining neighborhood quality and livability.

- Ø A consistent landscape theme in residential areas will reinforce community identity. Providing large canopied street trees in residential areas will soften the streetscape and create a more pedestrian friendly and walkable neighborhood.

- Ø Street trees should be provided at certain intervals (30ft. apart from center line) along major and minor roads throughout the Paradise West area.

- Ø In addition to the individual residential landscape requirements, a mini-

mum of one street tree (planted within 10 feet of the curb) should be required per lot, to be provided by the Builder. Irrigation and maintenance of these trees shall be the responsibility of the individual homeowner.

- Ø Street trees shall be planted in accordance with City setback and right-of-way regulations.

- Ø High water use turf should not be used within the street R.O.W. Low water use turf, such as Buffalo Grass or Blue Grama Grass, may be used.

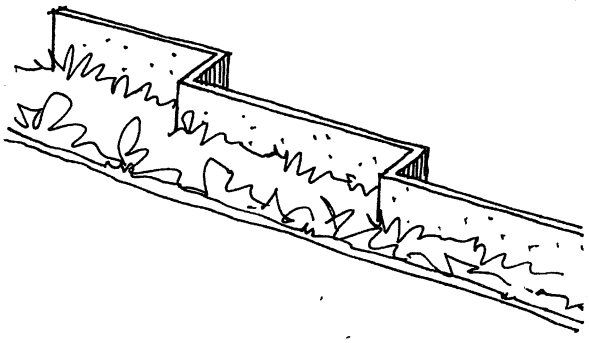
- Ø Automatic underground irrigation systems shall be provided for all formalized landscaped areas.

- Ø Parking areas should be screened from public streets by appropriate landscaping techniques, including earthen berming, and/or short masonry walls.

WALLS

Walls and fences will serve to provide security, screening of unsightly areas, visual relief, and buffering between land uses. A consistent level of quality, height, and design for walls will provide an element of visual continuity in the area. Walls within the residential area are considered an integral part of the site design.

- Ø To soften the horizontal mass of a continuous wall, the wall may be set back from the adjacent sidewalk with the space left between the wall and sidewalk used for landscaping.



- Ø Long stretches of wall should be articulated to provide visual relief. This can be accomplished by staggering the wall, providing a change of materials, providing buttresses, or other techniques to vary the appearance.

- Ø Unfinished block walls and barbed wire, chain link, concertina wire, and plastic/vinyl fencing are prohibited, except in the rear portion of industrial lots.

- Ø Visual openings shall be provided in perimeter walls every 100 feet.

- Ø Front yard walls within the view lot areas shall have a maximum height of 6 feet for any single wall. Clear site distances will be maintained at all driveway locations.

B. NON-RESIDENTIAL DESIGN GUIDELINES

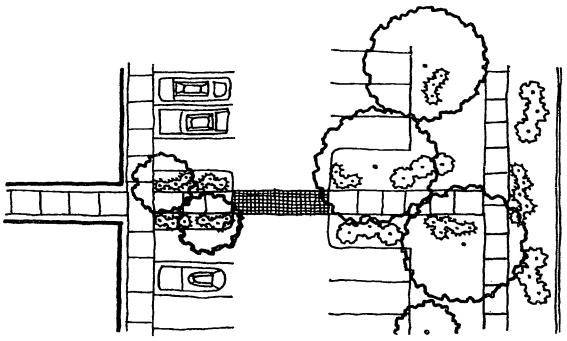
STREETSCAPE

The development of a bold and dynamic entry and streetscape is desirable in defining an image for Paradise West. The streetscape will provide a unifying element that weaves its way through, and ties together the vast development potential of the project. Specific streetscape requirements will meet City standards.

PARKING

The intent of the standards for the development of parking areas is to: mitigate heat/glare through the provision of landscaping; minimize the visual impact of parking areas; and provide accessible, safe circulation within and adjacent to the parking areas.

- Ø Parking space standards shall be per the City of Rio Rancho Zoning Code.
- Ø Large parking areas should be broken into smaller parking areas. The preferred method is to provide landscaped medians with pedestrian connections.
- Ø ADA-compliant parking shall be located adjacent to main building entries as required by existing regulations.
- Ø Clear pedestrian connections should be provided through parking areas. Shade trees should be provided along pedestrian walks.
- Ø Parking lot landscaping is required by the City.



Clear Pedestrian Connections

BICYCLE FACILITIES

Providing convenient bicycle facilities to encourage non-vehicular travel within Paradise West will be encouraged in support of the Plan's goal of supporting alternative modes of transportation.

SITE LANDSCAPE

The landscape environment serves to enhance the visual dynamic of the development and aid in reinforcing the street edge and pedestrian environment. Landscape elements, such as street furniture, lighting, bollards, and graphic pylons should be used to reinforce the street edge. The landscape requirements will meet all the regulations of the City. Consideration will be given to spacing and sizing of plant materials, coverage of site area, water conservation, and other site landscape issues.

SITE PLANNING

The intent of the site planning guidelines is to create pedestrian-friendly environments for employees and visitors.

- Ø Cross access easements should be provided between adjoining parcels.

- Ø An outdoor patio space with shade trees and/or shade structure is encouraged.

- Ø Sidewalk requirements will be consistent with those used by the City of Rio Rancho.

- Ø Pedestrian connections should be provided from each building to the internal circulation system and to adjacent roadways. Shade trees should be provided along the pedestrian connection.

- Ø Design, paving materials, arroyo/corridor trail design, and requirements for landscape or shade provision may be required through private covenants.

OPEN SPACE AND PARKS

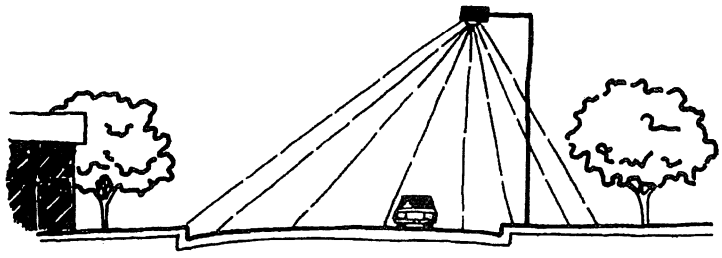
The open space and park areas within Paradise West are intended to be for both active and passive recreational uses, such as jogging, bicycling, picnicking, playground and ballfield use, etc., while also fulfilling their additional function for water quality and drainage. The design of these areas is undefined until after the Master Plan is approved, zoning has been established and the facilities are ready to be designed.

SETBACKS

The use of building and parking area setbacks is encouraged to provide space for the creation of visually attractive streetscapes within the Paradise West area. Required within these setbacks will be pedestrian walkways, screening devices, and landscape improvements. Setbacks will be consistent with those listed in the City's Zoning Ordinance, unless a variance or amendment has been requested at the time of site development.

LIGHTING

Safety and security should be the primary design consideration, as well as the daytime appearance of the light fixtures. Lighting will be in accordance with the City standards, as well as the Night Sky ordinance.



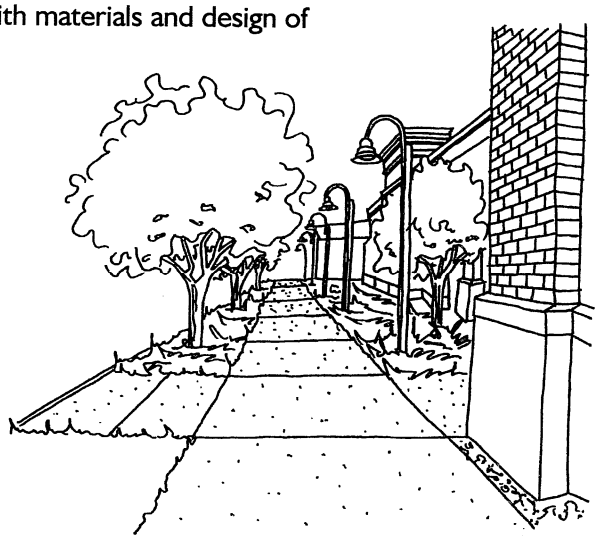
Shielded Lighting

SCREENING/BUFFERING

- Ø Mechanical equipment and refuse enclosures, whether on roof areas or at street level, should be fully screened from pedestrians or motorists. Screening should be compatible with materials and design of the building.

SIGNAGE

Signage criteria will create a sense of arrival to the development and establish a quality visual impact. Signage will meet requirements of the City codes.



Shaded Walkway

7. TRANSPORTATION SYSTEM PLAN

A. INTRODUCTION

The transportation system is designed to establish a long-range transportation network to meet local and regional circulation needs. The network can function as a multi-modal transportation system to move people and goods. The road network is designed to accommodate the 2020 ICP Preferred Land Use Scenario. The major street facilities are classified by functional type with designated rights-of-way. Future right-of-way acquisition should be prioritized along the designated transportation routes through Paradise West.

The final heading of this section includes a summary of how emergency and public safety services are to be provided.

B. TRANSPORTATION SYSTEM FEATURES

As part of a traffic management plan major traffic generating developments, i.e., commercial and industrial, should be located along established arterial streets and proposed corridors. All large-scale development proposals are required to perform a Traffic Impact Analysis (a threshold should be established through the review process) prior to site plan approval so that planning for proper intersection designs can be anticipated.

The success of a multi-modal transportation system that can move people and goods as well as vehicles begins with the location of land uses adjacent to streets with adequate traffic carrying capacities. Provision of pedestrian, bicycle and transit facilities in the form of walkways, transit stops and bikeways along major, minor and local arterials, and trails along the arroyo network will create the multi-modal system that is desired.

The community of Paradise West contains approximately 3,574 acres or 5 ½ square miles. The development is proposed to be a mix of residential, employment, institutional and open space land uses. The project is anticipated to build out over four phases of development. In 2003, this area was annexed by the City of Rio Rancho, which will provide all the municipal transportation services to this community.

In establishing an efficient multi-modal transportation system to move people and goods for an urban community, it is essential to provide principal arterials at approximately 1-mile intervals in all directions for regional service. Minor arterials or collector streets should occur at ½ mile intervals in all directions for local service. Geographical / topographical features and land ownership will limit the placement and / or need for a grid pattern coverage of the area.

Major activity centers should be designed surrounded by major streets. This will minimize vehicle and pedestrian conflicts; and maximize right-turn access and egress for the center. A major activity center that is split by a major street requires the left turn movement for basic access to the site. The left turn movement creates the greatest conflict with traffic moving through the community; and the greatest conflict with pedestrians at the entrances to the centers. The number of left turn opportunities should be kept to a minimum. The braiding of major streets creates confusion and identity problems when streets criss-cross or change direction.

C. NETWORK AND CLASSIFICATIONS

The proposed transportation system consists of the following:

Length / Distance
Principal Arterials (ROW = 156 feet with pedestrian, transit & bicycle features) 4 - 6 lanes (feet = miles)

McMahon Boulevard - Universe Boulevard (ABQ) to Quail Ranch Limits (RR)
20,240' = 3.83 mi.
Paseo del Norte - Paseo del Volcan [East. Align.] (ABQ) to Quail Ranch Limits (RR)
3,200' = 0.61 mi.
Paseo del Volcan - Sandoval County [20th Street] (RR) to Paseo del Norte (ABQ)
10,200' = 1.93 mi.
(Eastern Alignment)
Boulevard. del Oeste -
Sandoval County [10th Street] (RR) to Paseo del Norte (ABQ)
9,200' = 1.74 mi.
RainbowBoulevard -
Sandoval County [Rainbow Blvd] (RR) to Irving Blvd. (ABQ)
4,700' = 0.89 mi.

Length / Distance
Minor Arterials (ROW = 100 feet with pedestrian, transit & bicycle features) 4 - 6 lanes (feet = miles)
Irving Boulevard - West of Rainbow Boulevard (ABQ) to McMahon Blvd.
12,000' = 2.27 mi.
MA 001 [E-W] - Boulevard. del Oeste to Quail Ranch Limits (RR)
10,800' = 2.05 mi.
MA 002 [E-W] - Paseo del Volcan [East. Align.] (ABQ) to Quail Ranch Limits (RR)
3,000' = 0.57 mi.

Collector Streets (ROW = 80 feet with pedestrian, transit & bicycle features) 2 – 4 lanes
CS 001 [S-N] - MA 001 [E-W] to CS 004
5,200' = 0.98 mi.

CS 002 [S-N] - Irving Boulevard to McMahon Boulevard
3,000' = 0.57 mi.
CS 003 [N-S] - Paeso del Norte to McMahon Boulevard
7,200' = 1.36 mi.
CS 004 [E-W] - Paseo del Volcan (old) to Quail Ranch Limits (RR) to Boulevard. del Oeste 5,280' = 1.00 mi.

Off-Site Connection to Rio Rancho Central Business District

Principal Arterials
10th Street - Southern Boulevard (RR) to Bernalillo / Sandoval County Line
8,600' = 1.63 mi.

The primary eastern access to this development will be provided from Paseo del Norte, McMahon & Irving Boulevards. The initial connection to the Rio Rancho Central Business District should be developed via 10th Street, SW and Southern Boulevard, with later connections being via Rainbow Blvd and 20th Street. Tenth Street now exists as an unimproved dirt road.

Initial improvements connecting to the Central Business District (10th Street) are anticipated to be a two-lane, all-weather roadway with capacity adequate to serve the level of development anticipated within the initial phase. Additional lanes would be added as the scope of development increases. In order to serve Phase 1, the 10th Street connection will extend south via Boulevard del Oeste and then east down McMahon. Connections to other facilities will be coordinated with the appropriate jurisdiction. Connection to the Central Business District via Rainbow will require spanning a bridge across the main branch of the Calabacillas Arroyo.

Definition of a primary route from Quail Ranch and Paradise West to the Rio Rancho Central Business District should be established and enhanced with unification features to be provided along this route (i.e., signage, pedestrian / transit, lighting characteristics, landscaping treatment, etc.).

Preliminary cost estimates for acquisition of right-of-way and costs of roadway construction are attached at the end of this section.

D. PEDESTRIAN & BICYCLE FACILITIES

Pedestrian & bicycle facilities will be provided in at least one of the following methods:

Principal Arterials - (156 feet of right-of-way)
- 10-foot trail on one side, 6-foot sidewalk on the other.
- 6-foot bike lane and 6 foot sidewalk on both sides.

Minor Arterials – (100 feet of right-of-way)

- 6-foot bike lane and 6 foot sidewalk on both sides.

Collector Streets – (80 feet of right-of-way)

- 6-foot bike lane and 4 foot sidewalk on both sides.

Open Space – (Varying widths of right-of-way)

- 10-foot trail (surface will vary)

Traffic Impact Analyzes will be required for each proposed development to determine the necessary transportation improvements as incremental development occurs.

E. EMERGENCY SERVICES

Rio Rancho Department of Public Safety needs to have either on-site fire and police facilities, or have off-site stations within less that five vehicle-route miles to the service area so that residences can enjoy reasonable hazard insurance rates. Until that happens, homeowners should be expected to pay higher rates and receive delayed emergency response. If a new on-site facility is constructed, an off-site, back-up facility is still needed for the city to be able to provide minimum levels of service.

Currently, the nearest facility is located at Golf Course Road and Southern Blvd., or about 6 miles to the closest boundary of the project area, via Southern Blvd. and unimproved 10th St., SW. The intersection of Rainbow Blvd. and Southern Blvd. is a location for one of the next new DPS facilities that would serve the western City of Rio Rancho, unincorporated Sandoval County, and allow for coverage of all of Paradise West. Southern Blvd. is currently paved west to 10th St., but 10th St. is only a dirt road south of Southern Blvd. 10th St. will need to be improved to paved, all-weather status in order to facilitate DPS service to the project area from the new facility at Rainbow Blvd. and Southern Blvd.

PARADISE WEST
Transportation Network Improvement

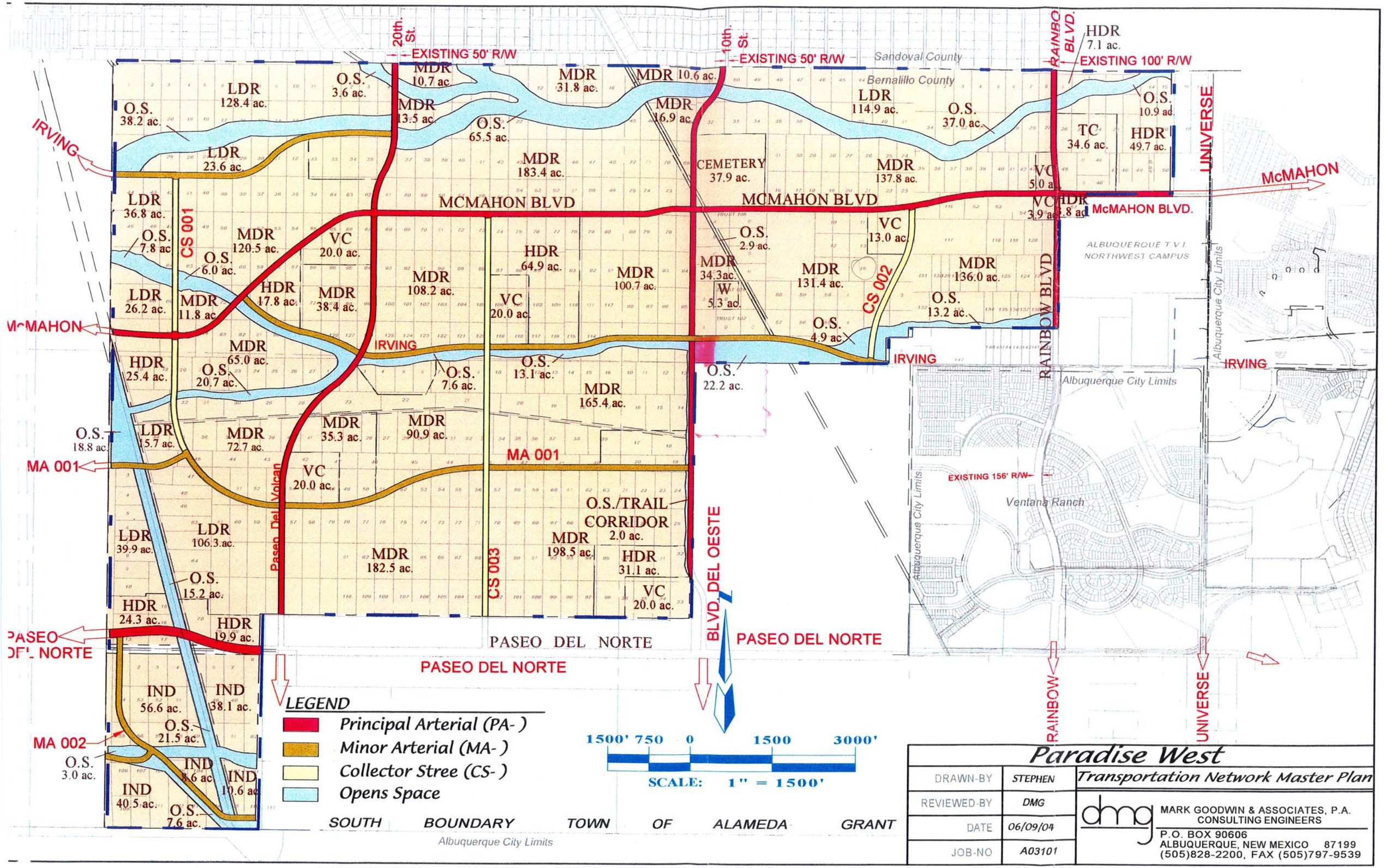
Principal Arterials Road Segment	Length	Road Cost *	Acres of ROW **	ROW Cost	Total Cost
McMahon Blvd	20,240	$ 5,566,000.00	72.48	$ 362,424.00	$ 5,928,424.00
Paseo del Norte	3,200	$ 880,000.00	11.50	$ 57,500.00	$ 937,500.00
Paseo del Volcan	10,200	$ 2,805,000.00	36.53	$ 182,645.00	$ 2,987,645.00
Blvd del Oeste	9,200	$ 2,695,000.00	32.90	$ 164,500.00	$ 2,859,500.00
Rainbow	4,700	$ 1,292,500.00	16.83	$ 84,160.00	$ 1,376,660.00
Total		$ 13,238,500.00	170.24	$ 851,229.00	$ 14,089,729.00

Minor Arterials Road Segment	Length	Road Cost *	Acres of ROW **	ROW Cost	Total Cost
Irving Blvd	12,000	$ 2,220,000.00	27.50	$ 137,500.00	$ 2,357,500.00
Minor Arterial #1	10,800	$ 1,998,000.00	24.80	$ 124,000.00	$ 2,122,000.00
Minor Arterial #2	3,000	$ 555,000.00	6.89	$ 34,435.00	$ 589,435.00
Total		$ 4,773,000.00	59.19	$ 295,935.00	$ 5,068,935.00

Collector Street Road Segment	Length	Road Cost *	Acres of ROW **	ROW Cost	Total Cost
Collector Street #1	5,200	$ 962,000.00	9.55	$ 47,750.00	$ 1,009,750.00
Collector Street #2	3,000	$ 555,000.00	5.51	$ 27,548.00	$ 582,548.00
Collector Street #3	7,200	$ 1,980,000.00	13.20	$ 66,000.00	$ 2,046,000.00
Collector Street #4	5,280	$ 1,452,000.00	9.70	$ 48,500.00	$ 1,500,500.00
Total		$ 4,949,000.00	37.96	$ 189,798.00	$ 5,138,798.00
Total Onsite Roads		$ 22,960,500.00	267.39	$ 1,336,962.00	$ 24,297,462.00

Off-Site Improvements Road Segment	Length	Road Cost *	Acres of ROW **	ROW Cost	Total Cost
10th Street Connection	8,600	$ 2,365,000.00	20.90	$ 104,637.00	$ 2,518,994.00
Grand Total		**$ 25,325,500.00**		**$ 1,441,599.00**	**$ 26,816,456.00**

* Construction of Principal Arterials are estimated to cost $275/ft, with Minor Arterials and Collectors at $185/ft.
** Right-of-Way (ROW) cost estimated at $5,000/acre.



20th. St.
EXISTING 50' R/W
10th. St.
EXISTING 50' R/W
Sandoval County
Bernalillo County
RAINBOW BLVD.
EXISTING 100' R/W
HDR 7.1 ac.
UNIVERSE
IRVING
McMAHON
McMAHON BLVD
McMAHON BLVD.
CS 001
CS 002
CS 003
MA 001
MA 002
Paseo Del Volcan
BLVD. DEL OESTE
PASEO DEL NORTE
RAINBOW BLVD
ALBUQUERQUE T.V.I. NORTHWEST CAMPUS
Albuquerque City Limits
EXISTING 156' R/W
Ventana Ranch
LDR 128.4 ac.
O.S. 3.6 ac.
MDR 10.7 ac.
MDR 31.8 ac.
MDR 10.6 ac.
O.S. 38.2 ac.
MDR 13.5 ac.
O.S. 65.5 ac.
MDR 16.9 ac.
LDR 114.9 ac.
O.S. 37.0 ac.
O.S. 10.9 ac.
TC 34.6 ac.
HDR 49.7 ac.
LDR 23.6 ac.
MDR 183.4 ac.
CEMETERY 37.9 ac.
MDR 137.8 ac.
VC 5.0 ac.
LDR 36.8 ac.
O.S. 7.8 ac.
MDR 120.5 ac.
VC 20.0 ac.
O.S. 6.0 ac.
HDR 64.9 ac.
MDR 108.2 ac.
MDR 100.7 ac.
O.S. 2.9 ac.
VC 13.0 ac.
MDR 34.3 ac.
W 5.3 ac.
MDR 131.4 ac.
MDR 136.0 ac.
O.S. 13.2 ac.
LDR 26.2 ac.
MDR 11.8 ac.
HDR 17.8 ac.
MDR 38.4 ac.
VC 20.0 ac.
O.S. 4.9 ac.
MDR 65.0 ac.
HDR 25.4 ac.
O.S. 20.7 ac.
O.S. 7.6 ac.
O.S. 13.1 ac.
O.S. 22.2 ac.
MDR 165.4 ac.
O.S. 18.8 ac.
LDR 15.7 ac.
MDR 72.7 ac.
MDR 35.3 ac.
MDR 90.9 ac.
VC 20.0 ac.
O.S./TRAIL CORRIDOR 2.0 ac.
LDR 39.9 ac.
LDR 106.3 ac.
MDR 182.5 ac.
MDR 198.5 ac.
HDR 31.1 ac.
O.S. 15.2 ac.
VC 20.0 ac.
HDR 24.3 ac.
HDR 19.9 ac.
IND 56.6 ac.
IND 38.1 ac.
O.S. 21.5 ac.
O.S. 3.0 ac.
IND 8.6 ac.
IND 10.6 ac.
IND 40.5 ac.
O.S. 7.6 ac.
LEGEND
Principal Arterial (PA-)
Minor Arterial (MA-)
Collector Stree (CS-)
Opens Space
1500' 750 0 1500 3000'
SCALE: 1" = 1500'
SOUTH BOUNDARY TOWN OF ALAMEDA GRANT
Albuquerque City Limits
Paradise West
DRAWN-BY STEPHEN
REVIEWED-BY DMG
DATE 06/09/04
JOB-NO A03101
Transportation Network Master Plan
dmg
MARK GOODWIN & ASSOCIATES, P.A.
CONSULTING ENGINEERS
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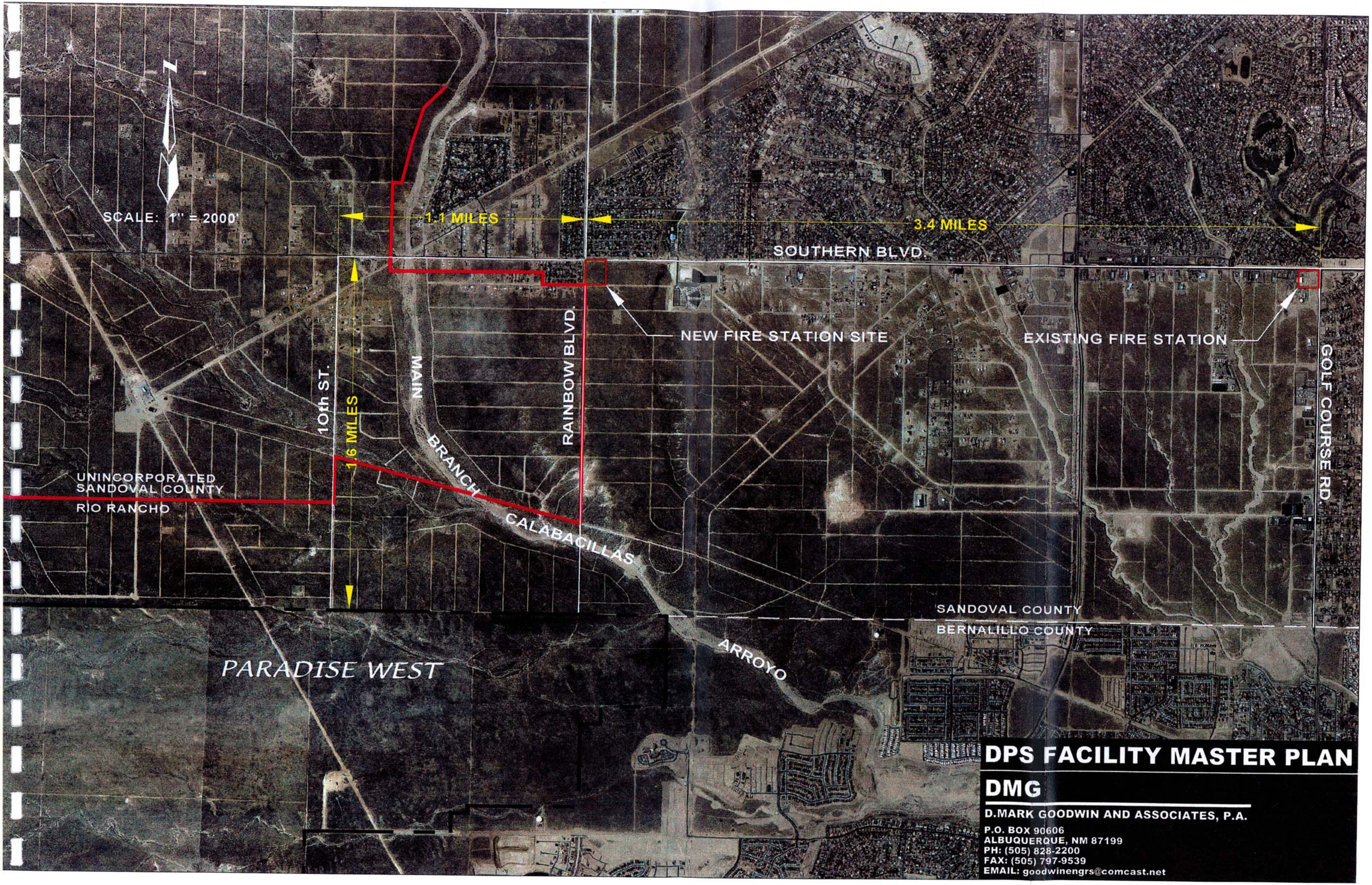

DPS FACILITY MASTER PLAN

DMG

D.MARK GOODWIN AND ASSOCIATES, P.A.

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8. DRAINAGE MASTER PLAN

The purpose of this master plan is to provide a first-step in determining how the Paradise West area should best develop, given the characteristics of the landscape, downstream constraints, how existing floodplains are affected, and what types of land uses are proposed. Ways to address management of drainage features are combined with the other aspects of master planning so that development can be coordinated comprehensively and at once. Upon approval, information contained within the plan is intended to establish a framework that should be carried out through the implementation steps in the plan. Because of the size of the project area, large-scale drainage issues will arise due the magnitude of runoff that enters the site from upstream basins and the increase expected from new development. From a regulatory standpoint, the Paradise West area is under the jurisdiction of the City of Rio Rancho and AMAFCA, but much of its upstream basin originates in the areas overseen by SSCAFCA.

A. CHARACTERISTICS OF THE PROJECT AREA

The Paradise West project area (project area) covers approximately 3,500 acres, bounded by Universe Blvd., Rainbow Blvd., and Ventana Ranch on the east, Paseo del Norte Blvd. and Ventana Ranch on the south, Quail Ranch on the west, and the Sandoval/Bernalillo County line on the north. The property is entirely undeveloped and the land around all of its sides is also undeveloped, except to the east. The project area is between the developments of **Quail Ranch** (formerly Black Ranch) to the west and **Ventana Ranch** to the east. Las Ventanas, Ltd., has recently annexed property east of the project area (**Ventana Ranch West**) into the City of Albuquerque with intentions of developing up to the eastern boundary of the project area along Blvd. del Oeste. Along other portions of the east project boundary there is either development underway or in various planning stages leading up to development.

The project area's terrain slopes down from west to east at grades ranging from 1 to 3 percent, with some areas adjacent to arroyos steeper that 10 percent. According to the Soils Conservation Service Soil Survey Map, the surface is covered by a mixture of Bluepoint and Madurez loamy-fine sand. Subsurface basalt outcroppings are a well-known feature within the adjacent Ventana Ranch and other developments to the south. This rock may be located at variable depths below the surface along the south perimeter of the project area. Further investigation to determine if it exists is warranted due to the difficulties that are typically encountered when attempting to excavate this material. Measurement of depth-to-basalt would identify and quantify problem areas so that efforts necessary to overcome the resulting cover requirements for underground utilities could be planned.

Three major arroyos that now cross the project area from north to south are the Middle Branch of the Calabacillas, the West Branch of the Calabacillas, and the Boca Negra (across the extreme southwest corner). An upper branch of the Piedras Marcadas Arroyo extends about 800 feet into the extreme SE corner of the project area from the Ventana Ranch

West's boundary along Blvd. del Oeste. The Middle Branch of the Calabacillas enters just south of the project's northwest corner, from where it then meanders east along the project's north boundary. The West Branch enters at mid-point of the project's west boundary, flowing east to where it discharges off-site between the TVI's West Campus and Irving Blvd.

B. DEVELOPMENT SCENARIO

According to policy within Rio Rancho's 2020 Integrated Comprehensive Plan, and in connection with comments from AMAFCA, arroyos containing floodplains should be preserved to incorporate their existing open character so that both drainage and recreational uses can coexist. An east-west network of trails can easily be established within the project area by utilizing the existing major on-site arroyos. Combining the east-west arroyo alignments with major east-west roadways will add to openness within the arroyo and trail network. Minor realignment of the meandering arroyo patterns will necessary in order to draw all three of these components together. As an alternative to hard-lining these arroyos, the conventional hard-lining costs should instead be used to construct stabilization measures that would be integrated into preservation of the natural arroyo character.

As shown on the attached Drainage Master Plan, development is anticipated to progress from east to west, primarily due to the proximity of existing development along the east boundary. In addition, downstream arroyo stabilization measures have also been constructed within the existing development, some of which have been designed to anticipate future upstream development. Furthermore, new arroyo improvements should connect to existing improvements so that unprotected reaches between stabilized segments are avoided. Plan phases would then extend west to principal roads (except at the Phase 1-2 boundary half way between Rainbow and Blvd. del Oeste). Phase terminations at principal road crossings would establish a hard point in the arroyo bed where a drop structure would be designed. Arroyo drop structures are also necessary at various intermediate points between the road crossings in order to further dissipate energy and help the arroyo bed to attain a flatter, more sustainable slope.

The Drainage Management Plan for Ventana Ranch West, (Bohannan Huston, Inc., October 2003) has planned for acceptance of developed runoff from Paradise West, estimating an impervious developed area of 59 percent. From this DMP, the upstream basin developed within Paradise West is expected to generate approximately 250 cfs along the West Branch of the Piedras Marcadas Arroyo, just west of Blvd. del Oeste.

Paradise West was annexed into the City of Rio Rancho at the same as Quail Ranch, however, Quail Ranch was originally master planned independently within Bernalillo County at least ten years before this annexation. At that time it was anticipated to eventually be within the City of Albuquerque. The Black Ranch Drainage Management Plan (Easterling and Associates, September 1993) was included as a part of that original master plan. The DMP

recommended new techniques to deal with stormwater runoff, most of which are not traditionally embraced by the City of Albuquerque's Hydrology Division. Some of the design concepts were to encourage filtration instead of conveyance by installing extended detention basins, retention ponds, constructed wetlands and porous block pavement. The net effect would be a zero-discharge rate from the site's proposed urban development, assuming these are planned as permanent facilities. Presentation of this concept was important, due to the fact that urban runoff is not routinely allowed to flow downstream without corresponding arroyo improvements and/or storm drain piping. Quail Ranch was, and still is, about two miles west of existing urban development.

With the current design consisting of retention for all of the post-development, peak runoff during the 100-year storm, it will be assumed for the purposes of this master plan that the maximum runoff from Quail Ranch into the project area will be as it now exists. If the Quail Ranch DMP design approach is eventually changed, the downstream impacts would have to be modified accordingly.

C. METHODOLOGY

Within the local metropolitan area the standard used for assessing protection from the effects of flooding is the 100-year, 6-hour design storm. The 100-year storm is utilized determine runoff rates and to estimate sizes of drainage infrastructure. Procedures identified in the City of Albuquerque's DPM, Section 22.2, have been employed using the AHYMO hydrology program (see Appendix A). The 100-year, 24-hour storm event was run using the following precipitation depths:

1-hour storm:	1.90 inches
6-hour storm:	2.25 inches
24-hour storm:	2.75 inches

The 24-hour storm was used due to the possibility of having to design for retention ponds. Land treatments were estimated from the Land Use Plan incorporated herein. Time to peak calculations for the various basin lengths were compiled from Section 22.2, Part B. The project area was broken down into 4 phases, running from east to west, with boundaries marked primarily by principal roads. Peak flows due to development were measured and combined with existing upstream basin flows to estimate conditions along the east boundary of the project. Arroyo drainage and road infrastructure should be planned to accommodate fully developed conditions within all of the project area's upstream basins based upon these rates. When individual developments come into the city of approval, further evaluation of the affected basins is necessary to determine anticipated peak discharge rates at each of the subsequent phase boundaries.

The following table summarized the hydrologic results:

Middle Branch Calabacillas

Project Phasing	Phase I	Phases I & 2	Phases I, 2 & 3	Phases I thru 4
Upstream Basin Size (sq. Mi.)	12.48	12.15	11.72	11.19
Undeveloped Peak Flow Entering from Upstream Basin (cfs)	1497	1540	1574	1597
Developed Phase Area (sq. mi.)	0.37	0.70	1.13	1.65
Peak Flow in Developed Phase (cfs)	711	819	990	844
Peak Flow @ East Boundary of Project (AP-1A) (cfs)	1530	1728	2269	2437

West Branch Calabacillas

Project Phasing	Phase I	Phases I & 2	Phases I thru 3	Phases I thru 4
Upstream Basin Size (Sq. Mi.)	8.65	8.21	6.84	5.37
Undeveloped Flow Entering from Upstream	1246	1277	1142	971
Phase Area (Sq. Mi. Cumulative)	0.28	0.71	2.31	3.69
Developed Flow in Phase (cfs)	374	999	1383	1912
Peak Flow @ East Boundary of Project (AP-1B) (cfs)	1267	1539	2371	2854

All flow rates show should be increased by 3% to account for sediment bulking.

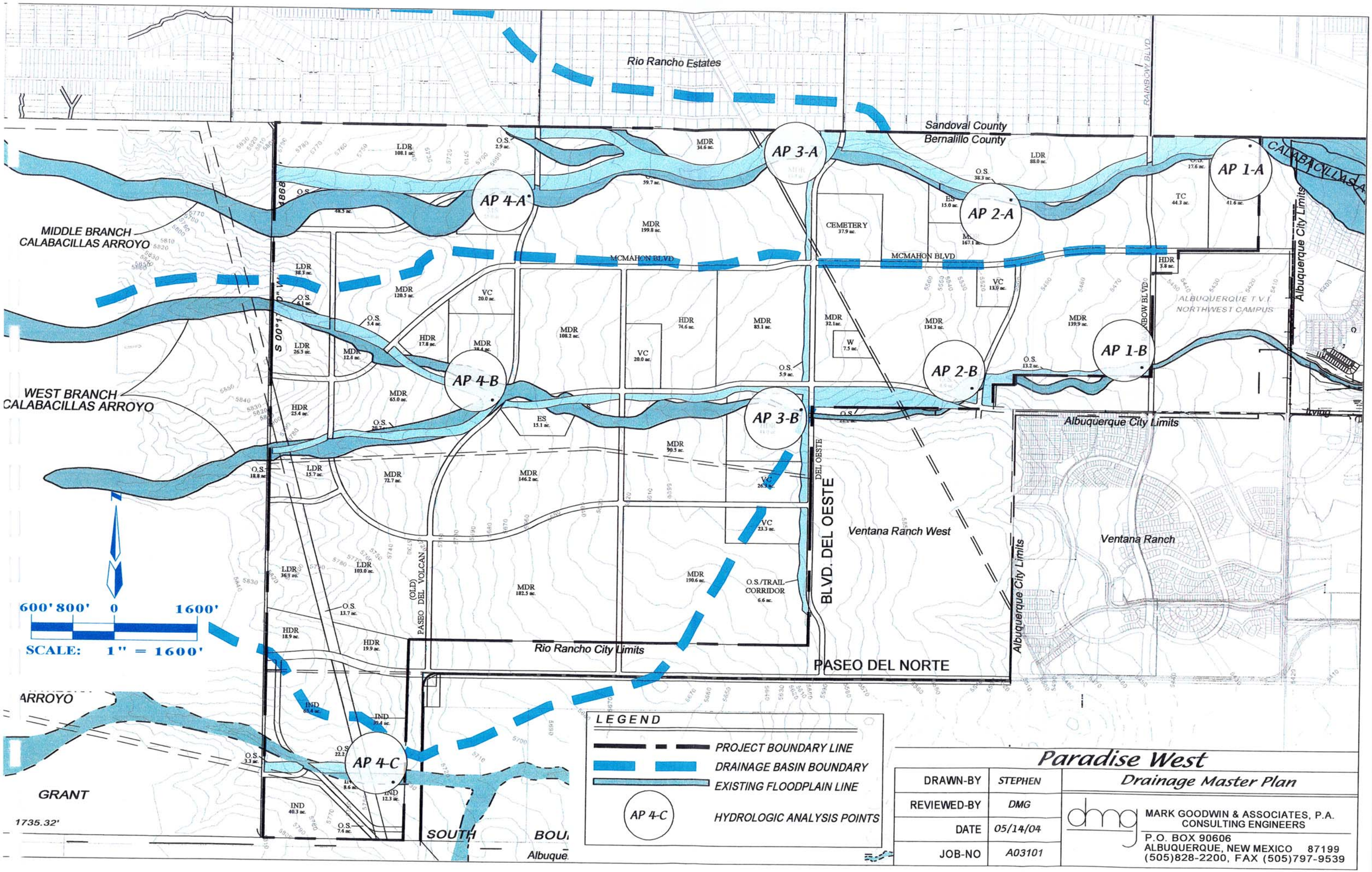
D. ARROYO CONDITIONS

As part of the natural erosion process, arroyos have a tendency to cut in their upper reaches and deposit the captured sediment they carry in lower reaches. For branches of the Calabacillas Arroyo within this project, significant deposition occurs in the Swineburne Dam pool, located approximately 2 miles east of the project area. The West Branch of the Calabacillas was studied by Leedshill-Herkenhoff in 1986 and by Mussetter Engineering, Inc., in 1999. Over a distance of 2 miles east of the project area, those reports cite 2 to 5 feet of degradation occurring in the arroyo bed due to base-level lowering that has resulted from excavation within the dam pool. As time goes on and upstream development proceeds, further degradation of the arroyo bed is inevitable due to the impact development will have on the character of stormwater runoff (as magnitude, frequency, and duration all increase). This process of degradation will creep west from the lower, off-site reaches into the project area and then ultimately, though all the upstream phases until a flatter, equilibrium slope is achieved. Prior to the discharge of urban runoff into the arroyos, energy-dissipating improvements (drop structures) are necessary in order to accommodate the arroyo's natural tendency to flatten and lower its bed.

Figure 5.5 from Mussetter's report (attached) demonstrates how an existing arroyo bed profile is fitted with recommended grade-control structures that are necessary to take out slope changes associated with bed-lowering. This pattern will have to be repeated upstream through the project area, based upon a supplemental, more detailed study that takes into account all the variables that affect arroyo geomorphology.

More detailed evaluation of the horizontal meandering of these arroyos is also necessary. In 1999, Mussetter established draft prudent limits for the West Branch of the Calabacillas. These limits were derived from a detailed analysis that took into account arroyo alignment, flow, slope, sediment carrying capacity and the arroyo's embankment stability. Coupled with drop structures, bank stabilization measures will also likely be necessary to limit the lateral migration of the arroyos as conveyance needs increase. A prudent limit analysis also needs to be conducted on the Middle Branch of the Calabacillas, assuming it is also to be maintained in its "natural state."

In coordination with AMAFCA and the City of Rio Rancho, well-defined design parameters for discharging to the existing arroyos need to be established and then further study performed consistent with the discussion results. Should the developer of Paradise West elect to realign arroyo corridors, substantial measures necessary to stabilize the new arroyo will be necessary, along with the need to analyze the impact to floodplains. If development occurs upstream of existing drainage facilities, temporary retention ponds will have to be installed so that downstream erosion associated with clean water conveyance is mitigated. The 10-day, 24-hour storm should be used as the basis for sizing of these temporary ponds.



LEGEND

- PROJECT BOUNDARY LINE
- DRAINAGE BASIN BOUNDARY
- EXISTING FLOODPLAIN LINE
- AP 4-C — HYDROLOGIC ANALYSIS POINTS

Paradise West

Drainage Master Plan

DRAWN-BY	STEPHEN
REVIEWED-BY	DMG
DATE	05/14/04
JOB-NO	A03101

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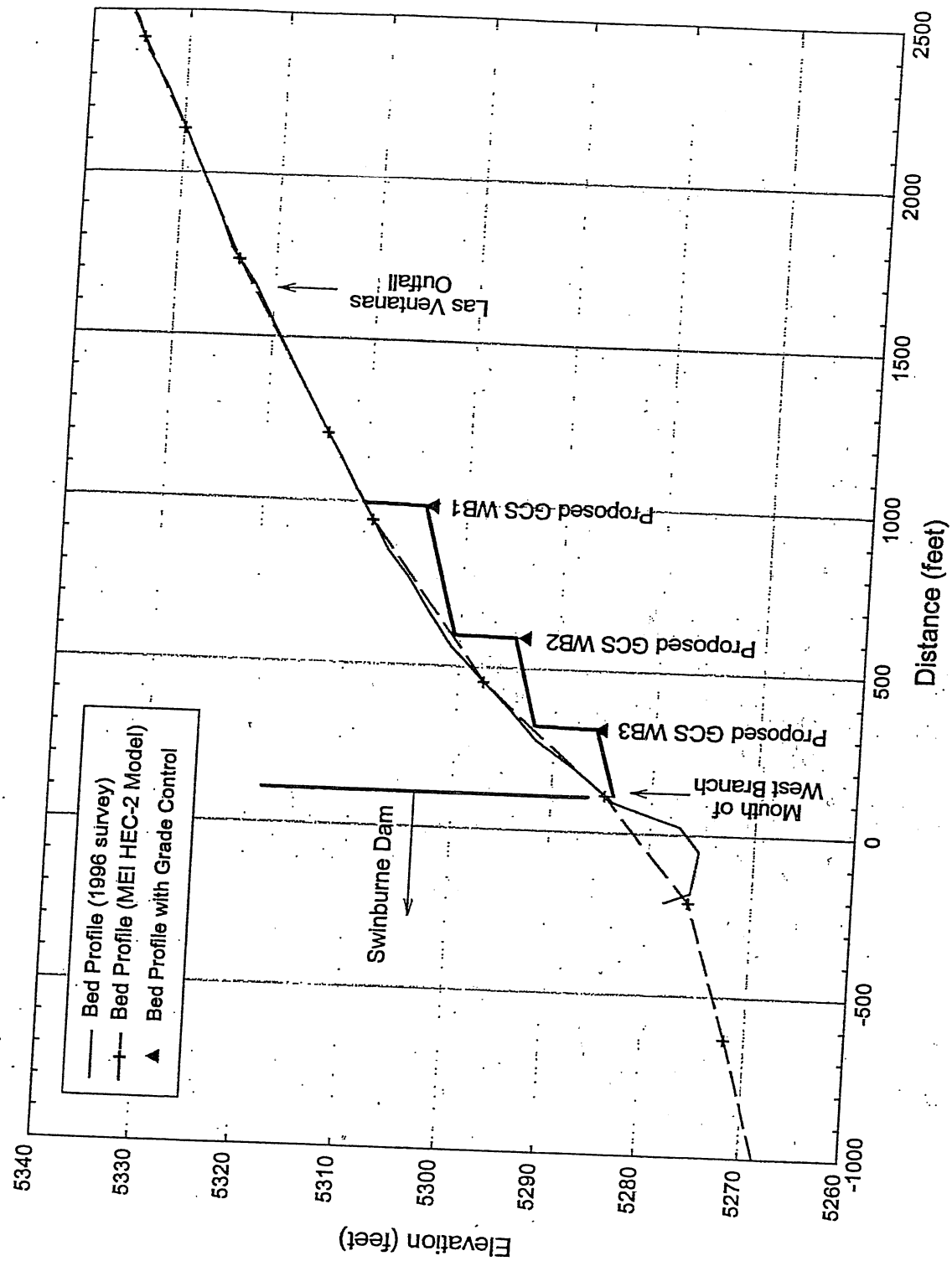

Figure 5.5. 1996 bed profile of the downstream reach of West Branch of Calabacillas Arroyo showing recommended location of grade control structures and the approximate bed profile that would develop with the structures in place.

9. UTILITIES

New Mexico Utilities, Inc. (NMUI) currently serves the neighboring Ventana Ranch, Paradise Hills, and the remaining northern Bernalillo County area west from the Rio Grande down to the south boundary of the Alameda Grant. Domestic water and sanitary sewer service for the Paradise West Master Plan area are to be provided NMUI.

A. DOMESTIC WATER

Water serving the NMUI area is currently supplied by six wells operating in between Paradise West and Unser Boulevard. Water is pumped into storage reservoirs that exist at locations identified on Utility Master Plan map. NMUI uses several zones to distribute water within predetermined pressure ranges, depending on elevation. For its entire service area, NMUI has recently contracted with Parson-Brinckerhoff, Inc. to update its Water System Master Plan. The Master Plan will show that Paradise West is covered by zones 4 through zone 7. NMUI water zone 4 serves the eastern part of Paradise West and then it runs west from Universe Boulevard to approximately elevation 5600 (just west of Blvd. del Oeste). From there west, pressure zones have been established at every 115 feet in elevation change up to zone 7, which extends into Quail Ranch.

There are presently 5 wells and 5 reservoirs in zones 4 and 5 that provide production and storage for zone 4 and other zones below it. Installation of a new booster pump is necessary at the existing reservoir just north of Ventana Ranch West, in order to supply sufficient pressure to VRW, and Phases 1 and 2 of Paradise West. From elevation 5600 water pressure zones 6 and 7 will extend west, where it is anticipated that new wells and storage facilities will be needed within each zone. The major difference for these upper zones is that aquifer production diminishes as wells are drilled further away from the Rio Grande, so it is likely that new wells will instead be located predominantly east of elevation 5600 and then water will be pumped up to higher zone 6 and 7 reservoirs.

Within zone 4, NMUI is actively seeking a site to install a new well about 3000 feet north of the existing northwest corner of Ventana Ranch. A second new well is also being considered at the location of their existing reservoirs just south of Paseo del Norte, and a third new well is currently being drilled in Zone 4 about 2000 feet south of Ventana Ranch just west of Rainbow. As development expands within zones 4 and 5, two new reservoirs will be needed within the lower reaches of zone 5.

B. SANITARY SEWER

NMUI currently has a Certificate of Convenience and Necessity (CCN) agreement with the City of Albuquerque to discharge untreated wastewater from the area east of Boulevard del Oeste down into Albuquerque's collection system. Conversely, the service area west of Boulevard del Oeste is outside the agreement boundary and, therefore, must be treated by an alternative sewage treatment facility. NMUI is in the planning stages to

build a new treatment facility within the industrial-zoned land in the southeast corner of Quail Ranch. Sewage collected within the Paradise West area west of Blvd. del Oeste would be pumped by lift station(s) and force mains located within right-of-way up to the Quail Ranch site. Additional treatment capacity would have to be designed into the facility and the extra costs associated with the related pumping will also have to be addressed. The facility's treated effluent must be disposed of via either subsurface injection or by surface irrigation. A recommended choice would be to follow the examples of centralized, on-site facilities currently being designed for the Miraposa and Cabezon developments in other parts of Rio Rancho. A discharge permit for the treated effluent must be obtained from the New Mexico Environment Department, in accordance with state regulations.

A second alternative would be to design and build a new treatment plant and locate it within an acceptable area of Paradise West. This facility would still be designed and built according to NMUI specifications, with ultimate ownership to be with NMUI.

The third alternative would be to gravity drain this Paradise West sewage to the City of Rio Rancho's Cabezon treatment facility located just north of the county line approximately four miles to the east. Downstream lines presently do not have sufficient capacity to convey this flow, so a new sanitary sewer interceptor would have to be built and lift stations installed where the line would cross arroyos. Jurisdictional issues arise with this alternative due to the fact that NMUI groundwater would drain to and then be treated at a City of Rio Rancho facility. A more in-depth study of all the choices is necessary in order to determine the most cost-effective alternative.

New wells, reservoirs, lift stations, and treatment plants would be planned and cost-shared through development agreements with NMUI and then constructed in accordance NMUI standards and specifications. NMUI would eventually own and maintain all of the utility infrastructure. Capital cost participation would be eligible for offset through issuance of city impact fee credits.

C. DRY UTILITES

According to PNM, a new substation is being planned for in the area west of Universe Blvd. just south of the county line. They currently have three-phase power extending west to the water storage reservoir located north of the Blvd. del Oeste – Irving Blvd. intersection. Electric service from this line can be extended as necessary to provide a substantial portion of the power needs for Phases I and 2, according to PNM.

Natural gas service will come off a 4" high-pressure distribution line that will extend west of the Ventana Ranch developments within the Irving Blvd. right-of-way. To a certain extent, other lines in the vicinity of Universe Blvd. north of Irving can also provide immediate service for a limited distance into Phase I of the project area.

Water Pressure Zone 7

Water Pressure Zone 6

Water Pressure Zone 5

Water Pressure Zone 4

20th. Street

10th. Street

RAINBOW BLVD.

Target Site for New PNM Electrial Substation

McMAHON BLVD

McMAHON BLVD.

McMahon Blvd

NEW 10" SAS INTERCEPTOR

FUTURE WELL SITE

NEW 8" SAS COLLECTOR

CEMETERY 37.9 ac.

ALBUQUERQUE T.V.I. NORTHWEST CAMPUS

10" OFF SITE SAS INTERCEP

EXISTING WELL AND RESERVOIR

NEW 8" SAS COLLECTOR

EXISTING WELL AND RESERVOIR

2 TO 4 ACRES NEEDED FOR A NEW RESERVOIR SITE

2 TO 4 ACRES NEEDED FOR A NEW RESERVOIR SITE

EXISTING 12" SAS INTERCEPTOR

VENTANA RANCH

EXISTING HIGH-PRESSURE GAS TRANSMISSION LINE

VENTANA RANCH WEST

EXISTING WELL AND RESERVOIR

BLVD. DEL OESTE

PASEO DEL NORTE

EXISTING OVERHEAD TRANSMISSION LINE

QUAIL RANCH

FUTURE SEWAGE TREATMENT PLANT TO BE LOCATED IN SOUTH EAST CORNER OF QUAIL RANCH

SEWAGE TREATMENT IN QUAIL RANCH

OFF-SITE SEWAGE TREATMENT

EXISTING RESERVOIR AND FUTURE WELL

LEGEND

- SAS COLLECTOR/INTERCEPTOR
- SAS SERVICE AREA BOUNDARY
- PROJECT LIMITS
- WATER SERVICE ZONE BOUNDARY
- NEW 4" HP GAS LINE
- EXISTING OVERHEAD 3 PHASE POWER

1600' 800' 0 1600'

SCALE: 1" = 1600'

Paradise West

Utility System Master Plan

DRAWN-BY	STEPHEN
REVIEWED-BY	DMG
DATE	05/14/04
JOB-NO	A03101

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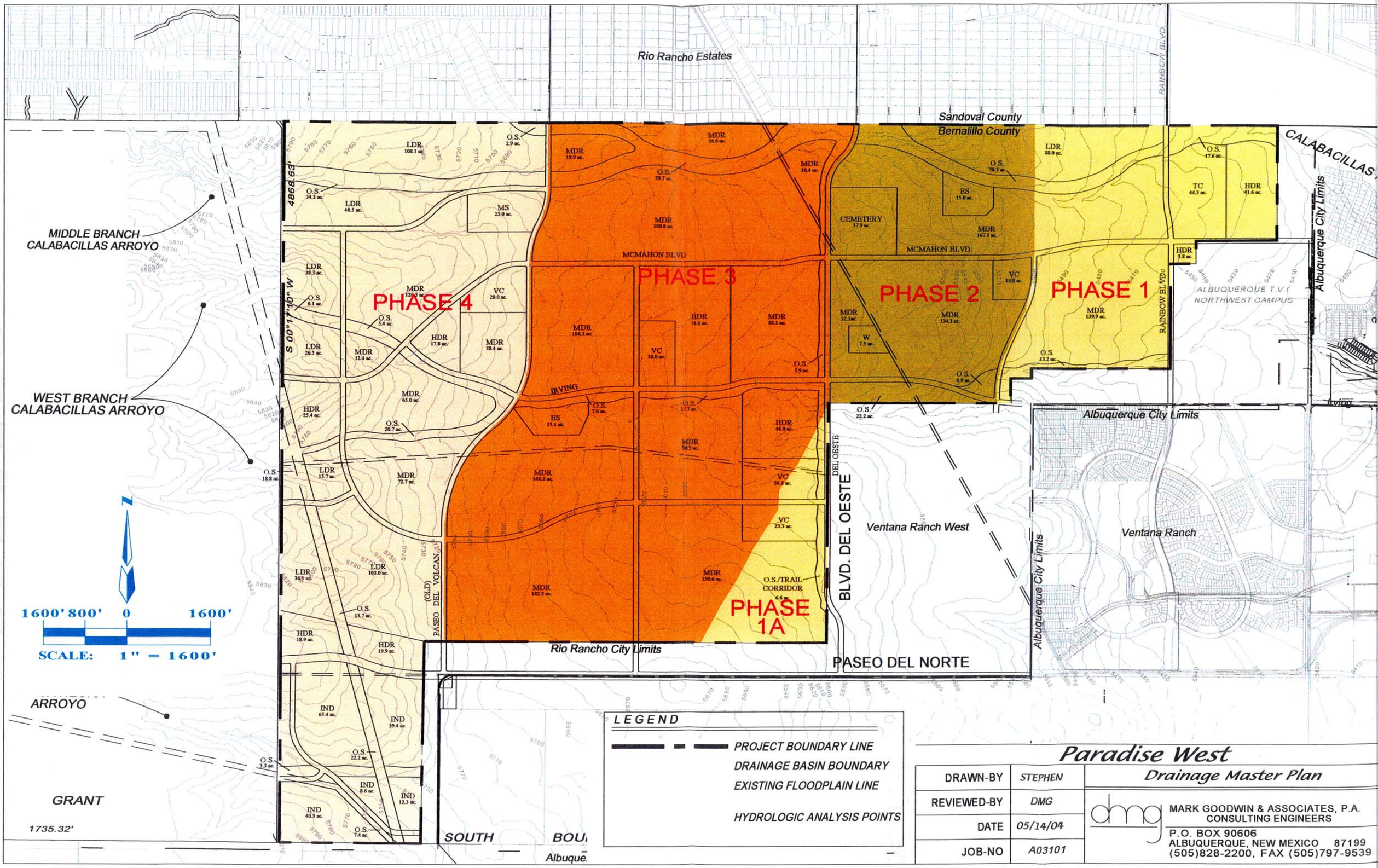
10. PHASING

As shown on the attached Master Plan Phasing diagram, development is anticipated to progress from east to west due to contiguity with existing development.

From a transportation standpoint, existing improved roads available for immediate connection adjacent to the project boundary are Rainbow Blvd. and Irving Blvd. within Ventana Ranch. Paseo del Norte is two lanes of pavement just south of and running parallel to the south side of the project area. Universe Boulevard stretches north along the east side of the new T-VI campus, and another road extending north through Ventana Ranch West will also be on-line soon. In order to serve Phase I the off-site Tenth Street (Boulevard del Oeste within Paradise West) will have to be improved to all-weather status from Southern Boulevard south to McMahon and then east to the Phase IA/Phase 2 boundary. If Phase IA also comes on-line with Phase I, 10th Street should be extended south and connect to Paseo del Norte. In general, principal north-south roads will be more expensive to construct because of arroyo crossings.

From a drainage standpoint, the area just west of Ventana Ranch West (Phase IA) could be targeted for immediate development because VRW has planned for the acceptance of developed flow into their facilities to the east. Other areas within Phase I would have to extend drainage improvements on the Middle Branch and the West Branch of the Calabacillas Arroyo as development proceeds west. This would also be the case for all other upstream phases as well, unless owners develop upstream of existing facilities and retention ponds are incorporated into the design.

Both wet and dry utilities currently exist adjacent to Ventana Ranch West in Irving Blvd. and next to T-VI in Universe Blvd. NMUI's principal well and reservoir infrastructure will allow for immediate development in Phase I through Phase 2. PNM also has existing capacity to provide immediate service to all of Phases I and 2. The timetable for domestic water and sanitary sewer service within Phases 3 and 4 west of Blvd. del Oeste will be dependent upon the progress of developing a new sewage treatment facility in Quail Ranch. Phase IA is ready to develop with Phase I if design and construction of a new sewage treatment facility in Quail Ranch proceeds quickly.



LEGEND

- PROJECT BOUNDARY LINE
- DRAINAGE BASIN BOUNDARY
- EXISTING FLOODPLAIN LINE
- HYDROLOGIC ANALYSIS POINTS

Paradise West

Drainage Master Plan

DRAWN-BY	STEPHEN
REVIEWED-BY	DMG
DATE	05/14/04
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