HIGH DESERT

Sector Development Plan

A Master Planned Community Prepared for High Desert Investment Corporation

Volume One



As Recommended by the Environmental Planning Commission on December 17, 1992; and amended and adopted by the City of Albuquerque on May 3, 1993.

Amended by the Environmental Planning Commission on August 12, 1994. Amended by the Environmental Planning Commission and approved by the City of Albuquerque on October 5, 1995.

Amended by the Environmental Planning Commission and approved by the City of Albuquerque on March 19, 1999.

Amended by the Environmental Planning Commission on December 20, 2001

LIST OF VOLUMES

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Volume 1: High Desert Sector Development Plan (Refer to the City case files and the Albuquerque Academy Library for Volumes 2-5.) Traffic Impact Analysis Volume 2: Air Quality Analysis Volume 3: Drainage Management Plan Volume 4: **Environmental Evaluation** Volume 5: **LIST OF MAPS** Before Page 1.1 Elena Gallegos Grant Boundaries in 1716 Map 1: Site Vicinity Map Map 2: Soils Before Page 2.1 Map 3: Map 4: 10% Slope Demarcation Regional Bio-Geographic Setting Map 5: **Vegetative Communities** Map 6: Before Page 3.1 * Comprehensive Plan Context Map 7: **Existing Community Facilities** Map 8: Circulation Hierarchy Map 9: Zoning / Land Uses Map 10: Open Space and Trails Map 11: Phasing Plan Map 12: Before Page 5.1 Long Range Major Street Plan Map 13: Page 5.2 Traffic Study Area Map 13.a: Page 5.5 Map 13.b: **Existing Network Map** Before Page 7.1 Drainage Basins Affecting the Site Map 14: Floodplains on the Site Map 15: Conceptual Drainage Map 16: Before Page 8.1 **Conceptual Utilities** Map 17: LIST OF TABLES Page 2.4 Upland Biotic Communities By Acreage Table 1: Vegetative Volume Index Page 2.4 Table 2: Page 2.6 Table 3: Impacts By Habitat Type **Land-Use Allocation** Page 3.4.a Table 3A: Page 3.7 Table 3.B: Open Space Disposition Page 3.14 Fireplace Limitations Table 3.C: Page 4.7 **Building Colors Matrix** Table 4.B.1: Before Page 5.1 Street Section (2-Illustrations) Table 5: Page 5.4 Full-Buildout Scenario Table 5.A: Page 5.6 **Trip Generation Rates** Table 5.B: Page 5.7 1994 Level of Service Comparisons Table 5.C: Page 5.8 Table 5.D: Employment by Data Analysis Sub-Zone Page 6.3 Carbon Monoxide Concentrations Table 6.A:

Total Predicted Emissions Volume

Predicted 8-Hour CO Concentrations

Table 6.B:

Table 6.C

Page 6.4

Page 6.5

CITY of ALBUQUERQUE TENTH COUNCIL

COUNCIL BILL NO. R-245 ENACTMENT NO. 50-1993

SPONSORED BY: Deborah E. Lattimore

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2 ADOPTING THE HIGH DESERT SECTOR DEVELOPMENT PLAN AS A RANK 3

3 SECTOR DEVELOPMENT PLAN, ESTABLISHING THE ZONING, AND ADOPTING

4 A DESIGN OVERLAY ZONE, ALL AS SPECIFIED IN THE HIGH DESERT SECTOR

5 DEVELOPMENT PLAN.

6 WHEREAS, the Council, the Governing Body of the City of Albuquerque,

has the authority to adopt plans for physical development within the planning and platting jurisdiction of the City as authorized by New Mexico Statutes and by the City Charter as allowed under home rule provisions of the Constitution of

10 the State of New Mexico; and

WHEREAS, the Council recognizes the need for sector development plans to guide the City, County, other agencies, property owners and other individuals to ensure orderly development and effective utilization of resources; and

WHEREAS, the Council recognizes the need for design guidelines for development of lands which contain highly scenic natural features or physical setting, or have highly significant views; and

WHEREAS, the High Desert Sector Development Plan has been reviewed
by the official planning bodies having jurisdiction over the plan area in
accordance with the interests and needs of the area residents and property
owners as expressed through public meetings; and

WHEREAS, the High Desert Sector Development Plan has been reviewed
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WHEREAS, the High Desert Sector Development Plan has been reviewed
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WHEREAS, the High Desert Sector Development Plan has been reviewed
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WHEREAS, the High Desert Sector Development Plan has been reviewed

WHEREAS, the High Desert Investment Corporation has prepared a sector development plan to guide future development of the plan area by addressing requirements for public services, land use zones; and deservices are deserved.

24 WHEREAS the Environmental Programs of the Environmental Program

By contail mattery related by planning considerable environmental protection approved the analysis of the deep Desert Sector Development Plan at

High Desert Sector Plan Max 3 1993 Recession Page i.2

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Page i.4 High Desert Sector Plan May 3, 1993 Revision

1	Section 2. ANNEXATION ACCEPTED. The petition and the are
2	specified in Section 1 and shown on the attached Exhibit A plat 1
3	hereby annexed.
4	Section 3. ZONE MAP AMENUED. The zone map adopted by Articl
5	7-14 R.O. 1974 Is hereby amended, establishing SU-2 for various lan
6	use categories including Design Overlay Zone, as shown on the attache
.7	Exhibit B and as more fully detailed in the sector development pla
8	adopted by Bill No. R-245 of the Tenth Council.
9	Section 4. SEVERABILITY CLAUSE. If any section, paragraph
10	sentence, clause, word or phrase of this ordinance is for any reaso

sentence, clause, word or phrase of this ordinance is for any reason held to be invalid or unenforceable by any court of competent jurisdiction, such decision shall not affect the validity of the remaining provisions of this ordinance. The Council hereby declares that It would have passed this ordinance and each section, paragraph, sentence, clause, word or phrase thereof Irrespective of any provision being declared unconstitutional or otherwise invalid.

Section 5. EFFECTIVE DATE AND PUBLICATION. This ordinance shall become effective five or more days after publication in full when a copy of the ordinance and a plat of the territory hereby annexed is filed in the office of the County Clerk.

High Desert Sector Plan Page i.6 May 3, 1993 Revision

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NOTIFICATION OF DECISION AUGUST 12, 1994 SU-91-3-1/Z-94-98 PAGE 2

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Sincerely,

Rex King Acting Planning Director

RK/KB/1q

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CC: Herbert Danish & Assoc., P.O. Box 2001, Albuq. NH 87103
Uni Priola, John B. Robert Neigh. Assoc., 12517 Royal Winslow Pl., Albuq. NH 87111
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1	community center, the 7.3 acre tract 8A; and
; 2	WHEREAS, the increase from 50,000 to 65,000 square feet for allowable
3	commercial space would result in an FAR of .20 for the 7.3 acre commercial area
4	and this represents a relatively low intensity of development; and
5	WHEREAS, development of the neighborhood commercial center would give
6	the community a degree of self sufficiency and would reduce vehicle trips outside the
7	community as intended by the High Desert Sector Development Plan; and
8	WHEREAS, the proposed amendment would not be harmful to the surrounding
9	High Desert community; and
10	WHEREAS, the Environmental Planning Commission found the Sector Plan
11	Amendment request was in conformance with all applicable plans including the
12	Albuquerque/Bernalillo County Comprehensive Plan; therefore,
13	BE IT RESOLVED BY THE COUNCIL, THE GOVERNING BODY OF THE CITY OF
14	ALBUQUERQUE:
15	1. That Section 4.A.5:1 of the High Desert Sector Development Plan is
16	amended to read as follows:
17	'1. The sale of alcoholic drink for consumption off premises, as an incidental
18	use within a grocery store, is permissive.'
19	2. That Section 4.A.5:5. of the High Desert Sector Development Plan is
20	amended to read as follows:
21	'5. A maximum of 65,000 net leasable square feet of retail sales and service
22	uses is permissive.'
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City of Albuquerque Planning Department Development Services Division P.O. Box 1293 Albuquerque, New Mexico 87103

High Desert Investment Corp c/o Doug Collister 13000 Academy NE Albuquerque, NM 87111 Date: December 21, 2001

OFFICIAL NOTIFICATION OF DECISION

FILE: 01138-01553 (Project #1001566)

LEGAL DESCRIPTION: Request an amendment to the High Sector Development Plan for a portion of Tract 15D1B1C, Desert Highlands at High Desert, zoned SU-2; HD/R-1 and located on Simms Park Road, NE between Tramway Boulevard NE and Cibola National Forest, containing approximately 9.32 acres. (E-24) Simon Shima, Staff Planner

On December 20, 2001, the Environmental Planning Commission voted to approve 01138-01553, an amendment to the High Sector Development Plan, based on the following Findings and subject to the following Conditions:

FINDINGS:

- 1. This is a request to amend portions of the text of the High Desert Sector Development Plan regarding a visual screening of structures as contained in Section 4.B.4: Highlands Design Overlay Zone, Building Height and Screening;
- 2. The amendment would apply specifically and exclusively to the property of approximately 9.3 acres in size, located adjacent to the Forest Service Lands to the north and to the east, as identified on the summary page map of the staff report;
- 3. The single most substantive amendment involved in the request would be to require native landscaping in lieu of the constructed berm as a visual screening device in order to minimize the adverse visual impact of residential structures on the approach to Simms Park;
- 4. The existing Sector Plan regulation requires that 100% of the view of the north wall of any building not exceeding the straight view line 9 feet above the average natural grade be blocked by topography and the constructed berm, and a minimum of 50 % of the view of the north wall of any building where the straight view line exceeds 9 feet above the average natural grade be obscured by native landscaping, respectively, from Simms Park Road;

OFFICIAL NOTIFICATION OF DECISION 01138-01553 (Project #1001566)
December 20, 2001
Page 3

YOU WILL RECEIVE NOTIFICATION IF ANY OTHER PERSON FILES AN APPEAL. IF THERE IS NO APPEAL, YOU CAN RECEIVE BUILDING PERMITS AT ANY TIME AFTER THE APPEAL DEADLINE QUOTED ABOVE, PROVIDED ALL CONDITIONS IMPOSED AT THE TIME OF APPROVAL HAVE BEEN MET. SUCCESSFUL APPLICANTS ARE REMINDED THAT OTHER REGULATIONS OF THE CITY MUST BE COMPLIED WITH, EVEN AFTER APPROVAL OF THE REFERENCED APPLICATION(S).

Successful applicants should be aware of the termination provisions for Site Development Plans specified in Section 14-16-3-11 of the Comprehensive Zoning Code. Generally plan approval is terminated 7 years after approval by the EPC.

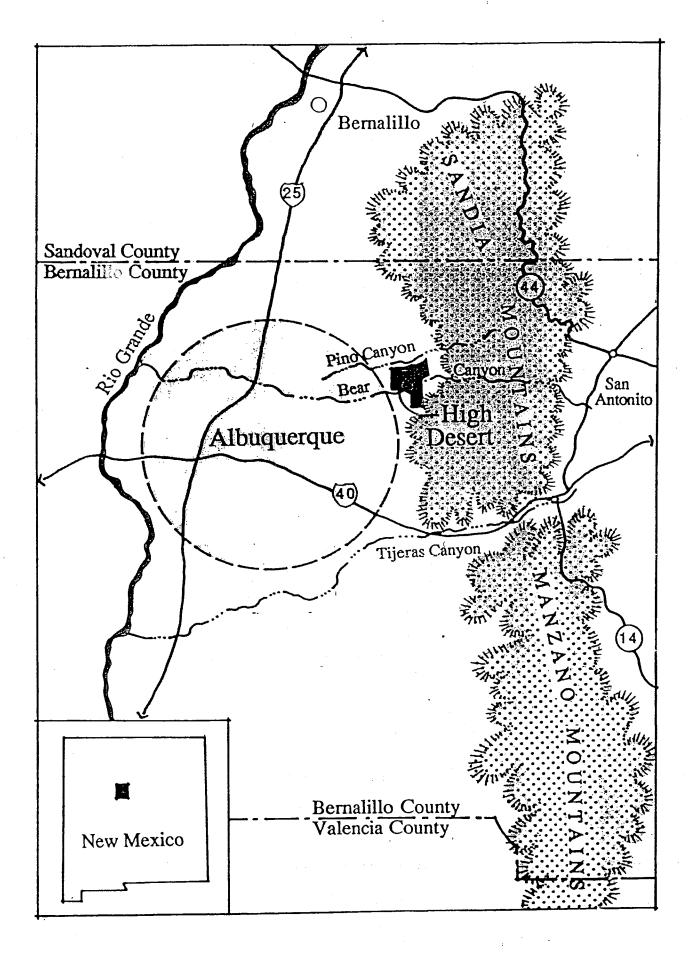
Sincerely,

David Steele

Acting Planning Director

DS/SS/nat

cc: Lawrence Kline, Herb Denish & Associates, Inc., P.O. Box 2001, Albuq., NM 87103



MAP 2: Site Vicinity



The Academy granted an extension to the City to close the transaction. In March 1982, the City Council voted to fund most of the purchase price through the issuance of bonds supported by a temporary 1/4 cent increase of the gross receipts tax, which went into effect that July. The temporary tax increase was widely supported by citizens of Albuquerque eager to see this and other lands brought into the public domain.

Conveyance

On July 2, 1982, the transaction was completed. Albuquerque Academy transferred 7,760 acres of land to the City of Albuquerque. The City then traded 7,120 of those acres to the federal government; this portion became part of the Cibola National Forest and Sandia Wilderness. A small portion of this acreage was reserved by the City as a water reservoir storage site, along with service road and water line easements. The federal government in turn conveyed to the City approximately 20,000 acres of Bureau of Land Management (BLM) land and other surplus federal land in New Mexico as payment. The Academy retains 20% of the excess proceeds from the sale of these properties.

Retained Lands

In final measure, the Academy retained ownership of approximately 1000 acres directly to the east of Tramway Boulevard to develop at some point in the future. It is made quite clear by the 1982 purchase agreement that this property was retained for development:

"The Academy is planning to develop the Retained Property. The City will cooperate with the Academy to permit development on the Retained Property consistent with orderly planning, including, without limitation, the construction of a reservoir as discussed herein, the approval of proper zoning for the development, the supplying of normal municipal services, including water and sewer services, and the approval of reasonable density requirements on those parcels on which dwelling units will be constructed, all subject to annexation and regular capital improvements programming."

Since the Transaction....

Since the transaction, the Academy has from time to time assessed the developability of the land against the fulfillment of its financial needs, knowing that the development of the property would eventually be necessary. That time has arrived. The school is prepared to undertake a high-quality, environmentally sensitive development to strengthen the endowment of the Academy, ensure the future of the school, and provide future generations the same quality education that is presently offered.

Founding of Albuquerque Academy

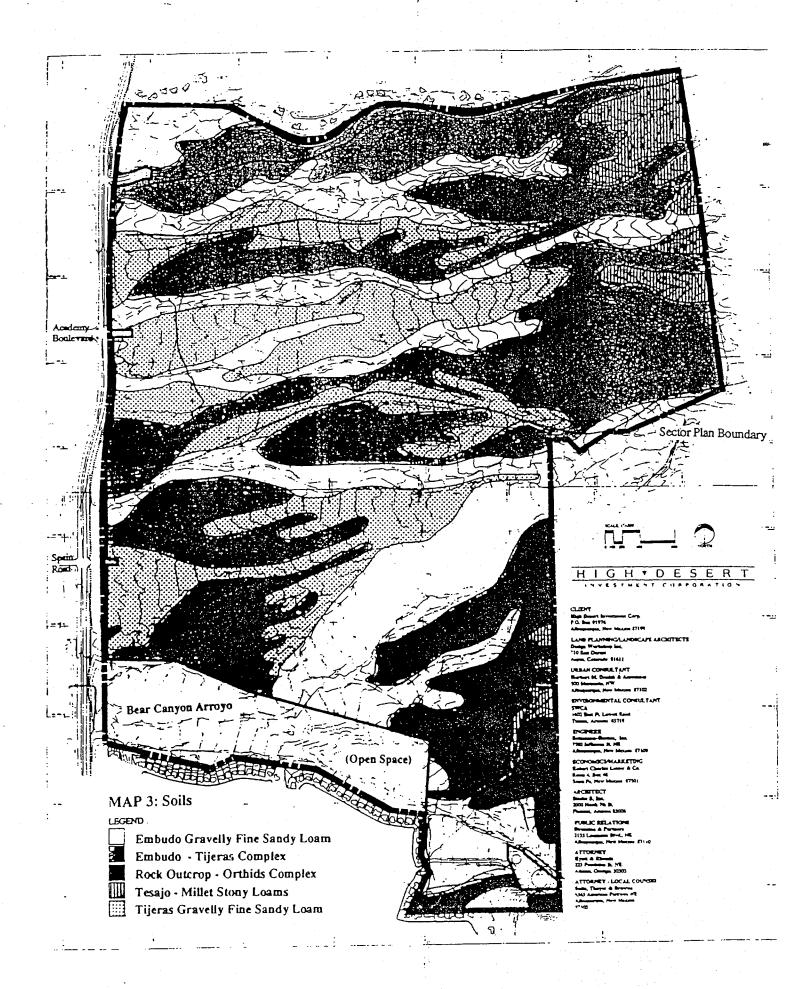
Albuquerque Academy was founded in 1955 by William B.S. Wilburn and incorporated as a nonprofit corporation in New Mexico in 1956. The Academy is fully accredited by the State of New Mexico to provide education in Grades 6 through 12.

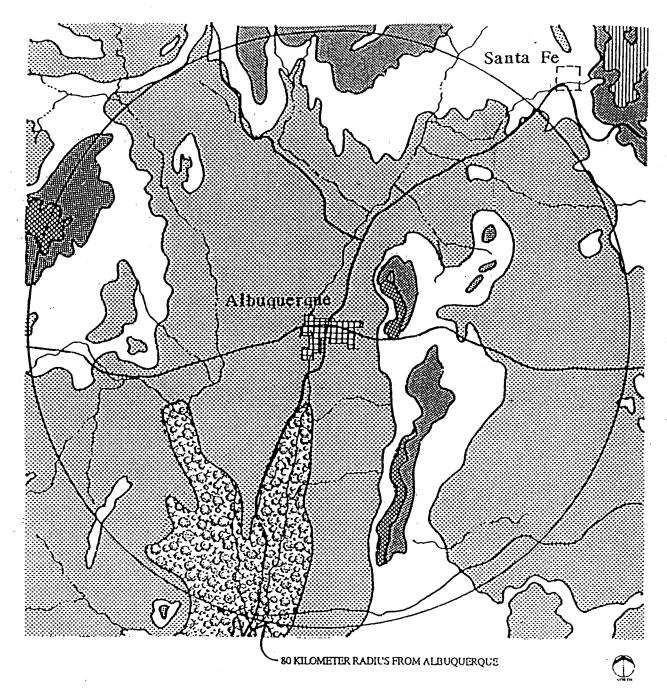
Formation of High Desert Investment Corporation

In June 1991, the Board of Trustees of the Academy authorized the formation of High Desert Investment Corporation, a wholly-owned "for-profit" subsidiary charged with preparing the Academy's land east of Tramway Boulevard for development. Control over the subsidiary reflects the deep environmental concern of the Academy Trustees, particularly, that the development be of the highest possible quality, and that the Academy's nearby Bear Canyon Scenic Easement Property continue to be protected and serve its role as an experiential education center.

High Desert Investment Corporation's approach to the development of the land is a reflection of Albuquerque Academy's continuing concern for the environment. The Academy, and High Desert, intend to make a major contribution to the quality of life in the community by setting the standard for environmentally sound planning in Albuquerque.

High Desert Investment Corporation's proposal for the site exceeds typical development practices by voluntarily undertaking an environmental evaluation which examines a wide range of issues including a complete survey of plants and wildlife, soil and topography, hydrology and water quality, drainage, archaeological sites, and much more.





MAP 5: Regional Bio-Geographic Setting LEGEND

Rocky Mountain Subalpine Conifer Forest
Rocky Mountain Montane Conifer Forest
Great Basin Conifer Woodland
Great Basin Montane Scrub
Subalpine Grassland
Plains and Great Basin Grassland
Semidesert Grassland



The property occupies a unique place in the Albuquerque landscape. It lies between the City and the mountains, and between two subdivisions (Sandia Heights and Glenwood Hills) that represent vastly different approaches to development. These factors, and the leadership role that Albuquerque Academy has taken in the community with regard to the environmental soundness of development, led High Desert to retain the services of SWCA of Flagstaff, Arizona. The following material is a synopsis of their environmental assessment of the property, which , as Volume 5 of the Sector Plan, is available for review at the Albuquerque Academy Library......

ENVIRONMENTAL EVALUATION

This property is located on the northeast side of Albuquerque on an alluvial fan at the base of the western slope of the Sandia Mountains at an elevation of 6,000 to 6,300 feet (MAP #2). Located at the northeastern edge of the city along Tramway Boulevard, the project area is bounded on three sides by residential development of varying types and on the east side by the Sandia District of the Cibola National Forest. Portions of the Forest Service lands which abut the property are a designated Wilderness area. The Albert G. Simms City Park is northeast of the project area and is separated from it by a small parcel of Forest Service land. Immediately south of the project area is the Bear Canyon Arroyo, that is part of the City's open space system and an interconnected trail system extending well into the city.

Property Description

The environmental evaluation includes overviews and analyses of a variety of physical, biological, and cultural resources. SWCA, Inc. was assisted in the preparation of this assessment by:

Methodology and Sources

CH2M-Hill, a local engineering firm, provided the analysis for the geology, hydrology and ambient air quality of the project site.

The Museum of Northern Arizona, provided information on the paleontological resources of the project site, and;

The local firm of Marron Taschek Knight Inc., analyzed the potential for occurrence of hazardous materials.

SWCA investigated the archaeological and ecological resources of the area and made determinations on short and long-term impacts to the project site and adjacent National Forest. The results of these investigations are presented in three sections:

The first section includes discussions of site geology and paleontology, landform and landscape character, trails, and geohydrology;

The second section discusses regional biogeography, habitat types on the property, wildlife, and protected species; a special section on mule deer has been provided due to local interest; and,

Biotic Factors

The third section presents the results of a Class 3 cultural resource survey and Traditional Cultural Properties investigations.

Human Factors

Physical Factors:

The project area is located along the eastern edge of the Albuquerque Basin, a large north-south tending structural basin located in central New Mexico. The basin consists primarily of unconsoli-

Geology

dated Cenozoic sediments (Santa Fe Group and associated deposits) which are up to 10,000 feet $thick. \ \ The western edge of the basin is defined by a series of sub-parallel faults. \ The eastern marginal edge of the basin is defined by a series of sub-parallel faults.$ of the Albuquerque Basin where the project is located, is defined by the Sandia and Manzano uplifts

Views on and off the site are important considerations of landscape character. Public hiking trails are generally considered to have the highest sensitivity to visual impacts. The views in this area are protected by distance from the site and screening of views by naturally occurring vegetation. The Foothills trail runs from Simms Park and Pino Canyon south through Forest Service lands crossing the High Desert property prior to reaching the Embudito Canyon trailhead. The trail that runs south from Simms Park to the wildemess area has middleground views of the site. Within the project vicinity the northern-most segment of the trail passes through junipers and drainages and has limited views of the property.

Viewsheds

Along the project's 2.4 mile border with the National Forest there are three points of public access: Simms Park Road, where a parking area in Simms Park provides 30 parking spaces; at the Embudito trail head in the southeast corner of the project site, where an additional 30 parking spaces are located; and via the Bear Canyon arroyo corridor. These areas already lie in public control, and public access at these locations will not be reduced in any way by development of this project.

Public Access

Groundwater is the primary source of drinking water for residents of Albuquerque and Bernalillo County. The alluvial sediments of the Albuquerque Basin typically provide prolific amounts of groundwater to properly sized and constructed wells. The natural quality of the basin's groundwater typically meets all state and federal standards.

Geohydrology

A records search and site survey for hazardous materials was conducted. Review of records found no evidence of past disposal or storage of hazardous materials on the property, and that no known sites were within a 1-mile radius of the property. Site surveys found no evidence of improper storage or disposal of hazardous materials, suspect industrial processes, or improper wastewater disposal.

Hazardous Materials

Biotic Factors

A wide variety of biotic communities can be found in the Albuquerque region as a result of differences in elevation and topography, and the consequent variation in precipitation, soil type, drainage, slope, and aspect. Seven upland biotic communities are found within an 80 kilometer radius of Albuquerque. The acreage of these upland communities within the project boundaries is depicted in Table 1. Due to restrictions of scale, riparian and xero-riparian habitat types are not included in the summary.

Regional Bio-Geographical Setting

Habitat types within the property were mapped and the vegetation volume measured in each of the delineated habitats (Map 6). These data were collected to provide a quantitative assessment of the habitat value and to form the basis for development of mitigation programs. Table 2 summarizes acreage, and vegetation volume index for woody perennial vegetation, perennial grasses, and total perennial vegetation. Upland habitats identified on the property includ Short Grass Prairie, Juniper-Short Grass Prairie Ecotone, and Interior Chaparral, together covering 828 acres of the project site. Numerous arroyos traverse the property. These drainages support three Xero-Riparian associations, which together cover approximately 158 acres of the property.

Habitat

The project occurs within a designated wildlife preserve. The wildlife preserve status of this and adjoining public and private lands is an administrative designation by the New Mexico Game and Fish Department that restricts hunting to archery. It has no other meaning or significance from a resource management perspective. The same designation also applies to Sandia Heights.

Wildlife Preserve

Wildlife Habitat

Wildlife species are typical of those expected to be found in the site's habitat types. There are no springs or other natural sources of water on the property to increase its value to wildlife. Breeding bird density is a good indicator of habitat value, and is closely correlated with the volume of woody perennial vegetation. Therefore, the measure of the relative value of wildlife habitats within the project area is based upon general considerations of habitat values as measured by plant community structure. Utilizing this relationship reveals that the Desert Willow Dominated Xero-Riparian habitat has the highest wildlife value on a unit area basis. The next highest are the Interior Chaparral and the Juniper Dominated Xero-Riparian habitats.

The Peregrine Falcon is federally listed as endangered. Peregrine Falcons nest in the Sandia Mountains, and the western face of these mountains is part of a raptor migration pathway. It is possible that a Peregrine Falcon occasionally forages or flies over the project site. The project site would not be considered to be important foraging habitat for Peregrine Falcons, however, because of the relatively low bird densities found throughout the year.

Birds

The Gray Vireo is a State Endangered Group 2 species. Preferred habitat of this bird is open woodland, normally containing juniper, pinon, and an assortment of small shrubs. Only one breeding pair of vireos has been reported in the Sandias and its occurrence on the property is considered unlikely because of its rarity in the Sandias and the relatively low densities of juniper which occur on site.

Mule Deer

While they are not protected by either Federal or State regulation, and thus not strictly under the charge of this report, interviews with concerned citizens indicated that there was a high degree of interest in the mule deer which populate the east face of the Sandia Mountains. The following special section addresses their role in this development.....

Mule deer are common in the Sandia Mountains east of the project site. They are also reported to occasionally occur on the project site as well as in developments north and south of the project area. Chaparral and Juniper/Pinon Pine/Oak habitats east of the project area provide primary winter range for mule deer in the Sandias.

While there is little in the way of quantitative population or habitat preference data for this herd, an aerial survey conducted on January 19, 1992 by the New Mexico Game and Fish Department to determine sex ratios of this deer population found 177 deer in one and one-half hours of flight time. These deer were all found between 7,500 and 8,300 feet in the Domingo-Baca/Pino Canyon area. The New Mexico Game and Fish Department also estimate, though there are no data or survey results, that an additional 200 deer occur in the Sandia Mountains east and southeast of the project site.

A viable, huntable population of deer on public lands adjacent to the development will remain after the development of the High Desert property. Development of the higher density portions will probably preclude the use of those areas by mule deer. However, just as mule deer are regularly found in residential developments north and south of the project area, they are also expected to occur regularly in lower density residential areas and interconnected natural open space areas within the project.

Cultural Resources

A cultural resources survey of the property was completed in October, 1991. The pedestrian survey covered 100 percent of the project area. During the survey two small archaeological sites were found. These sites are located within an area likely to be retained as natural open space. No Traditional Cultural Properties (ritual, ceremonial, or otherwise significant cultural sites) were identified in the project area.

Paleontology

No paleontological resources were found, and no impacts are expected. There is the potential for sub-surface deposits. If such deposits are unearthed during construction, a qualified paleontologist should be contacted.

Impact Assessment: Physical Factors Soils

The only adverse impact on soil resources that could be expected from development of the project is increased erosion as a result of stormwater discharges generated from within developed portions of the property. It is understood that stormwater generated from high-density portions will be discharged into a storm-drain system, and ultimately removed from the site into established public stormwater conveyance system. No adverse off-site erosion is expected.

Landform

The landform and landscape character of the site will be altered by development of this project. These impacts can be minimized by implementation of the recommendation provided.

It is very unlikely, given the nature of the habitat on the project site, for this development to adversely impact the Peregrine Falcon.

Peregrine Falcon

Because of the relatively low tree density of juniper and pinon on the project area; the fact that the species is considered unlikely to occur; and the ability to preserve in place the majority of trees that currently occur on the project site, it is extremely unlikely the development will have an adverse impact on this species.

Grey Vireo

There are two small pre-historic sites. While their location in the project area will protect them from direct impact, indirect impacts are possible. No traditional cultural properties were identified within the project area.

Impact Assessment: Cultural Resources
Archaeological Sites

The foregoing material was extracted from the report entitled "Environmental Evaluation of Albuquerque Academy Lands East of Tramway" prepared by SWCA, Inc. Environmental Consultants in February 1992. The

full text of the document is attached to the sector plan as Volume 5 and is available for inspection in the Albuquerque Academy Library. For ease of reference, the entire text of the "recommendations" portion of that

document is reproduced below.; you may also refer to Section 3 of this volume.....

Recommendations

Though no fossils were found on the surface of the two Quaternary rock units, there is potential for the presence of subsurface paleontologic resources which could be uncovered by construction activities. In the event that vertebrate fossils are uncovered during construction a local paleontologist should be called to assess the significance of the finds and to determine mitigation if any. Qualified paleontologists from the Paleontology Department of the New Mexico Museum of Natural History and the Geology Department of the University of New Mexico can be contracted for this work. Both institutions are located in Albuquerque.

Paleontology

Areas above the 10% Slope Demarcation Line should be protected by granting them as public open space. Impact on areas of arroyo sideslope greater than 10% should be mitigated through limitations on building siting, area, and construction methods.

Slopes

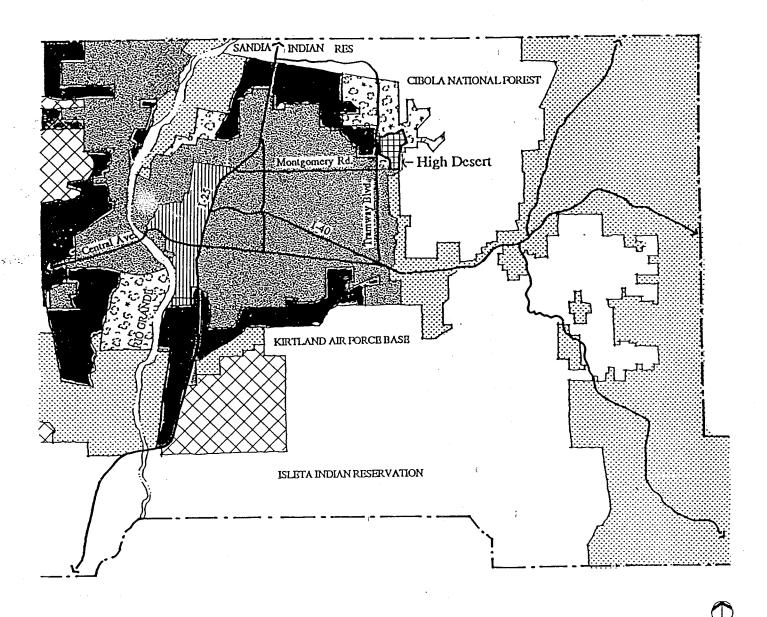
Recommendations to preserve, and/or mitigate impacts associated with development of existing landform and character are presented below:

Landforms

- Maintain arroyo land forms in an undisturbed or enhanced condition to allow for view corridors across the site to the valley and the mountains.
- Preserve existing trees on site, particularly in the Juniper transition area. Pre-select house building and grading envelopes to minimize disturbance.
- Minimize over-lot grading in order to maintain the character of the existing landform. To the
 greatest degree possible buildings and roadways should be designed to adjust for changes in grade rather
 than adjusting grade to compensate for the design of a building.
- Mitigate off-site views of Tramway through landscaping and earthen berms. Create openings in the visual screen at the arroyos to allow for views of the Sandias across the site.
- Landscaping, especially trees and in many cases shrubs, should be predominately native species either indigenous to the site or from upland and riparian areas immediately adjacent to the site.
 Large scale landscaped features, possibly employing skyline canopy trees such as Fremont Cottonwood or ash should be limited to designated portions of the site.
- Landscape buffers should be employed in combination with fences, walls or earthen berms, to control negative off-site or on-site views and noise.
- Limit building roofline and vegetation heights to protect views across the site, and to minimize contrast with the existing landform.
- Buildings should repeat the form, line, color (reflectivity) and texture of the existing site landscape and surrounding mountains.

SWCA recommends that vegetation lost through development be replaced, on a volume basis, at a 1:1 ratio. Native plants which occur in the adjacent foothills and low elevations of the Sandias, such as pinon, juniper, ponderosa pine, and Interior Chaparral species should be used. These species can be established at these lower elevations through implementation of appropriate water harvesting techniques. This approach would be consistent with overall project goals of water conservation. Not only are native trees and shrubs more appropriate as a landscape amenity than are the native grasses, they will also create a habitation the site which is structurally much more diverse than the existing grassland. As a result, breeding bird densities can be expected to increase on the property.

Habitat Value



MAP 7: Comprehensive Plan Concext Albuquerque Bernalillo County

LEGEND

Central Urban

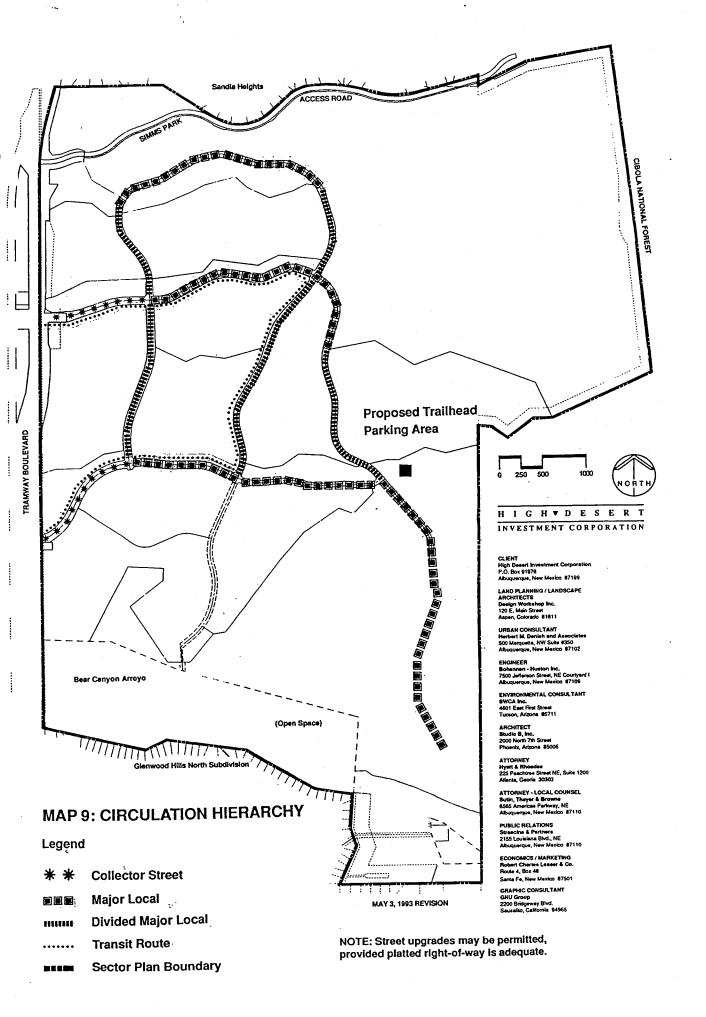
Established Urban

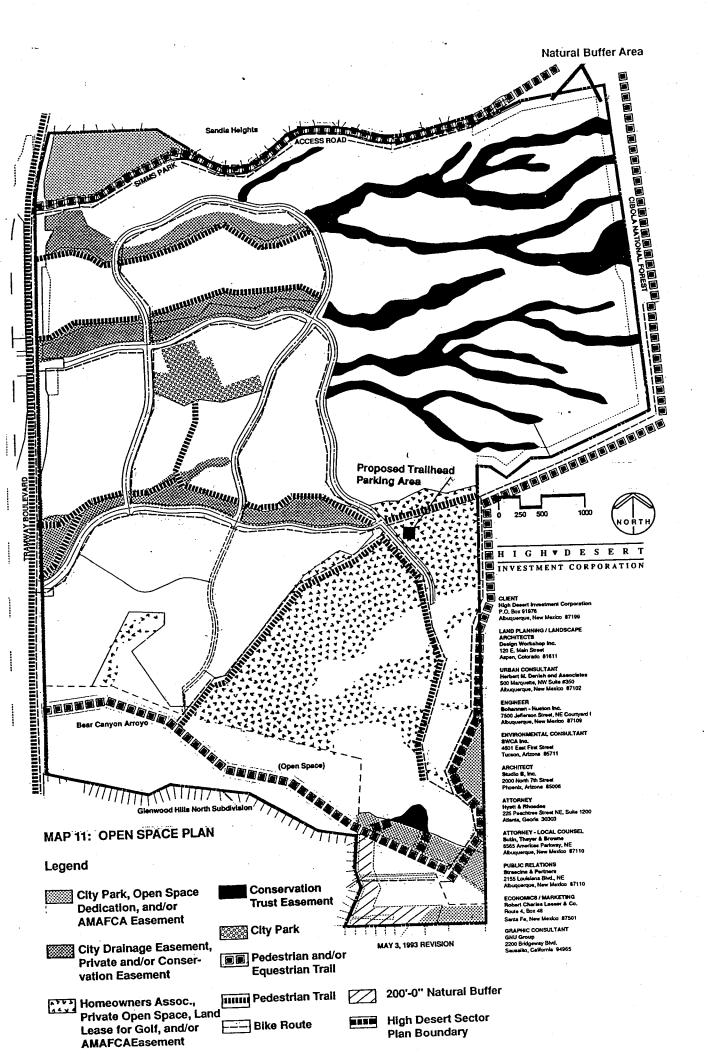
Developing Urban

Semi-Urban

Rural

Reserve







High Desert is set in the foothills of the Sandia Mountains. Its rolling contours are bounded by the City on one side and by the massive forms of the Sandias on the other. It is home to wildlife and wildflowers and is host to people seeking relief from the urban environment. The outdoors, and the relationship of man to his environment are important parts of New Mexico culture. As indicated in the previous section, planning for High Desert began with a thorough assessment of the environmental structure of the land, and a thorough appreciation of what impacts development would have.

Issues, Impacts, and Mitigations

Completion of the environmental studies set the stage for the development of a land use plan which would respect natural resources while providing a sustainable urban environment. Market research and social goals establish the mixture of uses and life styles. However, the plan must also direct attention to mitigation of environmental impacts external to the site, and must also comply with the policies set forth in the Albuquerque/Bernalillo County Comprehensive Plan. The purpose of this section is to document the aspects of this plan which address these issues. This section synopsizes impacts and responses that are further detailed in the other technical sections of this plan...

Project Setting

The High Desert Sector Plan comprises approximately 1067 acres at the eastern margin of the City of Albuquerque. It is the last large piece of undeveloped land between the urban areas of the city and the Sandia Mountains to the east, and is thus important in creating a suitable transition between urbanized and open natural areas.

The property lies at the end of Academy Boulevard, which reaches east from I-25 through a predominately residential portion of the city characterized by neighborhoods of single family detached houses, punctuated by clusters of apartments, shopping centers, and parks. Much of this development followed the Academy-Tramway-Eubank Sector development plan as approved by the City in 1978 and amended in 1984. All of the development proximate to the project site and west of Tramway Boulevard falls within the guidelines of that plan and is essentially complete.

To the north lies Sandia Heights. Like the northeast heights of the city, it is essentially a residential area, with limited public and commercial facilities. While it is in the County of Bernalillo it does have limited access to public utility services, and is characterized by a much more" natural" approach to development. Water courses, vegetation, and landforms are better preserved here than in traditional urban development. To the south is Glenwood Hills, the eastern-most extension of "typical" urban platting and development. Glenwood Hills North, most proximate to the project site, was created in the late 1970s from the bottom of the Embudito Arroyo. It is arranged to follow the banks of what is now the Bear Canyon Arroyo, and the phalanx of large single family homes which faces the project area forms a firm southern boundary.

To the east is Albuquerque's most significant natural feature, the Sandia Mountains and the forest and wilderness areas that comprise a huge natural open-space area. The rocky foothills of the mountain extend down to generally within a half-mile of the project area. In one area of its southeast corner, the a rock outcrop of the mountain protrudes into the property.

Hiking, hang-gliding, mountain biking, horse-back riding, and picnicking are all popular activities in the Sandias. The interaction between urban and recreational uses is of prime importance to development in the project area.

High Desert is envisioned as a planned residential neighborhood which seeks to create a sense of community by fulfilling seven primary planning goals:

 Completing the transition from urbanized to natural open space areas on the eastern side of the city. **Planning Goals**

High Desert Sector Plan October 1, 1995 Revision The Plan is presented in the form of an SU-2 Special Neighborhood Plan, due to the special zoning restrictions that are proposed. The Zoning Code states that such a plan is appropriate if:

Form of the Plan

"The areashould develop with a pattern of mixed land uses, which would need careful control and coordination of development at a sub-area scale in order to ensure a desirable inter-mixture of uses."

> **Description of** Land Uses

The land use plan proposed is a mixture of residential types ranging from single family units on large lots to apartments; a neighborhood center consisting of commercial, institutional, and recreational uses; an extensive system of public and private open space and trails; and opportunities for both active and passive recreation. The project as a whole will not be walled or secured, although individual subdivisions may be. These land uses and zoning designations for each area is illustrated on the Land Use Map (Map#10) described in Chapter 4. The proposed uses with their corresponding zones are, in brief:

> SU-2 HD-R-1 ["Estate" Lots]

This zone is intended for large single family detached units on larger lots adjacent to the Sandia Heights and forest service boundaries; building siting determined by "building envelopes" and large areas of land surface left in its natural condition. Approximate density: 1 dwelling unit per gross acre. The corresponding zone in the Comprehensive City Zoning Code is R-1. In addition to the general requirements of the plan, portions of this area are subject to the Viewshed Guidelines in Section 4.A.

SU-2 HD-R-LT

This zone is intended for large single-family detached units on a "standard" lot. Approximate density: 3 dwelling units per gross acre. The corresponding zone in the Comprehensive City Zoning Code is R-LT. Like the HD•R-1 area, portions of this zone are subject to Viewshed Guidelines.

["Custom" Lots]

 Both Estate and Custom Lot areas will be permitted to have "caretaker quarters" on the same lot as the primary unit. These are defined as "providing for elderly parents who desire a degree of independence yet need close attention, mentally and physically challenged individuals, or older children attending the university or other schools housing of individuals employed in the principal residence.". These units are part of the maximum building area allowed on each lot, and cannot be separately conveyed. A maximum of 200 such units is proposed. Additionally, there is a Design Overlay Zone for the area shown as "the Highlands"; refer to Section 4.B of this plan.

> SU-2 HD-R-T ["Garden" and Townhouse" Lots]

This zone is provided for traditional single-family detached and attached units development ranging from 4 to 10 dwelling units per gross acre. Lot layout is governed by typical setbacks, except where townhouses are "clustered" under special provisions of the zoning incorporated in Section 4 of this plan. "Over-lot" grading is anticipated. The equivalent zone in the Comprehensive City Zoning Code is R-T. Approximate average density: 7.5 dwelling units per gross acre.

> SU-2 HD-R-G* [Apartments]

This zone, equivalent to R-G in the Comprehensive City Zoning Code, except for its density limit, provides for townhouse and low density apartment construction up to 13 dwelling units per net acre.

This area contains the commercial and institutional uses of the plan, including the retail services, church, and school; it may also be used for townhouse and apartment developments. It is to be sited immediately adjacent to a central 10-acre public neighborhood park (as defined in the Parks Facilities Plan) and will be the focus of an internal trail system.

> SU-2 HD-C-1* [Neighborhood Center]

It is the equivalent of the C-1 Neighborhood Commercial Zone, with the addition of several permissive uses, notably full-service sale of liquor in restaurants and outdoor activities including outdoor restaurants. The area is limited to 65,000 net leasable square feet of retail and service uses.

> SU-2 HD-R-R Recreational and Resort]

This zone, which encompasses the area between the north edge of the Bear Canyon Arroyo and the north edge of the Embudito Arroyo, combines a variety of uses ranging from flood-plain and resource efficient golf course through a potential resort and conference center. Consequently, it is designed to allow various levels and types of review for various uses; it is the only zone in the plan without a City equivalent. This zone shall require site development plan approval by the Environmental Planning Commission for any proposed golf-course, related facilities, and resort/conference

High Desert Sector Plan March 19, 1999 Revisior

^{*}Due to requirements of the Subdivision Ordinance, tracts in the Sector Plan zoned SU-2 HD R-G and SU-2 HD C-1 must be returned to the DRB for platting and compliance with Subdivision Improvement Agreement and Subdivision Ordinance requirements prior to or as part of their development.

Land Use Allocation Table 3.A.

the state of the s	Δ.	Probable Buildout		W	Minimum Buildout ¹	
Land Ose Designations	Gross Acres	Dwellings Allowed	Gross Density	Gross Acres	Dwellings Allowed	Gross Density
SU-2 HD•R-1	321	380 2	1.18	321	335 2	1.04
SU-2 HD•R-LT	203	460 2	2.26	203	405 2	2.00
SU-2 HD•R-T 3	223	1160	5.20	223	1050	4.71
SU-2 HD•R-G	33.1	430	13.0	33.1	380	11.48
SU-2 HD•C-1 4	26.9	30	4	56.9	0	
SU-2 HD•R-R ³	180	300	1.67	180	260	1.45
Developable Acreage Subtotals	, £ £86	2730	2:77	- 687	2400	2.43
Bear Canyon Open Space	615	ŧ	ı	61		1
Tramway Boulevard Right-of-Way	135		1	13	•	•
Simms Park Access Right-of-Way	6 2	•		9		
Non-Developable Acreage Subtotals 5	80		1	08		
Total Land Use Allocation	1067	2730	2.56	1067	2400	2.25

Regulations) provides that the High Desert Homeowner's Association must certify to the City, prior to application for any required approval, that proposed plans and plats do not exceed the maximums allowed by the Plan. However, no units may be added to the 165 units allowed in the "Highlands" and the density on any 1. Unit counts refer to the maximum number of units that can be built throughout the plan area; internal transfers may occur. Section 4 of the Plan (Zoning site after units are transferred in may not exceed the density permitted by the land use category mapped for the area.

3. The densities for these zones appear low due to the large amounts of public or private open space contained in each zone. The respective maximum buildout 2. These zones also permit caretaker quarters on the same lot as the primary residence; 110 such units in the R-1 zone; 90 such units in the R-LT zone.

densities on the developable acreage are: 5.71 in the R-T zone, and 2.85 in the R-R zone.

4. The C-1 zone is composed of a 10 acre neighborhood park site, an 8 to 10 acre school site, a 5 to 7 acre church site, and a 3 to 5 acre neighborhood shopping

5. These areas were conveyed to the public prior to the development of this plan, and are thus not part of the developable acreage.

High Desert Sector Plan October 1, 1995 Revision

"Development in semi-urban areas shall include trail corridors, where appropriate, and shall be compatible with economic policies and historical and socio-cultural values, and shall maintain and integrate existing and new buildings and spaces of local significance into the community."

Policy B

Visual and physical access across the site is critical to the interface between the City and its most significant recreational asset, the Sandia Mountains. The relationship between urban aggregations and natural open areas is a critical socio-cultural element of life in New Mexico.

The site is essentially alluvial in nature, and the system of arroyos, perpendicular to the mountains, is a long standing physical and psychological connection between the City and the mountain. To the extent possible these arroyos are preserved in the plan to maintain and enhance the environment.

The north and south boundaries of the site are defined by arroyo beds. The more significant of these is the Bear Canyon Arroyo which separates the site from Glenwood Hills to the south. Proceeding from a narrow rock-lined channel within the Bear Canyon Scenic easement to the east of the site, the floodplain of the Bear widens as it crosses the alluvial fan; in places it is up to 500 feet wide. The entire course of this arroyo is to be protected. The easternmost extension of the trail system defined by the Bear Canyon Arroyo Corridor Plan will run through it. A sub-trail will lead up the course of the Embudito Arroyo to the City's existing trail-head at the Simms Reservoir. A secondary trail will lead up the Bear Canyon itself.

The north boundary of the site is defined by the access road to Simms Park. The roadway follows the banks of an existing arroyo, and this system will be paralleled by an equestrian/pedestrian trail. The two east-west arms formed by the Embudito Trail and the Simms Park Access Trail will be joined by a north-south trail lying primarily within Forest Service property.

Two other main arroyo systems internal to the site, the Bear Tributary and the South Pino Tributary Arroyo, will also be maintained in their natural state and will be paralleled by multiple-mode transportation corridors. Each will contain a pedestrian and bicycle system as well as one of the main access road extensions.

Policy C governs the manner in which commercial and industrial development will be provided. There are three thematic elements to this policy:

Policy C

- 1. Neighborhood-scale centers are appropriate.
- 2. Strip commercial is discouraged development should be clustered at major intersections.
- 3. Mixed use areas should protect residential uses, and offer local employment opportunities.

The plan contains a mixed use area of approximately 30 acres devoted to four major public uses: shopping, church, park, and school facilities. The retail and service uses would consume approximately 3 to 5 acres of land and would be limited to 65,000 square feet of leasable area. Consequently, the marketing area of the center will be limited to the project and its immediate environs. It will also employ approximately 150-250 persons, thus providing some opportunity for employment on-site. This is the equivalent of a small neighborhood shopping center. The remainder of the site would be allotted to a school site (approximately 10 acres) and church site of approximately six acres. Each of these uses will be arranged for adjacency to a neighborhood park (as defined in the Parks Facilities Plan) park element approximately ten acres in size, simultaneously fulfilling the park requirement for the development, as well as satisfying the need for a centralized public space to serve as the focus of the new community. To the extent possible, all these uses will share common parking facilities.

The neighborhood center is situated to place the majority of the project residents within a one-half-mile walking radius to the center. A network of paths, trails, and sidewalks will be provided to connect residences with the neighborhood center and recreational trail system. An extension of the City's mass transit system is proposed to link the neighborhood center to Academy and Spain and the balance of the City transit system.

- The steep rock outcrops in the southeastern portion of the property, with the exception of "the knoll" will be dedicated as Public Open Space; the knoll will be retained as a natural open area through private easements. These areas comprise approximately 12 acres or 0.8%.
- An additional 20% of the ground surface including the minor arroyos in the HD•R-1 or "Highlands" areas will, although privately held, be left undisturbed through development restrictions such as floor area ratios, building envelopes, or conservation easements.

Through these actions, fully 40% of the gross land area of the site is protected as Public Open Space, private open space, or lands left in their natural state. High Desert will use New Mexico's new conservation easement laws for the first time. The private open space areas will, in the majority, be granted to a conservation trust for protection; while the individual owner could freely use the property, alterations to the land or its vegetation would not be permitted except to mitigate a public hazard. It is probable that the five-year old Albuquerque Conservation Trust will be selected for this purpose, thus offering a strong and valuable endorsement for this local group.

Preservation of the Natural Land Surface

The native vegetation, natural topography, and views in many areas that will be developed are also being protected by the designation of building envelopes, rather than standard setbacks. Floor area ratios which limit the size home that can be built on each lot have been established to preserve a balance between built area and open area on each site. All construction, including all non-native landscaping installations, must take place within the enclosed areas of the envelope, thus preserving the rest of the lot surface in its native state. Outside the envelope, only native plant material can be used, thus enhancing the natural landscape and minimizing the use of irrigation water. Temporary drip-irrigation systems could be used during the initial growing seasons, but permanent irrigation will not be encouraged. Means of using developed run-off from roofs and paved areas are being investigated but are not proposed as part of this plan. Low pollen producing plants will be strongly encouraged.

Preservation and Enhancement of Vegetation

In development, vegetation is removed, disturbing wildlife habitats and making the ground susceptible to erosion. This impact will be mitigated by:

- Replacing lost vegetation with equal or greater volumes.
- Developing a plant palette consistent with the natural landscape.
- · Limiting grading to limit vegetation loss.

In addition to conserving resources, many aspects of the plan are designed to enhance them. Foremost is the habitat replacement plan or "vegetation budget". Development by its nature removes habitat. By calculating the amount of vegetation to be removed, a quantity of plant material to be re-planted is thus established. Doing so not only mitigates the loss of existing material, but actually results in a total net increase of vegetation for wildlife habitat. There are several distinct types of habitat in the plan area, some of which are more important than others in fostering wildlife. Development will take place in the least vital habitat areas. The volume of habitat removed is then replaced by an equal or greater volume of the habitat types most likely to support wildlife on the site.

Plant Palette

An extensive native plant palette will be developed to ensure that landscapes within the development are consistent with natural landscapes on public lands adjacent to the project. Native plants which occur in the adjacent foothills and low elevations of the Sandias, such as pinon, juniper, ponderosa pine, and Interior Chaparral species should be used. These species can be established at these lower elevations through implementation of appropriate irrigation techniques. The water-harvesting system described elsewhere in this plan is consistent with overall project goals of water conservation. Not only are native trees and shrubs more appropriate as a landscape amenity than are the native grasses, they will also create a habitat on the site which is structurally much more diverse than the existing grassland. As a result, breeding bird densities can be expected to increase on the property.

The plant palette, except for small areas adjacent to residences and enclosed by walls, will utilize native trees and shrubs exclusively. The goal of the landscaped planting within the development will be to increase the volume of woody perennial vegetation two and a half times over the existing condition. Studies have demonstrated that within urban areas the density and diversity of native breeding bird populations are directly correlated with the volume of native woody vegetation. The ultimate goal of this wildlife landscaping theme will be to maintain the same volume of perennial

Transition Area will be preserved, and building and grading envelopes will be preselected to minimize disturbance.

Use of Building Envelopes

Current zoning districts within the city-provide for the establishment of building setbacks based upon standard dimensions from front, rear, and side property lines as prescribed in the city code. In order to limit encroachment of buildings into the major arroyos of the site, respond to site topography, and preserve existing vegetation, High Desert's HD•R-1 and HD•R-LT zones establish a building envelope. This envelope, which will be recorded on the final plat for each portion of the development in these zones, will establish setbacks on an individual lot basis. In establishing building envelopes, existing drainages, vegetation, and topography, as well as views to and from adjacent lots will be considered. The building envelope will serve as the limit of all improvements, including landscaping. Within the envelope, exotic species and traditional irrigation will be allowed. Outside the envelope drip irrigation systems will be encouraged, and only native plant species will be allowed.

Building Heights

Building heights and site lighting levels will also be keyed to view preservation.

From the neighborhood center, residential land use densities transition from higher densities in the project center to lower densities at the borders with adjacent lands. The lowest structures, governed by the Highlands Design Overlay Zone Regulations and in the Special Regulations related to Glenwood Hills (both contained in Section 4), will be against the boundaries with the Forest Service lands. Apartments within the project are located next to the neighborhood center. This also places the tallest buildings within the interior of the site with lower buildings along Tramway. Such a relationship provides a more visually pleasing interface with Tramway Boulevard and in turn responds to concerns expressed in meetings with residents of adjacent neighborhoods.

Site Lighting

In order to conserve energy and preserve night views of the city skyline and night sky, it is proposed that street lights in the eastern, estate lot portion of the property be limited to major intersections and the ends of cul-de-sacs. This portion of the project is proposed to be of comparatively low density. It is not believed, therefore, that the typical lighting standards of more urbanized areas is appropriate for this condition. This limitation on street lighting is also consistent with the desires of residents in adjacent neighborhoods. Street lighting throughout the remainder of the project will be low level, decorative fixtures at standard city spacings. In addition solar energy efficient lighting systems will be considered along designated bike and pedestrian pathways.

Project Boundaries and Interfaces

While attempting to incorporate its own land use standards, new development must be sensitive too the social and physical character of the properties which bound it. The project area has four "faces" - the semi-rural nature of Sandia Heights; the urban quality of the Tramway frontage the semi-urban character of Glenwood Hills; and the natural character of the Bear Canyon Public Open Space and the foothills. The following paragraphs describe how each of these aspects is to be treated:

Sandia Heights

The same size lots or larger as those found in Sandia Heights are proposed in order to maintain continuity with the pre-existing neighborhood. Furthermore, based upon numerous conversations with the Sandia Heights neighborhood association, no road connections between High Desert and Sandia Heights are proposed. Subdivision standards for these portions of the project will include narrow roadways, low impact street lighting and natural landscaping consistent with the character of Sandia Heights. We believe this approach is consistent with the wishes expressed by neighbors during several meetings with the neighborhood association.

In addition to these steps, it is also proposed that approximately eighteen acres of land in the North Pino arroyo, which divides Sandia Heights from High Desert, be dedicated to the City for open space. (Please see table 3.B for a list of private and public open space areas and their disposition) This will preserve a natural division between the two communities. This dedication is proposed to be made in a manner that will not preclude limited development of this land as a neighborhood park. In order to ensure that any such park development does not negatively impact the adjacent homes, prohibition of parking areas and lighted ballfields will be a condition of the dedication. Dedication of this land will be made in conjunction with final plat approval of the adjacent residential lands.

The recently adopted Bear Canyon Arroyo Trail System will pass through and become part of this site. Easements will be provided for trails through the Bear Canyon where it traverses the project to a point of intersection with the existing north-south trail within Forest Service lands; and along the Simms Park access road to the closest point of approach to Simms Park. The project will not result in alteration of the existing points of public access to public forest lands east of the project area.

Cultural Resources Paleontology

Though no fossils were found on the surface there is potential for the presence of subsurface paleontologic resources which could be uncovered by construction activities. In the event that vertebrate fossils are uncovered during construction a local paleontologist should be called to assess the significance of the finds and to determine mitigation if any. Qualified paleontologists from the Paleontology Department of the New Mexico Museum of Natural History and the Geology Department of the University of New Mexico can be contracted for this work. Both institutions are located in Albuquerque

Archeology

There are two small pre-historic sites in areas to be dedicated as open space. While their location in the project area will protect them from direct impact, indirect impacts are possible. No traditional cultural properties were identified within the project area.

Although final plans have not yet been prepared, a mitigation plan to avoid the potential for indirect impacts to the two small historical sites located within natural open areas in the project is likely to include detailed site mapping, recordation, and surface collection of cultural materials, and limited test excavation to confirm the expected absence of significant subsurface deposits. The State Historic Preservation Officer will be consulted during planning of the proposed mitigation program to ensure compliance with all applicable laws and regulations.

Both pre-historic sites have been registered with the New Mexico State Laboratory of Anthropology and are considered potentially eligible for the National Register of Historic Places under Criterion "D". These sites should be avoided in the development of the property. Because of the potential for indirect impact, it is further recommended that the sites be recorded in detail and surface collected. This work should be planned and implemented by a qualified archaeologist. The ten Isolated Occurrences are deemed "not eligible" for the National Register of Historic Places.

It is possible, though not probable, that buried cultural deposits are present in the project area. In the event that historic or pre-historic artifacts are uncovered during construction a local archeologist should be called to assess the significance of the finds.

Infrastructure Issues

High Desert, like any development, is dependent on the provision of public infrastructure to service its residents. The High Desert Development will impact each of those infrastructures as well as the regional systems and must be assessed.........

Traffic

The project is accessed from Tramway Boulevard by Academy and Spain Roads. Of these two roadways, Academy is assumed to be the principal entrance into the project as it is classified as an arterial street on the Long Range Major Street Plan. Extensions of these two roads within the project form a loop road system which will serve the majority of the development and offer easy automobile access to the residential areas. This loop will also carry the City's Suntran bus system. No other access points from Tramway Boulevard are contemplated as Tramway is a limited access road, nor are direct connections to Sandia Heights or Glenwood Hills being considered, except for the twenty-nine units proposed for the Panhandle Area south of the Embudito Arroyo. In order to enhance the appearance of Tramway Boulevard, High Desert will augment landscaping in easements within the Tramway right-of-way adjacent to the main entry points for a period of three years, at which time the easements and landscaping shall revert to the City.

A traffic study involving the projection of generated trips and the analysis of intersection volumes and capacity was performed as part of the preparation of this plan. The Traffic Impact Analysis, which is attached in its entirety to the Plan as Volume 2. The major thrust of the traffic studies to date has been to gauge the impact of the traffic produced within the project on the street network outside the project; the internal street network must still be analyzed to assure that circulation within the project is properly designed in accordance with DPM standards*. The major conclusions of the study are:

system of bike trails. The location of the "neighborhood center" will help reduce internal automobile trips, while simultaneously discouraging the importation of vehicle trips from beyond the project boundary. The design of the roadway system for the project is also conducive to use of the City's transit system.

In order to reduce the impact of wood-burning, the following table is hereby adopted limiting the number of wood-burning fireplaces permitted in the Sector Plan Area:

Table 3.C: Fireplace Limitations

Residential	% With	No. With	% With	No.With	Total
Zone	Fireplaces*	Fireplaces	Gas Only	Gas Only	Units
HD•R-1	100	380	0 .	0	380
HD•R-LT**	100	460	0	0	460
Caretaker Units	0	0	100	200	200
HD•R-T	50	580	50	580	1160
HD•R-G	0	0	100	430	430
HD•R-R***	0	0	100	350	350
UD-K-K	•	•			

^{*} Fireplace means a constructed hearth or integral unit burning wood as its principal fuel. All fireplaces shall be equipped with a gas-starter device. No more than one woodburning fireplace is permitted per unit; all other fireplaces must be gas fired using artificial logs. An EPA approved woodburning stove or a gas-log fireplace may be substituted for any woodburning fireplace.

Stormwater Management

The stormwater management system was derived directly from environmental criteria calling for the preservation of the natural landscape of the arroyos and the enhancement of natural vegetation in arroyos. To accomplish these stormwater management goals, the development can be divided into four major land use areas employing different drainage management concepts. These major land use areas consist of varying degrees of intensity ranging from undeveloped open areas to commercial and institutional development. The following paragraphs contain general descriptions of the various land use areas and their associated drainage management concepts.

Flood Plain Zone

The flood plain zone is those areas that could potentially be inundated in a 100-Year Storm, and will be set aside as separate parcels for public and private open space and stormwater management purposes. These include the Bear Canyon and Embudito Arroyos, and the portion of the Pino Arroyo immediately adjacent to Sandia Heights. No development is proposed for the floodplain zones other than recreational uses.

The land use plan allows for the potential development of a golf course primarily within the southern arroyo systems on the property. Design and installation of the golf course will minimize obstruction to the flows of the arroyo by restricting major grading operations to the existing land forms and contours.

Arroyos are to remain in a natural condition conveying essentially historic flows. No improvements to the arroyos are planned except for occasional crossing structures. Present plans call for one free-span crossing of the thalweg of the Bear Canyon Arroyo which will not interfere with the flow regime.

The legal disposition of the easements for these arroyos is discussed in the Drainage Management Plan, Volume 4, and is charted in Table 3.B on page 3.7.

^{**} If any custom lots are placed into townhouse uses, then these dwelling units will fall under the requirements listed in the townhouse zone

^{***} Woodburning fireplaces would be permitted in common use areas, such as lobbies, lounges, and ballrooms, etc., if the resort option is excercised.

Water and Sewer Provision

Consequently, the site is to be annexed in its entirety and served by public systems; wells and septic tanks will not be permitted, except for one well, which if private, could be used only for irrigation of the golf course, if any; and if public, would be used for supplying the Canada or Simms Reservoir when constructed. Recreational uses may in the future be irrigated with partially treated effluent of sufficient standard as to not threaten groundwater supplies. Otherwise, the project will utilize City water services. In addition, the project will utilize Albuquerque's municipal sewer system, avoiding the potentially adverse impacts septic systems may have on the quality of ground water.

Nota Bene: The use of treated effluent for irrigation cannot presently be, and is not, approved by the City as part of this Sector Plan. Implementation of this technique will require approval of a private tertiary treatment plant, approval of all State and Federal environmental permits and amendment of the City's Wastewater Facilities Plan.

Closed Loop System

The construction of the Canada Reservoir, the Simms Pump Station, and the connecting transmission line may be required for permanent service to Water Zones 11E and 12E, of which the eastern half of the project area comprises a portion. Water service to this portion of the project will be provided through a closed-loop pumping system until such time as the Canada Reservoir is ready for service. As water service to these areas would be in advance of public system provision, the cost of the system, including the electrical costs, will be paid by High Desert. The pumping station for this system would be located at the Simms Reservoir site.

Implementation

Funding of master-plan water and sewer lines throughout the project will be handled in accordance with standard City Water Utility Extension Policies. All other utilities constructed to service the project that are not master-planned facilities will be designed, financed, and constructed by High Desert under normal subdivision improvement procedures.

Existing easements and rights-of-way for major utilities at the project boundaries are shown Volume 4. Easements and rights-of-way for major utilities within the project will follow the schematic locations of water and sewer lines shown in Volume 4. These generally follow, and are congruent with, transportation corridors and their location within these corridors will be approved with the subdivision design process. Water and sewer lines crossing existing or proposed Public Open Space (which in general is the bottom of major arroyos) will be designed in accordance with standards for locating utilities in such areas and will be modified as requested and approved during the design process.

- 5. Parking Reserve Areas as defined herein.
- 6. Lot Size

3.

- a. If developed as detached houses, minimum net lot area shall be 7,500 square feet, and minimum lot width shall be seventy-five (75) feet.
- b. If developed as townhouses, minimum net lot area shall be 4,200 square feet and minimum lot width twenty-two (22) feet.
- 7. Floor Area Ratio
 - a. If developed as detached houses, lots shall have a maximum floor area ratio of 0.65.
 - b. If developed as townhouses, lots shall have a maximum floor area ratio of 0.70.
- 8. Clustering of Townhouses

Notwithstanding the provisions of this plan, or any provision of the Comprehensive City Zoning Code, up to eight (8) townhouse units may be clustered on a townhouse site as defined herein provided that a subdivision plat shall be approved by the City showing that: the minimum area of such site is equal to the number of units times the minimum net lot area defined above; that the Off-Street Parking Regulations of the Comprehensive City Zoning Code are met; that the minimum amount of area conveyed for ownership (including the townhouse, any accessory structures, and private outdoor spaces) is not less than 1400 square feet as measured at the ground plane; that proper evidence of common title to the residual lands is evidenced on the plat; and that proper evidence that the residual lands may only be used for common open areas, vehicular circulation, or recreational purposes is also shown on the plat.

Section 4.A.3: SU-2 HD•R-T

This zone corresponds to the R-T Residential Zone in the Comprehensive City Zoning Code and provides suitable sites for houses, townhouses, and uses incidental thereto. It is subject to the same regulations as that zone with the following exceptions:

- 1. Density: A maximum of 1160 dwelling units is permitted in this zone.
- 2. Private parks as regulated in the HD•R-1 zone are permitted.
- 3. Public or private recreational trails as regulated in the HD•R-1 zone are permitted.
- 4. Parking Reserve Areas as regulated in the HD•R-1 zone are permissive.
- 5. Floor Area Ratio shall be as regulated in the HD•R-LT zone.
- 6. Clustering of Townhouses, as regulated in the HD•R-LT zone.

Section 4.A.4: SU-2 HD•R-G

This zone corresponds to the R-G Residential Zone in the Comprehensive City Zoning Code and provides suitable sites for houses, townhouses, and low density apartments. It is subject to the same regulations as that zone with the following exceptions:

- 1. Density: A maximum of 430 dwelling units is permitted in this zone; density shall not exceed 13 dwelling units per net acre.
- 2. Private parks as regulated in the HD•R-1 zone are permissive.
- 3. Private or public recreational trails as regulated in the HD•R-1 zone are permissive.
- 4. Parking Reserve Areas as regulated in the HD•R-1 zone are permissive.
- 5. Clustering of Townhouses, as regulated in the HD•R-LT zone, is permissive.

Section 4.A.5: SU-2 HD•C-1

This zone corresponds to the C-1 Neighborhood Commercial zone in the Comprehensive City Zoning Code and is subject to the same regulations as that zone with the following exceptions:

- 1. The sale of alcoholic drink for consumption on premises is permissive; and, the sale of alcoholic drink for consumption off premises, as an incidental use within a grocery store, is permissive.
- 2. The following additional services and special events with outdoor storage and activities are permissive:
- a. Outdoor retail sales of food and drink including alcoholic drink for consumption onpremises.
 - b. Music, Theater, and Artistic Performances
 - c. Crafts Fairs
 - d. Antique Fairs
 - e. Farmer's Market

High Desert Sector Plan March 19, 1999 Revision

Section 4.A.7: Provision for Design Review

- 1. Unless otherwise provided herein, the zones described in this Sector Plan shall be developed in accordance with the regulations and procedures of the Subdivision Ordinance and Comprehensive City Zoning Code. Further the High Desert Homeowner's Association or its successors shall certify to the City at time of submittal for approval to the Development Review Board that any proposed plat meets the requirements of the Sector Development Plan, and at time of submittal for building permit for new construction or renovation, that any construction plans meet the requirements of the Sector Plan. The Homeowner's Association shall further certify that the number of units constructed in the zone does not exceed the maximum allowed by the Sector Plan.
- 2. Where so provided herein, approval of the Planning Director shall mean delegation to the Development Review Board.
- Where so provided herein, approval of conditional uses shall be subject to the provisions of the Special Exceptions provisions of the Comprehensive City Zoning Code.

Section 4.A.8: Definitions

Unless otherwise provided herein, all terms are defined as they are defined in the Definitions of the Comprehensive City Zoning Code.

- 1. Area, Net Lot is the lot area remaining after dedication of public right-of-way or the granting of access easements, but prior to the granting of easements for any other purpose.
- 2. Assisted Living Facility is an apartment or complex of apartments including medical facilities serving only those living on-site, and providing living assistance and skilled nursing care to those residents unable to care for themselves or requiring assistance with day-to-day functions. It does not replace the group residential programs defined in the Definitions section of the Comprehensive City Zoning Code, but is intended, like "caretaker quarters", to provide for an alternative life-style. It does not provide the diagnostic services or treatments associated with hospitals. Such facilities may be subject to licensing by the State of New Mexico.
- 3. Building Envelope means an area proscribed on the plat of an individual lot which limits horizontal development of the lot in response to topographic, drainage, and other natural features of the site.
- 4. Caretaker Quarters means separate living quarters with not more than one bedroom, bath, and kitchen facilities, contained within or attached to the house or an accessory building on a residential lot.
- **5. Cluster Townhouse** means a group of townhouses on a given site where the majority of land area is held in common and separate title is held only to a living unit, its accessory structures, and private outdoor spaces.
- **6. Commerce Association** means the High Desert Commercial Owner's Association, a New Mexico non-profit corporation, responsible for the administration of all non-residential property and common area within non-residential areas within the community and for the preservation and maintenance of architectural standards for the commercial properties under the Declaration of Covenants, Conditions and Restrictions. Each owner of commercial property in High Desert automatically becomes a member of the Association upon taking title, and remains a member until title is conveyed. Membership is mandatory and cannot be transferred except in connection with the transfer of title to the property.
- 7. Conservation Easement means an easement granted specifically to a third, non-profit entity for the purpose of entering upon and maintaining property held in common for open space purposes.

- Roof-Lines and Roof-Massing
- Roof-Top Equipment
- Topography
- Landscaping

All parties should be aware that many other controls in the form of Covenants and Restrictions apply to construction within the Sector Plan area.

All construction in the Highlands Design Overlay Zone is subject to the development criteria and policies established by the Sandia Foothills Area Plan, except that Policy B, streets parallel to contour, and Policy H, densities do not apply.

Section 4.B.3: Land Use Intensity Development within the Highland Design Overlay Zone shall be limited to one-hundred sixty five (165) single family detached residences as governed by the HD•R-1 and HD•R-LT zones previously described.

Section 4.B.4: Building Height and Screening

Section 4.B.4.d.1,

2, 3 was amended

by the City of Albuquerque on

December 20, 2001

and text reflects

the amendment

Building Height shall be subject to the following criteria:

- a. From the highest point of the natural grade adjacent to any wall of the building in question, building height exclusive of chimneys shall not exceed nineteen (19) feet.
- b. No vertical wall plane, exclusive of chimneys, shall exceed twenty-two (22) feet in height as measured from the highest point of natural grade at its base.
- c. The overall height of a structure, exclusive of chimneys, from the highest point to the lowest, measured at natural grade, shall not exceed twenty-six (26) feet.
- d. To minimize the visual impact of residential structures on the approach to Simms Park, the following requirements apply when a building is within 250 feet of the north property line of the High Desert development:
- 1. No part of a structure or building, other than a chimney, shall be higher than any straight line beginning five feet above the finished grade at the centerline of Simms Park Road just north of High Desert and extending through any point 16 feet over the average natural grade along the north line of the platted building envelope;
- 2. Topography and existing or planted native vegetation (at maturity), either within High Desert or in the National Forest, shall substantially (at a minimum 75%) block the view from Simms Park Road at its centerline (from the points defined below) of the north line of the platted building envelope;
- 3. For the purposes of this section, sightings shall be taken from 90 degrees (perpendicular) from the centerline of Simms Park Road to the centerline of the north line of each platted building envelope and then 45 degrees generally northwest from the centerline of the north line of the platted building envelope back to the centerline of Simms Park Road.
- e. In order to better buffer the view from Simms Park to the east High Desert will contract with the City's Open Space Division to provide native and naturalized evergreen and semi-evergreen trees and shrubs (including pinons and/or junipers) equal to five gallons or better, to be planted in the City's park in order to better obscure the buildings in the Highlands of High Desert.

NOTE: The Zoning Code definition of height of a building does not apply to this section.

Section 4.B.6: Building Color Hue is an important a characteristic of color within the viewshed area as is the reflectivity of the color. Just as bright, saturated colors should be avoided, so should dark, deep toned colors which give the impression of excess mass. Likewise, a narrow limit on reflectivity is specified to avoid the impression of either very light or dark colors which contrast with their background. As with the other regulations in the viewshed area these regulations are intended to assure an architecture which grows out of its landscape rather than being superimposed upon it or in contrast to it.

The predominant color of the building may be chosen from the set of twelve pre-approved samples below, or others closely approximating them. Generally, approved colors include the yellow ochres, ochres, browns, dull reds, and grey greens of the natural landscape of the mesa and in the foothills. These colors have been chosen for their compatibility with the environment, as well as their harmony with one another.

F

High Desert Sector Plan 12/20/2001 Revision

Section 4.B.11: Rooftop Equipment

Roof-mounted mechanical equipment is prohibited on any roof, unless in the judgement of the Homeowner's Association it does not adversely affect views from public streets, public spaces, or other lots. Even if permitted, such equipment must be screened from view from such public streets, public spaces, and lots. Such screening must comply with the color and reflectivity standards described above.

Section 4.B.12: Provision for Design Review

The High Desert Homeowner's Association or its successors shall certify at time of submittal for building permit approval that any proposed plan for new construction or renovation within the Highland Design Overlay Zone meets the requirements of the special controls imposed by this section. Appeal from the interpretation of the Zoning Enforcement Manager is to the Environmental Planning Commission.

The additional guidelines suggested here are administered by the Homeowner's Association through its Covenants and Restrictions, anbd are enforceable only through the provisions of this sector plan; refer to Section 4.A.7: Design Review.

Section 4.B.13: Massing and Articulation Recommendations

In order to preserve the visibility of the natural environment, building masses should be predominately horizontal rather than vertical, but should avoid the appearance of unbroken, unnatural planes or horizontal lines. Unless otherwise approved by the Homeowner's Association, each structure shall be composed of at least three visual building masses distinguished from one another by both horizontal and vertical offsets of at least two (2) feet. The height of each mass shall be measured from its highest adjacent natural grade. At least three distinct masses shall be perceivable in each building elevation. While it is anticipated that buildings- will follow natural site contours, nothing in these guidelines shall prohibit residences with a single floor level provided the building height requirements previously described are otherwise met. The floor or roof plan of each structure should clearly show the extent of each building—with relevant information pertaining to its height above grade.

Surface articulation_and visual strength are also important factors in creating the perception of appropriate mass. Therefore, all doors and windows not protected by overhangs or portales shall be recessed at least four (4) inches as measured from the door surface or window sash to the exterior face of the finished wall.

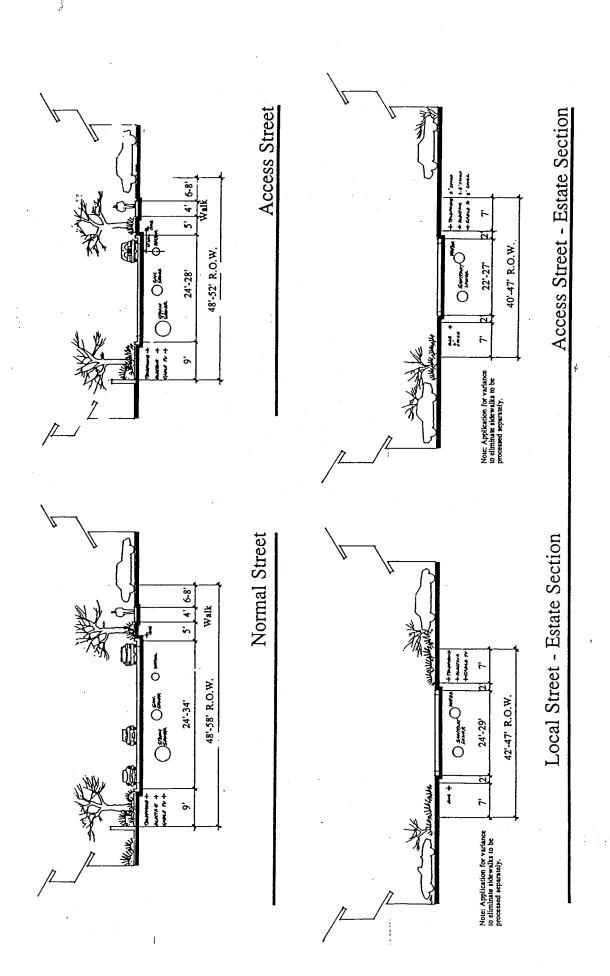
Section 4.C: Glenwood Hills "Panhandle"

The following restrictions shall apply to development south of the Embudito Arroyo in the "panhandle" area, and are hereby adopted as part of the Sector Plan:

- 1. The area of development will be defined on the west and south by a 200' buffer granted as a permanent private conservation easement.
- 2. Development shall consist of 29 single family residential units.
- 3. Structures shall not exceed nineteen (19) feet in height as defined by the Comprehensive City Zoning Code.
- 4. A sidewalk will be provided from the Glenwood Hills/Cedarbrook intersection through the subdivision to the Simms Reservoir Trailhead parking lot.
- 5. A conventional drainage system, connecting to existing stormwater improvements in Glenwood Hills, will be employed

In addition, the following transportation improvements will be provided within Glen wood Hills at High Desert's expense:

- 1. The east bound leg of Glenwood Hills Drive and Cedarbrook intersection will be reconfigured to more efficiently channel traffic and to attempt to increase sight distance as much as possible.
- 2. Sidewalks will be constructed in the vicinity of the Larchmont/Montgomery intersection.



H I G H T D E S E R 1

Street Sections

Date: April 11,1992



TRAFFIC IMPACT = **ANALYSIS**

The project site is at the north-eastern extremity of the City, relatively separate from employment and cultural functions of the City as a whole. The people who live there will need access to the other functions of the City....access that is traditionally provided by the automobile. Consequently, assessment of the impact of new development on the traffic system of the City is a necessity. This section briefly describes the methodology and results of the Traffic Impact Analysis study performed for the project. While it is a distillation of the maps, tables, and text of the Traffic Impact Analysis, it is not intended to be, nor should it be considered, a substitute for the full analysis....

Pre-Scoping

The parameters of the traffic study were developed simultaneously with the development of the land use plan as a whole, and in concert with those agencies ultimately responsible for their review. Even before the first land use scenarios were developed, meetings were held with the City of Albuquerque's Transportation Development Division and with the Middle Rio Grande Council of Governments (MRGCOG) to determine how the impacts of the project were going to be modelled and estimated.

During the pre-scoping meeting, a decision was made to analyze three time frames for the sector plan. The MRGCOG regional modelling process was to be used to produce Year 2000 and Year 2010 forecasts for the Study Area Street Network and selected intersection turning movements. For the immediate analysis point (Year 1994) existing traffic volumes, and manual analysis techniques for traffic volume growth, distribution, and assignment would be used for comparison purposes and determination of Levels of Service.

The first major step was taken by High Desert: estimating the actual extent of development and establishing project scenarios, even before a full land use analysis had been completed. In order to investigate a broad range of possibilities and their potential effects, two scenarios were developed. The smaller included 2230 residential units, with a narrow range of amenities. The larger included 2730 residential units with a broad range of on-site amenities including neighborhood shopping, school, and church, and an 18-hole golf-course and resort or conference center. For the purposes of the traffic study, the larger scenario was used in the belief that it would represent a conservative basis for studying traffic impacts.

Scenario Development

The study area considered in this report is trapezoidal in shape. Along Tramway Boulevard, it ranges from the Montgomery Boulevard intersection north to the Paseo Del Norte intersection. From Tramway, it extends west as far as Wyoming Boulevard.

The study area was defined in conjunction with City staff and represents the area at whose outer limits the MRGCOG regional model would not show significant changes in the total traffic flow as a result of this development. The intersections selected for analysis are major intersections which have the potential to be affected by increases in turn movement volumes generated by the proposed development and are indicative of impacts that may occur throughout the area. Beyond those points, the traffic from the site is more dispersed and represents a smaller percentage increase in the existing and projected traffic volumes. These intersections are numbered on the map below, and various charts in the text refer to this numbering system.

Defining the Study Area

In order to determine when the impacts from the proposed development would occur, it was then necessary to establish study years. This traffic study is based on three dates: 1994, the year when construction would begin on the project; 2000, the time the project is anticipated to be 50% complete, and also a year for which COG has already developed socio-economic projections; and 2010, the year in which the project is anticipated to be built out, but, more importantly, is also a base datum or "horizon year" for which the Council of Governments has developed socio-economic projections. 1994 is then known as the Implementation Year; 2000 as the "Mid-Point" year, and 2010 as the Horizon Year. For the purposes of this brief summary, the Year 2000 study results have High Desert Sector Plan been omitted; please refer to Volume 2 of the Sector Plan.

Implementation, Mid-Point, and **Horizon Years**

May 3, 1993 Revision

"Capacity" is a theoretical standard defined for various types of intersection "geometries". It is the "maximum rate of flow through the intersection under prevailing traffic, roadway, and signalization conditions" and is measured in terms of vehicles per hour. **Capacity Defined**

Level of Service (LOS) is what we perceive as congestion. It is represented by a simple alphabetical code "A" through "F". Level of Service "A" describes operations with very low delays - less than 5.0 seconds per vehicle. Level of Service "F" describes delays greater than 60 seconds per vehicle.

Application of "Level of Service"

The letters in between describe a whole range of delays. A mid-range Level of Service "D", or delay times from 25-40 seconds per vehicle is the lowest desirable level for design in Albuquerque. Many intersections already operate near or at this Level of Service; some intersections, however, already operate near, at, or beyond capacity at Level of Service "F".

Whenever possible, efforts should be made to keep intersections operating at acceptable Levels of Service. If an acceptable Level of Service is unattainable, as a minimum an effort should be made to restore the intersection to the Level of Service at which it was operating prior to the proposed development. This may require immediate infrastructure improvements or it may consist of monetary contributions for improvements to be made in the future.

This study, presented here in synopsis form, was conducted to evaluate the impacts of the proposed development on the transportation system surrounding the site. A full copy of the study, measuring all scenarios, and presenting all calculations, is available as Volume 2 of the High Desert Sector Plan submittal........

Synopsis of the Traffic Analysis

The High Desert Development area is located east of Tramway Boulevard, north of Montgomery Boulevard, and south of Paseo Del Norte. The site is bounded on the north by the Simms Park access road which abuts the Sandia Heights South subdivisions, on the east by the United States Forest Service lands, on the south by the Bear Canyon Arroyo Open Space and the Glenwood Hills North subdivision, and on the west by Tramway Boulevard. Its relation to the Long Range Major Street Plan is depicted in Map 13.

Project Location

The existing site is currently undeveloped and is owned by Albuquerque Academy. The Sandia Heights South subdivision to the north is approximately 90% built out with predominately single family detached housing units. The Glenwood Hills North subdivision to the south is fully built out with predominately single family detached housing units. The Forest Service lands serve as regional recreational space. Residential properties to the west of Tramway Boulevard are predominately built-out but some commercial properties remain vacant.

Existing Conditions

The proposed project consists primarily of residential development with a small portion of retail and other land use types to support the needs of the project. The Land Use Plan (Map 10) describes the development proposed for this site. The density will range from less than 0.5 to as much as 18 dwelling units per acre, with an overall aggregate density of less than 3 dwelling units per acre. The following scenario describes the product mix investigated by this study. Please note that the traffic study is based on scenarios; the land use plan proposed may vary slightly in the number and distribution of units and land use zones.

Proposed Development

The entire development will consist of four phases over approximately 12-15 years, thus being complete by the "horizon" year of 2010. The initial phase of construction is assumed to be complete by the implementation year, 1994, and consists of approximately 26% of the final residential product, the 10,000 S.F. church, and approximately 25% (12,500 S.F.) of the total commercial development.

Phasing

- Spain Road, which is a 4-lane collector from Tramway to Eubank and 2-lanes from Eubank to Wyoming runs through highly developed residential areas, is not planned to be expanded at any time in the future.
- Academy Boulevard, which is a 4-lane minor arterial with a wide landscaped median, was
 originally designed for future expansion to 6-lanes. This study assumes that it will remain a fourlane facility from the Wyoming intersection to the east.

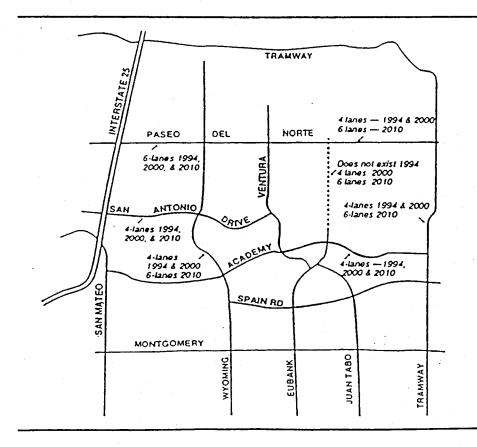
The Existing Street Network Map on the next page is a graphical representation of the existing transportation system.

It should be noted that there is a difference between the methodology used in the 1994 study compared to the 2010 study. In the 1994 Implementation Year Analysis, background traffic was determined by assigning growth rates to current actual intersection counts. Background traffic growth was estimated using historical baseline data from the previous five years. Trip generation rates for new development were derived from the Institute of Traffic Engineer's (ITE) trip generation rate tables.

Study Variables by Analysis Year

In the 2010 Horizon Year study, both base-case data and proposed condition traffic volumes were generated by the MRGCOG computer model which uses statistical regression equations to estimate trip-production and attraction between the centers of socio-economic zones.

Both methodologies compare background, background growth, trip generation, and trip origin and destination points. The 1994 Year is based on actual numbers; the 2010 methodology is a strict computer modelling technique. The MRGCOG model is not used for the 1994 Implementation Year because a "data set" doesn't exist for that specific year. Computer modelling techniques are used for long term forecasts due to significant changes in growth and the street network. These changes can not be reliably accounted for using growth trends and existing traffic volumes. Although the methods differ for the different time frames, each is the standard method for the respective time frames, and both use the same parameters for calculating the results.



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MAP #13b: Existing Street Network

Employment data was taken from the 2010 Socioeconomic Forecasts for State Planning and Development District 3 by Data Analysis Subzones, TR-104, published by the Middle Rio Grande Council of Governments in December 1989. Table 7 was taken from that publication and shows Total Employment for the Data Analysis Zones (DAZ's) in the Albuquerque area. The distribution was computed based on these volumes (as shown in Volume 2) and then a straight line interpolation was used to compute distribution for 1994. The assignments result in the following distribution: 19.1% north on Tramway Boulevard, 47.0% south on Tramway Boulevard, 21.2% west on Academy Boulevard, and 12.7% west on Spain Road.

Based upon this distribution and the development characteristics of the Sector Plan 45% of the traffic will enter or exit the site at the Academy/Tramway intersection and the remaining 55% will use the Tramway/Spain intersection. The selected study area intersections were analyzed in accordance with – standard procedures for signalized intersections. Since the spacing of intersections matches the Long Range Major Street Plan and new signals are not proposed a signal system analysis was not performed.

The intersections were analyzed for both background traffic and the background plus the proposed traffic. Results are provided in the chart below: By way of explanation, the terms included are:

AM or PM Peak represents the two daily "rush hours" during which traffic volumes are at their highest;

LOS, or Level of Service, is a relative measure of perceived congestion as measured by delay times. LOS "A" means delays of less than 5 seconds. LOS "F" means substantial delays of up to 60 seconds.

Intersection	Backs	Background		
and both of the same of the sa	AM	PM	AM	PM
1. Tramway and Academy (as is)	В	В	C	C
Tramway and Academy (NB dual lefts)	В	В	· C	C
2. Eubank and Academy	В	В	В	В
Wyoming and Academy (as is)	*	*	*	*
Wyoming and Academy w/ improvement	s D	D	D	D
. Tramway and Spain	В	В	В	C
Juan Tabo and Spain w/WB dual lefts	C	C	C	C
Eubank and Spain	С	С	C	C
. Tramway and Montgomery (as is)	С	D	D	D
Tramway and Montgomery (NB dual left	s) C	С	C	D
Tramway and Paseo Del Norte	В	В	В	В
. Wyoming and Paseo Del Norte	С	В	C	В
0. Eubank and Montgomery (as is)	C	E	C	F
Eubank and Montgomery w/improvemen	ts C	D	C	D
1. Eubank and Paseo Del Norte	(not analyzed: does	s not exist	in 1994)	

TABLE 5.C:
1994 Implementation Year LOS in
the Background
Count and Partial
Buildout Scenarios

The full contents of the Mid-Point Year Analysis are presented in Volume 2 of the Sector Plan. For the purposes of brevity, they are omitted here.

* Volume/Capacity Ratio greater than 1.2; LOS not meaningful.

Mid-Point Year Analysis

The analysis for the 2010 horizon year was conducted using the Base Scenario, with the assumption that the project is 100% complete.

2010 Horizon Year Analysis

The traffic forecasts for both the 2010 Horizon Year and 2000 Mid-Point Year were produced by the regional traffic forecasting model maintained by MRGCOG. The 2010 data set was modified to account for additional development on the High Desert site. Traffic generated by the site was estimated by a series of regression equations which use the socioeconomic data as independent variables. In calculating trip distribution, travel desires are determined. An equilibrium assignment then chooses appropriate routes based upon minimizing system wide travel time.

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High Desert Sector Plan

May 3, 1993 Revision

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The selected study area intersections were analyzed in accordance with standard procedures for signalized intersections. Since the spacing of the intersections matches the Long Range Major Street Plan and new signals are not proposed a signal system analysis was not performed.

Intersection capacity analyses were performed on the Base Case Scenario and Full-Buildout Scenario to determine LOS and Average Vehicle Delay. The results for the 2010 Horizon Year are summarized in Table 9 below:

Intersection		Base Case		Full Buildout	
		AM	PM	AM	-PM
1	Tramway and Academy w/NB dual lefts	C	C	С	С
2.	Eubank and Academy w/ improvements	С	D	\mathbf{C} ,	D
3.	Wyoming and Academy (as is)	*	*	*	*
٥.	Wyoming and Academy w/ improvements	D	D	D	D
4.	Tramway and Spain (as is)	C	C	D	C
٦.	Tramway and Spain with NB dual lefts	С	C	C	C
5.	Juan Tabo and Spain (as is)	D	D	E	D
٦.	Juan Tabo and Spain with WB dual lefts	D	D	D	D
6.	Eubank and Spain with NB dual lefts	D	D	D	D
7.	Tramway and Montgomery				
٠.	with NB and EB dual lefts	C	C	D	C
8.	Tramway and Paseo Del Norte w/imp.	В	. B	B 1	В
9.	Wyoming and Paseo Del Norte	(projections not available)			
		*	*	*	*
10.	Eubank and Montgomery w/improvements	F	E	F	E
11	Eubank and Paseo Del Norte	Ċ	c	С	C
11.	ETHORITY WITH LARGO DELLLACTOR	~	_		

TABLE 5.E: 2010 Horizon Year LOS in the Base Case and Full **Buildout Scenarios**

The High Desert development is located adjacent to Tramway Boulevard and relatively close to Paseo Del Norte, which have been planned, and are currently under design or construction, as highcapacity transportation corridors. As shown by this study, these facilities have been planned with adequate capacity to support this and other future development in this area. However, various street intersections and segments will experience growth in traffic volumes.

The Tramway/Montgomery intersection is anticipated to experience heavy left turn movements from both the background and proposed traffic volumes. This intersection is, however, currently constructed for easy expansion to dual left turn lanes in both the northbound and eastbound approaches to accommodate these heavy movements.

The far northeast heights is dependent on Academy Boulevard to carry traffic westward toward the heart of the City. This is apparent by the congestion that currently occurs at the Wyoming/Academy intersection, and is a result of the insufficient number of north-south arterial roadways in the area which would serve to dissipate traffic onto other east-west arterials. Although High Desert's impact on the Academy/Wyoming intersection is less than 2% compared to both the 1994 background traffic and the "base-case" scenario in 2010, the traffic impact analysis illustrates that this intersection already operates at or above capacity (Level of Service "F"); the intersection would experience this Level of Service under normal growth rates alone.

It was assumed that Academy Boulevard would remain a four-lane facility east of the Wyoming intersection through the 2010 Horizon Year, allowing the preservation of the aesthetic qualities it now enjoys with its landscaped medians. The analysis validates this assumption, indicating Academy will function adequately at four lanes in this segment, if appropriate improvements are made to the Academy /Wyoming intersection. These improvements are relatively minor in the Implementation Year, but are extensive by the Year 2000, including three through lanes, dual lefts, and right turn bays in all directions. While not specifically addressed in the study, it appears that a portion of the Academy link east of this intersection will need to be reconstructed to provide three High Desert Sector Plan

Recommendations

^{*} Volume/Capacity Ratio exceeds 1.2; LOS not meaningful.



AIR QUALITY

The Comprehensive Zoning Code of the City of Albuquerque requires that the Air Pollution Control Division (APCD) review land use actions that exceed prescribed threshold criteria for their potential impact on ambient air quality. Based on the magnitude of the proposed sector plan, and the anticipated change in trip generation and distribution compared to that allowed by the existing uses on the site, APCD determined that an air quality study was required. This section summarizes the air quality analysis, which is presented in its entirety as Volume 3 of the Sector Plan submittal. It is not intended as, nor should it be considered, a substitute for review of the full analysis.....

The traffic assumptions and data used in this study reflect the assumptions used in the High Desert Development Traffic Impact Study prepared by Bohannan-Huston Inc., and presented as Volume 2 of this Sector Plan. The methodology for the air quality study was determined in concert with the Air Pollution Control Division staff in the same manner as the traffic impact study methodology was devised. For a better understanding of the transportation aspects of the High Desert Development project readers of this study should first be familiar with the traffic impact study.

Pre-Study Scoping

The objective of this study is two-fold: to assess the impact on ambient air quality resulting from development of the project; and to inventory the total volume of emissions within a study area. Air quality impact, by definition, occurs when implementation of a project is likely to: cause a violation of federal ambient air quality standards; contribute to an existing violation condition; or result in a substantial increase in background pollutant concentrations.

Study Objectives

Albuquerque does not meet the standard, i.e., Albuquerque is a "non-attainment area", for carbon monoxide. The City Zoning Code requires that new development be evaluated specifically with regard to "non-attainment" pollutants.

"Non-attainment" is measured (or modelled) at "air quality receptors". An air quality receptor is a location having public access where it is likely that people will remain or reside for the periods of time required by the federal ambient air quality standards, i.e., 1-hour or 8-hour periods. Thus, homes, schools and shopping centers are typical receptor sites. Impacts are identified by air quality models that theoretically predict the concentration of pollutants at selected air quality receptor sites. In some cases, the receptor is theoretical.

In addition to the prediction of pollutant concentrations, a qualitative assessment of air quality impacts can also be made based on the relative increase in overall emission volume that occurs within an area. This form of study includes an inventory of vehicle-generated hydrocarbons (HC) and oxides of nitrogen (NOx) as well as carbon monoxide. HC and NOx are important because they are "pre-cursors" of ozone. The emissions analysis was included at the request of APCD because of the magnitude of the proposed project.

Two time frames have been included in this study: 1994, which is the Implementation Year, and 2010, which is the Horizon Year. For each of these time frames, two development scenarios were evaluated: a "base case" condition and the "build" alternative.

Study Years

Because the predominant source of air pollutant emissions from the proposed project will be the result of transportation sources, it was decided by the APCD that the air quality study area and traffic study area should be consistent with one another. The air quality study area is, therefore, the same area used in the traffic study and is depicted in Map 13a on page 5.2.

Definition of the Study Area

Albuquerque and the surrounding portions of Bernalillo County have the potential to develop concentrations of carbon monoxide (as well as other pollutants) due to the area's physiographic and meteorological features. The City's physical nature, being set in a river valley sheltered by the Sandia Mountains to the east and by the mesa and volcanic escarpment to the west, limits

Regional Conditions

Year	1-Hour	8-Hour	1 to 8-hour ratio
1991	10.0 ppm	5.5 ppm	0.55
1990	9.0 ppm	5.1 ppm	0.57
1989	11.0 ppm	6.5 ppm	0.59

TABLE 6.A: CO Concentrations By Year*

While CO levels are moderate within the study area, ozone concentrations are generally high. Concentrations in excess of 100 parts per billion (ppb) have been recorded for eight of the last twelve years at Air Quality Monitor 2ZH, located approximately one mile west of the intersection of Alameda and Tramway Boulevards. Because of the time required for ozone formation and summer prevailing wind direction, the high ozone levels occurring at this monitor are most likely a consequence of precursor emissions from other areas within Albuquerque rather than from emissions generated within the study area. Nonetheless, precursor emissions from study area activities do contribute to ozone formation within the Albuquerque region.

The High Desert Development Air Quality Study included two objectives. The first objective involved the quantification of CO concentrations in the vicinity of the project area roadways and the comparison of predicted CO concentrations with the federal ambient air quality standards. The second objective, an emissions analysis, was used to estimate the total mobile source (i.e., vehicular) emissions that occur from travel on the major streets within the study area and a comparison of the relative difference in emissions between the "base-case" and "build" scenarios. A brief description of the methodology and assumptions used for each objective are described in the following sections of this summary report. Additional information is available in the High Desert Development Air Quality Study prepared by JHK and Associates and presented as Volume 3 of the Sector Plan submittal.

Synopsis of the Analysis

To determine the incremental increase in CO concentrations that result from the proposed development and the potential for the project to cause or contribute to an existing hotspot condition, a project level air quality analysis was prepared. The analysis was conducted in accordance with procedures outlined by the Environmental Protection Agency (EPA) in the document <u>Guideline for Modelling CO Concentrations From Roadway Intersections</u> dated October 1990. The scope of the study and the assumptions used in the analysis were discussed with and established by APCD during project scoping meetings.

By joint decision, two models were used in the analysis. Mobile 4.1, a mobile source emissions model developed by the EPA, was first used to generate vehicle emission factors specific to Bernalillo County. CAL3QHC, an EPA-developed model for the prediction of carbon monoxide concentrations near roadways and intersections was then used to estimate CO levels at selected air quality receptor locations proximate to major intersections within the study area.

The air quality study included analysis of the following scenarios:

1994 Implementation Year Background Condition;

1994 Implementation Year Partial Buildout Scenario;

2010 Horizon Year "Base-Case" Scenario; and

2010 Horizon Year "Full Buildout" Condition.

The 1994 Background Condition is based on 1990 traffic counts that have been adjusted to account for area growth. The 1994 build condition assumes completion of an initial construction phase consisting of 26% of the residential units, approximately 12,500 square feet of commercial development and a 10,000 square foot church. The 2010 "base-case" assumes a level of development consistent with the Middle Rio Grande Council of Governments (MRGCOG) socioeconomic forecasts for the study area. Full build-out of the High Desert Development Site is assumed in the 2010 "build" scenario." These scenarios are more thoroughly described in the previous section of the sector plan pertaining to traffic impact analysis.

Scenarios Studied

^{*} Second Highest Annual Values at the Monitor Located at 4700 San Mateo Blvd., NE

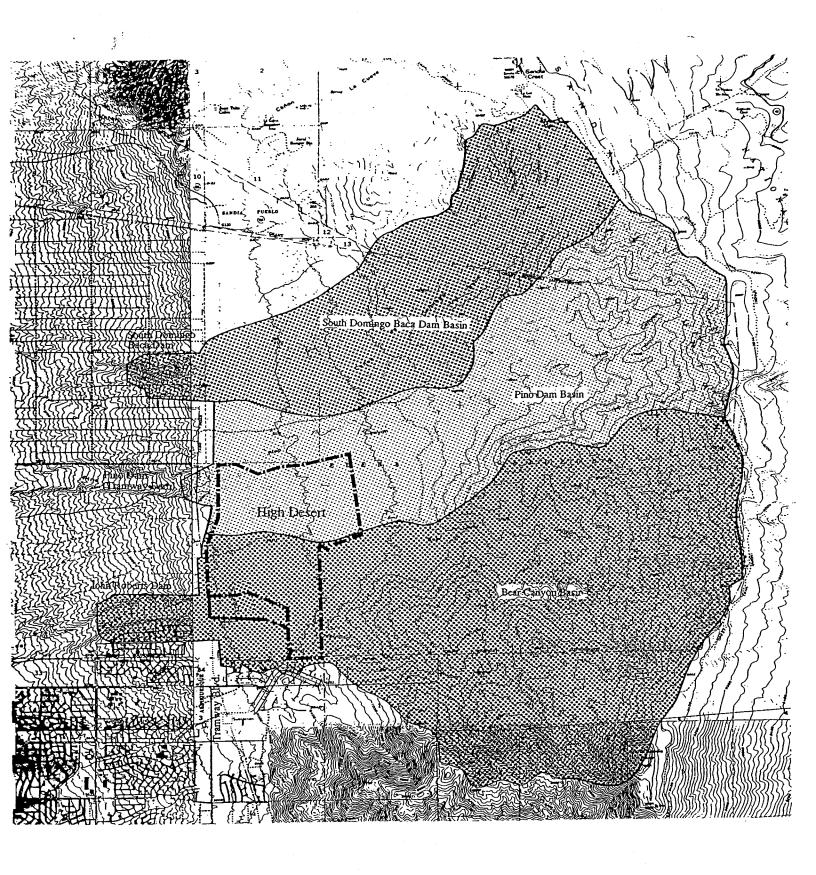
The emissions of non-methane hydrocarbons, oxides of nitrogen, and CO increase by 10 to 17 per cent in the 1994 implementation year. By comparison, VMT increases by 7%. The difference between the increase in emissions and VMT is the effect of additional vehicles travelling on study area roads that result in congestion and slower travel times. In the Horizon Year, the percent increase in emissions is less with an approximate increase of 10% expected in 2010. However, the difference between the increase in emissions and VMT is minor, with a difference of approximately 2% expected. With respect to air quality, these findings suggest that development of the High Desert site will add to congestion experienced in the 1994 Implementation Year but, due to planned public street improvements, will not cause substantial congestion and consequent emissions in the Horizon Year.

MAXIMUM PREDICTED 8-HOUR CO CONCENTRATIONS IN PPM* (BY INTERSECTION QUADRANT)

Intersection	1:	994 Yea	ar	1		10 Year		
Quadrant and Receptor	No Build	Build	Change	1	No Build	Build	<u>Change</u>	
Paseo del Norte and Wyomi	ng			ŀ				
NE Queue	5.9	5.9	0.0	. !	5.4	5.4	0.0	TABLE 6.C:
SE Queue	6.3	6.3	0.0	i	5.8	6.1	0.3	2010 Horizon
SW Approach	6.2	6.2	0.0	1	5.5	5.6	0.1	Year Analysis
NW Queue	6.0	6.1	0.1	ı	5.2	5.3	0.1	•
22323				İ	•		., · •	
Spain and Eubank				i				
NE Residence	5.3	5.3	0.0	i	4.7	4.8	0.1	
SE Restaurant	6.2	6.2	0.0		5.4	5.4	0.0	
SW Apartments	6.3	6.4	0.1	- 1	5.6	5.6	0.0	
NW Residence	6.6	6.6	0.0	ļ	5.9	5.9	0.0	
				1				
Wyoming and Academy				ļ				
SW Apartments	8.9	8.9	0.0	1	6.6	7.2	0.6	
SE Approach	9.1	9.1	0.0		6.3	7.2	0.9	
NE Queue	9.0	9.0	0.0	1	6.4	6.8	0.4	
NW Alejandro's	8.9	8.9	0.0	Ì	6.4	6.7	0.3	
•				i				
Academy and Tramway				ì				
SE Queue	5.3	7.3	2.0	-	4.2	4.7	0.5	
NE Queue	4.0	5.8	1.8	!	4.1	4.5	0.4	
NW Queue	4.3	4.9	0.6	į	4.1	4.1	0.0	
SW Queue	4.8	5.4	0.6		4.1	4.5	0.4	
3 dasas				- 1				
Spain and Tramway								
SE Queue	4.3	5.3	1.0	1	4.2	4.7	0.5	
NE Queue	3.9	5.5	1.6	1	4.3	4.7	0.4	
NW Residence	3.5	4.0	0.5	i	3.7	3.9	0.2	
SW Queue	4.2	5.5	1.3	i	4.6	4.9	0.3	
011 dd020				1				
Montgomery and Tramway				1				
SE Wild Plum	6.5	6.8	0.3	ļ	5.3	5.4	0.1	
NE McDonalds	6.2	6.7	0.5	i	5.0	5.0	0.0	
NW Queue	7.6	7.8	0.2	- 1	5.7	5.7	0.0	
SW Commercial	5.7	6.1	0.4	1	5.1	5.3	0.2	
5,1 55,,,,,,				1				
Montgomery and Eubank				i				
SW Commercial	7.4	7.5	0.1	i	6.3	6.5	0.2	
SE Commercial	7.2	7.8		i 1	6.2	6.2	0.0	
NE Vacant Lot	7.1	8.0		l I	6.2	6.3	0.1	
NW Commercial	7.5	7.6		ļ	6.3	6.4	0.1	
MAA COHHIGICIAL	7.5	1.0	5.1					

^{*} Includes background concentrations

A persistence factor of 0.6 was used to calculate 8-hour CO concentrations The federal 8-hour standard for CO is 9.0 ppm



MAP 14: Drainage Basins Affecting the Site

LEGEND











This section describes the special land-use requirements and hydrologic conditions which must be met to devise a drainage management plan consistent with the land use plan for the project. The guidelines and recommendations of this report will form the basis of future drainage design within the development. A detailed technical report, entitled "Conceptual Drainage Management Plan for High Desert Development, Technical Report, February 1992" has been prepared by Bohannan-Huston, Inc. and is available for review as Volume 4 of the Sector Plan submittal.....

STORMWATER MANAGEMENT

The key elements of this conceptual drainage management plan include the following major areas of study:

Purpose and Scope

- Research and consideration of previous and coincident drainage studies on or adjacent to the proposed development.
- Determination of the existing hydrological conditions of the property, including sedimentation concerns.
 - Determination of future hydrological conditions following development of the property.
- Conceptual identification and description of drainage improvements, structures and systems required under developed conditions.

The development concept consists primarily of residential land uses with some minor commercial and institutional (possibly including a church and a school site) land uses. Current land use planning for the site proposes a zoning that will permit approximately 2,700 residential dwelling units. Additional flexibility within the land use plan is proposed to permit the inclusion of a resort/conference center site and a golf course should future conditions warrant these types of developments.

Proposed Development

The property is currently situated outside the city limits but is proposed for annexation during the planning process. Actual land development and home construction activities are anticipated to begin in the last quarter of 1993 or the first quarter of 1994. Phasing of the infrastructure for this development is planned to coincide with estimated lot absorption rates.

This conceptual drainage management plan will be submitted to the City of Albuquerque and AMAFCA simultaneously with the Sector Development Plan submittal. Review and comment by these entities will form the bulk of the technical comments concerning the development's drainage planning.

Public Review Process

With Sector Development Plan approval and further development progress, additional drainage studies will be conducted in order to implement the recommendations of this master plan and to prepare actual construction documents.

Phasing of the project will require individual drainage management plans to identify the extent of infrastructure required for the planned phase. These plans must be submitted for agency review at the time of their preparation.

The methodology selected for hydrological analysis of the proposed development is the City of Albuquerque's Development Process Manual, Chapter 22, as recently revised (August, 1991). This chapter presents a computer program (AHYMO) for the determination of 6-hour, 100-year storm runoff volumes and flow rates. The model is particularly useful for large watersheds with significant routing analysis requirements.

Study Methodology

Sediment yield and bulking analysis for the affected watersheds were analyzed using the Pacific Southwest Interagency Commission (PSIAC) methodology for sediment analysis. The PSIAC method provides a general guide for estimating sediment yields based on climatological factors and physical characteristics of the watershed. The method is typically intended for broad planning purposes and was selected after consultation with AMAFCA.

These zones primarily represent the major arroyos located in the high density development area. No development is planned in this zone.

• Historic flows are removed from the arroyos. Arroyo flows are collected in sedimentation basins at the eastern, upstream edge of the zone and conveyed to crossing structures at Tramway Blvd. via maior storm drain lines.

 Although storm flows have been removed, the arroyos will continue to remain in a natural condition, preserved by protective covenants and drainage easements and maintained by the

homeowner association.

 Vegetation in these "dry" arroyos will be enhanced through the use of water harvesting techniques. These techniques collect stormwater from developed area runoff and irrigate the arroyo in order to sustain higher densities of animal and plant life.

This zone consists of the low to moderate density residential areas with densities ranging from 2 dwelling units per acre (2 du/ac) to 6 du/ac. These zones are located predominately in the upland areas of the project, and will be developed in a manner intended to minimize disturbance to ground cover and existing arroyos. Existing hydrological conditions will be impacted in negligible fashion.

· Lot development will remain outside the identified arroyo floodplains and prudent lines.

• Runoff from roofs and other hard surfaces will be collected and discharged onsite using storm water retention/infiltration methods.

 To minimize lot grading, cross lot drainage will be permitted and preserved by platted easements and other land use covenants.

 Roadways will typically be placed high on the ridges and designed without curb and gutter in order to minimize concentration of flows in the roadway systems.

• The majority of runoff water from impervious areas will be collected and infiltrated into the soil. However, in order to be conservative, no credit for flow reduction due to infiltration, will be considered in the analysis of downstream flowrates and crossing structures.

· Primarily, onsite collection and detention techniques will be employed to significantly reduce or eliminate developed discharge to the Bear Canyon Arroyo in accordance with the Bear Canyon Arroyo Corridor Plan.

This zone contains the higher density development areas ranging from 5 dwelling units per acre to 18 dwelling units per acre (residential). Apartment, commercial and institutional developments are also included. Overlot mass grading, with the exception of the major "dry" arroyos as described above, will be predominant.

 As described previously, collection of the main arroyo flows, and sediment, will occur in upstream sedimentation basins at the eastern edge of the zone.

· In-zone, developed stormwater will be primarily collected by streets, storm inlets and minor storm drain piping systems. These flows will be conveyed to the major storm drain trunk systems that extend from the sedimentation basins to the crossing structures beneath Tramway Blvd.

Determinations of the arroyo flows under developed subdivision conditions were also performed. Design of the proposed drainage improvements described below must be based on these flows.

Although the majority of the structures under Tramway Boulevard are under capacity when analyzed using conventional highway crossing design techniques, remedies to this lack of capacity are available. These remedies include diversion of flows in certain upstream areas, distributing flows advantageously among the available crossing structures, and enhancing capacity within the crossing structures themselves through minor structural modifications. Possible methods for structure modification include improving the inlet conditions to the structures or running storm drainage pipes directly to and connecting with the culverts under Tramway.

In order to comply with the drainage management guidelines established in this section, the following major drainage improvements are proposed for the development of this property:

· Installation of the South Pino Tributary, Bear Arroyo Tributary and Bear Arroyo public storm drain systems, including sedimentation ponds, to remove large upstream flows from the arroyos flowing through the higher density developed areas.

· Upgrade the existing South Pino Tributary/Bear Arroyo Tributary, and Bear Canyon Arroyo training dikes to comply with new FEMA standards for freeboard and sedimentation analysis.

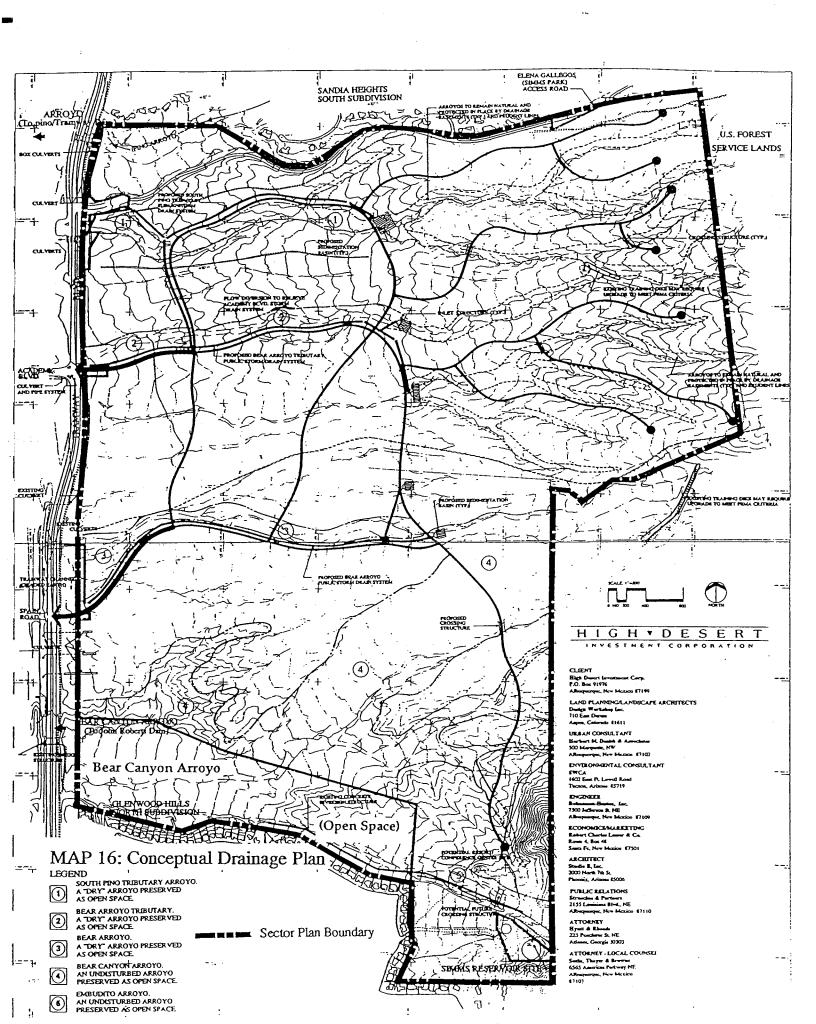
Landscape **Buffer Zones**

Semi-Urban Residential Zones

Urban Residential Zone

Developed Flows

Recommended **Improvements**





All utility extensions within the plan area will be underground facilities aligned within public street right-of-way or within granted utility easements. All utility companies indicated that reasonable time frames for provision of service upon request were possible. In the case of electricity and gas, refunds will be made based on first year revenues. Map 17 graphically depicts the location of major utility easements and lines.

The City of Albuquerque currently provides water to developed properties west of Tramway Boulevard, in the vicinity of Academy and Spain Roads, and to the Glenwood Hills North Subdivision, south of the High Desert property. On the north, Sandia Heights South is served by Sandia Peak Utility Company, a Public Service Commission-regulated utility.

Water

The sector plan area is located within the City of Albuquerque water system pressure zones 9E, 10E, 11E and 12E. Existing water facilities that will serve the High Desert property include the recently constructed Simms Reservoir in the southeastern most extreme of the property and Zone 9E and 10E water lines at the northern edge of the Glenwood Hills Subdivision.

Water System Zones

Additions to the existing water system in order to provide permanent service to the sector plan area will include the extension of waterlines across the property for distribution of water to each of the pressure zones and, possibly, the construction of Canada Reservoir east of the sector plan area. The construction of the Cañada Reservoir will include the extension of a 16" transmission line from the Simms Reservoir. Easements for both the Cañada Reservoir and the transmission line from Simms Reservoir have been platted. The transmission line easement between Simms and Cañada Reservoir may be adjusted to follow proposed street patterns.

Required Improvements

Extension of the existing 9E and 10E water lines at the Glenwood Hills Subdivision boundary will be made to provide service to these zones within the High Desert development.

Within the sector plan area, construction of the transmission lines and other master-planned water lines will be accomplished in accordance with line extension policies.

Service to Zones 11E and 12E may be accomplished prior to the construction of Canada Reservoir by installing a temporary closed loop pumping system in the Simms Reservoir pump station structure and extending the transmission line between the reservoir sites as necessary. Provision, for both domestic service and fire flow will be made; the provision of this temporary service will be financed by High Desert.

Temporary Provisions

Should a resort be incorporated into the plan as provided for in the "recreation resort" zone, it will be constructed in Zone 11E close to the Simms Reservoir. The fire flow requirement for this facility is estimated to be 2500 gallons per minute for a maximum duration of 10 hours. Adherence to these values can be achieved by proper control of the size and construction type of structures.

Resort and Conference Center

The resort hotel envisioned in the Recreational Resort Zone is anticipated to include a principal structure of approximately 30,000 square feet containing a restaurant, lounge, and recreational facilities such as tennis, racquetball and exercise equipment. Guest rooms would be arranged in clusters or "casitas" generally as described in the "cluster townhouse" provisions of the Townhouse Zone. Each cluster would contain approximately eight units. The overall configuration of the resort hotel and conference center would conform to the fire flow capacities of Canada Reservoir as currently designed.

Caretakers Quarters

In addition to traditional dwelling units a maximum of 200 "caretaker quarters" will be constructed on the property. All these units have the potential to be constructed in Zones 11E and 12E. It is estimated that each of these accessory units will consume 150 gallons of domestic water per day.

High Desert Sector Development Plan Appendix

- Indemnification Agreement
- Trails Agreement
- Letter from AMAFCA Conceptual Drainage Management Plan
- Notice of Subdivision Conditions
- Parks Agreement

any such costs, the City must give High Desert thirty (30) days prior written notice of its intent to act under the third paragraph of Section 4.4 of the Declaration, the reasons it intends to act under the third paragraph of Section 4.4 of the Declaration, and the obligations of the Association it intends to perform. However, within ten (10) days after acting in an emergency situation as described above, the City must give High Desert written notice containing the information described in the immediately preceding sentence.

High Desert's obligations under the preceding paragraph shall terminate upon the termination of the Class "B" Control Period (as defined in the Declaration). Under Section 3.3 of the By-Laws of the Association (which are attached to and recorded with the Declaration as Exhibit "C" thereto), the Class "B" Control Period terminates upon the first to occur of the following:

- (a) when 75% of the total number of Units (as defined in the Declaration) proposed by the Master Plan (as defined in the Declaration) for the property described on Exhibits "A" and "B" of the Declaration have certificates of occupancy issued thereon and have been conveyed to Persons (as defined in the Declaration) other than Builders (as defined in the Declaration);
- (b) 30 years after the date on which the Declaration is recorded in the Office of the County Clerk of Bernalillo County, New Mexico; or
- (c) when, in its discretion, the Class "B" Member (High Desert) so determines.
- Indemnification by the Association. After termination of the Class "B" Control Period, the Association, to the extent provided herein. shall indemnify and hold harmless the City against any and all maintenance and construction costs, including reasonable costs of investigation and administration, which may be incurred by the City in performing the Association's obligations regarding Common Area and open space maintenance and water recapture as necessary to ensure compliance with the requirements of the Declaration concerning such obligations pursuant to and under the circumstances described in the third paragraph of Section 4.4 of the Declaration. Except in an emergency situation which threatens or causes injury to persons or damage to public or private property, before incurring any such costs, the City must give the Association thirty (30) days prior written notice of its intent to act under the third paragraph of Section 4.4 of the Declaration, the reasons it intends to act under the third paragraph of Section 4.4 of the Declaration, and the obligations of the Association it intends to perform. However, within ten (10) days after acting in an emergency situation as described above, the City must give the Association written notice containing the information described in the immediately preceding sentence.
- 3. Exception to Indemnification. Notwithstanding anything provided in this Agreement to the contrary, neither High Desert nor the Association shall be obligated to indemnify the City for any maintenance and construction costs, including reasonable costs of investigation and

Desert, the Association, and the City and their respective heirs, personal representatives, successors and assigns. Notwithstanding the foregoing. High Desert and the Association, without the prior written consent of the City in each instance, may not assign, transfer or set over to another, in whole or in part, all or any part of its or their benefits, rights, duties and obligations hereunder, including, but not limited to, performance of and compliance with conditions hereof.

- 11. <u>Governing Law</u>. This Agreement and the rights and obligations of the parties hereunder shall in all respects be governed by, and construed and enforced in accordance with, the laws of the State of New Mexico (without giving effect to New Mexico's principles of conflicts of law).
- 12. Amendment. No provision of this Agreement may be changed, waived, or discharged orally, by telephone or by any other means except by an instrument in writing signed by the party against whom enforcement of the change, waiver, or discharge is sought.
- 13. <u>Termination</u>. The obligations of High Desert hereunder shall terminate upon termination of the Class "B" Control Period as set forth in Section 1 of this Agreement. Otherwise, this Agreement and the obligations set forth herein may be terminated only by an instrument in writing signed by the party against whom enforcement of such termination is sought.
- 14. Effective Date. The "Effective Date," as such term is used herein, shall be the later of (a) the date on which High Desert, the Association, and the City have each properly executed at least one counterpart to this Agreement or (b) the date on which the Declaration is recorded in the Office of the County Clerk of Bernalillo County, New Mexico: provided, however, so long as the Declaration remains unrecorded, this Agreement shall be null and void and of no effect whatsover, regardless of the fact that all of the parties hereto have properly executed at least one counterpart to this Agreement.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed as of the date first written above.

HIGH DESERT: HIGH DESERT INVESTMENT CORPORATION, a New Mexico corporation

By: <u>V-1/2</u>

11(1

Attest

:___Seco

Address: 6400 Wyoming Boulevard, NE

Albuquerque, New Mexico 87109

Attn: DOUBLAG H. Collister

DECLARATION OF COVENANTS, CONDITIONS, AND RESTRICTIONS FOR

HIGH DESERT RESIDENTIAL PROPERTIES

HYATT & RHOADS, P.C.

Attornays

1200 Peachtree Center South Tower 225 Peachtree Street, N.E. Atlanta, Georgia 30303 (404) 659-6600

STATE OF NEW MEXICO COUNTY OF BERNALILLO FILES TOO BECORD

1993 DEC 22 PH 3: 46

93-36PC 1-87

High Desert Sector Plan a.6

- 5. The City shall have eighteen months from the date of payment by High Desert to commence construction of the trail.
- 6. This letter of agreement shall be referenced in the resolution approving the Sector Plan for case number SD-91-3/AX-92-8/Z-92-63.
- 7. This letter of agreement may be incorporated into the Memorandum of Understanding between the Albuquerque Academy, Bernalillo County, the City of Albuquerque and the Cibola National Forest in order to define the agreement between the parties pertaining to the trail along Simms Park Road.
- 8. All successors and assigns of the parties in interest are bound by the terms of this agreement.

High Desert Investment Corporation By Lichard J. Ellin
Its Treesurer
The foregoing instrument was acknowledged before me this @ day of @fr. 1993, by Achart after of High Desert Development Corporation:
Notary Public My Commission Expires: 1/11.25, 1994
City of Albuquerque, Parks & General Services Department By Jay Czar, Department Director
,
The foregoing instrument was acknowledged before me this day of fig. 1993, by TAY J. c2AR of the City of Albuquerque.
Margaret Ann Haleto Notary Public My Commission Expires: October 23, 1995
City of Albuquerque

By Arthur A. Blumenfeld, CAO

James R. Topmiller, P.E. May 1, 1992 Page 2

- b. The "Geologic Map of the Albuquerque Area" (Kelley, 1977) indicates that a portion of the High Desert property is in an alluvial fan area (Geologic area Qfa). Aerial photos do not indicate the kind of active alluvial fans that are apparent with the South Domingo Baca and La Cueva Arroyos except for areas controlled by training dikes. It will take further investigation to determine if alluvial fans will affect the drainage at this site for a 100-year storm. Current FEMA maps were completed at a time when alluvial fan procedures were not a part of a standard analysis. FEMA is currently doing floodplain re-mapping studies in the La Cueva and Camino Arroyo areas. Their decision to do re-mapping in the Pino and Bear Arroyo basins may depend upon the extent of flood map changes they find with that study.
- c. The relatively high annual rainfall should be considered in your analysis. National Weather Service records (see attached release) indicate average annual rainfall in the area may be 14-16 inches. This presents both problems and opportunities. For example, frequent rain storms may exacerbate erosion, but should also promote more rapid plant growth. Conversely however, too much growth in arroyos may reduce hydraulic capacity, so vegetation control or management may become necessary.

3. Specific comments/recommendations follow:

- a. Sediment ponds must be adequately sized and shaped to function properly. We have design guidelines available for your use. Disposal areas and/or sediment management plans may need to be developed. Pond facilities will need to be designed for the critical storm duration which may be longer than a 6-hour storm, per City, AMAFCA, and FEMA criteria.
- b. Entrances from the sediment ponds to the storm sewers must be designed to minimize hydraulic losses, in order to take full advantage of pipe capacities. Trash and debris should be addressed: We have some ideas and designs available for review.
- c. Because storm sewers are being used to convey the 100-year flows, the existing arroyos should be preserved and protected to (1) compensate for the lack of freeboard in the pipes, (2) to provide a relief for potential plugging of pipe entrances, and (3) to provide a floodway for storms in excess of 100-year events. In that regard, we recommend that the existing floodplain be preserved. This statement is based on the premise that, over an extended time period, the likelihood of a storm exceeding the 100-year event becomes

Albuquerque Metropolitan Arroyo Flood James R. Topmiller, P.E. May 1, 1992 Page 4

In the future, agencies may require that such data be executable on a program available to them. FEMA already has this requirement.

- i. It is anticipated that this project will proceed in phases and that bulk land platting will be required in the near future. This conceptual drainage management plan does not fully address the special interface and timing of facility construction that may be needed with development of individual bulk land parcels. Without further analysis, the establishment of easements and infrastructure requirements will need to be based on assumptions which may be speculative. Easements may need to accommodate short term developed flows even if the long term plan calls for no flow increases. Additional sediment trapping or flow detention areas may need to be specified to allow one phase to proceed independently from another. Perhaps a phasing sequence will need to be established. There may need to be extra construction of facilities and interim development restrictions to accommodate a particular phase.
- j. AMAFCA owns, operates, and maintains downstream facilities which will accept flows from High Desert, subject to our review and approval. The City and Bernalillo County own, operate and maintain other facilities, including structures crossing Tramway Boulevard. Analysis and design must recognize the capacity of these facilities.
- 4. The following additional conditions must be considered as you proceed with this project:
 - a. AMAFCA will not maintain storm drains or sediment ponds in High Desert. If major new dams or diversion dikes are proposed, maintenance by AMAFCA will require approval by AMAFCA's Board of Directors. The acceptance of maintenance by AMAFCA may be conditioned on financial guarantees or compensation, should unconventional facilities or unusual conditions be identified which will result in specialized maintenance requirement or increased maintenance levels.
 - b. AMAFCA will not maintain the "natural" arroyos, nor does dedication of any floodplain as drainage easement to AMAFCA infer operation and maintenance by AMAFCA, unless specifically approved by AMAFCA's Board of Directors.

Albuquerque Metropolitan Arroyo Flood

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JAN 1.6 1992

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... ALBUQUERQUE METRO AREA TOTAL PRECIPITATION FOR 1991...

THE ALBUQUERQUE METROPOLITAN AREA HAS A LARGE NUMBER OF COOPERATIVE EATHER OBSERVERS. SOME OF THE COOPERATIVE OBSERVERS KEEP CUMPLETE ECORDS OF PRECIPITATION AND SEND THEIR REPORTS IN TO THE NATIONAL WEATHER SERVICE. NOW THAT THESE HAVE ALL BEEN SENT IN FOR 1991, WE TAN GET A GOOD IDEA OF THE PRECIPITATION DISTRIBUTION ACROSS THE ITY FOR 1991. FOLLOWING IS A LIST OF LOCATIONS, THE "NORMAL" AND THE PRECIPITATION PROPORTIONED TO THE 30 YEAR NORMAL AT THE AIRPORT, AND THE 1991 AND 1990 TOTAL PRECIPITATION:

COCATION RIO GRANDE BLVD/CANDELARIA COORS/MONTANO NATIONAL WEATHER SERVICE (AIRFI) SOUTH VALLEY ASEO DEL NORTE/LOUISIANA NDIAN SCHOOL/CARLISLE PARADISE HILLS INDIAN SCHOOL/WYOMING ACADENY/WYOMING HEMAUL/LOUISIANA JUAN TABO/CQNDELARIA LMDIAN SCHOOL/TRAMWAY EAST END OF MONTGOMERY EAST FOUR HILLS SOUTH FOUR HILLS	10RHAL PRECIPITATION 7.92 7.58 8.12 8.59 8.61 8.73 9968 10.36 10.47 10.67 11.26 12.42 14.10 NOT YET ESTABLISHED NOT YET ESTABLISHED	1771 9.62 10.35 11.57 11.76 11.36 12.87 12.53 12.04 14.80 15.73 16.79 17.82 19.64 20.20	1790 11.16 8.28 10.25 10.77 10.66 10.25 10.23 12.21 11.18 12.79 14.71 15.91 16.01 17.08 15.20 12.06
DIAGOTO CONTRACTOR CON		_	

AS ONE CAN SEE...EVEN THOUGH 1970 WAS A WET YEAR, 1991 WAS EVEN WETTER. 10TAL PRECIPITATION RANGED FROM 9.62 INCHES AT THE RIO GRANDE NATURE CENTER TO 20.20 INCHES IN SOUTH FOUR HILLS. THIS RATIO IS SIMILAR TO 1990. WHEN THE RANGE ACROSS THE CITY WAS FROM 8.28 INCHES TO 17.08 INCHES. ONLY TWO LOCATION REPORTED LESS PRECIPITATION IN 1991 THAN IN 1990.

EVEN THOUGH PRECIPITATION WAS UP IN 1971 LILE THE STOCK MARKET, SHOWFALL WAS DOWN. THIS WAS DUE TO THE FACT THAT 1970 HAD A RATHER MAJOR STORMY PERIOD JUST BEFORE CHRISTMAS...WHILE 1971 HAD NO MAJOR SHOWSTORMS. SNOWFALL REPORTS FOR 1971 INCLUDED ONLY 1.0 INCHES AT THE EIO GRANDE MATURE CENTER, AND 2.5 INCHES AT LOMAS AND SAN MATEU. ONLY 3 INCHES FELL AT CARLISLE AND INDIAN SCHOOL. AND ALSO AT CENTRAL AND MYONING. ON THE OTHER END OF THE SPECTRUM, ALL LOCATIONS EAST OF TRANSMAY REPORTED MORE THAN 12 INCHES OF SNOWFALL FOR THE YEAR. HIGHEST WAS 22 INCHES AT THE EAST END OF MONTGOMERY, WHILE A COUPLE OF OTHER SPOTS EXCEEDED TO INCHES. SOUTH FOUR HILLS MEASURED 13.5 THICHES. CONSEQUENTLY, THE RANGE ACROSS THE CITY WAS FROM 1 INCHES.

Pursuant to Section 7 of the City of Albuquerque, New Mexico subdivision ordinance, a variance or waiver from certain subdivision requirements has been granted by the City and the Albuquerque Metropolitan Arroyo Flood Control Authority in connection with this plat.

Future subdivision of lands within this plat, zoning site development plan approvals and development permits may be conditioned upon dedication of rights-of-way and easements and/or upon infrastructure improvements by the owner for water, sanitary sewer, streets, drainage, grading and parks in accordance with current resolutions, ordinances and policies in effect at the time for any specific proposal.

The City (and AMAFCA with reference to drainage) may require and/or permit easements to be added, modified or removed when future plats and/or site development plans are approved.

By its approval, the City makes no representation or warranties as to availability of utilities, or final approval of all requirements including (but not limited to) the following items:

- Water and sanitary sewer availability
- 2. Future street dedications and/or improvements
- 3. Park and open space requirements
- 4. Drainage requirements and/or improvements
- 5. Excavation, filling or grading requirements.

Any person intending development of lands within this subdivision is cautioned to investigate the status of these items.

At such time as all such conditions have been satisfactorily met, the City Engineer shall approve a recordable document, removing such conditions from all or from a portion of the area within the subject subdivision.

A Letter of Understanding between High Desert, AMAFCA and the City will be prepared and will identify drainage Issues to be addressed for all phases (tracts) of the development. This letter must be prepared and approved before any tract can be developed.

Robert L. Bovinette, President
The Albuquerque Academy
Owner of Tracts 1,2,3,4,5,7,8,
9,11,13,14,15,16,17,18, OS-1,
OS-2, OS-3, OS-4, OS-5 and OS-6

STATE OF NEW MEXICO)
SS
COUNTY OF BERNALILLO)

M. Commission Expires: 4/17/94
Saxana Q. Taylor
Notary Public

Approved:

Albuquerque Metropolitan Arroyo

Flood Contro! Authority

STATE OF NEW MEXICO)
SS
COUNTY OF BERNALILLO)

This instrument was acknowledged before me on November 19, 1993 by Clifford E. Anderson

My Commission Expires: 10-25-95

Notary Public

Arthur A. Blumenfeld, Chief

Administrative Officer
City of Albuquerque
Owner of Tracts G-1, H-1, I-1, Simms
Park Road, Open Space & Floodway
& Open Space & Drainage Easement

STATE OF NEW MEXICO)
SS
COUNTY OF BERNALILLO)

This instrument was acknowledged before me on Nowmen 32 199

My Commission Expires:

Elsie Dousi Notary Public My Commissi

STATE OF NEW MEXICO ICIN Expires 4-2-94

AL SEAL

Approved:

Development Review Board

Jack Cloud, Chairman

STATE OF NEW MEXICO)

COUNTY OF BERNALILLO)

This instrument was acknowledged before me on November 23, 199

by Richard Nince

y Commission Expire

laise Konoma Notary Public OFFICIAL SEAL
CLAIRE KOOPMAN
NOTARY PUBLIC
STATE OF NEW MEXICO

My Commission Expires 7-30-96

A TOUR

provided for in this Agreement. City covenants that the Undeveloped Park will never be used or improved for any purpose other than as a Neighborhood Park. The Park and Undeveloped Park will meet all City standards for a Neighborhood Park set forth in the Manual and other applicable regulations and ordinances. City covenants that the Dedicated Land will be used only as a Neighborhood Park within the meaning of Chapter 7, Article XVIII and the Comprehensive City Zoning Code, Chapter 7, Article XIV of the Revised Ordinances, and the Manual, as such meaning may be modified or supplemented by any applicable rules, regulations and plans of City relating to Neighborhood Parks as amended or replaced and as indicated in the deed restrictions attached as Schedule 1 to Exhibit A.

4. Stormwater; Utility Easements.

Surface stormwater flows, underground storm drainage conduit and sanitary sewer easement issues will be addressed as part of the site development plan and subdivision plat approval process and of the master drainage plan covering the tract that includes the Dedicated Land. The master drainage plan will be subject to the approval of the Director of the City Department for parks, or his/her designee, insofar as the master drainage plan applies to the Dedicated Land. If City approves a drainage plan for the tract that includes the Dedicated Land that includes or requires subsurface and/or surface stormwater flows, City will grant, without any further compensation, easements as necessary for such subsurface and/or surface stormwater flows.

within 10 days after notification of the selection by High Desert.

- 7. Payment for Development of Park and Undeveloped Park.
- Α. Development Fee. Park Desert be responsible to pay for the Development Plan, construction documents and construction of the Park and seeding of the Undeveloped Park. The first \$196,170 of the costs paid by High Desert will represent the payment in full by High Desert of the Park Development Fee as required under § 7-18-3 of the Revised Ordinances when High Desert has expended \$196,170 in connection with the Park, High Desert will notify the City in writing and provide the City copies of the invoices evidencing the expenditures. Upon receipt of invoices indicating expenditures made by High Desert in connection with the Park totaling \$196,170, the City will, in writing, confirm that High Desert has fulfilled all of its obligations as a developer § 7-18-3 of the Revised Ordinances relating Park Development Fees in connection with the development.
- B. Amounts Beyond Park Development Fee. In conjunction with expenditures made by High Desert in connection with the Park and Undeveloped Park in excess of \$196,170, City will, after November 30, 1993, coordinate purchase of materials and goods, including without limitation, seed, fertilizer, playground equipment and irrigation equipment for use in the development of the Park and seeding of the Undeveloped Park for amounts up to, but not to exceed, \$83,000, which amount represents

Development, whichever is earlier. Maintenance will be performed If City, through its Park in accordance with the Manual. Management Division, is required to maintain the Park and Undeveloped Park during the time High Desert is responsible to do so, High Desert will pay to City a fee not to exceed \$7,000 per acre, per year. The exact amount of such fee will be based on City's determination of the costs associated with maintaining the Park and the Undeveloped Park. City will not be required to maintain the Park under this Agreement during the time High Desert is responsible to do so unless High Desert gives City written demand by November 1 that City maintain the Park and Undeveloped Park beginning July 1 of the following calendar year and until the maintenance funds have been programmed by City.

- 9. Representations and Warranties of the City. City represents and warrants that:
- A. The undersigned is fully authorized to execute this Agreement on behalf of City; and
- B. Dedication of the Dedicated Land and improvement of the Park as set forth in this Agreement will satisfy in full Developer's obligations with respect to the Development under the Park Dedication and Development Ordinance for a development of 2,300 single family houses and townhouses and 430 apartments.
- 10. <u>Representations and Warranties of High Desert</u>. High Desert represents and warrants that:

provisions of this Agreement. This Agreement binds and beneficative and High Desert and their successors, assigns, transferees, heirs, devisees and personal representatives. Time is of the essence of each term of this Agreement. If any provision of this Agreement is determined by a court of competent jurisdiction to be void, invalid, illegal or unenforceable, that portion will be severed from this Agreement and the remaining parts will remain in full force as though the invalid, illegal, or unenforceable portion had never been a part of this Agreement. The provisions of this Agreement will survive the conveyance of the Dedicated Land.

14. <u>Integration</u>; <u>Interpretation</u>. This Agreement contains or expressly incorporates by reference the entire agreement of the parties with respect to the matters contemplated by this Agreement and supersedes all prior negotiations. This

[Form of Warranty Deed]

WARRANTY DEED (WITH DEED RESTRICTIONS)

HIGH DESERT INVESTMENT CORPORATION, a New Mexico corporation ("Grantor"), for consideration paid, grants to the CITY OF ALBUQUERQUE, a municipal corporation ("Grantee"), the following described real estate in the City of Albuquerque, Bernalillo County, New Mexico:

[Legal Description of Dedicated Land (which includes the Park and the Undeveloped Park)] (the "Park") with warranty covenants.

SUBJECT TO: taxes for the current and subsequent years, exceptions, reservations and easements of record.

ALSO SUBJECT TO THE DEED RESTRICTIONS (the "Restrictions") described on the attached Schedule 1.

Dated:	, 1993.
	HIGH DESERT INVESTMENT CORPORATION
	By
STATE OF NEW MEXICO COUNTY OF BERNALILLO)) ss.)
The foregoing	instrument was acknowledged before me on, 19, by
of High of the corporation.	Desert Investment Corporation, on behal
e de la companya de l	Notary Public

My commission expires:

5. <u>Enforcement</u>. These restrictions may be enforced High Desert Residential Owners Association, Inc., its successors and assigns. If these restrictions are violated by the City and the violation is not corrected after notice as set forth in Section of these restrictions, High Desert Residential Owners Association, Inc. will have the right to injunctive relief.