CITY OF RIO RANCHO
RESOLUTION
RESOLUTION NO. 73

WHEREAS: the State of New Mexico has granted the City of Rio Rancho the power, authority, jurisdiction and duty to enforce and carry out the provisions of law relating to planning, platting, zoning, and the power to adopt, amend, extend and carry out a general municipal or master plan which may be referred to as the general or master plan, all pursuant to 3-19-1, NMSA, 1978; and

WHEREAS: the Governing Body of the City of Rio Rancho has adopted a Comprehensive Plan that addresses and provides for specific goals, policies, and actions; proposes land use throughout the City; provides for adoption of specific area plans for specific area within the City; and also provides for land use in master planned communities via master plans; and

WHEREAS: the Governing Body of the City of Rio Rancho has adopted a Comprehensive Plan that addresses land use in master planned communities; and

WHEREAS: the Governing Body of the City of Rio Rancho approved the Los Diamantes Master Plan on August 12, 2015 with Resolution No. 61 Enactment No. 15-055; and

WHEREAS: the Governing Body of the City of Rio Rancho approved the Generalized Land Use Map on September 12, 2018 through Resolution no. 60, Enactment no. 18-058; and

WHEREAS: the Planning and Zoning Board of the City of Rio Rancho reviewed the land use amendments to the Los Diamantes Master Plan at their meeting held on July 28, 2020, and following public hearing recommends approval of those amendments and modifications; and

WHEREAS: the Governing Body of the City of Rio Rancho has reviewed the proposed land use amendments (Case No. 20-410-02) to the Los Diamantes Master Plan at their meeting held on August 13, 2020, and following public hearing and receipt of the Planning and Zoning Board’s report and recommendation, has determined that the amended Plan is in conformance with the City of Rio Rancho Comprehensive Plan.

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

Section 1. The Governing Body hereby approves and adopts the land use amendments and modifications to the Los Diamantes Master Plan, Exhibit A to this resolution.
Section 2. Designs, layouts, and engineering requirements or details are subject to compliance with City engineering and/or subdivision requirements prior to development.

Section 3. Effective Date. This Resolution shall take effect immediately upon adoption.


Greggory D. Hull, Mayor

ATTEST:

Rebecca A. Martinez, City Clerk
(SEAL)
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This document is a Master Plan for the area known as Los Diamantes, located in Rio Rancho, Sandoval County, New Mexico. The Los Diamantes Master Plan area is comprised of approximately 180 acres owned by Los Diamantes, LLC. The vicinity map located on page 2 illustrates the location of the master plan area. The purpose of this Master Plan is to identify land uses, zoning, parks, trails, drainage facilities, conceptual utilities, transportation corridors, and provide design guidelines. The following are the objectives of the Master Plan:

• To create a zoning and land use plan that includes well-planned single family residential neighborhoods in close proximity to planned schools and commercial services, a business park area that will attract future employers to the City of Rio Rancho, multi-family residential opportunities to support affordable housing goals and commercial services and provide needed services to both the residential neighborhoods and the business park.

• To connect with and extend existing transportation corridors identified in the City’s Transportation Policy.

• To correct the jobs/housing imbalance on the Westside by providing a desirable location and infrastructure necessary to support employment in a well-designed business park.

• To provide a balanced land use mix that accommodates high quality residential development of various densities and high-quality employment and commercial development with convenient access to housing.

• To comply with and implement the Rio Rancho Comprehensive Plan and the Unit 10 Specific Area Plan.

Master Planning Process
This Master Plan was accomplished in collaboration with City of Rio Rancho Development Services Department, Los Diamantes LLC, Mark Goodwin and Associates, Price Land Development Group, and Consensus Planning, Inc. A zone map amendment request is included in conjunction with this master plan application. This master plan establishes zoning for the Los Diamantes Plan Area. The Master Plan Project team worked with the City of Rio Rancho Development Services on the Business Park zone; and the Los Diamantes Business Park proposes to use this zone.
2. EXISTING CONDITIONS

As shown on the Vicinity Map, Los Diamantes is located approximately one mile west of Unser Boulevard and a little over a half mile south of Southern Boulevard in Unit 10. The proposed combination of the Business and Residential components comprises approximately 180 acres, which is currently vacant.

The existing alignment of West Side Boulevard runs east and west and bisects the Plan Area. The south boundary is the existing Isabel right-of-way. The east boundary is 10th Street, and the west boundary is Viga Road.

Los Diamantes is the first large scale development within Unit 10 and as such, it is not in close proximity to any other approved master plans. The Plan Area’s preferred land use categories and zoning were addressed in the recently approved Generalized Land Use Map as is further discussed in the Land Use section of this master plan. The Los Diamantes Master Plan is in compliance with and furthers the Generalized Land Use Map.

The property lies within a geological saddle that falls from northwest to southeast. The surface is covered by a mixture of sand sagebrush, four-winged saltbush and blue grama grasses, and includes some cholla and cacti. Animal species in the Plan Area include coyote, cottontails, jackrabbits and horned lizards. An Endangered Species Act compliance document was produced, and no endangered species (plant or animal) were documented. A Cultural/Archeological survey was also performed. The report, along with mitigation recommendations, is on file with the Historic Preservation Division of the State Historic Preservation Office.

There is a large undefined flood plain in an arroyo channel that is created by the “Rainbow Tributary” to the Calabacillas Arroyo that originates in Rio Rancho north of Southern Boulevard and terminates in the City of Albuquerque at the Calabacillas Arroyo. This arroyo and its flows are addressed in the drainage section of the Master Plan.

2020 Amendment
Since this Master Plan was adopted in 2015, the City of Rio Rancho adopted the Unit 10 Specific Area Plan, which addresses land use, transportation, utilities and infrastructure, and general development guidelines for the larger geographic area surrounding Los Diamantes. The Specific Area Plan has subsequently been amended and further amendments have been considered by the Rio Rancho Governing Body.

The Unit 10 Specific Area Plan proposed land use change areas that designated different land uses than those adopted in the Comprehensive Plan and relied on in the original Los Diamantes Master Plan. Such changes included designation of the western portion of Unit 10 as a “Future Master Planned Area,” location of the new Joe Harris Elementary School as a civic/institutional land use where residential was previously shown, and an increase in commercial uses along Westside Boulevard and near Unser Pavilion.
Due to these changed conditions, housing market demands, and in support of the Comprehensive Plan policies of the City of Rio Rancho, this Master Plan was amended in 2020. The amendment updates the land use, zoning, and parks and recreation sections to address a revised lot layout for the R-3 Mixed Residential located south of Westside Boulevard, changes a portion of the Business Park to R-2 single-family residential, and provides for the future development of 15 acres of multi-family residential within the remaining Business Park area. In addition, the Master Plan boundary was adjusted to add Lot 15, Block 64 and Lot 41, Block 18 of Unit 10 while removing Lots 10 and 13 through 16, Block 60 of Unit 10, which reflects current lot consolidation and assembly efforts.
3. LAND USE, ZONING, AND DENSITY

The zoning for the Plan is intended to allow for a mix of land uses that will provide for the creation of residential neighborhoods with a mix of single family housing types, multi-family residential opportunities, and the creation of a business park that will provide employment space and commercial services for the City of Rio Rancho. The creation of a regional pond has been designed to handle the regional drainage detention needs for the Plan Area. The residential plan also identifies two public neighborhood parks located within the Los Diamantes residential neighborhood south of Westside Boulevard. See the Los Diamantes Zoning Map on page 7.

The following sections and pages include descriptions of the land use and zoning for the Master Plan.

Business Park (34 acres)
The area that is zoned Business Park follows all of the regulations of the City of Rio Rancho Business Park Zone.

The intent of the Los Diamantes Business Park is to provide for large employers within a campus style setting that is supported by commercial services. In addition, up to 15 acres of the business park area is appropriate for future multi-family residential development depending on the absorption of commercial uses. Multi-family residential would provide a more complete mixed-use center along the Westside corridor. A future zone map amendment may be required to implement the multi-family residential land use.

This Master Plan contains design standards for the Business Park to ensure that the Park is developed in an aesthetically pleasing and cohesive manner and that the more intense aspects of the industrial uses are enclosed, screened, and/or buffered. The design standards will also ensure any multi-family residential component will be successfully integrated with the remainder of the business park uses.

The commercial uses are intended to support the Business Park by providing the opportunity for commercial services such as restaurants, dry cleaners, and banks that will serve both Business Park employees and the adjacent Los Diamantes residential neighborhoods. Within the employment and commercial mix in the Business Park there is the opportunity for both an employment campus like setting, as well as for the commercial services to take a more urban mixed-use form.

R-3 Mixed Residential District (109 acres)
The Los Diamantes residential neighborhood follows all of the requirements of the City of Rio Rancho R-3 Mixed Residential District. The Master Plan and Los Diamantes Residential Overlay Zone (LDROZ) does not permit multi-family development within the R-3 zone (LDROZ).
The R-3 residential neighborhoods will provide the opportunity for a variety of single-family housing types. The plan intends the neighborhood to develop with a range of lot sizes. All the lots will meet the minimum lot size requirement established by the R-3 zone. The Master Plan establishes the following residential lot sizes for the Plan Area:

<table>
<thead>
<tr>
<th>Minimum Lot Width</th>
<th>Percent of Residential Units</th>
<th>Number of Units</th>
<th>Density (DU’s per acre)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forty (40) Feet</td>
<td>41%</td>
<td>200</td>
<td>+/- 6</td>
</tr>
<tr>
<td>Fifty (50) Feet</td>
<td>43%</td>
<td>209</td>
<td>+/- 5</td>
</tr>
<tr>
<td>Fifty-Five (55) Feet</td>
<td>16%</td>
<td>78</td>
<td>+/- 4</td>
</tr>
</tbody>
</table>

**R-2 Single-Family Residential (25 acres)**
The proposed R-2 single-family residential neighborhood follows all the requirements of the City of Rio Rancho R-2 zoning district. This neighborhood, located north of Westside Boulevard, will provide additional single-family detached residential needed in the Rio Rancho housing market at slightly lower densities than within the R-3 area located to the south. A small park serving the residents of this neighborhood will be provided upon development.

**Multi-Family Residential (15 acres)**
As mentioned above, approximately 15 acres of the Business Park area is designated for potential multi-family residential development. Implementation and use of this land use will be done via a zone map amendment utilizing the R-6 zone district or other equivalent zoning designation provided by the Rio Rancho Code of Ordinances. When this land use is implemented, the Unit 10 buffer overlay district regulations established in Ordinance No. 20, Enactment 18-24 shall be considered and implemented. Further details regarding implementation of this land use may be defined in a separate development agreement.

**Pond/Open Space (8 acres)**
The pond that is located at the Plan Area’s southwest boundary is being developed in collaboration with the Southern Sandoval County Flood Control Authority (SSCAFCA) and the City of Rio Rancho. More information on the Los Diamantes Regional Pond is included in Chapter 8, Conceptual Drainage Plan.

**Neighborhood Parks**
There are three neighborhood parks planned within the Los Diamantes residential neighborhoods. These parks will be a variety of sizes based on the neighborhood area served by each. These parks total approximately 4.9 acres. They will be dedicated to the City of Rio Rancho and will be maintained by the City of Rio Rancho. More information of these parks is contained in Chapter 6, Parks and Trails.
Generalized Land Use
The City of Rio Rancho Comprehensive Plan Generalized Land Use Plan was recently updated in order to add proposed land uses for Unit 10. The Los Diamantes Master Plan is within Unit 10. The Master Plan is consistent with the Generalized Land Use Plan, which shows the land uses as Industrial, Business Park, Warehousing, and Low/Medium Density Residential. See the Generalized Land Use Map located below:
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4. DESIGN STANDARDS

The purpose of these Design Standards is to provide a framework to assist the architects, landscape architects, civil engineers, and designers in understanding the vision and development goals for the Plan Area. Minor amendments to these standards may be approved administratively by the Development Services Department Director and major amendments shall be approved by the City of Rio Rancho Governing Body.

A. RESIDENTIAL DESIGN STANDARDS
The residential design standards address the issues of landscape, setbacks, pedestrian amenities, screening, lighting, and signage that will create the visual image desired for Los Diamantes. They are intended to be complementary to the surrounding area, and to create a unique neighborhood in Los Diamantes that has its own identity but reinforces the character of the Los Diamantes Business Park and commercial development.

I. ARCHITECTURAL REVIEW COMMITTEE

The Los Diamantes residential subdivision will establish a residential Architectural Review Committee (ARC) to ensure that new development follows the design standards and to encourage and promote development that is harmonious and in keeping with the character of the Los Diamantes neighborhood. The ARC will be responsible for reviewing all plans and for making sure that properties are continually maintained.

A more comprehensive and detailed set of design standards and CC&Rs are being developed for the property consistent with the intent of these Master Plan standards. It is anticipated that these CC&Rs will be more detailed and may conflict with these more general guidelines. The ARC will administer these standards to ensure a consistent character and quality of development.

II. PEDESTRIAN AMENITIES

a. All pedestrian paths shall be designed to be handicapped accessible (See Americans with Disabilities Act Criteria for Barrier-Free Design), except where topography makes this unfeasible.

b. Sidewalks along Westside Boulevard shall be six feet in width. All other sidewalks shall be five feet in width.

c. To the maximum extent feasible, private parks, public parks, and open space areas shall be designed to create an integrated system that is connected through trails and sidewalks, which also serve as recreational amenities for the residents.

d. All trails within Los Diamantes will be designed in compliance with City of Rio Rancho trail standards. Trails will be designed to connect with a sidewalk and/or park. In some locations, a trail may be constructed in lieu of a sidewalk.
III. SETBACKS

The use of building area setbacks is required to provide space for the creation of visually attractive streetscapes. Required within these setbacks shall be pedestrian walkways and screening materials, including landscaping and walls.

a. Minimum Front Yard Setbacks: 15 feet, except 20 feet for garage doors and single-family attached and zero lot line dwelling units.

b. Minimum Rear Yard Setbacks: 15 Feet

c. Minimum Side Yard Setbacks: 5 feet on both sides for any principal building, for a total separation of 10 feet between buildings. 10 feet on the side of corner lots.

IV. BUILDING HEIGHT AND MATERIALS

a. Residential building heights shall not exceed 32 feet in height and shall be consistent with the City Comprehensive Zoning Code unless otherwise restricted as described below.

b. Stucco shall be the primary building material. Stucco colors shall be limited to shades of brown, tan, sage green, and sand. High intensity colors, such as metallic, black, or florescent colors are prohibited.
c. Accent colors in entry portals, front door, window frames and trim, and other incidental
elements shall be shades of white, blue, brown, and green.
d. Windows may be wood, metal, or solid vinyl. Reflective film is prohibited.
e. Exterior doors, including garage doors, shall be stained or painted wood or painted
metal and shall match the architectural theme of the dwelling.
f. Accent materials may consist of rock, wood, tile, or brick. All vinyl or metal window
frames must be either recessed or projected a minimum of 2” if they are adjacent to
stucco or stone, unless they are wood encased.

V. LANDSCAPE

The development of an overall landscape concept will establish a framework that unifies the
neighborhood. The goal is to provide a low water use landscaped community. These standards
are to be made as a supplement to the City of Rio Rancho requirements. The following are
minimum standards for the development of specific landscape plans:

a. A five-foot landscape parkway strip shall be located between the sidewalk and the curb.
The groundcover for the landscape strip shall be required to be Santa Fe Brown rock,
or other equivalent decorative rock groundcover. The maintenance of this strip shall be
the responsibility of the Homeowner.
b. Every lot shall have a minimum of two trees, each of a minimum one and one-half
inches in caliper.
c. Individual lot owners will be responsible for the installation and maintenance of the
landscape on their property. All plant material, including trees, shrubs, groundcover,
wildflowers, etc. shall be maintained by the lot owner in a living attractive condition.
d. Landscaping within the private common areas, as shown on the lot layout exhibit, shall
be maintained by the Homeowners’ Association. These areas are for the benefit of the
Homeowners and will be defined with future platting.
e. The Homeowners’ Association shall maintain landscaping in the right-of-way. All
landscaping must be maintained in attractive living condition.
f. Irrigation and landscaping maintenance outside of individual lots shall be the responsibility
of the HOA.
g. Front Yard Minimums:

40’ lots
1. 2 trees at least 1.5” caliper and 10-12 feet high at the time of planting
2. 3 large shrubs (minimum 5 gallon)
3. 2 small shrubs (minimum 1 gallon)

50’ and 55’ lots
1. 2 trees at least 1.5” caliper and 10-12 feet high at the time of planting
2. 3 large shrubs (minimum 5 gallon)
3. 4 small shrubs (minimum 1 gallon)
h. At a minimum, all front yard landscaping shall be required to contain Pueblo Rose, Santa Fe Brown, River rock, or similar type rock over filter fabric for all yard areas that are not covered with living vegetative groundcover.

i. Accentuating bark mulch or pecan shells are permitted in front yard landscape.

j. Within individual lots, landscaping and irrigation system maintenance is required and will be the responsibility of the homeowner, including that which is between the curb and sidewalk. Landscaping shall be maintained in a healthy and attractive condition.

k. Xeric principles are to be employed when designing landscaped areas and they shall include the use of water harvesting areas to the extent possible.

l. Suggested Trees:
   1. Acer negundo ‘Sensation’ – Sensation Box Elder
   2. Fraxinus velutina ‘Medesto’ – Modesto Ash
   3. Gleditsia triacanthos – Honey Locust
   4. Pistacia chinensis – Chinese Pistache
   5. Platanus acerifolia ‘Bloodgood’ – Bloodgood London Plane Tree
   6. Ulmus hybrid ‘Frontier’ – Frontier Elm

VI. LIGHTING

In order to enhance the safety, security, and visual aesthetics, careful consideration must be given to both the daytime and the night-time appearance of the lighting design and fixtures. The primary design objective of the site lighting system shall be to provide for public safety without adversely affecting adjacent properties, buildings, or roadways with unnecessary glare or reflection.

a. Placement of fixtures and standards shall conform to state and local safety and illumination standards.

b. All lights shall be fully shielded source with glare cut off angles of a maximum of 75 degrees to prevent spillage onto adjoining properties or light pollution of the existing “dark sky”. Cobra and sodium streetlights are prohibited.

c. Streetlights shall be in accordance with the City of Rio Rancho Outdoor Lighting Ordinance/Chapter 159. Height shall not exceed 16 feet.
VII. SIGNAGE

The following signage standards were developed to regulate the size, location, type, and quality of sign elements within Los Diamantes. The goal is to provide a signage program that is of high quality, maintains a consistent style and complements the visual character of the property.

a. Entry signs shall be the monument type and shall complement the materials, color, and architectural character of the buildings and shall not exceed forty square feet in area, and 8 feet in height above grade.

b. Pedestrian directional signs are permitted. The design of these signs shall be integrated with the Los Diamantes neighborhood monument entry signs and shall not exceed two square feet in area, and three feet in height above grade.

c. Illumination of signage is permitted and shall follow the Lighting Standards contained in Section VI of this document.

d. Digital and light emitting diode signage is prohibited.
VIII. WALLS

a. All perimeter block walls facing rights-of-way shall be designed to complement entry monument signs.

b. Plain grey CMU block shall not be used for wall material unless treated with stucco.

c. Chain-link (with or without slats), wood or plastic/vinyl fencing is prohibited except for security fencing where not visible from the public right-of-way.

d. Barbed wire, concertina wire, and similar materials are prohibited.

IX. UTILITIES

To ensure the overall aesthetic quality of the property and the natural environment, the visual impact of utilities and equipment shall be minimized by the following:

a. All new electric distribution lines shall be placed underground.

b. Transformers, utility pads, and telephone boxes shall be appropriately screened with walls and/or vegetation, per the access regulations of the applicable utility company, when viewed from the public right-of-way.

c. When an above ground backflow prevention device is required by the City, the heated enclosure shall be constructed of materials compatible with the architectural materials used as a main element of the building or with the landscaping there.

d. If prefabricated fiberglass enclosures are used, they shall be appropriately screened from view by low walls and/or landscaping.
X. OFF-STREET PARKING

Minimal number of off-street parking spaces shall be provided according to the design standard contained in the DPM and Requirements per Zoning Code. Parking shall be calculated and provided as follows:

a. For each house or townhouse:
   1. Three spaces if the dwelling has up to two bedrooms, two in garage
   2. Four spaces if the dwelling has three or more bedrooms, two in garage

b. Off street parking is prohibited in the front setback/landscape area. Off-street parking is permitted on the driveway within the front setback in front of the garage.

XI. RECYCLING

Curbside recycling pickup and garbage carts are provided by the City (currently via a private provider) within the City of Rio Rancho. Homes within Los Diamantes are required to provide storage for the automated carts, including the recycling cart, and homeowners are encouraged to participate in this recycling program.

B. Business Park Design Standards

The intent of the Los Diamantes Business Park Design Standards are to create the framework for a built environment within the Business Center that supports business and economic development through the creation of a cohesive, attractive setting while also respecting and accommodating the building size and use requirements of a range of employers. The design standards are intended to be complimentary to the surrounding residential neighborhoods and keep in the unique character of the entire Los Diamantes Master Plan. The Business Park Design Standards are based on the following principles:

- Design for compatibility with adjacent uses by outlining design standards which complement the nearby neighborhood and City of Rio Rancho, as a whole;
- Design for overall cohesiveness which unifies the business park with planned residential development; and
- Consider each building as a long-term addition to the city by ensuring high-quality development.

I. ARCHITECTURAL REVIEW COMMITTEE

The Los Diamantes Business Park will establish an Architectural Review Committee (ARC) to ensure that new development follows the design standards and to encourage and promote development that is harmonious and in keeping with the character of the Los Diamantes Business Park. The ARC will be responsible for reviewing all plans and for making sure that properties are continually maintained. The business park ARC will be separate from the residential ARC.
II. BUILDING ORIENTATION AND CONNECTIVITY

Intent: Buildings should be oriented with consideration to the visual impact from the perspective of the driver or pedestrian on the adjacent primary roadways. It is important to create the immediate first impression of a high-quality business park, as part of the city’s overall community character and identity. Business parks and campuses are enhanced when it is easier, safer, and more comfortable to walk between buildings and parking areas. The Los Diamantes Business Park is intended to accommodate large employers as well as live/work uses, and supportive retail and services which will have a more urban character. Therefore, both minimum and maximum setbacks have been included in order to allow for both of these land use forms. All development within the Business Park should connect to surrounding uses, including streets, businesses, transit facilities, and residential areas, where appropriate.

a. Setbacks

1. Front Yard Setback:
   Minimum - 10’
   Maximum - 80’

2. Side Yard Setback:
   Minimum of ten (10) feet, except that cantilevered roofs and sunscreens may project three (3) feet into the setback area. In the case of a corner lot, the front yard setbacks will apply except that cantilevered roofs and sunscreens may project six (6) feet into the setback area. Interior lot lines for a corner lot shall be considered side lot lines. Signs allowed by the ordinance may be placed in street-side, side yard setback areas. There is no maximum side setback.

3. Rear Yard Setback:
   Twenty (20) feet, except that cantilevered roofs and sunscreens may project three (3) feet into the setback area.

b. Building Placement

1. Building placement that creates opportunities for plazas, courtyards, patios, or outdoor dining is strongly encouraged.

c. Building Entries

1. Building entries should be located so that they are easily identifiable from the primary adjacent roadway.

2. Secondary and employee entrances shall be easily accessible and convenient to building parking and delivery areas but should not be dominant.

d. Sidewalks

1. Sidewalks shall be designed to connect to sidewalks internal to individual sites and to trails when relevant.

2. All sidewalks shall be designed per the Americans with Disability Act requirements.
e. Trails

1. All trails within Los Diamantes Business Park will be designed in compliance with City of Rio Rancho trail standards. Trails will be designed to connect with a sidewalk, business, and/or park. In some locations, a trail may be constructed in lieu of a sidewalk.

III. PARKING

Intent: The intent of the parking standards is to develop a circulation system that safely and efficiently moves vehicles while avoiding and reducing potential conflicts between pedestrians and vehicles. The maximum front setback of 80’ allows for two rows of parking and a drive aisle in front of the building. Therefore, the majority of parking shall be located either on the side or in the rear of the building.

a. Placement and Design

1. The placement and design of parking areas should foster safe pedestrian access and provide clearly identifiable pedestrian walkways between the primary entrance and visitor parking.

2. The minimum number of vehicular, disabled, motorcycle, and bicycle parking spaces shall be per Section 154.76 Off-street Parking Regulations contained in the City of Rio Rancho Zoning Code.

3. Large parking areas shall be visually segmented into smaller subareas separated by landscaping and/or pedestrian walkways.

4. Parking shall not dominate the street frontage. Wherever possible, visitor parking should be placed on the primary street frontage, and employee parking located either to the side or rear of the building.

5. Parking areas shall be designed to include a pedestrian link to the public sidewalk network, and/or trail system.

IV. ARCHITECTURE

Intent: The purpose of the architectural standards is to provide direction for the development of an attractive, cohesive built environment that accommodates the function of the individual buildings within the Los Diamantes Business Park while also ensuring quality development and reinforcing the unique character and identity of the Park.

a. Materials

1. Primary building materials shall be stucco, colored concrete, or colored block. Stone, tile, metal, or brick accents are also allowed.

2. Finished building treatments are required on all four side of the building.
3. Materials prohibited as the primary building material include the following:
   
   i. Exposed, untreated precision block or wood walls
   
   ii. Highly reflective surfaces
   
   iii. Metal paneling.

b. Color

1. Predominate colors shall be limited to shades of brown, tan, rust, and blue. High intensity colors, such as metallic, black, or florescent colors are prohibited.

c. Height

1. Building height shall be limited to sixty (60) feet.

d. Building Design

1. Facades with a high level of visual interest from both vehicular and pedestrian viewpoints are encouraged.

2. Long unbroken building facades should be broken up with architectural details. Facades with varied front setbacks are encouraged to provide visual interest.

3. Rear and side wall elevations shall be constructed of the same materials as the primary front facade and shall be of the same architectural design.

4. Entrances to individual buildings should be identifiable through the use of architectural recesses or projections, roof elements, columns, or other architectural elements.

V. SUSTAINABILITY

a. Energy efficient techniques shall be utilized to reduce energy and water consumption, where feasible.

b. Water harvesting techniques such as curb cuts for drainage to landscaped areas, permeable paving, and or bioswales to slow and treat storm water runoff shall be provided where feasible.

c. Buildings shall be oriented to take advantage of heat gain in the winter where feasible while coordinating with shading strategies to inhibit solar gain in the summer.

d. Grasses and other ground vegetation should be near edges to help filter and slow runoff as it enters and exits the site.

e. Convenient recyclable collection facilities shall be provided by all tenants of the site.
VI. LANDSCAPING

Intent: The intent of the landscape standards is to foster the development of an overall, water efficient, landscape concept that will establish a framework that unifies the entire Business Park.

a. The use of turf grasses shall be limited per the City of Rio Rancho regulations restricting turf grass.

b. A landscape setback (outside of the right-of-way) of a minimum of 10 feet shall be provided along each primary street frontage. The landscape area shall be comprised primarily of deciduous trees, 10-foot minimum height at the time of planting and shall be capable of reaching a mature height of at least 25 feet.

c. An automatic underground irrigation system shall be provided to support all landscaping. The system shall be designed to avoid overspraying of walks, buildings, fences, etc.

d. Proposed lighting and landscaping shall be placed so they are not in conflict with each other.

e. All plant material within the business park, including trees, shrubs, groundcovers, turf, wildflowers, etc. shall be maintained by a landscaping company. A business park association shall be established to fund landscaping maintenance. Association membership shall be required by property owners within the business park and landscaping maintenance fees shall be based on property size.

f. Suggested Trees:
   1. Acer negundo ‘Sensation’ – Sensation Box Elder
   2. Fraxinus velutina ‘Modesto’ – Modesto Ash
   3. Gleditsia triacanthos – Honey Locust
   4. Pistacia chinensis – Chinese Pistache
   5. Platanus acerifolia ‘Bloodgood’ – Bloodgood London Plane Tree
   6. Ulmus hybrid ‘Frontier’ – Frontier Elm
   7. Pinus eldarica – Afghan Pine
   8. Pinus nigra – Austrian Pine

VII. SCREENING, BUFFERING AND WALLS

Intent: The intent is to reduce the visual impact of the necessary elements of parking, mechanical equipment, and refuse on the site; and to provide broader buffers to adjacent land uses without impacting the practical function of the site components.

a. Screening

   1. Portions of parking lots that are in front of or beside buildings along the primary street (as determined by main entrance) shall be screened with one or more of the following treatments:

      i. Landscaping to sufficiently screen the first 3 feet in height adjacent to the parking area, within the landscape setback.
ii. Low walls made of concrete, masonry, or other similar material and not exceeding a height of 3 feet.

iii. Raised planter walls planted with a minimum 80% evergreen shrubs not to exceed 3 feet in height.

2. Refuse collection shall comply with Waste Management of New Mexico and City of Rio Rancho requirements.

3. Screening for the refuse collection shall be comprised of a solid wall. The location, design, color, and material of the enclosure shall be compatible with the principal building.

4. Ground and roof-mounted mechanical equipment shall be screened from the view of adjoining properties by landscaping or parapets, respectively.

b. Walls

1. All perimeter block walls facing rights-of-way shall be constructed of split-face concrete block and shall include a smooth, continuous 4-inch cap of a complementary color.

2. Plain grey CMU block shall not be used for wall material unless treated with stucco.

3. Chain-link (with or without slats), wood or plastic/vinyl fencing is prohibited except for security fencing where not visible from the public right-of-way.

4. Barbed wire, concertina wire and similar materials are prohibited.

VIII. STORAGE AND EQUIPMENT AREAS

Intent: Storage and equipment areas should be designed to be harmonious with the site without interfering with their storage function and need for security.

a. Any exterior storage and sales areas shall be screened with walls which are architecturally compatible with the primary building(s) on the site.

b. Loading and service areas should be provided with separate access and circulation whenever possible.

IX. SIGNAGE

The following signage standards were developed to regulate the size, location, type, and quality of sign elements within this property. A properly implemented signage program will serve four very important functions: to direct and inform employees and visitors; to provide circulation requirements and restrictions; to provide for public safety, and to complement the visual character of the development.
a. The following types of signs are permitted in the Los Diamantes Business Park:

1. Monument/Entry Signs
2. Building Mounted Signs
3. Vehicle Directional Signs
4. Pedestrian Directional Signs

b. Entry signs shall be monument type and shall complement the materials, color, and architectural character of the buildings and shall not exceed one hundred thirty-five square feet in area, and fifteen feet in height above grade.

c. One building mounted sign is permitted for each facade that faces a primary roadway. Building mounted signs shall be limited to 10% of the building facade, and a maximum projection of eighteen inches.

d. Vehicle directional signs are permitted when necessary to direct vehicles to a special site feature, such as visitor parking. The design of these signs shall be integrated with the Los Diamantes Business Park entry signs and shall not exceed three square feet in area, and five feet in height above grade.

e. Pedestrian directional signs are permitted when it is necessary to direct pedestrians to a special site feature such as a recreational trail. The design of these signs shall be integrated with the Los Diamantes Business Park monument entry signs and shall not exceed two square feet in area, and 3 feet in height above grade.

f. Illumination of signage is permitted and shall follow the regulations contained in Section X, Lighting, located below.

g. Digital and Light Emitting Diode Lighting is permitted per the City of Rio Rancho Institutional District sign regulations.
X. LIGHTING

Intent: Lighting should be designed to provide atmosphere, safety, and security. Lighting shall comply with all applicable City ordinances and shall be further restricted by the following design standards:

a. Site lighting shall be shielded and oriented to eliminate glare or light trespass on to adjacent rights-of-way and properties.

b. All parking lot lighting shall be fully shielded and night-sky compliant.

c. Pedestrian scale bollard lights are encouraged and shall be fitted with louvers, diffusers or shields, as necessary, to eliminate glare or light trespass on to adjacent rights-of-way and properties.

d. Light fixtures shall conform to the architectural character of the buildings and other site elements.

e. Building mounted lights shall be fully shielded and mounted at a maximum height of sixteen feet.

f. Up-lighting for signage and landscape is permitted and shall be shielded to eliminate glare and light trespass and be night-sky compliant.

XI. UTILITIES

a. All electric distribution lines shall be placed underground.

b. Transformers, utility pads, and telephone boxes shall be appropriately screened with walls and/or vegetation when viewed from the public right-of-way. Screening of transformers, electric boxes and other utility structures shall not impede access to the equipment and shall provide for safe maintenance and repair by utility workers.

c. When an above-ground backflow prevention device is required by the City of Rio Rancho, the heated enclosure shall be constructed of materials compatible with the architectural materials used as the main elements of the building. If prefabricated fiberglass enclosures are used, they shall be appropriately screened from view by walls and/or landscaping.

d. Any wireless communication facilities shall be concealed and architecturally integrated.

XII. RECYCLING

Recycling pick-up for businesses is provided within the City of Rio Rancho and is encouraged within Los Diamantes. To receive these services, business can purchase containers through the City (currently via a private provider). Site design shall accommodate recycling storage and pick-up.

XIII. MASS TRANSIT STOPS

The roadways adjacent to and through the Business Park shall be designed to accommodate transit stops in anticipation of future transit service within Rio Rancho. Transit shelters will be developed at such time as transit service is made available.
5. RIO RANCHO COMPREHENSIVE PLAN

The Los Diamantes Master Plan furthers and helps implement the Rio Rancho Comprehensive Plan. The Comprehensive Plan is a policy document that lays out goals, policies, and actions to guide growth and development in Rio Rancho. The Rio Rancho Comprehensive Plan is organized around nine fundamental principles, including:

- Annexations, Antiquated Platting & Addressing
- Conservation and the Natural Environment
- Land Use
- Population and Housing
- Transportation
- Public Facilities
- Parks and Recreation
- Urban Design
- Economic Development

The Los Diamantes Master Plan will implement these elements of the Rio Rancho Comprehensive Plan. An explanation of how the Plan meets and furthers the intent of the goals, policies, and actions under each element is included below.

ANNEXATIONS, ANTIQUATED PLATTING and ADDRESSING
The intent of the Annexations, Antiquated Platting, and Addressing element is to ensure proper platting and addressing within the City of Rio Rancho.

- Eliminate antiquated platting within the City of Rio Rancho where desirable.
- Identify alternative mechanisms to aide and encourage the consolidation of prematurely platted land.
- Require appropriate development standards for infrastructure and environmental improvements for both newly platted lots and antiquated lots.

The Los Diamantes Master Plan meets and furthers these goals and policies. The land has been assembled and will be platted according to City standards prior to development within the Plan Area. The Master Plan eliminates the challenges associated with antiquated platting by assembling land for a consolidated master planned community, providing adequate public infrastructure and paved roads to future residents, and addresses historical drainage patterns.

CONSERVATION and THE NATURAL ENVIRONMENT
The intent of the Conservation and the Natural Environment element is to ensure that sustainability is a key component of the City’s growth. As development occurs, this element is intended to ensure that concerns such as water quality, air quality, water conservation, geological features, and soil conditions are taken into consideration when development decisions are made.
The Conservation and Natural Environment element of the Comprehensive Plan include some of the following goals, policies, and actions which are relevant to the Los Diamantes Master Plan:

- Preserve water resources.
- Reuse and recycle materials, reduce waste and dispose of all wastes in a safe and responsible manner.
- Integrate site-specific development standards in areas where arroyos exist to manage and protect the functions of these critical areas.
- Provide incentives for developers to implement the use of low impact development techniques and green building practices.
- Develop and protect a public open space network.

The Los Diamantes Master Plan takes into consideration environmentally friendly building practices. Builders at Los Diamantes are encouraged to join green building programs and employ green building techniques.

The use of drought tolerant and native landscaping materials is required. A coordinated pedestrian network is established throughout the Plan Area to help foster non-vehicular mobility and accessibility and decrease vehicular pollution. An open space network will be provided that includes parks and trails to give residents recreation opportunities and non-motorized transportation alternatives.

The Master Plan maintains and improves natural resources in Rio Rancho through support for recycling, water conservation, transportation alternatives, and the use of renewable resources. Grading and development activities will be managed to prevent flood and erosion damage. A pond is proposed to capture and manage flows in the existing Rainbow Tributary and will also reserve land in an open, natural condition.

LAND USE, POPULATION and HOUSING

The intent of the Land Use and Population and Housing elements of the Rio Rancho Comprehensive Plan are to ensure the city has a balance of land uses that supports employment, creates a neighborhood identity, fosters human interaction, and provides a variety of quality housing for all segments of Rio Rancho’s population.

The Land Use and Population and Housing elements of the Comprehensive Plan include some of the following goals, policies, and actions which are relevant to the Los Diamantes Master Plan:

- Encourage mixed uses – retail, office, and residential centered on pedestrian-oriented development along principal arterial roads.
- Maintain a balance of land uses throughout the City.
- Encourage the master planning of developments that establish a community character that considers circulation, landscaping, open space, storm drainage, utilities, and building location and design in the master plan.
- Promote and support developments that incorporate walkability.
- Maintain the strength, vitality, and stability of all residential neighborhoods and types.
• Promote a variety of housing types to meet the needs of all members of the community.
• To ensure that single-family and multi-family residential neighborhoods provide an attractive living environment.
• Support residential development with appropriate amenities for families with children.

The Los Diamantes Master Plan meets these objectives by providing a range of land uses. The Master Plan calls for a mix of land uses that will accommodate a diversity of single-family and multi-family housing, employment, and retail service options for residents. Land uses include office, commercial, business park, and residential. Los Diamantes is located west of Unser Boulevard and residents living in Los Diamantes will additionally have convenient access to employment, education, and commercial services in the Unser Gateway area. The Los Diamantes Master Plan is consistent with and furthers the City of Rio Rancho’s Generalized Land Use Plan recently adopted by the governing body.

The Master Plan’s residential and business park design standards promote a strong community character. Dedicated park land and trails are included in the Master Plan to encourage neighborhood vitality and social interaction. Rio Rancho Public Schools plans to build three schools in proximity to the Plan Area to ensure the residential development will be served sufficient educational opportunities for families with children.

The Los Diamantes Master Plan will primarily utilize existing City of Rio Rancho zoning categories. The City is creating a new Business Park zoning designation for the north side of the Plan Area. Development will conform to the design standards contained in this Master Plan.

TRANSPORTATION
The intent of the Transportation element of the Rio Rancho Comprehensive Plan is to establish a long-range transportation network to meet local and regional circulation needs and develop land uses that are benefited by and supportive of mass transit. A multi-modal transportation system to move people and goods is encouraged.

The Transportation element of the Comprehensive Plan include some of the following goals, policies, and actions which are relevant to the Los Diamantes Master Plan:
• A balanced transportation system that provides access to a variety of transportation options....
• Plan key arterial routes that are essential for the efficient movement of goods with freight in mind....

A Traffic Impact Study has been provided to ensure that new residential, commercial, and business park development will not compromise the existing transportation network. Walkways and pedestrian corridors will be provided both as sidewalks along the roadways and within park land and trail corridors. Pedestrian and bicycle connections have been considered for arterial and collector roadways and within trail corridors.

There are plans to extend Westside Boulevard to increase connectivity between the development and other areas of Rio Rancho, while also keeping the integrity of a coordinated pedestrian network.
PUBLIC FACILITIES
The intent of the Public Facilities element of the Rio Rancho Comprehensive Plan is to focus development into areas of the city that already have well established public facilities and minimize the difficulties, due to antiquated platting, of providing infrastructure within the City.

The Public Facilities element of the Comprehensive Plan include some of the following goals, policies, and actions which are relevant to the Los Diamantes Master Plan:

- Make land use recommendations based on the availability of adequate public facilities necessary to support a proposed land use.

The Master Plan is strategically located in an area of Rio Rancho where the project will be able to connect to existing infrastructure and is a logical location for urban expansion. The City considered proper access to schools, police, fire, and emergency services when it adopted the Generalized Land Use Plan. The Los Diamantes Master Plan is in compliance with and furthers the Generalized Land Use Plan. Police, fire, and emergency rescue services impacts will be considered in all future development plans.

PARKS and RECREATION
The intent of the Parks and Recreation element of the Rio Rancho Comprehensive Plan is to ensure that as the City develops, amenities such as parks and recreation facilities are provided for the growing population. The Parks and Recreation element of the Comprehensive Plan include some of the following goals, policies, and actions which are relevant to the Los Diamantes Master Plan:

- Establish new and maintain existing recreation and senior centers, parks, trails, and open space that foster a quality community, support a strong economy, and meet the needs of current and future residents.
- Be responsive to the recreational needs of the community.
- Provide a variety of quality of life services to meet community needs, assuring that there are strong relationships with all sectors of the community and ample opportunities to foster human interaction.
- Develop pedestrian and bicycle linkages between neighborhoods and major natural areas, recreation facilities, education, employment, and retail centers.

The Los Diamantes Master Plan provides well-connected park land and trail corridors to meet the goals of the Rio Rancho Comprehensive Plan. The Plan Area will dedicate the necessary park land and trail corridors per the subdivision ordinance. Fulfilling this requirement will ensure the Master Plan is responsive to the parks and recreation needs of new residents, employees, and the entire community. Through parks and recreation, the Master Plan supports a community and economy intended to improve the lives of its residents and employees.
URBAN DESIGN
The intent of the Urban Design element of the Comprehensive Plan is to ensure that development follows design standards that help to achieve the creation of community identity and aesthetic quality. The Urban Design element of the Comprehensive Plan include some of the following goals, policies, and actions which are relevant to the Los Diamantes Master Plan:

- Create traditional neighborhood patterns that support a sense of place.
- Create street patterns with development that fosters human interaction.
- Create safe developments that discourage crime.
- Support development that links neighborhoods and encourages the use of all modes of transportation.
- Embrace the use of xeriscape landscaping.

Design features within the Los Diamantes Master Plan will highlight streetscapes, multi-use paths, perimeter walls, gateways, and pedestrian connections to create a community identity and promote aesthetic quality. Design standards created for the Plan Area are designed to expand on the City’s Zoning Ordinance and will provide unified streetscapes, unified signage design, and perimeter and wall entry design. Street patterns will be designed to foster human interaction and discourage crime. Native and xeric plant species will be required and water harvesting and irrigation requirements will be included in any future landscape plans.

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

- Create jobs.
- Enhance the tax base.
- Expand the economic base of Rio Rancho.

The importance of economic development is amplified by Mayor Hull’s stated goal of making the City of Rio Rancho “an environment attractive to job creation”. Los Diamantes helps realize this goal through the creation of a new high-quality business park. The Los Diamantess Master Plan will consist of a large business park on the north side of the Plan Area supporting a wide variety of potential employers and new industry in Rio Rancho. This “across the river” job center will support approximately 1,400 jobs and large parcels of land with accessibility to several major arterials will be desirable for future employers. The City should also consider development incentives to attract employers and commercial services to Los Diamantes by providing an expedited development review process. An increase in economic base job creation will support a larger future increase in retail and service-based businesses, thus decreasing retail leakage to Albuquerque. The large business park will provide the necessary infrastructure and land needed to incentivize companies to locate in Rio Rancho.

The business park and residential uses will be served and supported by a mix of retail uses, such as restaurants, banks, dry cleaners, etc., providing a balance of employment and residential land uses within Los Diamantes. Providing retail and other commercial options will keep Rio Rancho residents from spending money in Albuquerque and grow the service-sector base of the City.
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Los Diamantes proposes to provide a significant recreational component to its new land use mix. It is anticipated that approximately 1,600 residents will reside here. Parks will be provided at or exceeding City of Rio Rancho standards (which is more than 4 acres for the Master Plan Area).

A. Non-Vehicular Circulation:
Paved trails and sidewalks are proposed inside and around the perimeter of Los Diamantes to create a pedestrian friendly environment. Paved pathways and sidewalks will be incorporated into the streetscape. The intent is to encourage residents and employees of the Business Park to walk or bike to and from work, education facilities, and for recreation.

The internal parks will be linked to the paved trail and sidewalk network. There will be approximately 3,450 linear feet of trails within the Plan Area in addition to City standard sidewalks along all roadways throughout the development. These trails and sidewalks will create a comprehensive network within the Master Plan. The trails will be maintained by the HOA. Pedestrian access points will be placed throughout the trail network.
B. Neighborhood Parks

There are three parks proposed along the principal interior access and circulation routes for each neighborhood in Los Diamantes. Two neighborhood parks approximately two acres in size are proposed in the neighborhoods south of Westside Boulevard, and are designed to provide recreational opportunities for residents living in the immediate neighborhoods and will feature age-dependent amenities. These parks will be designed and constructed according to the City’s DPM standards, with an understanding that they will be dedicated to the City’s Parks and Recreation Department. The developer of Los Diamantes will dedicate the land and install park improvements. A third, smaller park is located within the proposed single-family neighborhood located north of Westside Boulevard. This park will serve the residents of this small residential subdivision.
7. TRANSPORTATION ANALYSIS

Los Diamantes is located approximately one mile west of Unser Boulevard which is classified as a Principal Arterial and approximately one-half mile south of Southern Boulevard which is also classified as a Principal Arterial. The property is bisected by the unimproved Westside Boulevard which has been classified as a Minor Arterial by the Mid-Region Council of Governments, MRCOG. To the south, Isabel Road intersects Black Arroyo Road at the Municipal Boundary with the City of Albuquerque. Black Arroyo Road (City of Albuquerque) is classified as a collector.

For its principal access route, Los Diamantes will rely upon the improved Westside Boulevard. It is anticipated that Westside will be improved in phases with two lanes being required from Unser to the east boundary at 10th Street for the full build out of this project. Westside will be built to its’ full section as it goes through Los Diamantes. This will also be done in phases. A Traffic Impact Study performed specifically for this project indicates that the City’s local street network has adequate capacity for the vehicular impacts generated by Los Diamantes.

All new streets proposed within Los Diamantes will be improved to City of Rio Rancho Standards including the perimeter streets of Isabel, Viga, and 10th Street as phased development occurs. For the three primary circulation routes within the project, 8-foot paved meandering trails will be installed on one side along with common area landscaping in lieu of the typical 5’ sidewalk.

All of the trails and common area landscaping will be HOA maintained.
Traffic Impact Study

A traffic impact study was performed for Los Diamantes in March 2015. The executive summary of that study is included as Appendix C of this document. The traffic study includes conclusions and recommendations for the transportation network within the Plan Area and how the Plan should be regionally and locally accessed.
CONNECTION OF ISABEL TO BLACK ARROYO BY LOS DIAMANTES
2 LANES REQUIRED FOR LOS DIAMANTES - UNSER TO 10TH ST.
FUTURE ALIGNMENT VIGA TO RAINBOW
2 LANES CONSTRUCTED THROUGH LOS DIAMANTES 10TH ST. TO VIGA RD.
FUTURE SIGNALIZE INTERSECTION
The Los Diamantes development is encumbered by a FEMA Zone A flood plain created by the Rainbow Tributary to the Calabacillas Arroyo. The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood. The Rainbow Tributary originates within the City of Rio Rancho above Southern Blvd. and ends at the Municipal Boundary with the City of Albuquerque where it enters an existing 108” Storm Drain maintained by the City of Albuquerque for conveyance to the Calabacillas Arroyo (see page 47) The Rainbow Tributary was studied as part of SSCAFCA’s Calabacillas Watershed Management Plan.

The Los Diamantes Drainage Management Plan, (DMP), proposes to intercept the Rainbow Tributary at the Western Boundary of the subdivision in a large Regional Pond. The Regional Pond will allow for the removal of the FEMA Flood Plain through the project. This pond will benefit approximately 700 acres of land outside of Los Diamantes by allowing those properties to develop without on-site drainage controls. The pond will also provide for a significant upgrade in the water quality of the released flow.

In coordination with SSCAFCA, the Regional Pond is designed to contain both the 10-year, 24-hour storm volume as well as provide flood protection from less frequent, larger storm events up to and including the 100-year storm event. It is proposed that SSCAFCA operate and maintain the pond facility.

Both the Business and Residential components will drain to an internal storm drain network that will discharge to an on-site Water Quality Pond prior to the flows being released to the existing 108” Saltillo storm drain. Water Quality will be enhanced as well as some Water Harvesting. Detention times will be such that significant amounts of urban debris, sediments, oils, and heavy metals will be removed. It will also allow for infiltration to occur.

With the approval of SSCAFCA and the City of Rio Rancho, the analysis and design of the regional Pond will be submitted for FEMA for a Conditional Letter of Map Revision (CLOMR). Upon receipt of the CLOMR, construction would occur. When construction is complete, a Letter of Map Revision (LOMR) will be issued by FEMA.
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This page intentionally left blank.
1. DETAILED DRAINAGE REPORT AND GRADING PLANS TO BE PREPARED FOR PRELIMINARY PLAT SUBMITTAL / APPROVAL.

2. CAPACITY OF EXISTING 108" SD TO CALABACILLAS IS 1328 cfs ±

3. SSSAFCA PROJECT N. OF SUBASIN 102 PROPOSES TO DISCHARGE 100 cfs ± SOUTH IN A SD IN 10TH STREET.

NOTES:

* RUNOFF CALCULATIONS HAVE NOT TAKEN INTO ACCOUNT WATER HARVESTING MEASURES.
9. CONCEPTUAL UTILITY PLAN

Los Diamantes will be served by the City of Rio Rancho Utility Department.

Water

The proposed development is south of Southern Boulevard and west of Unser Boulevard in southwest Rio Rancho, New Mexico. The development is generally bounded by 17th Avenue to the north, 10th Street to the east, Isabel Road to the south, and Viga Road to the west. The development is bisected by Westside Boulevard with the property north of Westside Boulevard planned for Business Park uses and residential development south of Westside Boulevard.

The property slopes from the west to the east/southeast ranging in elevation from approximately 5515' to 5410'.

Los Diamantes is located in Zone 3 of the City of Rio Rancho’s water system. The source of supply for the proposed development is via gravity from Tank 6 which is located near Tulip Road and 2nd Street and from Tank 8 (via PRVs) once a connection to the 16” line in Southern Boulevard NE is completed. It is planned for a new Zone 3 tank to be constructed further south within the City limit sometime in the future at the same HGL as this area continues to develop. Currently, service to the project area can be provided without the proposed Zone 3 tank. In this area Tank 8 and Well 19 feed Zone 5 via gravity and Zone 4 through PRVs.

Due to the proximity of Well 19 and the hydraulic connectivity in this area, these facilities will provide service to Los Diamantes through pressure reducing valves (PRVs).

Currently, no piping exists to support this development. The nearest infrastructure is located in Zone 4 off Hopi Road and Villa Road southeast of Puesta del Sol Elementary School off Southern Boulevard. This development is served from a PRV with the backbone infrastructure being 10-inch waterline.

A 16-inch waterline exists in Rainbow Boulevard bringing Well 19 water to the south. There is also 16-inch waterline in Southern Boulevard in front of Puesta Del Sol Elementary school which brings water east along Southern Boulevard to the lower pressure zones. Approximately 2,150 feet of 16-inch waterline is required to connect in the 16-inch waterlines in Rainbow Boulevard and Southern Boulevard for redundant supply from Tank 8 to Los Diamantes. In addition, some minor looping in Zone 4 is recommended to connect the 8-inch waterlines southwest of Hopi Road to the 10-inch waterline in Villa Road for redundancy to supply the proposed PRV in Ark Road to bring supply to Los Diamantes from the west. Due to the demand on Tank 6 to feed existing customers, this will be the primary supply to Los Diamantes.
The feed (provided by Tank 6) to Los Diamantes will be extending the existing Zone 3 infrastructure from Southern Boulevard to Los Diamantes via a proposed 16-inch to extend along 15th Street and Viga Road North of Viga Road the 16-inch waterline and extends south along 11th Street to Westside Boulevard where it will tie into a proposed 20-inch waterline to bring water to Los Diamantes.

The waterline diameters required to bring water to Los Diamantes take into consideration the City's Master Plan for future growth. In the future, it is intended for supply from the lower pressure zones to potentially be pumped up to the higher zones using the Westside Boulevard corridor for redundancy. It is important for utilities such as this large diameter pipe, to be taken into consideration as well as the other utilities needed to serve this development during the planning stage.

The piping around the Los Diamantes development takes into consideration the City's Master Plan. A minimum 8-inch diameter pipe is proposed internal to the development.

**Sanitary Sewer**

Sewer service for Los Diamantes and all properties within the Rainbow Basin will require construction of a Sanitary Sewer Lift Station designed for a future population of nearly 2,000 dwelling units within nearly 500 acres. Future flows are anticipated to reach nearly 1 million gallons per day. Los Diamantes contribution to this will be on the order of 225,000 gallons per day. Internally, 8” lines will be used. Several collectors will be constructed north and west that will provide service to the remainder of the basin in the future. The Lift Station will be designed to accommodate all future flows, but construction will be phased as needed.
10. IMPLEMENTATION AND PHASING

The implementation of the Los Diamantes Master Plan shall occur at the time of the zone map amendment and platting except for the potential multi-family residential land use. A future zone map amendment will be required to implement that land use in a specific location, up to 15 acres in size, within the larger business park area of this Master Plan depending on absorption of the commercial uses.

1. All land use decisions shall be in compliance with the Los Diamantes Master Plan and in accordance with the City of Rio Rancho Department of Development Services, including right-of-way acquisition.

2. All infrastructure shall be planned and coordinated with City of Rio Rancho Department of Public Works, Department of Development Services, Department of Public Safety, PNM, and any other established entities working with Sandoval County and the City of Rio Rancho.

3. In order to uphold national standards for emergency response times, facility planning shall be coordinated with the City of Rio Rancho as houses are built.

4. The developer shall ensure that all open spaces, entryways, linear walkways, rights-of-way, and landscaped areas meet City standards as shown on landscape and irrigation plans that shall be approved by the City of Rio Rancho prior to final plat.

5. Open space and trails shall be developed; a portion of which shall count towards the park requirements established by the City of Rio Rancho.

6. The residential design standards included in this Master Plan shall be incorporated into the CC&Rs for each Los Diamantes residential subdivision.

7. The Developer intends to use Tax Increment District and Public Improvement District financing within the Master Plan Area. These financing mechanisms will be implemented through separate applications to the City of Rio Rancho.

Due to its relatively large size, Los Diamantes will be divided into three (3) phases, with 224 dwellings in Phase 1, 263 dwellings in Phase 2, and 91 dwellings in Phase 3. The availability of infrastructure and the Marketing Window were the primary determining factors in deciding to locate the first phase in the southeast corner of the property. Phase implementation will be a function of buyer demand and home builder preferences since it is anticipated that numerous homebuilders will be constructing a variety of housing types to get different price points.
The site's terrain slopes down toward the southeast corner where the Water Quality drainage pond will be used to collect runoff from the first phase and all subsequent phases. A new storm drain will then extend further south to the existing 108" Storm Drain and eventually drain into the Calabacillas Arroyo.

Los Diamantes sanitary sewer outfall will also be to a new Lift Station at the southeast corner of Phase 1. Domestic water service to Phase 1 will come south down 11th from an existing line located in Southern Blvd. and on the north side of the site.

Vehicular access for Phase 1 will be via newly constructed Westside Boulevard. New roadways within and around the perimeter of Los Diamantes will also be constructed as new phases of this project are added.

Prior to Construction of Phase 1, an on-site Drainage Management Plan (DMP) will have to be developed and approved by SSCAFCA and the City of Rio Rancho. As mentioned previously, a study to Amend the SSCAFCA CAW MP for the Regional Pond will also require approval by SSCAFCA and City of Rio Rancho as well as a FEMA CLOMR.

Initiation of Phase 1 will require substantial outlays of capital to extend essential elements of infrastructure to this site. As a result, no neighborhood park improvements will be undertaken until Phase II.
11. APPENDICES

- Appendix A - Letters of Availability  Page 59
- Appendix B - Economic Impact Assessment  Page 73
- Appendix C - Traffic Impact Study  Page 75
- Appendix D - Typical Trail Surfacing  Page 83
March 10, 2015

Mr. Mark Goodwin, PE
President
Mark Goodwin & Associates, PA
8916 Adams St NE
Albuquerque, NM 87113

Re: Water System Availability – Los Diamantes Project – Unit 10, Rio Rancho, NM

Dear Mr. Goodwin:

Per your request, Bohannan Huston Inc. (BHI) performed an analysis of water availability for the proposed improvements for the Los Diamantes Project within Unit 10, in Rio Rancho, NM. BHI’s analysis and results are presented below. Be advised that this letter serves as a recommendation only and is not to be considered an official commitment of water availability. Recommendations discussed herein may be revisited and potentially revised by the City of Rio Rancho Engineering and Utility Divisions prior to final plan acceptance. If development has not begun within 18 months of this letter the City of Rio Rancho may request this analysis be revised to take into consideration growth which has occurred over this period to verify recommendations are still valid.

We understand the proposed project consists of 450 new single family homes and 600,000 square feet of Business Park, with an average building size of 60,000 square feet. The total land area is approximately 175 acres. A preliminary pipe layout was not provided for this analysis.

BHI used the City of Rio Rancho Water and Wastewater Design Criteria Guidelines for this analysis.

Water Availability

I. General

The proposed development is south of Southern Blvd and west of Unser Blvd in southwest Rio Rancho, New Mexico. The development is generally bounded by 17th Ave to the north, 10th St to the east, Isabel Rd to the south, and Viga Rd to the west. The development is bisected by Westside Blvd with the property north of Westside Blvd intended for the Business Park and the residential development south of Westside Blvd. A vicinity map is included in Figure 1.

The property slopes from the west to the east/southeast ranging in elevation from approximately 5515’ to 5410’.

Los Diamantes is located in Zone 3 of the City of Rio Rancho’s water system. The source of supply for the proposed development is via gravity from Tank 6 which is located near Tulip Rd and 2nd St. and from Tank 8 (via PRVs) once a connection to the 16” line in Southern
Blvd NE is completed. The hydraulic grade line (HGL) for this area is set by Tank 6 at approximately 5635'. It is planned for a new Zone 3 tank to be constructed further south within the city limit sometime in the future at the same HGL as this area continues to develop. Currently, service to the project area can be provided without the proposed Zone 3 tank. In this area Tank 8 and Well 19 feed Zone 5 via gravity and Zone 4 through PRVs. Due to the proximity of Well 19 and the hydraulic connectivity in this area, these facilities will provide service to Los Diamantes through pressure reducing valves (PRVs).

II. System Demands

The estimated demand for the residential development for Los Diamantes on an average day is 135,000 gallons. A peaking factor of 2.167 is used in the City of Rio Rancho Design Guidelines resulting in a peak day demand of 292,545 gallons per day, or 203 gallons per minute.

The estimated demand for the Business Park for Los Diamantes assumes a development type of Light Commercial which has an average day design demand of 1,750 gallons per day per acre. With this assumption the average day demand is calculated at 24,105 gallons. A peaking factor of 1.5 is used for non-residential demands resulting in a peak day demand of 36,160 gallons per day, or 26 gpm.

The system-wide diurnal curve, shown below in Table 1, was applied to the entire Los Diamantes peak day demands.

<table>
<thead>
<tr>
<th>Hour</th>
<th>Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.93</td>
</tr>
<tr>
<td>2</td>
<td>0.77</td>
</tr>
<tr>
<td>3</td>
<td>0.71</td>
</tr>
<tr>
<td>4</td>
<td>0.63</td>
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<td>0.70</td>
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<td>6</td>
<td>1.00</td>
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<td>7</td>
<td>1.39</td>
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<tr>
<td>8</td>
<td>1.78</td>
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<tr>
<td>9</td>
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<tr>
<td>10</td>
<td>1.24</td>
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<td>12</td>
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<td>0.74</td>
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<tr>
<td>21</td>
<td>0.73</td>
</tr>
<tr>
<td>22</td>
<td>0.87</td>
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<tr>
<td>23</td>
<td>1.16</td>
</tr>
<tr>
<td>24</td>
<td>1.03</td>
</tr>
</tbody>
</table>

Table 1 – City of Rio Rancho Diurnal Pattern of Use
Per the City’s Water and Wastewater Design Criteria, the required fire flow for residential demand is 1,500 gallons per minute and for Light Commercial development 3,000 gallons per minute. These fire flow were evaluated in the model using a residual fire flow pressure of 20 psi at the demand nodes.

III. Proposed Infrastructure and Analysis

Currently, no piping exists to support this development. The nearest infrastructure is located in Zone 4 off Hopi Rd and Villa Rd southeast of Puesta del Sol Elementary School off Southern Blvd. This development is served from a PRV with the backbone infrastructure being 10-inch waterline.

A 16-inch waterline exists in Rainbow Blvd bringing Well 19 water to the south. There is also 16-inch waterline in Southern Blvd in front of Puesta Del Sol Elementary school which brings water east along Southern Blvd to the lower pressure zones. Approximately, 2,150 feet of 16-inch waterline is required to connect in the 16-inch waterlines in Rainbow Blvd and Southern Blvd for redundant supply from Tank 8 to Los Diamantes. In addition, some minor looping in Zone 4 is recommended to connect the 8-inch waterlines southwest of Hopi Rd to the 10-inch waterline in Villa Rd for redundancy to supply the proposed PRV in Ark Rd to bring supply to Los Diamantes from the west. Due to the demand on Tank 6 to feed existing customers this will be the primary supply to Los Diamantes.

The feed (provided by Tank 6) to Los Diamantes will be extending the existing Zone 3 infrastructure from Southern Blvd to Los Diamantes via a proposed 16-inch to extend along 15th St and Viga Rd. North of Viga Rd the 16-inch waterline and extends south along 11th St to Westside Blvd where it will tie into a proposed 20-inch waterline to bring water to Los Diamantes.

The waterline diameters to bring water to Los Diamantes take into consideration the City’s Master Plan for future growth. In the future, it is intended for supply from the lower pressure zones to potentially be pumped up to the higher zones using the Westside Blvd corridor for redundancy. It is important for utilities such as this large diameter pipe be taken into consideration as well as the other utilities needed to serve this development during the planning stage.

The piping around the Los Diamantes development takes into consideration the City’s Master Plan. A minimum 8-inch diameter pipe should be internal to the development.

Using the proposed infrastructure and calculated demands the hydraulic model was run and peak hour pressures are calculated to range from 50 to 95 psi. Figure 2 summarizes these results as well as the existing and proposed pipes by diameter.

Additionally, the fire flow analysis was conducted under the fire flow demand stated previously. The model results are reflected in Figure 3, and fire flows exceed 3,000 gallons per minute in both the residential and business park areas.
IV. Recommendations

The proposed Los Diamantes development should be provided with service from Zone 4 (Tank 8 via PRV) and Zone 3 (Tank 6 via gravity) to provide redundant supply from two separate sources. Additional, piping outside of the subdivision area is required to provide supply from Tank 8 along with incorporation of future Master Plan utilities within Westside Blvd SE. This piping network is also required since the location of this study is segregated from current water infrastructure. Improvements noted will provide redundant supply with pressures and fire flows consistent with City standards.

Sincerely,

Nathan Roberts, P.E.
Engineer
Water Systems

cc: Steve Gallegos, CoRR Utilities Division (w/encls.)
    Todd Burt, P.E., BHI (w/encls.)
Required 16" WL extension west to Rainbow Blvd (Approximately 2,150')

Gravity Supply from Zone 3 (Tank 6)

Supply from Zone 4 via PRV (Tank 8)
PRV Downstream Setting @ ~53 psi

20" WL for future expansion on Westside Blvd

Legend

Pressure (psi)
- Less than 20
- 20-40
- 40-60
- 60-80
- Greater than 80

PRV
- Existing
- Proposed

Existing Pipe by Dia (inches)
- 4
- 6
- 8
- 10
- 12
- 14
- 16
- 18
- 20
- 24
- 20

Los Diamantes Water Availability Study
Figure 2
Peak Hour Pressures
February 2015
Required 16" WL extension west to Rainbow Blvd (Approximately 2,150')

Gravity Supply from Zone 3 (Tank 6)

Supply from Zone 4 via PRV (Tank 8)

PRV Downstream Setting @ ~53 psi

20" WL for future expansion on Westside Blvd

Legend

Fire Flow (gpm)
- Less than 1000
- 1000-2000
- 2000-3000
- 3000-4000
- 4000-5000
- Greater than 5000

PRV
- Existing
- Proposed

Existing Pipe by Dia (inches)
- 4
- 6

Existing Pipe by Dia (inches)
- 8
- 10
- 12
- 14
- 16
- 18
- 20
- 24
- 30

Los Diamantes Water Availability Study

Figure 3
Available Fire Flow
February 2015
March 27, 2015

Mr. Mark Goodwin, P.E.
D. Mark Goodwin & Associates, PA Consulting Engineers
PO Box 90606
Albuquerque, NM 87199
(505)-828-2200

Re: Sewer Availability Summary Report
Los Diamantes Business Park Project

Dear Mr. Goodwin:

We have reviewed your request for sewer availability for the proposed residential development bounded by Isabel Rd. SE, Villa Rd. SE, and 10th St. SE. The development proposes to connect to pump to the gravity line in 21st Avenue along the east side of the development.

The proposed project includes 450 single family residential homes to be constructed in a 600,000 square feet area and part of a business park and is located north of Isabel Road SE approximately between 10th Street SE and 5th Street SE. The sanitary waste from the proposed subdivision will discharge to the 8-inch sewer in 21st Avenue, then increases to a 12- inch on Wellspring Blvd before discharging to a 15-inch sewer on Westside Blvd and ultimately to WWTP 6. Loadings were projected by using the Rio Rancho Wastewater Design Standards and classified as “Residential” at 175 gal/ac-day. This equates to a total of 54.68 gpm for average day and a peak load of 164 gpm, which is 3 times the average day.

The sewer availability was reviewed for the project, at the tie location, and considered downstream impacts at the wastewater facilities. The offsite infrastructure is assumed to tie into the 8-inch sewer line in 21st Avenue. The project area is shown in Figure 1 (vicinity map).
Figure 1: Vicinity Map
Summary of Findings

Available capacities do exceed calculated full flow capacities along the trajectory to WWTP6. The minimum available capacity in the trajectory is reported at 0 gpm. The hydraulic profile also shows that the maximum hydraulic grade do surpass the criteria for the sewer line.

Figure 3 presents the maximum d/D ratio in the route from the project site to the WWTP 6. The maximum d/D ratio does exceed 75%.

Figure 4 presents the flows for the pipes in the project route.

The modeling results indicate that the City's sewer system cannot support the buildout of this project with the existing infrastructure. This analysis concludes that the City of Rio Rancho does not have sufficient capacity along this route to allow wastewater from this development without exceeding City criteria for available capacity, and maximum d/D. Possible mitigation measures can support the proposed development such as the following in order to the flows to meet the City’s criteria.

1) Field verify the inverts associated with the problem area (implemented from the City’s GIS) to ensure slopes are correct and carrying capacities are accurate.
2) Realign the construction of the slopes of the 12-inch pipes.
3) Construct a parallel sewer.

We encourage you to check with the City on these alternatives and associated costs. This may provide an opportunity for your development to move forward.

Please call me at (505) 896-7761 if you have any questions or need any additional information.

Sincerely,

Camila Fernandez
Project Engineer,
NCS Engineers
Figure 2: Hydraulic Profile
Figure 3: Maximum d/D Ratio in the Sewer Route to WWTP 6
Figure 4: Maximum Pipe Flow

![Maximum Pipe Flow Diagram]
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Los Diamantes Economic Impact Assessment

Initial Results and Assumptions

Mic-Region Council of Governments
November 10, 2014

Summary

The Mid-Region Council of Governments (MRCOG) provides this Economic Impact Assessment of a build out of the Los Diamantes conceptual plan to Sandoval County at the request of the County Manager, Mr. Phillip Rios. MRCOG utilized the REMI model (Regional Economic Models Inc.) for this analysis. This document presents a brief summary of the initial assumptions and findings. A follow up draft will be submitted with further detail related to the findings.

Los Diamantes is a conceptually planned area within the City of Rio Rancho’s Unit 10 area. The project includes the development of a 60 acre business park for manufacturing and commercial uses, the development of a 450 single family homes adjacent to the business park, and related on and off-site investments including utilities, roads, and flood control infrastructure. All assumptions related to project costs, funding, and employment were provided to MRCOG by the Unser Gateway Coalition. These assumptions may be updated as more information is available over time.

Timeline

This analysis assumes a timeframe of 6 years with planning beginning in 2015, construction occurring between 2016 and 2018, and a ramp up to full employment between 2017 and 2020.

Funding

The majority of project is expected to be privately financed. Public funds are assumed for off-site infrastructure for the business park in the amount of $3.1M. Of that amount, $2.5M is assumed to come from the state and the remaining $600K from local governments. To reflect public expenditures, funding in the jurisdictions was reduced to offset the money used on the Los Diamantes project. Of the $2.5M in state funds, approximately $1.1M is assumed to have been forfeited by other projects within the Central New Mexico Region. The $1.1M is the population weighted share of the total $2.5M.

Employment

The construction of Los Diamantes Business Park is assumed to begin in the second half of 2016 and job creation is assumed to begin in 2017 and increase evenly until 2020.

Of the business park’s 60 acres, it is assumed that just under one-third of the property would be developed, totaling 600,000 square feet of building space. This translates to an estimate of 1,440 employees using the following square footage to employment conversions as identified in the Institute of Transportation Engineers 2012 Trip Generation Manual, 9th edition:

- 50 % Miscellaneous manufacturing = 300,000 sqft, 1.8 jobs/1,000 sqft = 540 employees
• 10% Motion picture, sound rec = 60,000 sqft, 2.1 jobs/1,000 sqft = 126 employees
• 10% Administrative, support services = 60,000 sqft, 3.3 jobs/1,000 sqft = 198 employees
• 10% Ambulatory health care services = 60,000 sqft, 4.0 jobs/1,000 sqft = 240 employees
• 10% Nursing, residential care facilities = 60,000 sqft, 2.3 jobs/1,000 sqft = 138 employees
• 10% Social assistance = 60,000 sqft, 3.3 jobs/1,000 sqft = 198 employees

Assumptions

Table 1: Assumptions to the REMI model

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<thead>
<tr>
<th>Variable</th>
<th>Description</th>
<th>Year</th>
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<tr>
<td>Business Park</td>
<td></td>
<td></td>
</tr>
<tr>
<td>On-site Infrastructure</td>
<td>$2,750,000 (Private Funding)</td>
<td>2016</td>
</tr>
<tr>
<td>Off-site Infrastructure</td>
<td>$2,500,000 (State Funding)</td>
<td>2016</td>
</tr>
<tr>
<td></td>
<td>$600,000 (Local Funding)</td>
<td>2016</td>
</tr>
<tr>
<td>Government Spending</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- $1,100,000 (State Funding) The $2.5M reductions expected based on the population share of the region to the State.</td>
<td>2016-2017</td>
</tr>
<tr>
<td></td>
<td>- $600,000 (Local Funding)</td>
<td>2016-2017</td>
</tr>
<tr>
<td>Building Construction</td>
<td>$135,000,000 spread evenly over three years.</td>
<td>2016-2018</td>
</tr>
<tr>
<td>Residential Subdivision</td>
<td></td>
<td></td>
</tr>
<tr>
<td>On-site Infrastructure</td>
<td>$13,500,000 (Private Funding)</td>
<td>2016</td>
</tr>
<tr>
<td>Off-site Infrastructure</td>
<td>$3,100,000 (Private Funding)</td>
<td>2016</td>
</tr>
<tr>
<td>Residential Construction</td>
<td>$54,000,000 (Private Funding) spread over six years.</td>
<td>2017-2022</td>
</tr>
<tr>
<td>Residential Building Permits</td>
<td>$1,600,000 (to City of Rio Rancho)</td>
<td>2017</td>
</tr>
</tbody>
</table>

Employment

<table>
<thead>
<tr>
<th>Employment</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Employment</td>
<td>1,440 new jobs added over four years</td>
</tr>
<tr>
<td>Ambulatory Health Services</td>
<td>240 new jobs</td>
</tr>
<tr>
<td>Nursing and Residential Care</td>
<td>138 new jobs</td>
</tr>
<tr>
<td>Social Assistance</td>
<td>198 new jobs</td>
</tr>
<tr>
<td>Administrative and Support</td>
<td>198 new jobs</td>
</tr>
<tr>
<td>Motion Picture</td>
<td>126 new jobs</td>
</tr>
<tr>
<td>Miscellaneous Manufacturing*</td>
<td>540 new jobs</td>
</tr>
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</table>

*Miscellaneous manufacturing jobs are associated with lower wages than most all other manufacturing jobs in the region, thereby representing a conservative estimate of impacts.

Impacts

Preliminary estimates of the economic impacts from this project are presented in Table 2 on the following page. The table shows impacts for three regions: Central New Mexico, the City of Rio Rancho, and Sandoval County as a whole. The tables report changes in employment, gross domestic product, personal consumption, and income. Initially the largest effects are seen in Rio Rancho as construction begins and new jobs are added. Over time, the positive impacts spread throughout the Central New Mexico region.
APPENDIX C LOS DIAMANTES TRAFFIC IMPACT STUDY

LOS DIAMANTES TRAFFIC IMPACT STUDY

Draft Report March 2015

PREPARED FOR:
D. Mark Goodwin & Associates

PREPARED BY:
Lee Engineering, LLC
Executive Summary

Background

A proposed residential and business park development site is to be located off of Westside Boulevard between Viga Road and 10th Street. The site is within the jurisdiction of the City of Rio Rancho (CoRR), New Mexico.

The site will contain 450 single family dwelling units south of Westside Boulevard and approximately 600,000 SF of Business Park land use on the north side of Westside Boulevard. The site plan is presented in Figure 2 of this report.

Access to and from the project site will use the existing road Western Boulevard to the east and 10th Street to the south, adjacent to the proposed development site. No new access points are proposed and the existing driveway is shown in Figure 1 of this report.

Opening day of the development is anticipated to take place in 2020. Therefore, assessment for the opening year of 2020 was made using peak hour intersection turn movement volumes collected on February 24 and 26, 2015 and volumes from adjacent site developments. Peak hour trips generated by the proposed development were then added to the anticipated 2020 background volumes to assess the impact on the surrounding road network.

Conclusions and Recommendations

Based on the traffic analysis and report findings, the conclusions and recommendations are as follows:

Site Access

- Regional access to the site will mainly be provided via Unser Boulevard. Unser Boulevard provides routing to commercial and residential developments to the north and south of the project site. Additionally, Unser Boulevard provides access to east/west arterials of Southern Boulevard, Northern Boulevard and Paseo del Volcan.
- It should be noted that analyses contained within this study is considered conservative as they are based on interim conditions in which Unser Boulevard and Rio Rancho Boulevard/NM 528 are the only two north/south arterial options for project site trips. Ultimately, there will be additional north/south arterial and collector options including the development of Rainbow Boulevard (Minor Arterial) and a Major Collector Road east of the site as identified by the draft MRCOG 2040 Long Range Roadway Plan, which will better disperse project site trips so they are not concentrated strictly through the Unser Boulevard.
- Project access will be provided via eight street connections to abutting arterial and collector streets. A main Spine Road will provide access to both residential and commercial components via an intersection with Westside Boulevard to be located approximately 840 feet west of the 10th Street alignment.
An additional access point off of Westside Boulevard will be provided to both residential and business park land uses located approximately 1350 feet west of the Spine Road intersection.

The remainder of project access will be provided via several minor two lane collector streets. These will include the following:

- 10th Street
- Isabel Road
- Viga Road

A secondary access is proposed via Isabel Road to Black Arroyo Boulevard and McMahon Boulevard. Currently, the Isabel Road alignment is shown to be connecting to Black Arroyo at a very acute skew. It is therefore, recommended that the Isabel Road alignment be curved to the east of the current alignment to form a more perpendicular approach to Black Arroyo Boulevard.

10th Street is proposed to terminate at Isabel Road forming a T-intersection approximately 450 feet north of Black Arroyo.

Based on Table 18.C-1 Access Spacing Standards for Intersections and Driveways, the following spacing is required for compliance:

- Signalized intersection spacing should be no less than 1,760 feet on Westside Boulevard (Urban Minor Arterial 35-45 mph).
- Unsignalized and full access driveway spacing on Westside Boulevard should be no less than 660 feet
- Full movement driveways spacing on Viga Road, 10th Street, Isabel Road, and Spine Road should be no less than 150 feet.
- The Isabel Road/Black Arroyo Boulevard intersection should be spaced no closer than 150 feet from existing driveways on Black Arroyo Boulevard (Saltillo Street and Caracci Street)

Based on the latest site plan contained herein, all proposed driveways and access points appear to be in compliance with NMDOT SAMM recommended spacing.

It is likely that signal control will be warranted at the Westside Boulevard/Spine Road. Therefore, any future signalized intersection to the east or west of this intersection should be located at a minimum 1,760 feet away from the Spine Road intersection.

Parcel access for Business Park land use is recommended to be taken off of a Spoke Road on either side of the Spine Road located approximately at the mid-point between Viga Road and Westside Boulevard.

Full movement parcel access on the Spine Road within the Business Park should be spaced no less than 330 feet and partial access no less than 150-feet. Additionally, there should not be any access point on the Spine Road within 250 feet of the signalized Westside Boulevard/Spine Road intersection.

It is recommended that access to residential parcels be configured to produce ADT levels on local residential streets (i.e. with back-out driveways) less than 1,500 vehicles. Review of the latest proposed site plan indicates that there are no local residential streets that would generate more than 1,500 ADT.

Initial project access will be provided via Westside Boulevard exclusively, which will be incorporating one through lane in each direction between 10th Street and Unser Boulevard.
It is estimated that approximately 70% of the total project can be constructed, which translates to the following scenarios at which secondary access to Black Arroyo and McMahon would be needed:

- 98% of just the Business Park development
- Phase 1 of Residential (150 Units) and 94% of the Business Park
- Phase 2 of Residential (300 Units) and 90% of the Business Park
- Phase 3 Residential (450 units) and 86% of the Business Park

The proposed Isabel Road access in combination with a two-lane Westside Boulevard would accommodate full build of the project site.

Existing, Background and Build Out Traffic Demands

Peak hour turning movement counts for all existing study intersections were collected on February 24, 2015 and February 26, 2015. Existing peak hour turning movements are presented in Figure 3.

Per the February 10th scoping meeting with the CoRR, it was determined that background traffic demands for 2020 would be developed based on the following developments:

- Cabezon Village
- Pavilion at Presbyterian
- X Ray Associates

Resulting 2020 background traffic demands are presented in Figure 4.

Trip generation analysis was performed based on the Institute of Transportation Engineers (ITE) Trip Generation Manual, 9th Edition and project land use were categorized as ITE land use category 210 (Single-Family Detached Housing) and category 770 (Business Park) and are summarized in Table 1.

A 3% internal capture rate was assumed between the residential and business park land uses. Calculated internal and adjusted external trips are summarized in Table 2.

Offsite primary trip distribution for both AM and PM peak hours are shown in Figures 5 and 6 for the business park and residential development, respectively.

On-site distribution are indicated in Figures 7 and 8 for the business park and residential land use, respectively.

Total on-site and off-site build out turning movement demands are indicated shown in Figure 15 and 16.

Signal Warrant, Capacity and Queuing Analysis

Based on signal peak hour warrant analyses, signal control is recommended for the Westside Boulevard/Spine Road intersection and is expected to be needed at approximately 70% of total build-out.

Based on capacity and queue analysis, the following lane geometry, traffic control and storage length mitigation is recommended as part of this development:

- The following improvements were assumed to be in place as they were recommended and the responsibility of previous studies. They include:
  - Westbound dual left-turn lanes at the Unser Boulevard/Cabezon Boulevard
Westbound dual left-turn and right-turn lanes at the Unser Boulevard/Westside Boulevard intersection.

- Southbound dual left-turn lanes at the Unser Boulevard/Westside Boulevard intersection.
  - The existing northbound left-turn lane at the Unser Boulevard/Westside Boulevard intersection should be modified to incorporate dual left-turns. This will require restriping and conversion from a northbound protected-permitted phasing to protected only phasing. Additionally, the receiving lanes on the west leg should incorporate two through lanes, which can be tapered down at approximately the west boundary of the proposed X-Ray site. Per MUTCD, lane reduction tapers should incorporate 320 feet.
  - The westbound left-turn lane at Unser Boulevard/Westside Boulevard intersection should be modified to incorporate dual left-turns. This will require median modification and the construction and alignment of the receiving lanes on the east leg. The eastbound protected-permitted phasing should be changed to protected only.
  - Signal undergrounds including conduit and pull boxes are recommended at the Westside Boulevard/Spine Road. Signal control activation should only occur upon the satisfaction of a full warrant study when count data of the intersection is available.
  - The following auxiliary lanes are recommended as part of this project:
    - Westside Boulevard/10th Street Intersection
      - A single 300-foot westbound left-turn lane
      - Single 300-foot eastbound left and right-turn lanes
      - A single 150-foot Northbound left-turn lane
    - Westside Boulevard/Spine Road Intersection
      - Single 325-foot westbound left and right-turn lanes
      - Single 325-foot eastbound left and right-turn lanes
      - A single 150-foot northbound left-turn lane
      - Southbound 150-foot dual left-turn lanes but striped as a single turn lane until signal control is in place.
    - Westside Boulevard/Driveway A-Viga Road
      - Single 300-foot westbound left and right-turn lanes
      - Single 300-foot eastbound left and right-turn lanes
      - Single 150-foot northbound and southbound left-turn lanes
    - Black Arroyo Boulevard/Isabel Road
      - A single 175-foot westbound right-turn lane at Isabel Road
      - A single 150-foot southbound left-turn lane at Isabel Road
On-Site Street Classification

- Per the 2040 long range roadway map, Westside Boulevard is proposed as a Community Primary arterial that will ultimately incorporate 106 feet of ROW with two through lanes and a bike lane in each direction, a raised median, and a 40 mph speed limit.
- A review of the latest master bike facilities plan indicates no proposed multi-use trail along Westside Boulevard. However, it is noted that an existing multi-use trail existing along the south side Westside Boulevard east of Unser Boulevard, which terminates approximately 680 feet short of the Unser Boulevard/Westside Boulevard.
- For the build-out of this project, Westside Boulevard will incorporate one through lanes in each direction from 10th Street to the proposed Pavilion development located at the southwest corner of the Unser Boulevard/Westside Boulevard intersection.
- Between Viga Road and 10th Street, Westside would be fully improved incorporating the ultimate four-lane cross-section with raised median, bike lanes, curb, gutter and sidewalk.
- Two receiving lanes on Westside Boulevard will be required on the west leg of the Unser Boulevard intersection. The two westbound lanes can then taper (320 feet) to one through lane immediately west of the proposed Pavilion Commercial development.
- There are no existing or planned local transit routes along Westside Boulevard. Therefore transit stops, turnouts etc. are not required as part of this project.
- 10th Street is proposed as a minor collector road incorporating 50 feet of ROW and one undivided through lane in each direction with a 25 mph speed limit. Full improvements including curb, gutter and sidewalks will be constructed along the project frontage (west side only) from just north of Westside Boulevard to Isabel Road.
- Isabel Road is proposed as a minor collector incorporating 78 feet of ROW, one undivided through lane in each direction and a 25 mph speed limit. Full improvements including curb, gutter and sidewalks will be constructed along the project frontage (north side only) from Viga Road to 10th Street.
- Isabel Road is recommended to divert from its current alignment east of 10th Street to provide an intersection with Black Arroyo Boulevard that has no skew.
- Viga Road is proposed as a minor collector road incorporating 50 feet of ROW, one undivided through lane in each direction and a 25 mph speed limit. Viga Road will be constructed from Isabel Road to just south of Westside Boulevard and starting on the north side of Westside Boulevard to the north boundary of the business park property with full improvements of sidewalk, curb and gutter on the southeast side abutting the project site. Viga Road will be fully improved south of Westside Boulevard from Isabel Road to just short of Westside Boulevard.
- The north leg of Viga Road is recommended to be aligned with Driveway A (westernmost driveway on Westside Boulevard) and the south alignment of Viga Road will not intersect with Westside Boulevard to avoid placing a stop controlled intersection within curved alignment on Westside Boulevard.
- The Spine Road within the Residential area is proposed to be a public minor collector street to incorporate 68 feet of ROW including one through lane in each direction, a minimum 5-foot sidewalk, curb, gutter, and narrow raised landscape medians. There will be no direct residential
driveway access along this roadway. It is anticipated that this road will incorporate a 25 mph speed limit.

- The Spine Road north of Westside Boulevard is proposed to be a public minor collector street to incorporate 98 feet of ROW including one lane of traffic, curb gutter, and sidewalk in each direction. Additionally, due to anticipated traffic intensity and the density of the development, auxiliary lanes are recommended to all future major parcel access points along this alignment. There will likely be raised landscaped medians along this alignment within the business park. It is anticipated that this road will incorporate a 25 mph speed limit.

- A business park access road is to incorporate 50 feet of ROW and provide access for the most commercial parcels to the proposed Spine Road. This access street will terminate in a cul-de-sac at its southwest and northeast termini. It is anticipated that this road will incorporate one undivided lane, curb, gutter, and sidewalk in each direction. No auxiliary turn lanes are anticipated for this alignment. This is recommended to incorporate a 20 mph speed limit.

- All residential parcel access roads are proposed to incorporate 50 feet of ROW including one through lane, curb, gutter and sidewalk in each direction. These residential streets will provide direct access to residential driveways and incorporate a 20 mph speed limit.

**Unser Boulevard Coordination Analysis**

- A coordination analysis of Unser Boulevard indicates that optimal cycle lengths range from 130 seconds in the AM peak to 150 seconds in PM peak for Background and Build Out traffic demands assuming Unser Boulevard remains a four-lane roadway.

- If Unser Boulevard becomes a six-lane roadway, the optimized cycle length reduces to 120 seconds under Background and Build Out traffic demands.

- If a cycle length change on Unser Boulevard is implemented, the cycle lengths will also have to change on Southern Boulevard to maintain coordination on that corridor. This means that offsets would need to be adjusted on Southern Boulevard as well.

- Unser Boulevard is a lengthy corridor, which traverses both the City of Rio Rancho and City of Albuquerque. In order to provide a consistent and optimal coordinated corridor, both the Cities would need to coordinate timing plans between them.

**Crash Analysis**

- Crash analyses indicate a high frequency of crashes along Unser Boulevard, especially at Southern Boulevard and McMahon Boulevard. A more detailed safety study of this corridor could shed light on specific safety issues.

- There were two crash fatalities at the Unser Boulevard/Southern Boulevard intersection.

- The majority of the crashes at all the intersections were classified as following too close or driver inattention. This tends to be indicative of congestion issues and usually result in rear-end crashes.

- Many of the congestion caused crashes along this corridor could potentially be reduced when Unser Boulevard becomes a six-lane arterial.
APPENDIX D  TYPICAL TRAIL SURFACING

Aqua Roc™
Environmental Collection

TYPICAL TRAIL SURFACING

NOTE: PROPRIETARY Pavers SHOWN ARE FOR INFORMATION ONLY. OWNER WILL CONSIDER ALTERNATIVES.

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