

COMMUNITY MASTER PLAN

LEVEL B PLAN: AS APPROVED BY DEVELOPMENT REVIEW BOARD FEBRUARY 2008

AMENDED AUGUST 2021

Submitted by:

Forest City Covington New Mexico, LLC
Albuquerque

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Mesa del Sol

Introduction



Meeting the Planned Communities Criteria

This Level B Plan is the principal plan regulating development proposed by Forest City Covington NM, LLC (FCC) for a 3,151-acre area comprising the initial phases of Mesa del Sol, a new community on Albuquerque’s south-east mesa, south of the Sunport. This document refines land planning for the Level B area in a manner consistent with and supportive of the goals and policies of the Mesa del Sol Level A Plan, the Planned Communities Criteria, the Albuquerque/Bernalillo County Comprehensive Plan and the Planned Growth Strategy.

1.1 Overview

Mesa del Sol is a community designed for Albuquerque’s southeast mesa, on an approximately 12,900-acre plateau bounded generally on the north by the Tijeras Arroyo, on the east by Kirtland Air Force Base, on the south by the Isleta Pueblo, and on the west by Broadway Boulevard. Mesa del Sol includes approximately 630 acres leased to Bernalillo County for the development of a recreation area, as well as La Semilla, a one-mile wide strip adjacent to Kirtland Air Force Base on Mesa del Sol’s eastern boundary that has been leased to the Department of Energy for passive open space uses, environmental education, and renewable energy uses.

The approximately 9,000-acre development lease between the New Mexico State Land Office and Forest City Covington NM, LLC (FCC) a joint venture of Forest City Enterprises, Covington Capital and the University of New Mexico, vests FCC with the responsibility of planning and developing the Mesa del Sol community in accordance with the City of Albuquerque’s Planned Communities Criteria. On January 14, 2006, the Albuquerque City Council adopted the Level A Master Plan and Technical Appendices for Mesa del Sol and an associated Level A Development Agreement.

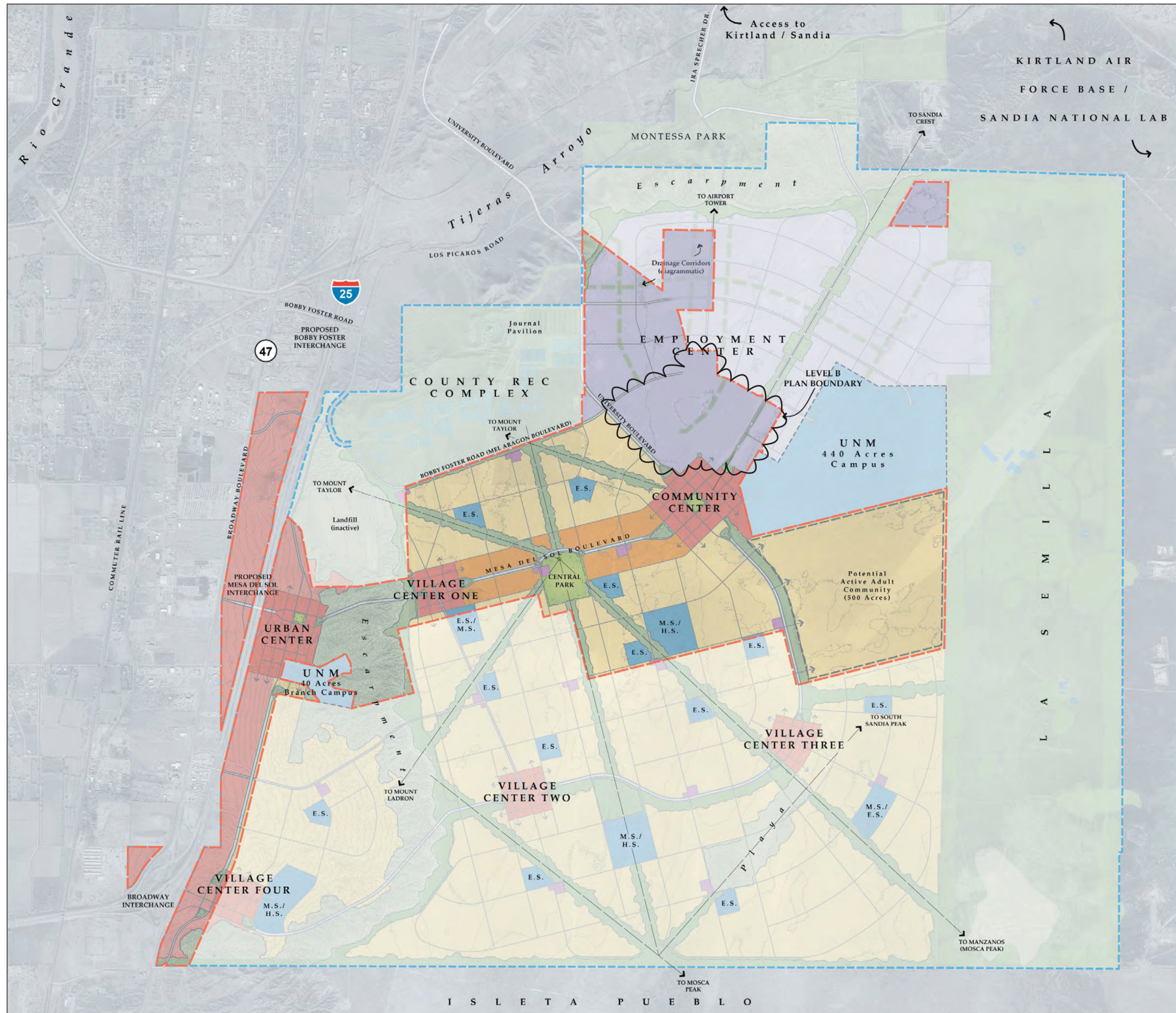
In the interests of economic development, the City of Albuquerque has expedited the approvals of several key employment projects at Mesa del Sol in advance of the Level B and Level C stages of the Planned Communities Criteria approvals process. These include site plan approvals and building permits for several key employers, including a research, development and manufacturing plant for Advent Solar, Inc. and a film studio campus to be known as Albuquerque Studios. FCC gratefully acknowledges the City’s assistance in expediting these approvals. These base economic projects demonstrate FCC’s commitment

to creating jobs and balancing residential development with employment opportunities.

This Level B Plan covers a 3,151-acre area comprising the initial phases of Mesa del Sol. The Technical Appendices submitted with this plan are hereby incorporated in their entirety and made part of this Level B Master Plan. The Level B Master Plan area (Figure 1-1) includes the land held in fee by FCC and an additional 40 acre area on the northern escarpment that is planned for a secure employment area. Table 1-1 below summarizes the anticipated development program for this Level B Plan. The land use districts are described in Chapter Two.

Table 1-1 Development Program

DISTRICT	Acres (gross)	Max. commercial sq. feet	Max. number of dwelling units
Employment Center	662	5,050,350	533
Highway Commercial	411	3,775,000	
Urban Center	92	1,500,000	828
Community Center	88	700,000	819
Village Center	44	200,000	660
Residential Villages (net of linear open space)	1,492	10,554	10,444
TOTAL DEVELOPED AREA	2,789	11,235,904	13,284
Steep Slopes (>10%)	185		
Linear Open Space	137		
Major Urban Park	40		
TOTAL AREA	3,151		



LEVEL B PLAN AREA

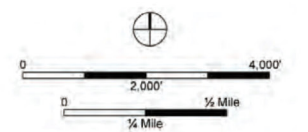
Figure 1-1

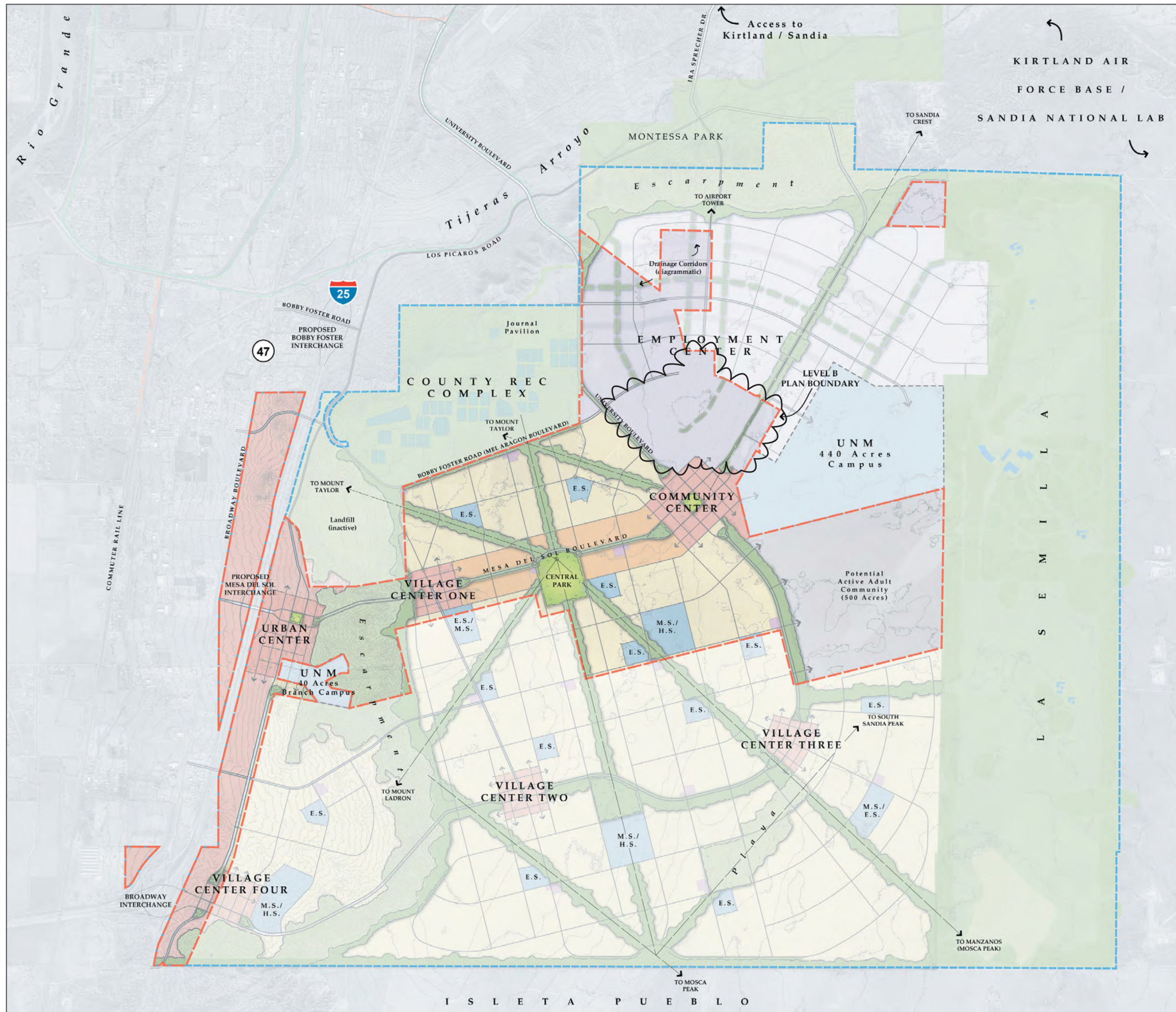
Revised September 2012 - addition of Tract D and removal of Tract 8 from plan area.

Revised August 2021 - modifications to roadways and linear parks/drainage corridors within a southern portion of the Employment Center, as shown.

Legend

- Mixed Use Centers
- Neighborhood Centers
(diagrammatic placement)
- Commercial
- Schools and UNM Land
- Office / R&D
- Corridor Residential
- Residential
- Large Parks
- Trunk Open Space Network
- Steep Slopes and Playas





MAJOR URBAN PARKS, LINEAR PARK CORRIDORS AND MAJOR PUBLIC OPEN SPACE

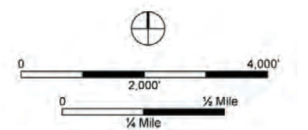
Figure 2-2

Revised September 2012 - addition of Tract D and removal of Tract 8 from plan area.

Revised August 2021 - modifications to roadways and linear parks/drainage corridors within a southern portion of the Employment Center, as shown.

Legend

- Major Urban Parks
- Linear Park Corridors
- Proposed Major Public Open Space



Major Public Open Space

The Albuquerque/Bernalillo County Comprehensive Plan (2002) proposes that the escarpment along Mesa del Sol become part of the larger regional open space network. In Figure 2-2, Regional Parks and Trunk Open Space, the escarpment is defined as areas with a slope of 10% or greater along the northern and western edges of the mesa top. Dedicating this area as Major Public Open Space will preserve natural areas and provide visual and aesthetic relief from future development. The roadway and trail connections across the escarpment needed to provide access to the mesa will be designed to minimize their visual and environmental impact on the open space while creating views of the natural environment. Public access to these areas will need to be controlled—enabling residents and visitors to appreciate the natural environment in a sustainable manner.

- a) Estimated Acreage: Approximately 185 acres
- b) Service Area: City
- c) Locations: Escarpment, La Semilla, Playa, perimeter areas
- d) Details: Trails and trailheads, interpretive signage, fencing/access control

Linear Park Corridors

These large linear park areas serve several purposes at Mesa del Sol. They receive stormwater and serve as recharge or infiltration zones. They serve as plant and wildlife corridors. They provide opportunities for off-road trails that increase pedestrian and bike connectivity between neighborhoods and parks. They may include small neighborhood parks and trailheads, providing recreation and community meeting opportunities for residents in a well-distributed manner. Finally, they serve as view corridors on the Mesa—visually linking Mesa del Sol with surrounding natural features and landmarks.

- a) Estimated Acreage: Approximately 137 acres
- b) Service Area: Mesa del Sol
- c) Details: Typically 200’-250’ in width, with trails, trailheads, infiltration areas, native plant and wildlife habitat, small neighborhood parks with play structures, seating, lighting, and off site parking. Minimum vegetative coverage shall be 33%, not including tree canopies.
- d) Maintenance: Corridors which function primarily as drainage facilities with ponding functions shall be maintained by the Property Owners Associations or by Special Districts. In Corridors where drainage is secondary, parks and recreational facilities shall be maintained by the City.

(See illustrative detail in Figure 4-5 on page 77.)

Major Urban Park

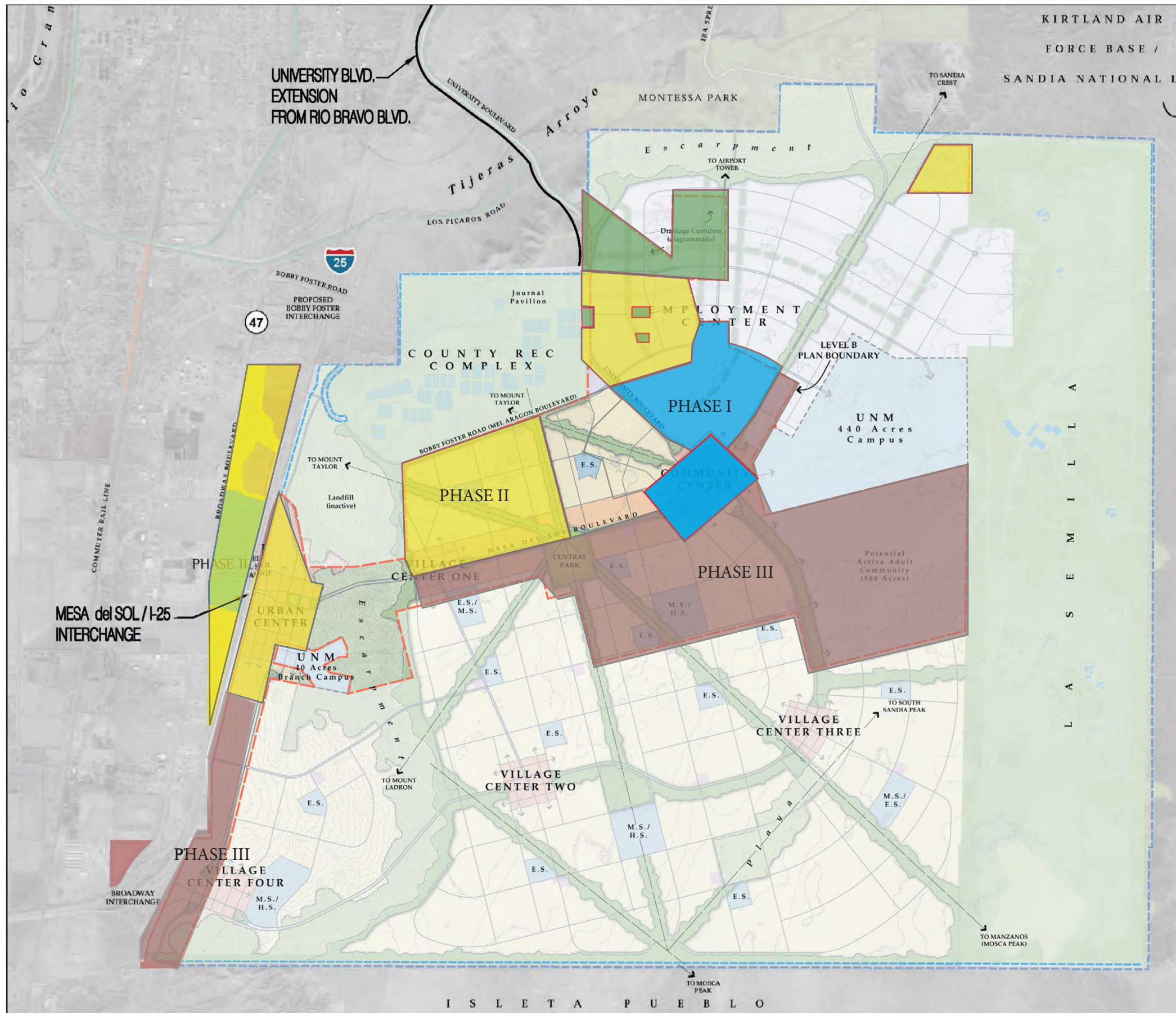
A large public park can serve the recreation and civic needs of an entire community and may include elements found in both neighborhood and community parks. The large centrally located park on Mesa del Sol Boulevard will serve as a site for active and passive recreation, provide a large comfortable site for large-scale civic events, and serve as a node for trails and open space corridors.

- a) Estimated Acreage: 40 acres
- b) Service Area: Mesa del Sol
- c) Details: multi-purpose fields, baseball/softball fields, playing courts, sidewalks, hard-scape, tables, seating, fountains, art, play structures, performance space, landscaping, vendors, lighting, programmed events and on and off site parking. Minimum vegetative coverage shall be 60% of which 25% of tree canopies can be counted.

Table 2.6-1 Proposed Responsibilities for Parks and Open Space

Type	Estimated Area	Capital Costs	O and M Costs
Major Public Open Space	245 acres	CoA	CoA
Linear Park Corridor	137 acres	Special District/Developer	CoA/Special District/POA
Major Urban Parks	40 acres	CoA/Special District/Developer	CoA/Special District/POA
Neighborhood Parks	.5-5 acres each	Special District/Developer	Special District/CoA/POA
School Parks	5 + acres each	APS/Special District/Developer	APS/CoA
Urban Plazas/Pocket Parks	.5 acre (or less)	Special District/Developer	Special District/POA
Streetscapes and Medians	NA	Special District/Developer	CoA/Special District/POA





**LEVEL B
OVERALL PHASING PLAN**
Figure 2-3

Revised September 2012 - addition of Tract D and removal of Tract 8 from plan area.
Revised August 2021 - modifications to update projected, as shown.

Legend

- Existing Development
- Phase 1 Development
- Phase 2 Development
- Phase 3 Development

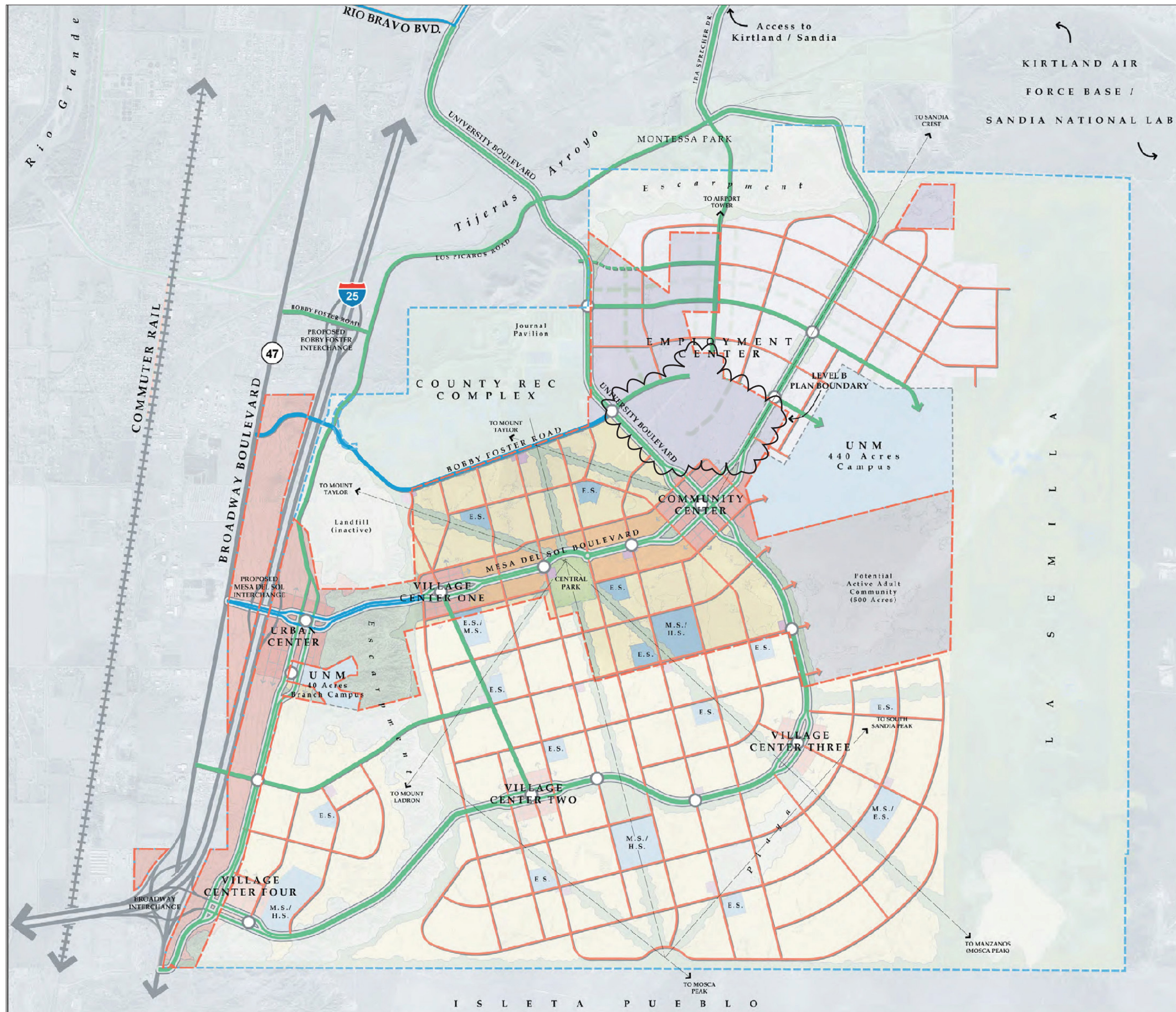
Key Dates:

1. University Blvd. Extension from Rio Bravo Blvd. to Journal Pavilion – Complete September 2006.
2. Mesa del Sol / I-25 Interchange – Complete 2009 Q4.

Notes:

1. Phase lines are approximate and subject to change based on market conditions, etc.





AUTO AND TRANSIT CIRCULATION BUILD-OUT NETWORK

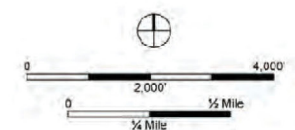
Figure 3-1

Revised September 2012 - addition of Tract D and removal of Tract 8 from plan area.
Revised August 2021 - modifications to roadways and linear parks/drainage corridors within a southern portion of the Employment Center, as shown.

Legend

- Primary Transit Nodes
- Trunk Transit Routes
- Primary Roadways
(Boulevards and Avenues)*
- 2 or 3 Lanes Each Direction
- 2 Lanes Each Direction
- Connector Roads
(specific configurations to be assigned at a more detailed planning level)

Note:
These road configurations and lane totals preliminary. The final transportation study dictate actual laneage. Some roadways may have phased construction.



AUTO AND TRANSIT
CIRCULATION
LEVEL B PLAN AREA

Figure 3-2

Revised September 2012 - addition of Tract D and removal of Tract 8 from plan area.
Revised August 2021 - modifications to roadways and linear parks/drainage corridors within a southern portion of the Employment Center, as shown.

Legend

Primary Transit Nodes

Trunk Transit Routes

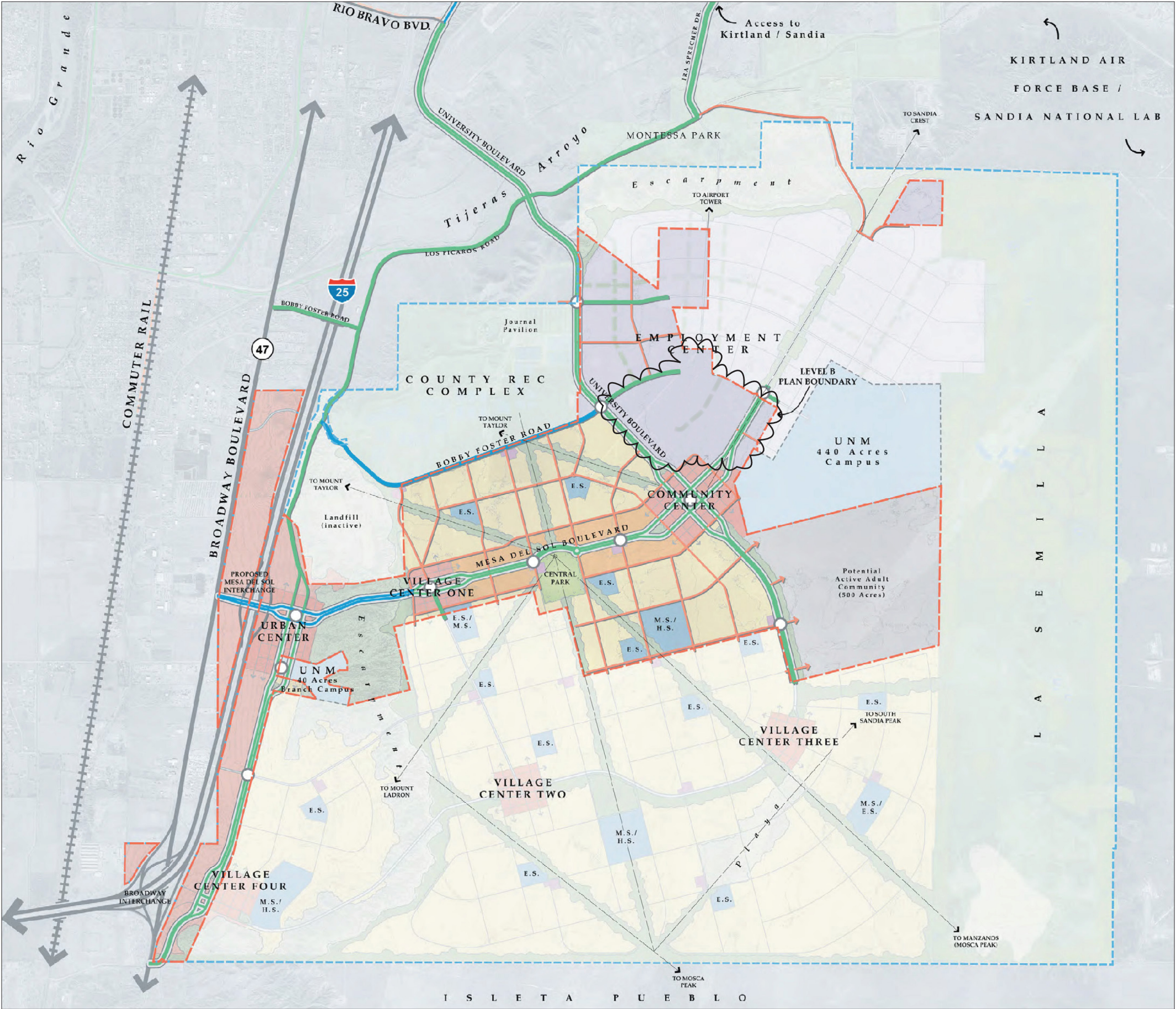
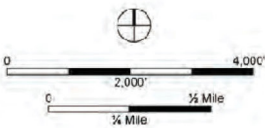
Primary Roadways
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2 or 3 Lanes Each Direction

2 Lanes Each Direction

Connector Roads
(specific configurations to be
assigned at a more detailed
planning level)

Note:
These road configurations and lane totals are preliminary. The final transportation study will dictate actual laneage. Some roadways may have phased construction.





ROADWAY PHASING: ROADWAYS NEEDED BY 2015

Figure 3-3

Revised August 2021 - modifications to roadways within a southern portion of the Employment Center, as shown.

Legend

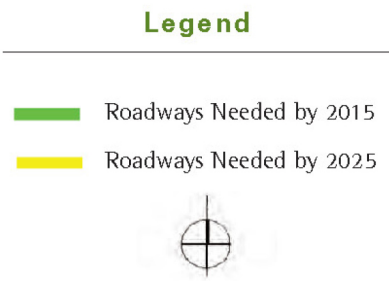
 Roadways Needed by 2015

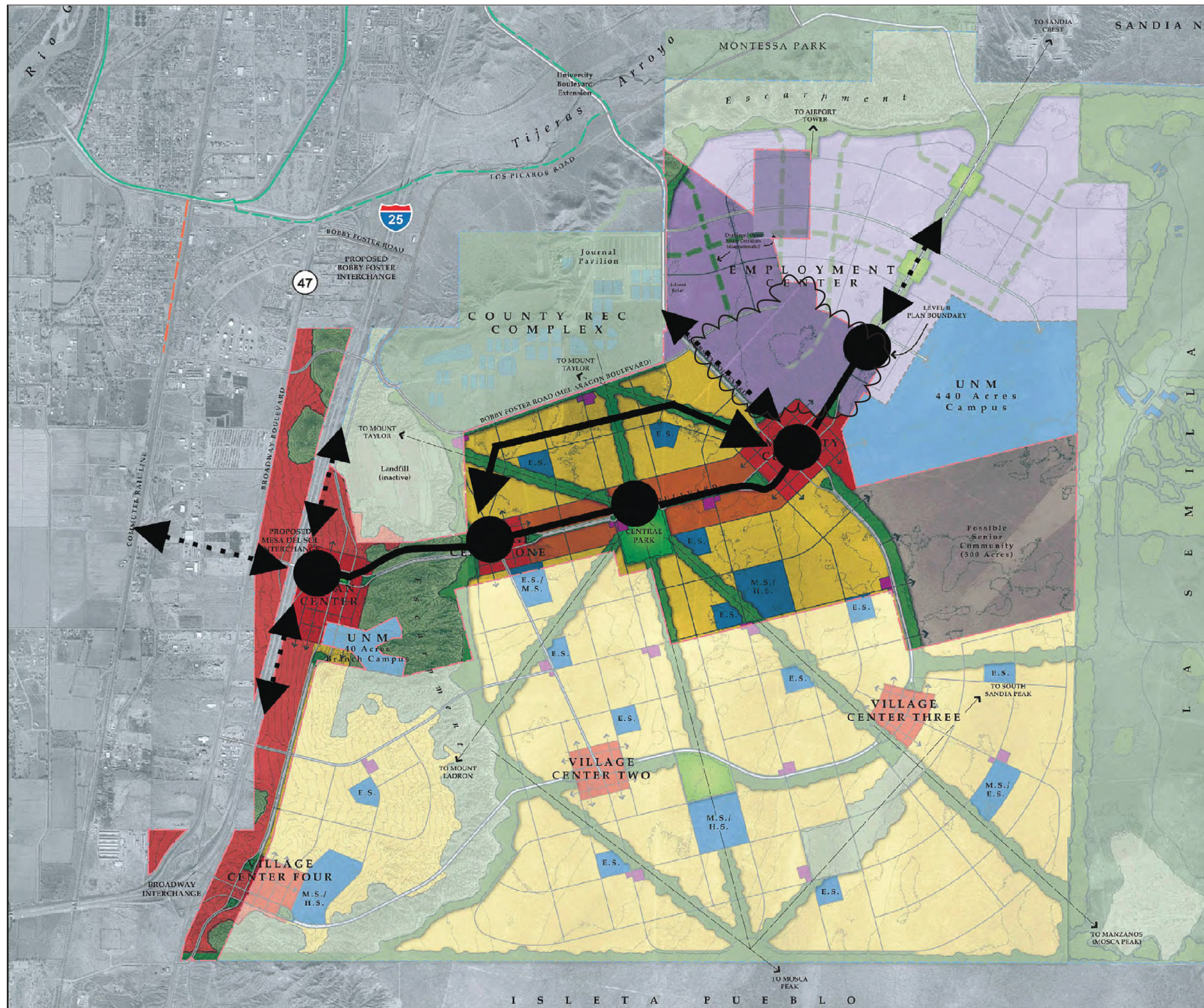


ROADWAY PHASING:
ROADWAYS
NEEDED BY 2025

Figure 3-4

Revised August 2021 - modifications to roadways within a southern portion of the Employment Center, as shown.









TRANSIT SYSTEM: COMBINATION LOCAL BUS CIRCULATION AND BRT/STREETCAR SCENARIO

Figure 3-5

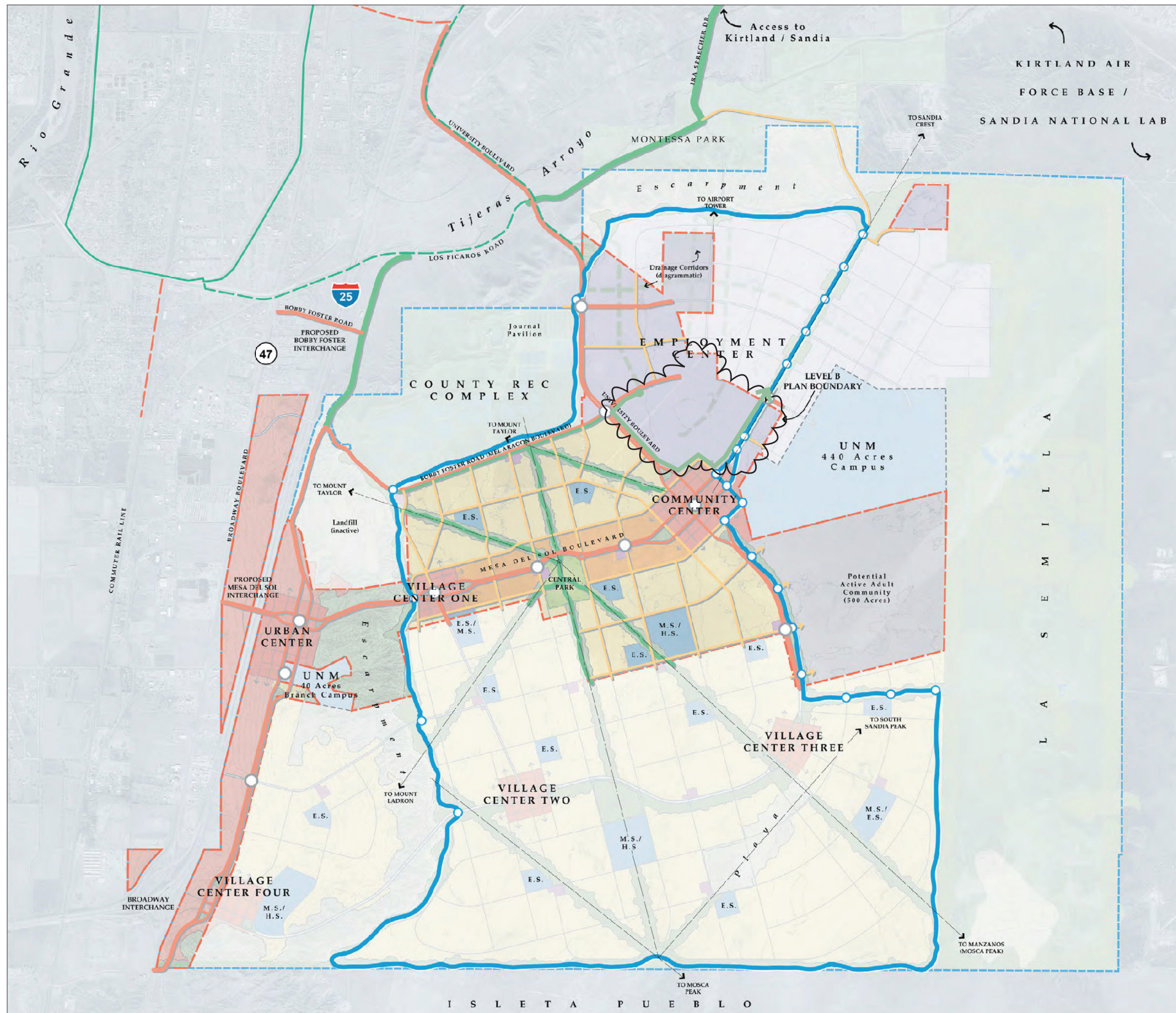
Revised September 2012 - addition of Tract D and removal of Tract 8 from plan area.

Revised August 2021 - modifications to roadways and linear parks/drainage corridors within a southern portion of the Employment Center, as shown.

Legend

- | | |
|---|------------------------------|
|  | Proposed Bus Route |
|  | Proposed Fixed Guideway Ro |
|  | Passenger Station/Transfer C |
|  | Potential Regional Connectio |



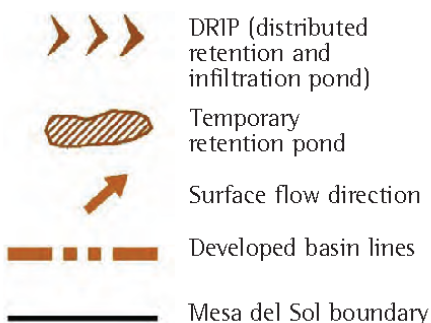


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OVERALL STORMWATER PLAN

Figure 4-4

Legend



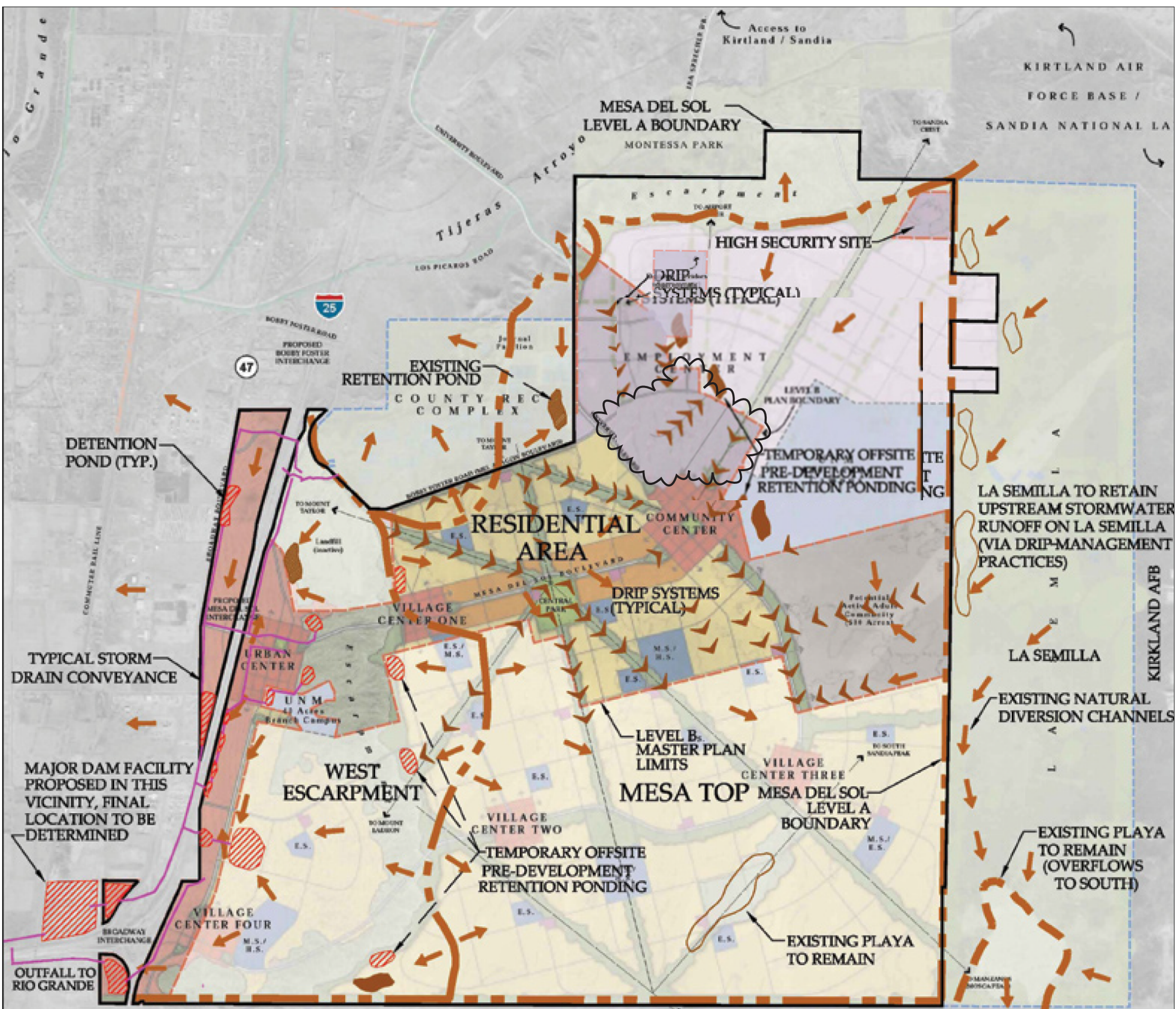
Notes:
Shown facilities are illustrative only.

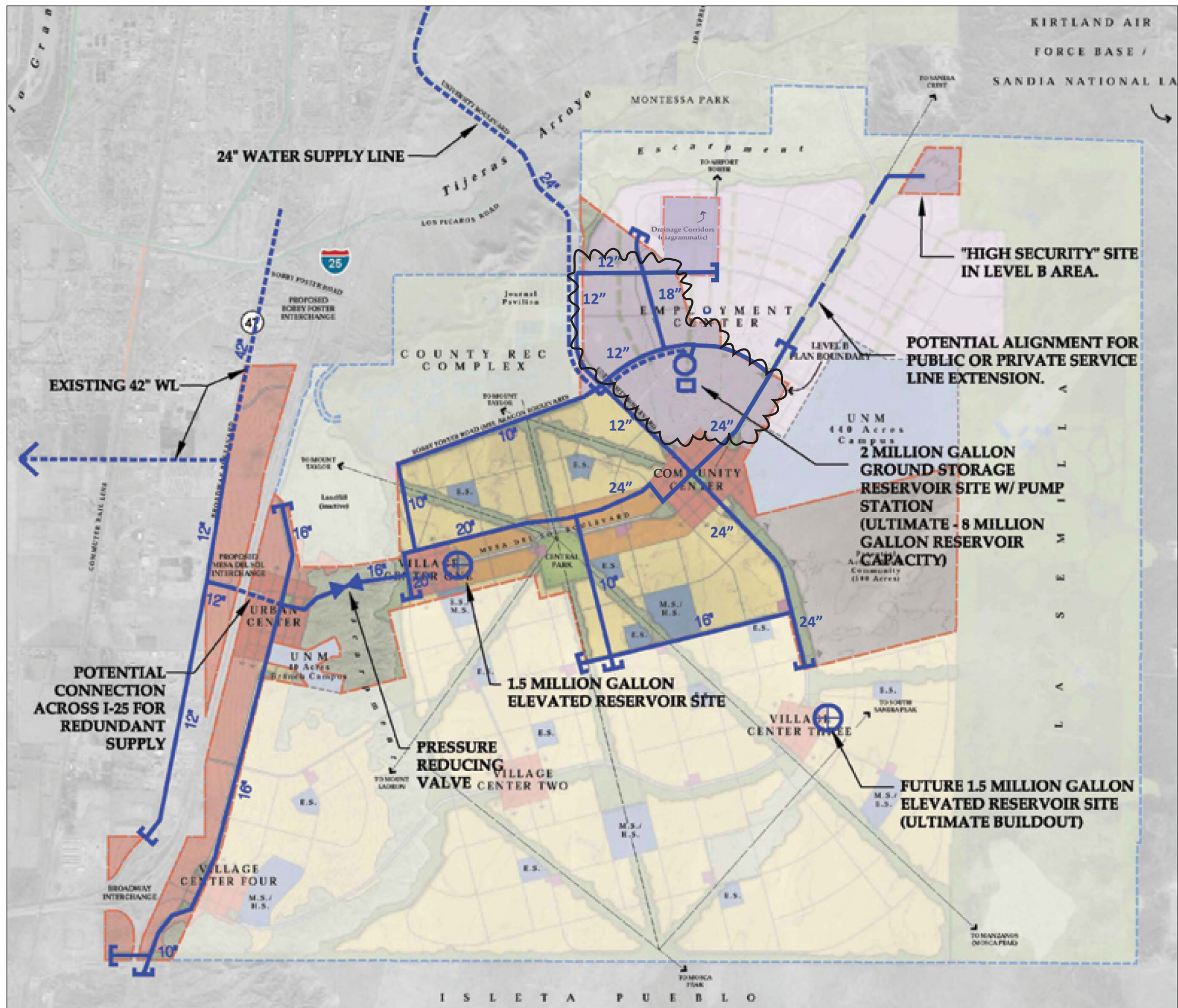
Mesa Top Area:

- Drainage management concept plan uses distributed retention/infiltration ponds (DRIPs) to collect all flows generated on the mesa top in the residential lands.
- Non-residential lands (i.e. employment center, UNM, public sites) may utilize shared onsite drip systems.

West Escarpment:

- The drainage management concepts consist of collection runoff in detention ponds and discharging storm water to a large storm water detention basin as proposed by the AMAFCA study entitled "Southwest valley drainage management plan," dated Jan. 1988. The detention pond discharges to the Rio Grande.





PREFERRED WATER SYSTEM: TRUNK INFRASTRUCTURE PLAN

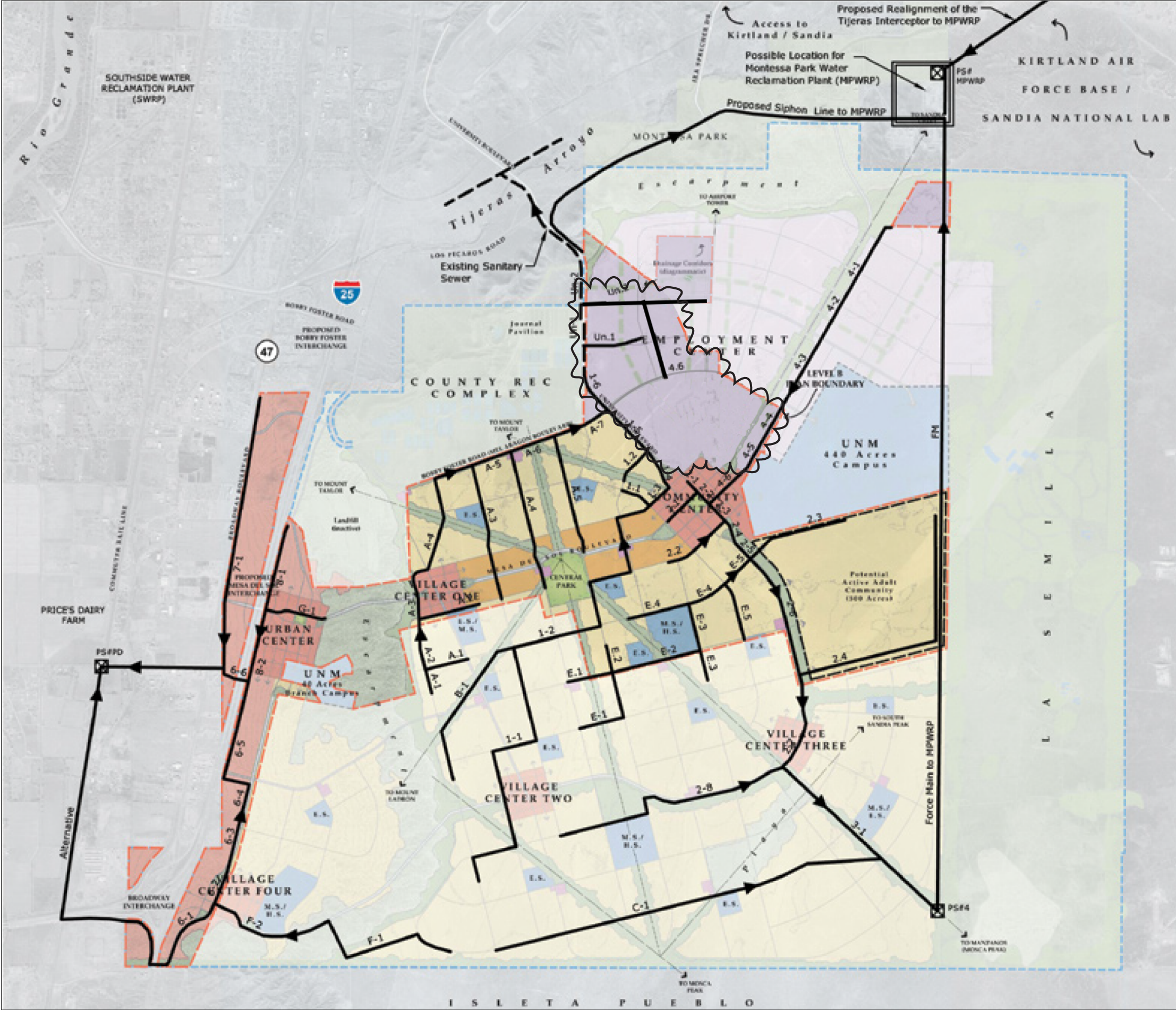
Figure 5-1

Revised September 2012 - addition of Tract D and removal of Tract 8 from plan area.
 Revised August 2021 - modifications to roadways, linear parks/drainage and infrastructure corridors within a southern portion of the Employment Center, as shown.

Notes

1. The water infrastructure and line sizing shown on this plan is illustrative and subject to change with further planning with the water utility authority.
2. Water wells and associated well collector system are anticipated prior to full development of Level B area.





**SANITARY SEWER
MASTER PLAN
INCLUDING
LEVEL A AREA**

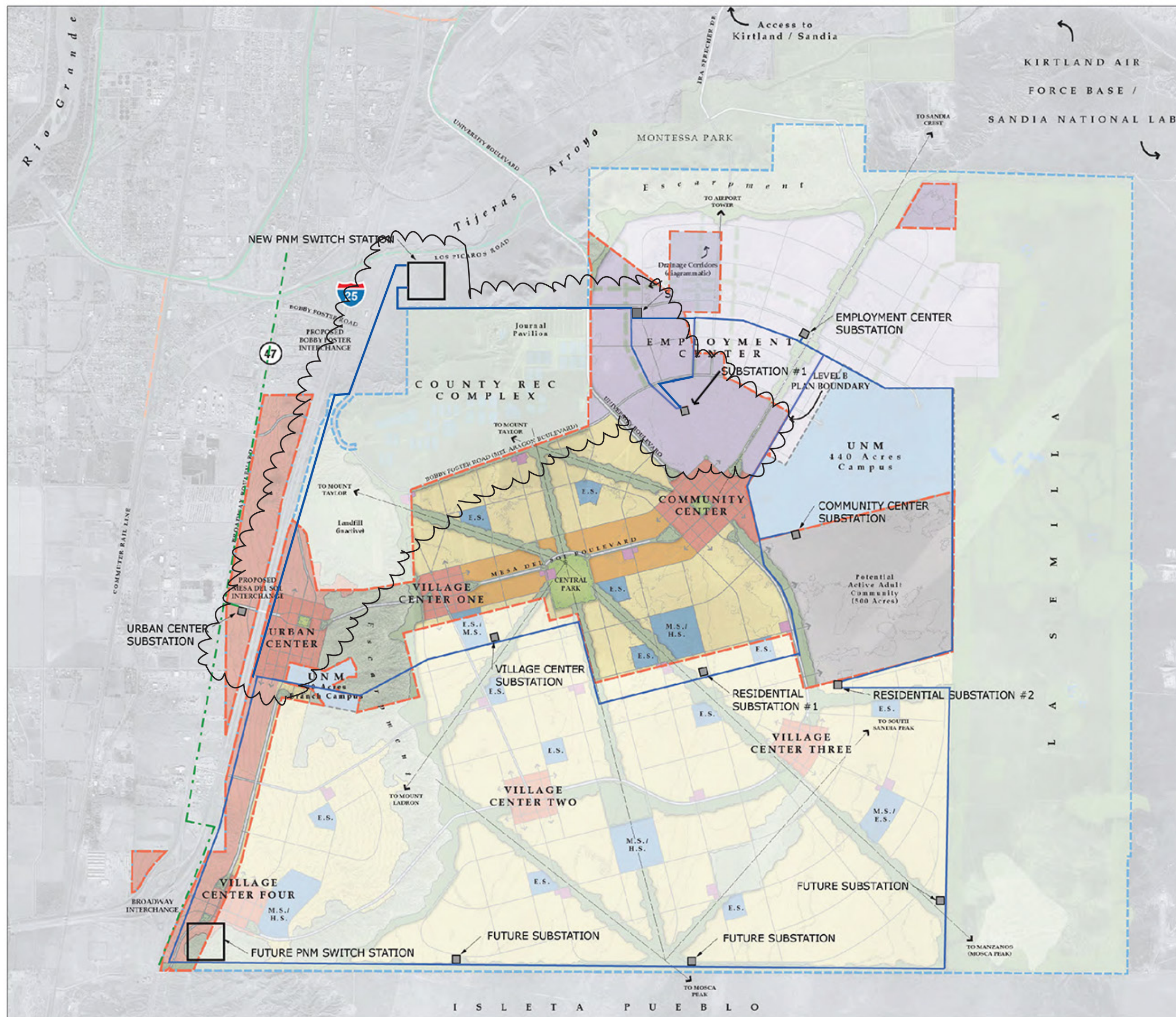
Figure 5-2

Revised September 2012 - addition of Tract D and removal of Tract 8 from plan area.
Revised August 2021 - modifications to roadways and linear parks/drainage corridors within a southern portion of the Employment Center, as shown.

Legend

- A-1 Sewer Line (Trunk Line) and Identifier
- A.1 Sewer Line (Level B Collector) and Identifier
- FM Force Main
- PS#1 Pump Station and Identifier





TRANSMISSION LINE ROUTING

Figure 5-5

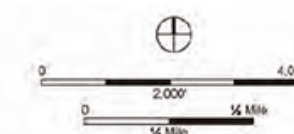
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LAND USES

- Mixed Use Centers
- Neighborhood Centers
(diagrammatic placement)
- Commercial
- School and UNM Land
- Office / R&D
- Corridor Residential
- Residential
- Large Parks
- Trunk Open Space Network
- Steep Slopes and Playas

- Overhead Transmission Line
- Existing Transmission Line



5.2.3 **Phasing of Sanitary Sewer System Construction**

Gravity mains sized for ultimate development will be extended when service is required in a particular area. The proposed permanent pump station facility will not be available until after 2025, therefore at least two temporary pump stations are proposed for development of the Level B area. Pump stations and associated force mains are also subject to construction phasing.

5.2.4 **Expanded Discussion – Montessa Park Water Reclamation Plant (MPWRP)**

As discussed in the Level A Report, the WUA is considering future satellite treatment plants at strategic locations to relieve demand at the existing Southside Water Reclamation Plant (SWRP). The Level A Plan proposed a new treatment plant in the southeast portion of Mesa del Sol. Subsequent consultation with the WUA led to the relocation of this plant north of Mesa del Sol in the Tijeras Arroyo in the area of the old Montessa Park. Advantages of this location are:

- A major portion of the City’s sewage flows in the Tijeras Interceptor, which is located in the Tijeras Arroyo (average flow of 26.6 MGD per the Facilities Plan). The Tijeras Interceptor would be routed to the new MPWRP in the Tijeras Arroyo. This would provide significant relief to the existing SWRP on 2nd Street.
- The MPWRP would benefit from economy of scale in both initial construction and operation and maintenance.
- The reuse water generated at the MPWRP would be approximately 240 feet higher than the similar facilities at the SWRP, a significant energy cost advantage in the future pumping of reuse water to facilities at Mesa del Sol and other appropriate facilities in other parts of the City.
- It is perceived to have fewer siting issues regarding land use and current and future neighbors.
- It is a preferred location for surface injection of a possible future ASR system. A major zone of depression in the aquifer has been documented just north of this proposed MPWRP site.

The proposed location has not been finalized and will be the subject of substantial study. The Montessa Park site is highly desirable for the following reasons:

- Location outside the proposed Tijeras Canyon 500-year floodplain.
- Relative ease of rerouting of the existing gravity Tijeras Interceptor to the MPWRP site.
- Diversion of flow from the University Boulevard outfall sewer via a potential gravity siphon line.

The WUA is considering the MPWRP to be a full treatment facility, including solids treatment. The WUA may pursue innovative technology grants and possible a cooperative approach involving Sandia National Labs, specifically involving solids treatment.

5.3 **Dry Utility Master Plan**

Project Overview

This Level B Dry Utility Plan is a master plan strategy for developing the dry utilities to support the Mesa del Sol community. This plan expands on the concepts developed in the Mesa del Sol Community Master Plan – Level A. While the names of utility providers are mentioned, no specific companies have been selected. Mesa del Sol reserves the right to use best business practices to select the utility provider. The utility provider reserves the right to determine all technical needs but not those impacting land use and planning issues.

Application of New Urbanist Concepts

New Urbanist concepts will be applied to the planning, layout and development of the dry utility system within Mesa del Sol. This system will mix new strategies for locating utilities within the transit corridors to reinforce access and construction for walkable neighborhoods and urban town centers. Mesa del Sol will utilize a hierarchy of locations for the differing types of needed installation. Technical needs and aesthetics will determine the best location for each type of system.

Key concepts of New Urbanism applied to dry utilities at Mesa del Sol will include the following:

- Within the employment center, a 10 foot public easement behind the road right-of-way will be granted for routing of utility systems. (See Figure 5-3, “Utility Corridor Street Sections” for installation locations.)
- Planning and development of systems within residential and urban centers will locate utilities within private alleys and adjacent to streets to allow building foundations to encroach to a “zero lot line.” (See Figures 5-3, “Utility Corridor Street Sections” and 5-4, “Typical Alley Installation” for installation locations.)
- Transmission systems’ visual impact will be minimized by running the overhead power lines at mid-block locations perpendicular to streets and at the edges of the open space corridors, and by minimizing the extent to which power lines run alongside streets, as determined by the electric utility to be feasible and as allowed by industry and regulatory technical and safety standards.
- Distribution systems will be underground for electric, gas and telecommunications facilities. Their location underground will be determined by the zone they occupy. Coordination with the electric utility early in the subdivision/platting processes to identify, locate, and secure necessary easements is imperative to provide safe and reliable electric service, avoid delays, and keep development projects on schedule.

5.3.1 Electric Supply

Existing System

Within the Level B development area the first planned buildings are already under construction in the employment center. These buildings include Advent Solar and Culver Studios. During the construction of these buildings, University Boulevard is being extended south, beyond the University Boulevard Extension project previously described. To support the development of these new buildings and industries, electric facilities have been extended as well.

PNM, as the electric utility in the Albuquerque area, has several possible transmission lines in proximity to the site. In the Tijeras Arroyo, PNM has an overhead 345kV transmission line, running east west just north of Los Picaros Road. At the northern end of the Tijeras Arroyo, also running east-west, is an overhead 115kV transmission line. PNM has another 115kV transmission line running north and south along the west ROW of I-25 in proximity to the future planned Mesa del Sol interchange of I-25. Within the Tijeras Arroyo there is also a 12.47kV distribution line running parallel to the 115kV transmission line, which feeds the County Rec Complex and the Journal Pavilion.

Existing 12.47kV Distribution

The existing 12.47 kV line has limited capacity based on PNM’s present system configuration. For Advent Solar, this line has been extended east, overhead from the Journal Pavilion to University Boulevard. It then transitions to an underground line within the Mesa del Sol development and continues along University Boulevard to Street D. However, due to the line’s limited load capacity, additional electrical systems need to be developed and constructed.

Proposed System

The electrical system will have three components. The first will be the 115 kV transmission systems consisting of the transmission line and structures, and distribution substations. The second system will be the 12.47 kV and 7.2 kV distribution systems. The third will be a transmission switching station to provide reliability to the transmission system serving the area. In order to support the loads required by the build out of Mesa del Sol, 115 kV electrical transmission lines will tie load centers together. By 2007–2008, a 115 kV electrical substation will be installed within Mesa del Sol to continue to feed the site. This substation will be fed from an overhead 115 kV transmission line that will be tied to the existing 115kV line in the Tijeras Arroyo. The location of the new switching station and the routing of the transmission line are being determined by off-site easement availability, costs, and aesthetic considerations. PNM has identified an area north of the Journal Pavilion, at the base of the escarpment for the location of the switching station.

Based on the continued build out load requirements, additional substations will be brought online. The existing feed to the site is a radial distribution line, and the installation of the first substation will include a radial transmission line. The electrical distribution system will feed out of the substations underground. Electric distribution systems will be in a joint trench with Gas, Telecommunications and Television/Internet services beyond substation walls where applicable.

Transmission System

A 115 kV transmission line will be brought into the Mesa del Sol development for the first substation. The requirements of PNM include:

- a) The design and construction of a 115 kV transmission line from the existing 115 kV line located in the Tijeras Arroyo to the first substation;
- b) The design and construction of the first substation; and
- c) PNM is designing and constructiong a new substation north of Mesa del Sol.

PNM is working on the design of the transmission line in the updated alignment shown in Figure 5-5, Transmission Line Routing. Aesthetics and cost have been taken into consideration in determining the route through the entrance to the Mesa del Sol development. Under-ground duct banks, for the possible routing of transmission lines, are typically 10 feet wide and 5 feet deep and contain thermal-concrete encased conduits with a thermal backfill to aid in heat dissipation, and may contain splice boxes where required. These splice boxes are approximately 10 feet wide by 20 feet long and will require space for vehicle access and soil storage during construction and maintenance. If determined to be feasible by the electric utility, undergrounding of transmission lines and facilities must meet all industry and regulatory technical and safety standards. All necessary easements for such facilities require early coordination with the electric utility prior to development of encumbered properties.

The first Substation, shown in Figure 5-5, “Transmission Line Routing,” will need to be on-line to support the employment center as it is built and occupied. Each sub-station is on a 200 foot by 200 foot lot. The location of the first substation has been considered for proximity to both the Employment center as well as the first Residential neighborhood. PNM’s dimensional standards for substations now require at least four acres with any side no less than 350-feet to meet current technical clearances and safety standards.

Distribution System

The PNM distribution system is built and operated as an interconnected system. The distribution lines of adjacent substations are interconnected to accommodate transferring load between substations. The details of the distribution will be documented in future Level C submissions. A direct application of New Urbanism will be applied to the routing of the electrical distribution (via joint trench with gas and telecommunications) adjacent to streets and within alleys in the residential zone. Diagrams of this are shown in Figure 5-3, “Utility Corridor Street Sections.” All necessary easements for such facilities require early coordination with the electric utility prior to development of properties encumbered by easements.

GAS LINE ROUTING

Figure 5-6

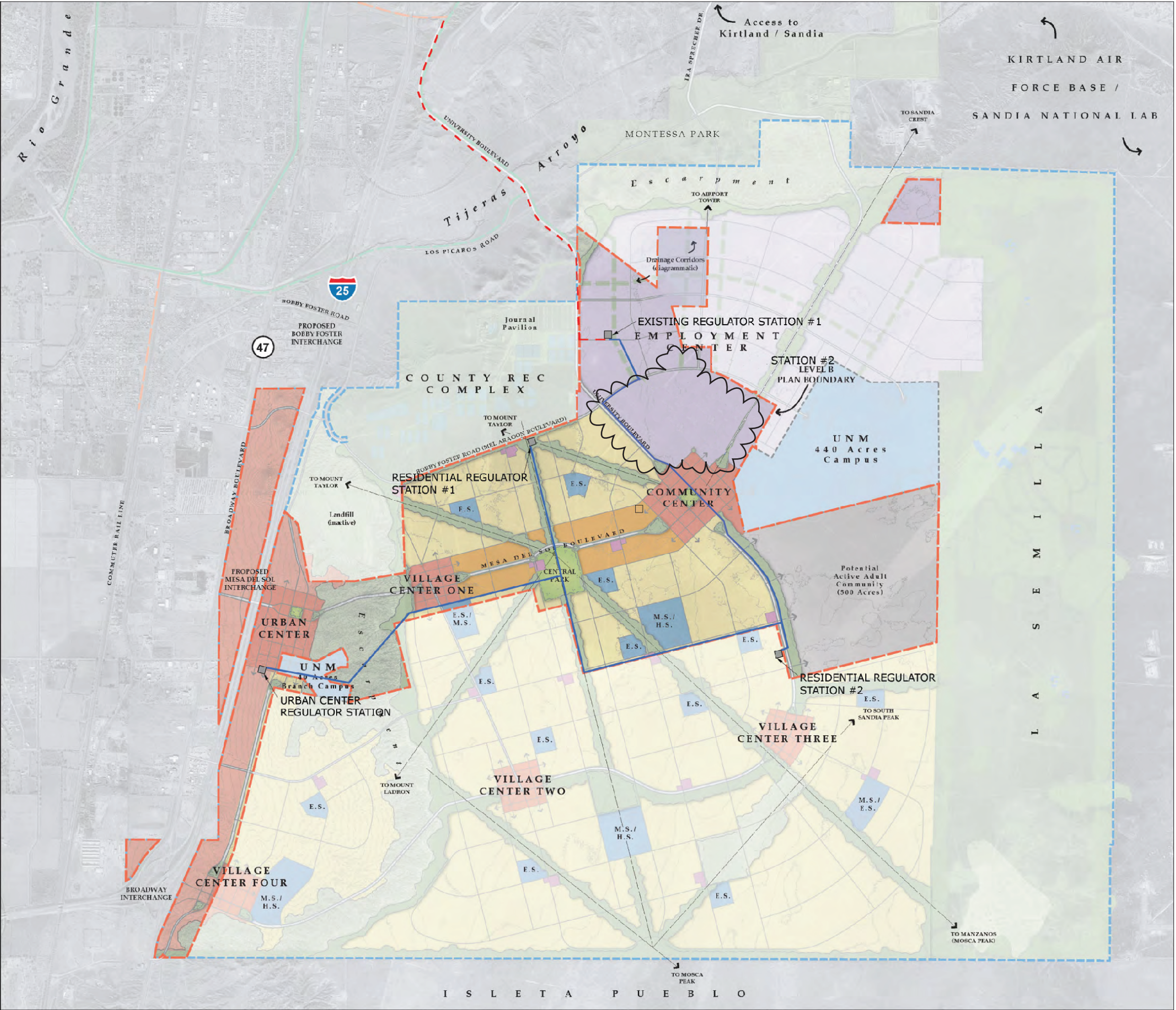
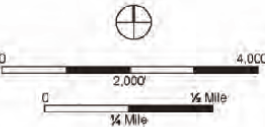
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Legend

LAND USES

- Mixed Use Centers
- Neighborhood Centers (diagrammatic placement)
- Commercial
- School and UNM Land
- Office / R&D
- Corridor Residential
- Residential
- Large Parks
- Trunk Open Space Network
- Steep Slopes and Playas

- Existing 10" Very High Pressure Gas Distribution Line
- Future 10" Very High Pressure Gas Distribution Line





TECHNICAL APPENDICES

LEVEL B PLAN : OCTOBER 2006

AMENDED August 2021

Submitted by:
Forest City Covington New Mexico, LLC
Albuquerque

Prepared by:
Calthorpe Associates
In collaboration with:
Community Design + Architecture
Dekker/Perich/Sabatini
Bohannon Huston
URS Corporation
M-E Engineers
Vaughn Wedeen Creative
Thomas Leatherwood Associates
Earthwrights Designs



MESA DEL SOL
ALBUQUERQUE SOUTH MESA

A Multi-Modal System

Transportation

3A Level A Update

3A.1 Correlation with Level A Transportation Plan

In accordance with the Planned Communities Criteria, the first step in the Level B planning process is to review the correlation with the Level A Plan. Relative to Transportation, fairly significant changes have taken place in land use, street network layout, and connections with off-site roadways since the Level A Community Master Plan was issued in June 2005, and since an Amendment to Technical Appendix F—Transportation was issued in January 2006. The following summarizes the major changes that have occurred in the continued development of Mesa del Sol planning, in reaction to market conditions and opportunities, and in response to comments received during reviews of the Level A document.

3A.1.1 Land Use Modifications from Level A

The following changes to Land Use have occurred and been incorporated into the Level B Plan:

- Designation of an Active Adult Community, with the effect of converting 500 acres of higher density (approximately 7 DU's/acre) residential use to lower density (approximately 4 DU's/acre) “active adult” or retirement community use.
- Moving of Village Center One from the former location along the north boundary of the site adjacent to Bobby Foster Road to a new location centered on Mesa del Sol Boulevard, located at the edge of the escarpment, just east of the Urban Center.
- Revisions to the proposed location of schools in reaction to other changes in land use and street configuration.

3A.1.2 Street Network Modifications from Level A

The following changes to the Street Network have occurred and been incorporated into the Level B Plan. All of these streets are shown in Figure 3-1, Auto and Transit Circulation, in the Level B Plan.

- University Boulevard, as the primary north-south roadway entering the Community Center, has been shifted from a location within the Employment Center to a new location on the westerly boundary of the site and edge of the Employment Center, adjacent to the Bernalillo County Recreation Complex. (This change was made due to legal concerns and commitments made in previous agreements.)

- With the shift to the location of University Blvd., the orientation of the Community Center was changed to a more northwest-southeast orientation in accordance with the new alignment of University Blvd.
- With the shift to University Blvd. and the orientation of the Community Center, the alignment of Mesa del Sol Blvd. east of the Community Center has been changed to a route that parallels a previously planned open space corridor. Mesa del Sol Blvd. will continue directly to Los Picaros Road, thus providing somewhat better continuity and circulation than the Level A alignment.
- Various connector roadways have been realigned in response to the major changes to the overall street grid described above.

3A.1.3 Connections to Off-Site Roadway Network

The Mesa del Sol circulation system will connect to I-25 at the four locations previously shown in the Level A Master Plan: (1) at the existing Broadway / NM 47 interchange, (2) at a new interchange proposed for Mesa del Sol Boulevard, (3) at a new interchange proposed for Bobby Foster Road, and (4) at the existing interchange with Rio Bravo Boulevard. The connection to Broadway / NM 47 has been modified from that previously shown in the Level A Plan to add direct access to I-25 / Broadway / NM 47 via added ramps connecting internal boulevards and avenues directly with the interchange.

The Mesa del Sol circulation system will also connect to the off-site transportation network at three new locations that have been added since the release of the Level A Master Plan, two of which were previously described in the Amendment to Technical Appendix F—Transportation. These locations are as follows:

- The westerly extension of an east-west avenue from the portion of the site south of Mesa del Sol Blvd.. crossing I-25, via a new underpass or overpass, terminating at Broadway (labeled as Avenue “A”) shown on Figure 3-1 in the Level B Plan.
- The addition of a connecting roadway from Bobby Foster Road over I-25 via a new overpass structure terminating at Broadway, directly opposite existing Desert Road / NM 500 (labeled as Avenue “D”) shown on Figure 3-1 in the Level B Plan.
- The northerly extension of a north-south roadway from the Employment Center, directly intersecting with Los Picaros Road and Ira Sprecher Road, providing a more direct link to KAFB and providing alternate access to the University Blvd. corridor, also shown on Figure 3-1 in the Level B Plan.

NOTE: The August 2021 plan amendments revised the southern portion of the Employment Center to accommodate the Albuquerque Studios expansion. As the nature of film studios requires stringent security and access measures, site access will only be granted through secured gates. No access gates will be located along the southeastern portion of the site along Mesa del Sol Boulevard, so the previously planned frontage road was removed.

3A.1.4 Comparisons of Traffic Generation and Distribution

Overall traffic volumes at Build-Out were modeled and shown in the Level A Plan, and included in Appendix F-3 of the Level A Plan dated June 2005. Figure F-3-8 of Appendix F-3 illustrated the forecast Average Daily Traffic Volumes (ADT) associated with each of the planned streets within Mesa del Sol and existing or proposed roadways surrounding Mesa del Sol. These volumes were based on the street network as proposed at that time. As described above, the street network has been modified with significant new additions made to the network that have had the beneficial effect of distributing traffic volumes onto additional roadways, generally reducing the projected traffic on the roadways connecting the Mesa del Sol street network with off-site roadways. (One exception to these reductions is Bobby Foster Road, as it leaves the development and escarpment. At this location, traffic on Bobby Foster Road is predicted to increase from 47,800 vehicles/day to 52,700 vehicles/day, an increase of 4,900 vehicles/day, or 10%. This increase is likely due to the inclusion of “Avenue D” as an additional off-site connection, accessed from Bobby Foster Road.)

The following Table 3A-1 shows the forecast Average Daily Traffic comparison between the Level A Plan and this Level B Plan. This comparison is made at a theoretical “screen-line” that represents traffic entering and exiting the development just below the edge of the escarpment. Overall traffic volume at the time of the Level A Plan was 199,600 vehicles/day; 197,500 vehicles/day are now forecast with this Level B Plan. This overall number is within 1% of the original forecast—no significant changes have taken place to the overall forecasts for land use and traffic at build-out.

3A.1.5 Travel Demand Modeling at Build-Out

The following figures, Figures 3A-1 to 3A-8, represent an update to the overall Travel Demand Modeling done for Mesa del Sol at Build-Out. The Methodology employed here is the same as that used in Level A analysis, and as described in Technical Appendix F—Transportation. We have included a forecast of the Average Daily Traffic at Build-Out, along with forecasts of the AM and PM peak hour traffic volumes. With the assumptions for laneage and these traffic forecasts, level of service deficiencies for the AM and PM peak hours were also analyzed and identified. Off-site capacity deficiencies are addressed in Appendix 3E. The few on-site capacity deficiencies within Mesa del Sol (Bobby Foster Road and various streets within the Community Center area) are primarily a function of the assumptions for street laneage as modeled. These will be addressed in greater detail through more site specific intersection capacity analyses that will be performed for Level C Plans and for site planning.

Table 3A-1 Screenline Comparison of Build-Out Traffic Volumes and Distribution

Location At Escarpment	Average Daily Traffic (ADT) – Vehicles/Day	
	Build-Out Scenario Level A Plan	Build-Out Scenario Level B Plan (Net “E”)
University Blvd..... east of Urban Center	14,300	16,100
Avenue “A”	0	11,700
Mesa del Sol Blvd.....	58,000	45,400
Bobby Foster Road	47,800	52,700
University Blvd..... South of Los Picaros	62,900	39,200
“Avenue 32” / Tower Road	0	18,000
Los Picaros North of Mesa del Sol Blvd.....	16,600	14,400
Totals	199,600	197,500

Note: Total Level B volume forecast is within 1% of forecast Level A volume

The purpose of the 2021 Albuquerque Studios Master Plan (TIS):

The purpose of this TIS was not to conduct an update to the Mesa del Sol Level B Master Plan TIS. Rather, it was to analyze the traffic impacts for the Albuquerque Studios Expansion for an implementation year of 2026 and future horizon year, considering the potential for periphery uses north and south of Albuquerque Studios.

The conclusion from the 2021 Albuquerque Studios Master Plan (TIS):

The Master Plan Albuquerque Studios Expansion results in an increase of 575 (Thousand Square Feet) of development from the Level B Master Plan. But the TIS confirmed that the proposed Albuquerque Studios Site peak hour traffic would be less than the traffic forecasted in the Level B Master Plan TIS. This is due to the atypical commuting patterns associated with a film studio.

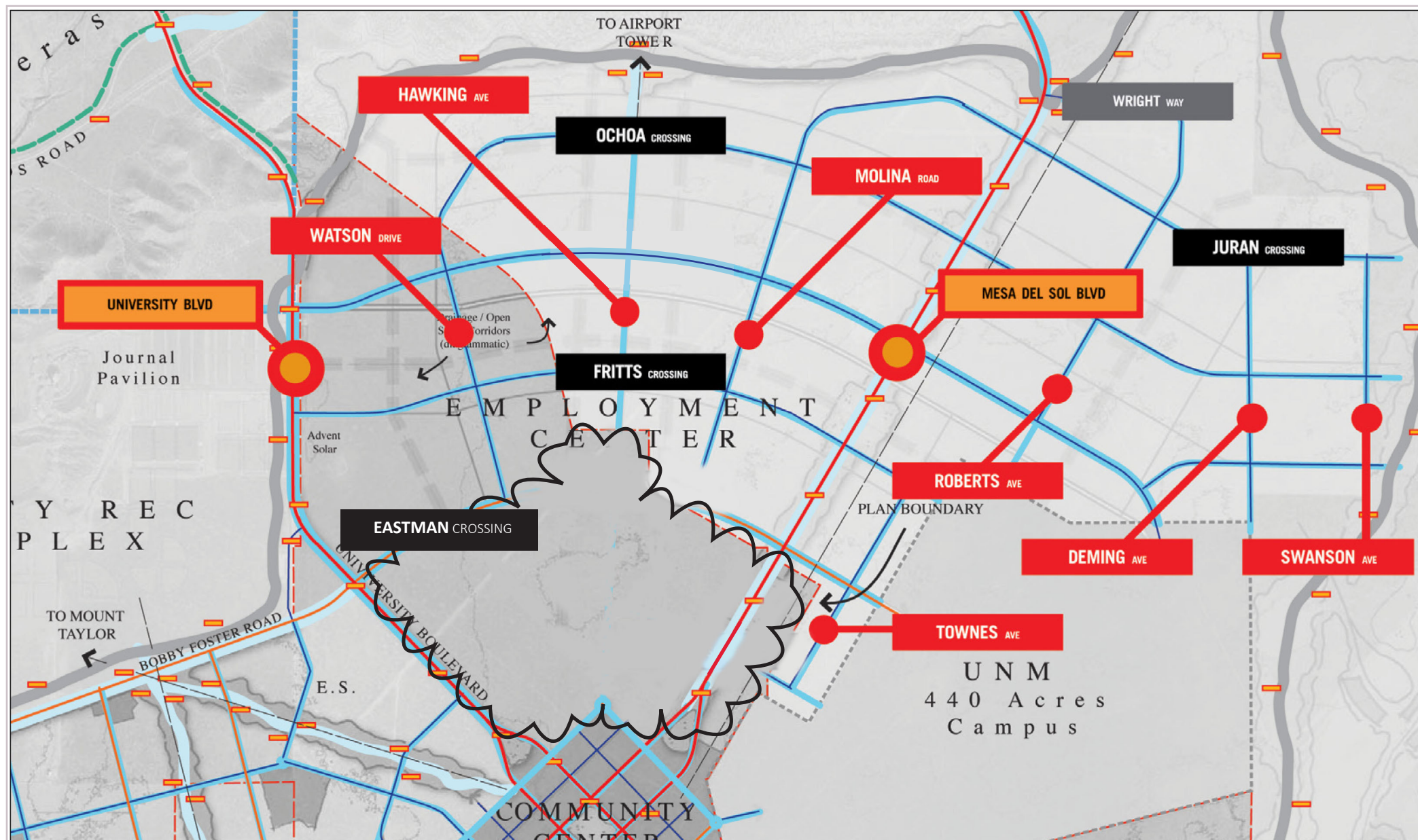
A decrease of -739 Trips from the Level B Master Plan during the AM Peak Hour.

A decrease of -202 Trips from the Level B Master Plan during the PM Peak Hour.

For the Implementation Year Conditions: 1/2 street improvements provide the required capacity and Level of Service (LOS) for the site development and background traffic in the study area.

For the Horizon Year Conditions: The LOS was found to be acceptable at all locations with implementation of recommended improvements.





EMPLOYMENT CENTER STREET NAMING

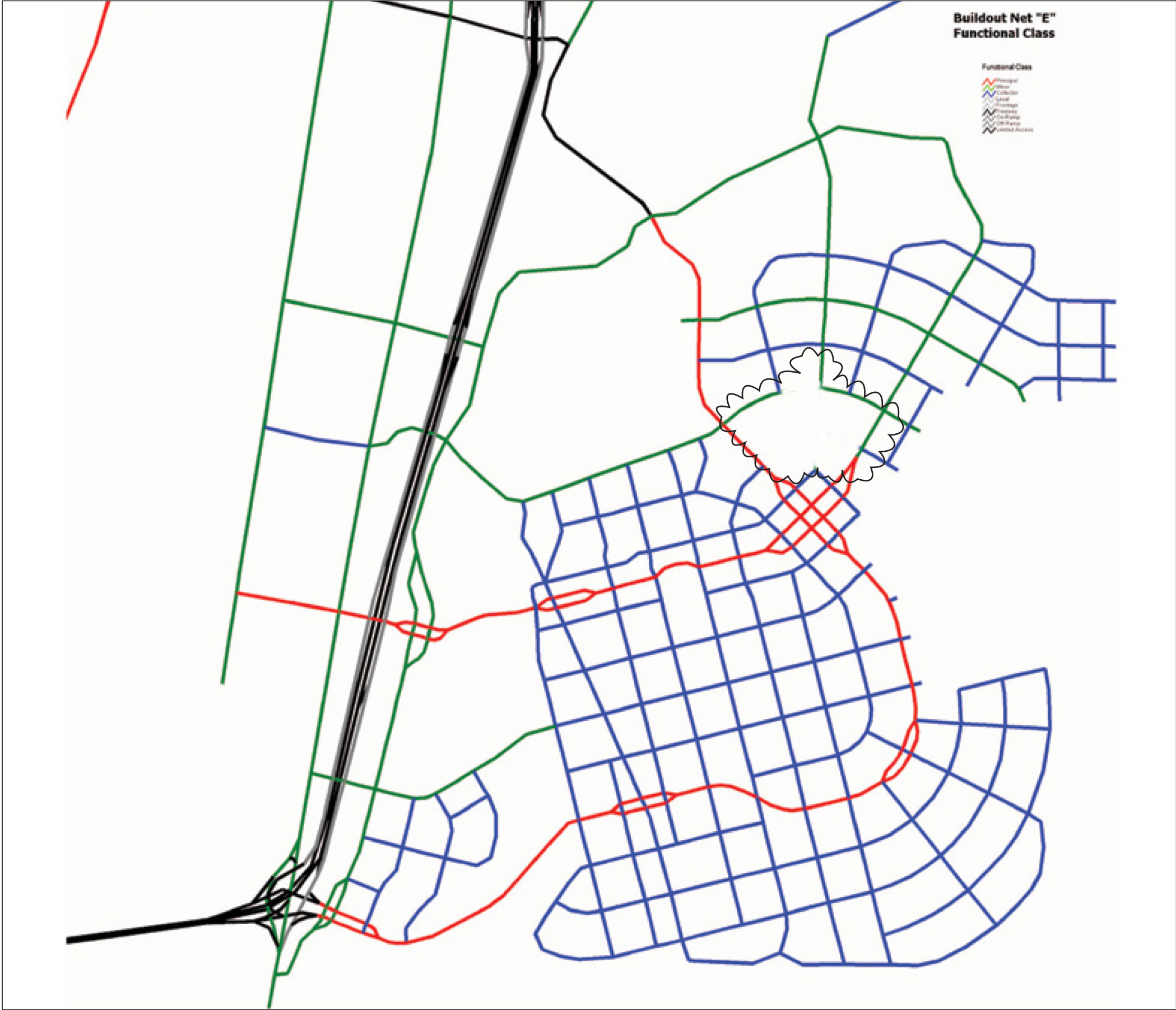
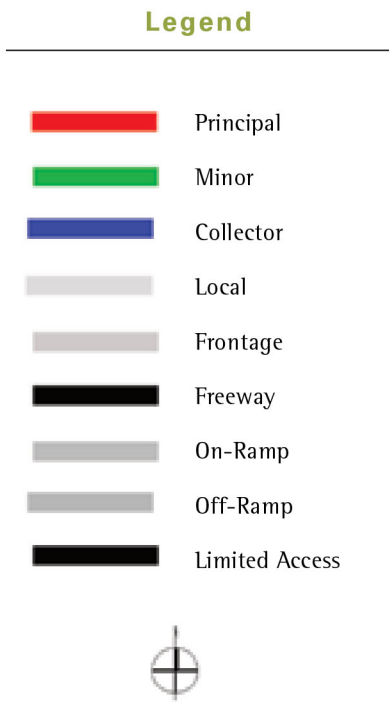
Figure 2B-1

Revised August 2021 - modifications to roadways to remove the portion of Eastman Crossing between Watson Dr. and Connector 32/Hawking Dr within a southern portion of the Employment Center, as shown.



**FUNCTIONAL
CLASSIFICATION
BUILDOUT**

Figure 3A-1
Revised August 2021 - modifications to roadways within a southern portion of the Employment Center, as shown.



TYPICAL
ROADWAY SECTION,
MESA DEL SOL BLVD.

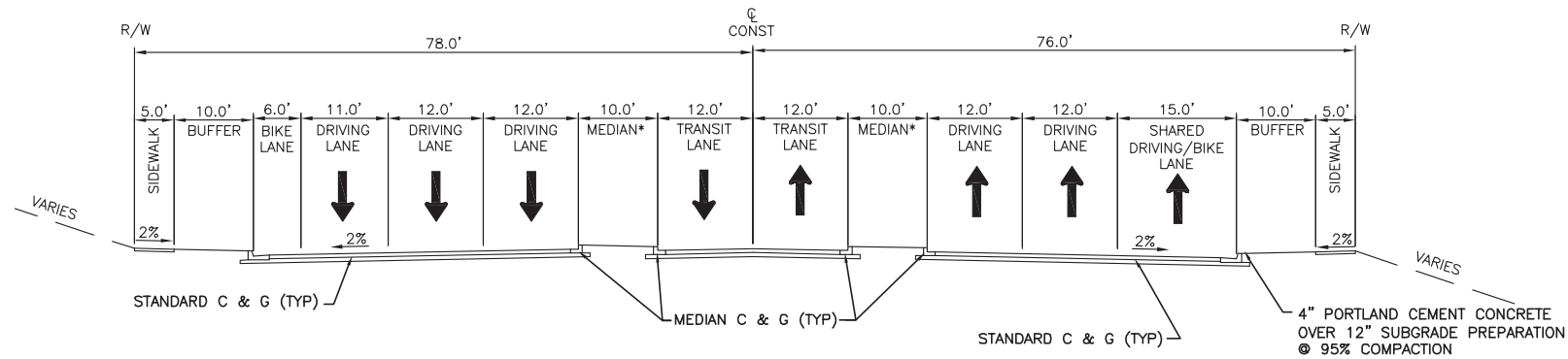
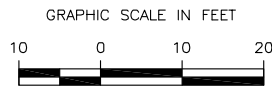
Figure 3F-4

Revised August 2021 - modifications to Mesa del Sol Boulevard corridors within a southern portion of the Employment Center, as shown.

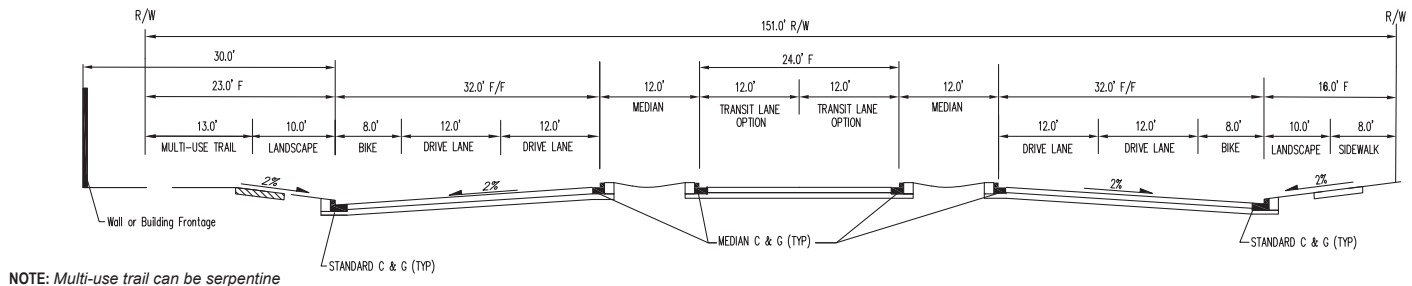
Legend

Notes:

- 1. Refer to Level B Plan Section 2.5 “Landscape Planning and Design” for median treatments.



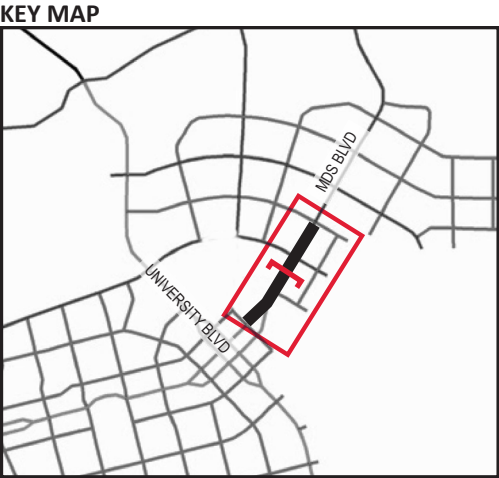
MESA DEL SOL BLVD. (1G-2)
COUPLET 1 TO CONNECTOR ROAD 44 / COUPLET 2

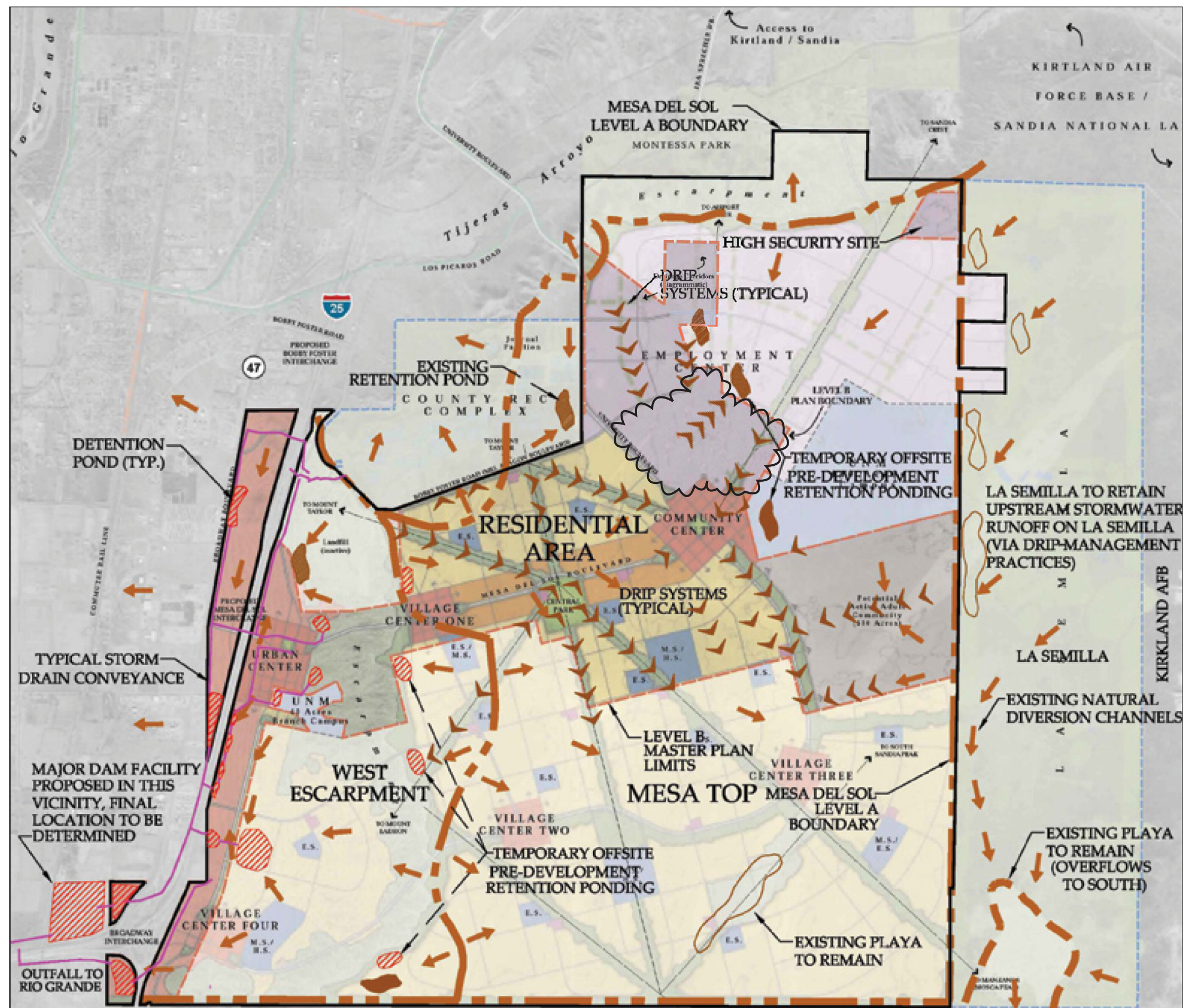


MESA DEL SOL BLVD. (Figure 3F-4)
Mesa del Sol Blvd. Couplet 3 to the Level B Plan boundary

* MEDIANS TO DRAIN INSIDE FOR WATER HARVESTING PURPOSE; SLOPES TO BE DETERMINED DURING DESIGN PROCESS.

NOTE: The August 2021 plan amendments revised the southern portion of the Employment Center to accommodate the Albuquerque Studios expansion. As the nature of film studios requires stringent security and access measures, site access will only be granted through secured gates. No access gates will be located along the southeastern portion of the site along Mesa del Sol Boulevard, so the previously planned frontage road was removed.





OVERALL STORMWATER PLAN

Figure 4A-1

Revised August 2021 - modifications to roadways and linear parks/drainage corridors within southern area of Employment Center.

Legend

Notes:

Shown facilities are illustrative only.






Mesa Top Area

Drainage management concept plan uses distributed retention/infiltration ponds (drips) to collect all flows generated on the mesa top in the residential lands.

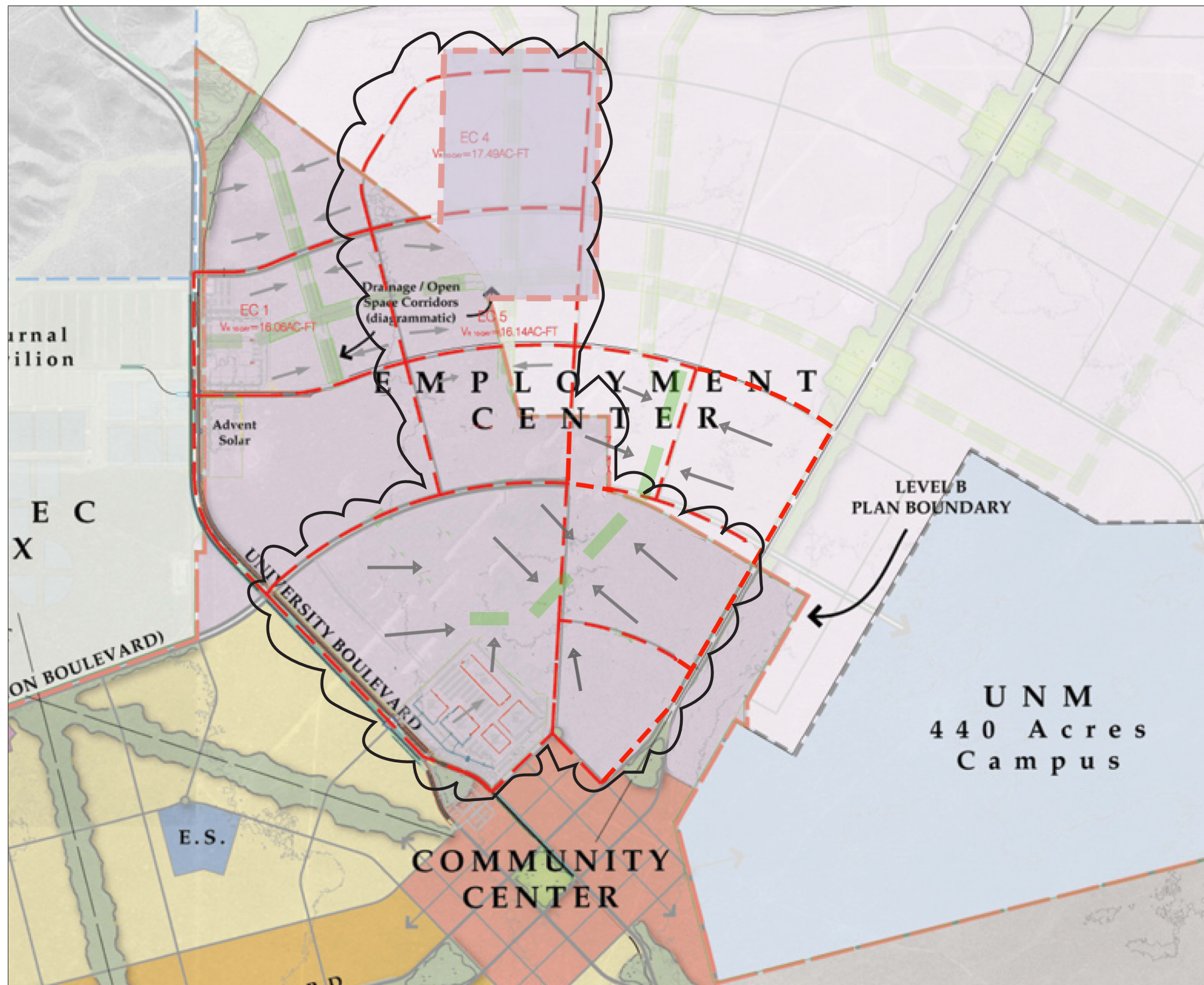
Non-residential lands (i.e. employment center, UNM, public sites) may utilize shared onsite drip systems.

West Escarpment

The drainage management concepts of collecting runoff in detention ponds and discharging storm water to a large storm water detention basin as proposed by the AMAFCA study entitled "Southwest valley drainage management plan", dated Jan. 1988. The detention pond discharges to the Rio Grande.

-  Drip (distributed retention and infiltration pond)
-  Temporary Retention Pond
-  Surface Flow Direction
-  Developed Basin Lines
-  Mesa del Sol Boundary





MESA TOP/COMMERCIAL DRAINAGE PLAN

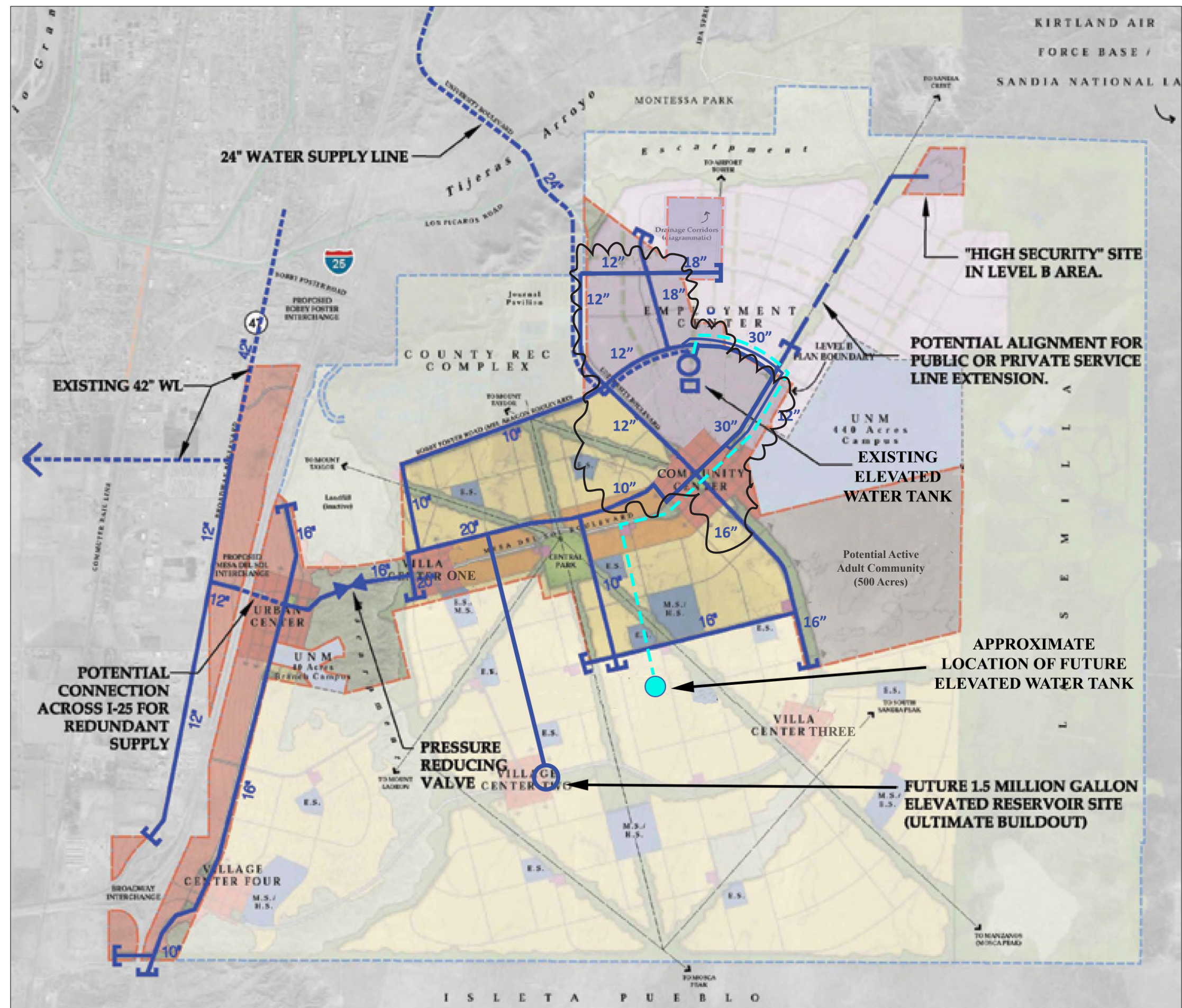
Figure 4A-10

Revised August 2021 - modifications to roadways and linear parks/drainage corridors within southern area of Employment Center.

Legend

- Drainage Basin
- Open Space/Regional Ponds
- Basin Flow Direction





PREFERRED WATER SYSTEM - TRUNK INFRASTRUCTURE PLAN

Figure 5A-1

Revised August 2021 - modifications to utility infrastructure within southern area of Employment Center, as shown.

Notes

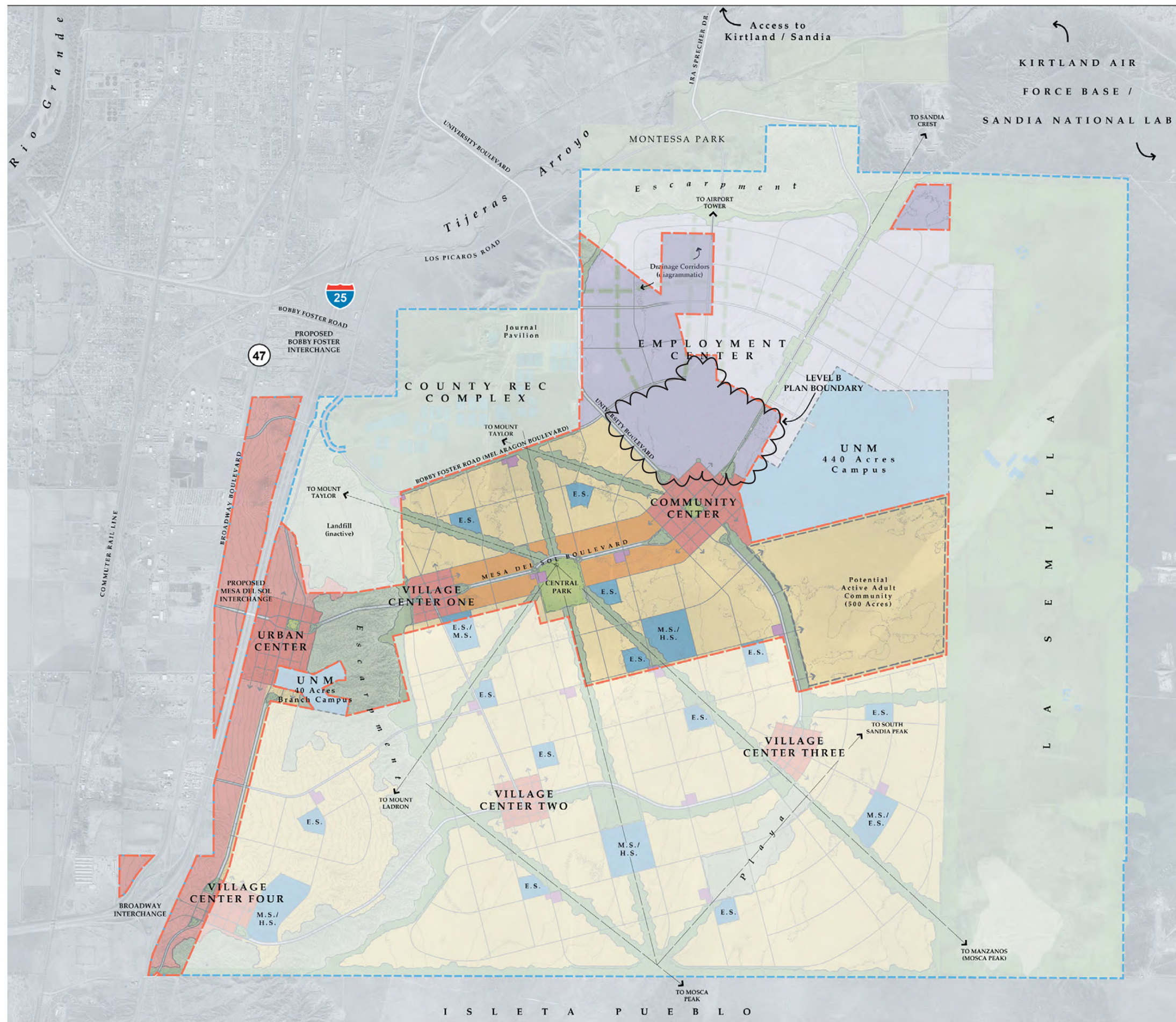
1. The water infrastructure and line sizing shown on this plan is illustrative and subject to change with further planning with the water utility authority.
2. Water wells and associated well collector system are anticipated prior to full development of Level B area.



Legend

- Future 36" waterline interconnect between existing elevated tank and future elevated tank.





MODIFIED MESA DEL SOL TAKE DOWN AREA LAND USE

Figure 5A-2

Revised September 2012 - addition of Tract D and removal of Tract 8 from plan area.
Revised August 2021 - modifications to roadways and linear parks/drainage corridors within southern area of Employment Center.

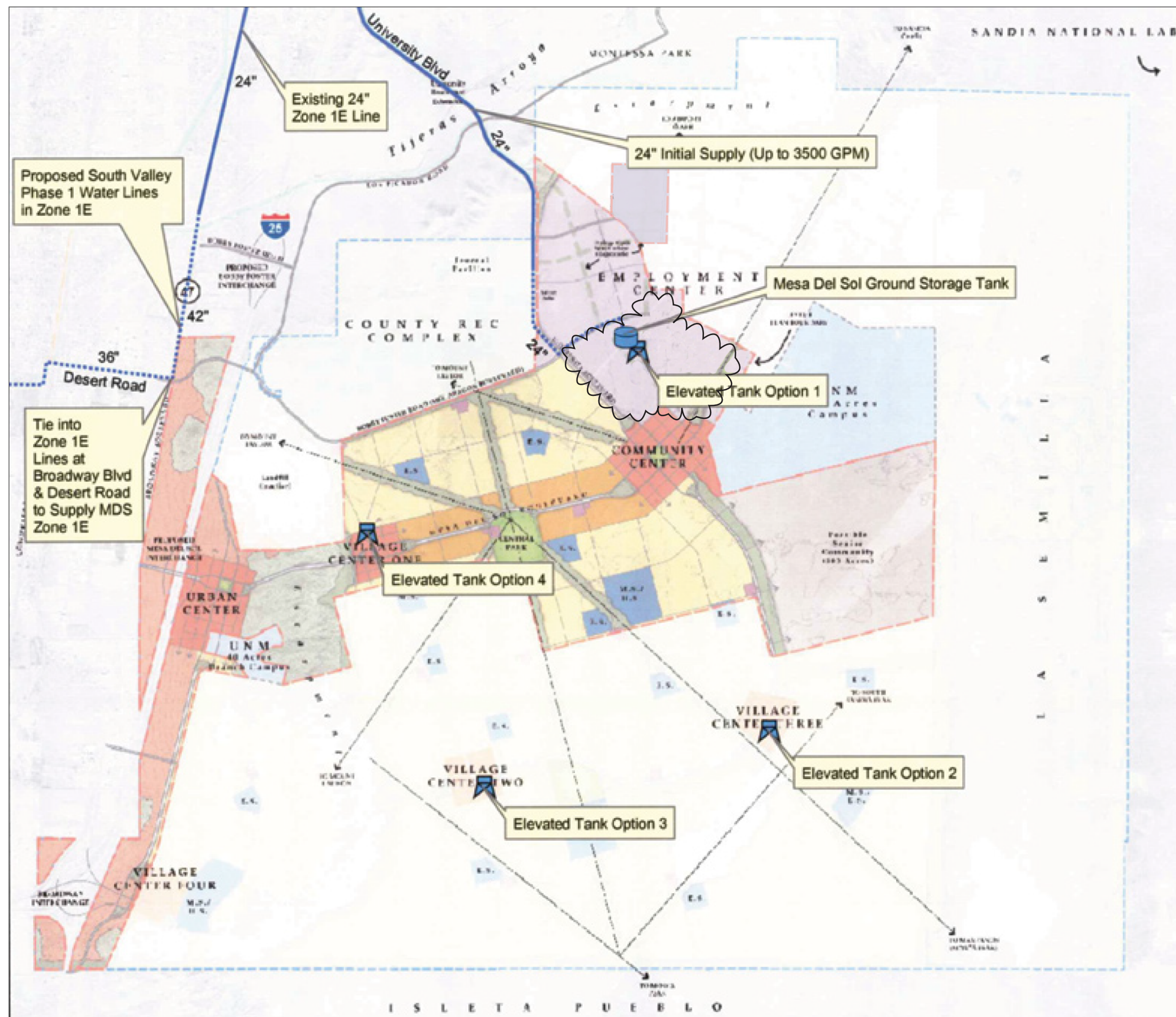
Legend

Land Use Category

- APS
- Community Center
- Employment Center
- Escarpment
- Greenway
- Industrial/Commercial
- Mixed Use/Commercial
- Multi-Family Residential
- Senior Community Center
- Single Family Residential
- UNM
- Right-of-Way

*As per Revised Master Plan 6/9/06





LOCATION OPTIONS FOR ELEVATED STORAGE TANKS AND WATER SUPPLY

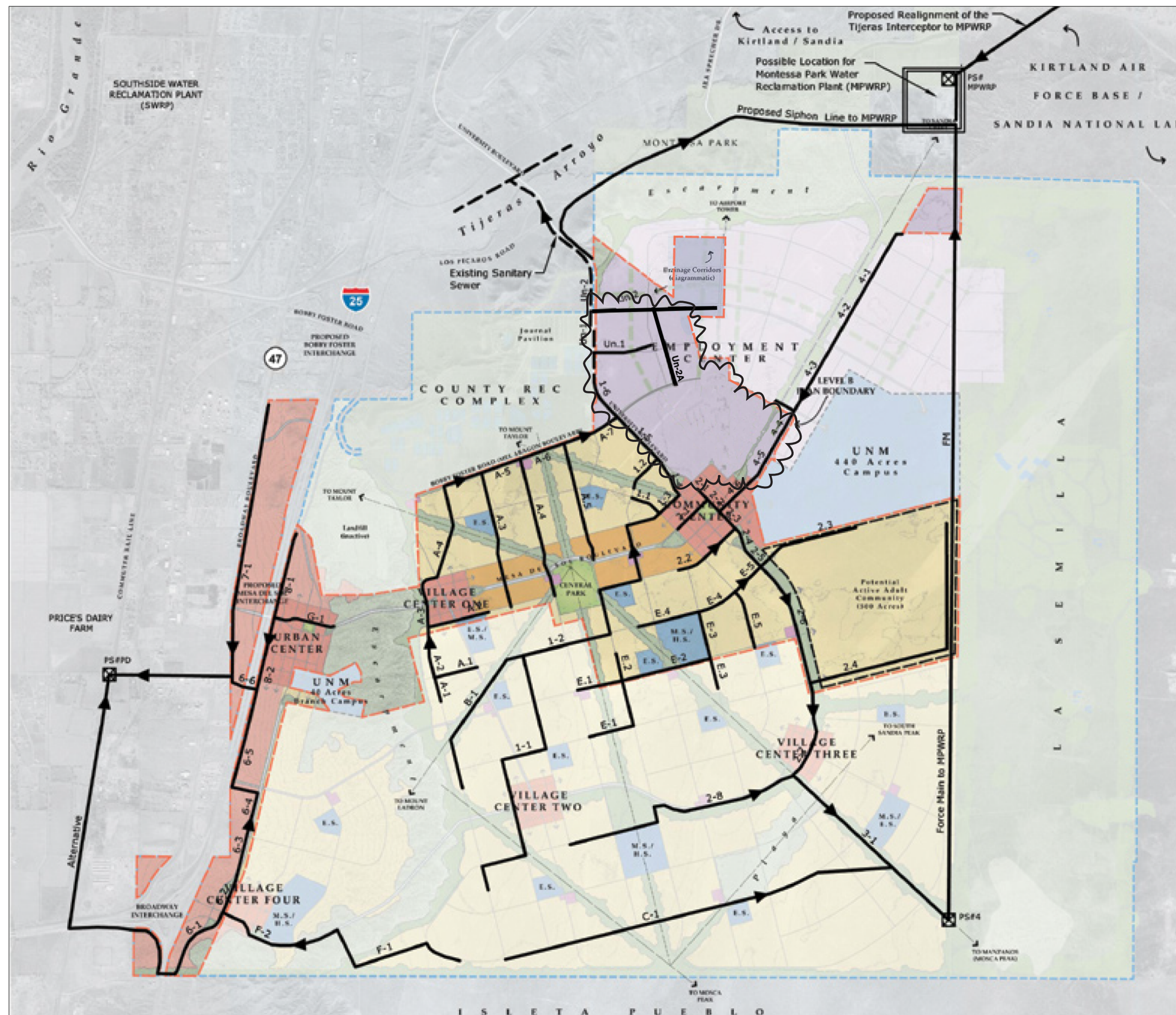
Figure 5A-5

Revised August 2021 - modifications to utility infrastructure within southern area of Employment Center.

Legend

- Ground Storage Tank
- Elevated Tank
- Existing Waterline
- Planned Waterline





SANITARY SEWER MASTER PLAN INCLUDING LEVEL A AREA

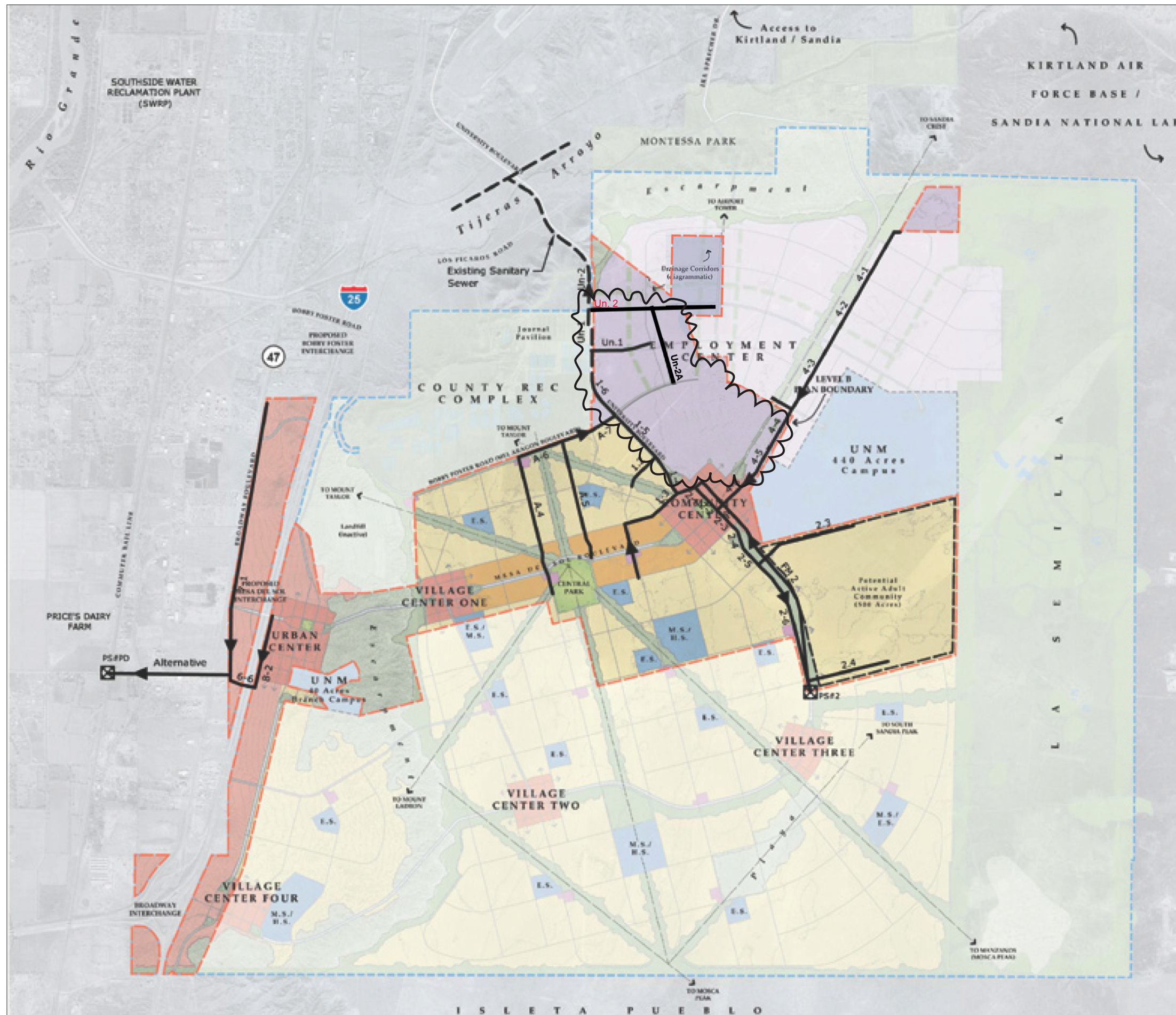
Figure 5B-1

Revised August 2021 - modifications to utility infrastructure within southern area of Employment Center.

Legend

- A-1** Sewer Line (Trunk Line) and Identifier
- A.1** Sewer Line (Level B Collector) and Identifier
- FM** Force Main
- PS#1** Pump Station and Identifier









SANITARY SEWER MASTER PLAN AND ABSORPTION 2020

Figure 5B-3

Revised August 2021 - modifications to utility infrastructure within southern area of Employment Center.

Legend

-  Sewer Line (Trunk Line) and Identifier
-  Sewer Line (Level B Collector) and Identifier
-  Force Main
-  Pump Station and Identifier



SANITARY SEWER
MASTER PLAN
AND ABSORPTION
2025

Figure 5B-4

Revised August 2021 - modifications to utility infrastructure
within southern area of Employment Center.

Legend

A-1

Sewer Line (Trunk Line)
and Identifier

A.1

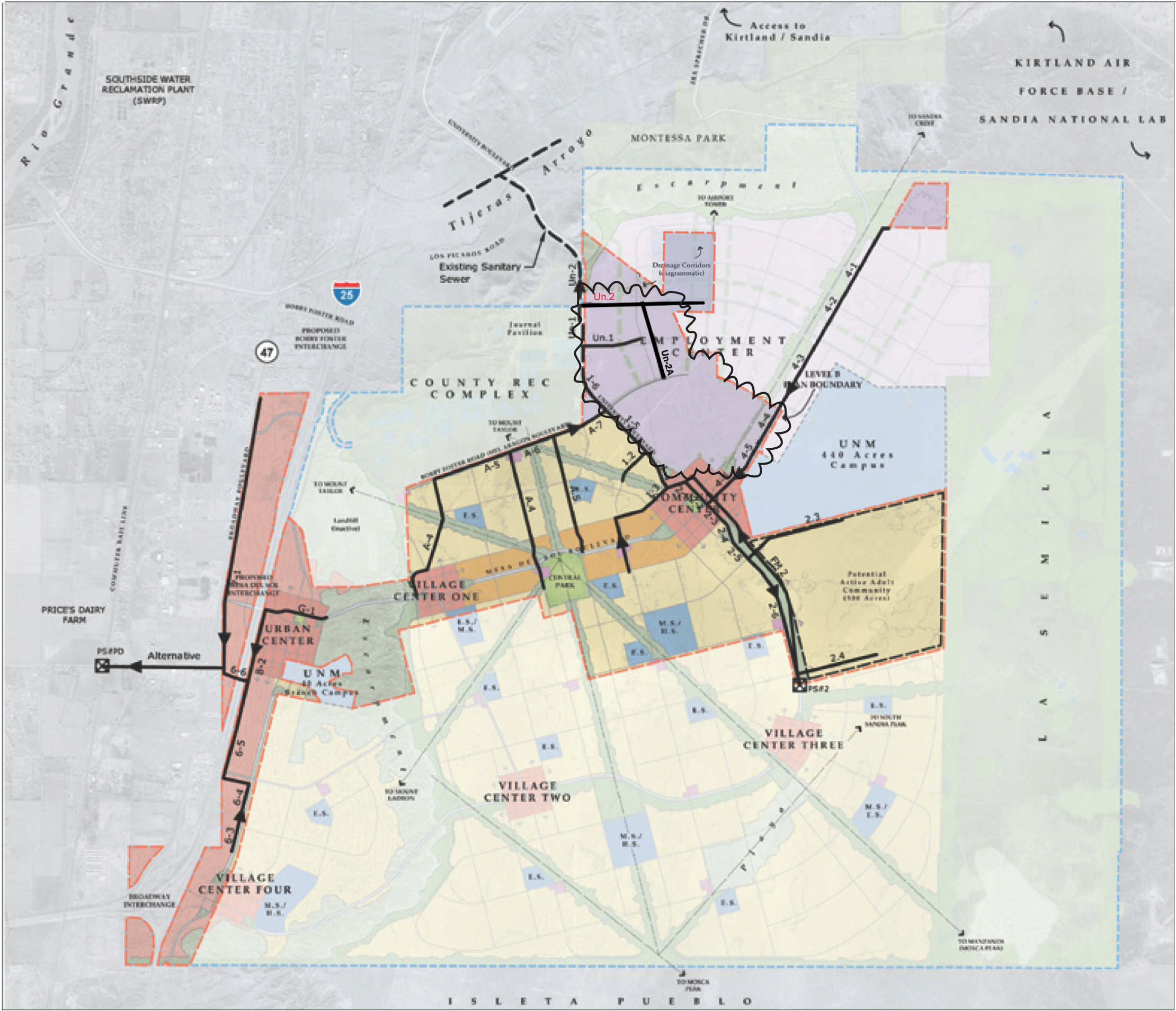
Sewer Line (Level B Collector)
and Identifier

FM

Force Main

PS#1

Pump Station and Identifier



Drainage Area for SAS_1
Main gravity trunk line through center of MDS.

SAS 1.1

Drainage Area	Area (acres)	Population	Average Flow (MGD) ¹	Peak Flow (MGD) ¹	Design Flow (MGD) ¹
Residential	20.23	391	0.03	0.11	0.13
Senior Community	0.00	0	0.00		
Multi-Family	0.00	0	0.00		
Commercial	0.00	NA	0.00	0.00	0.00
TOTAL	20	391	0.03	0.11	0.13

SAS 1.2

Drainage Area	Area (acres)	Population	Average Flow (MGD) ¹	Peak Flow (MGD) ¹	Design Flow (MGD) ¹
Residential	26.07	504	0.04	0.14	0.16
Senior Community	0.00	0	0.00		
Multi-Family	0.00	0	0.00		
Commercial	0.00	NA	0.00	0.00	0.00
TOTAL	26	504	0.04	0.14	0.16

SAS 1-1

Drainage Area	Area (acres)	Population	Average Flow (MGD) ¹	Peak Flow (MGD) ¹	Design Flow (MGD) ¹
Residential	235.97	4565	0.34	0.97	1.16
Senior Community	0.00	0	0.00		
Multi-Family	0.00	0	0.00		
Commercial	22.97	NA	0.03	0.04	0.04
TOTAL	259	4565	0.37	1.00	1.20

SAS 1-2 (includes flow from SAS 1-1 & SAS B)

Drainage Area	Area (acres)	Population	Average Flow (MGD) ¹	Peak Flow (MGD) ¹	Design Flow (MGD) ¹
Residential	498.80	9650	0.72	2.39	2.87
Senior Community	0.00	0	0.00		
Multi-Family	67.59	3054	0.23		
Commercial	22.97	NA	0.03	0.04	0.04
TOTAL	589	12703	0.98	2.43	2.92

Area Calc			
Name	Type	Area (ft)	Area (ac)
Community Center	Commercial	0	0.00
Employment Center	Commercial	0	0.00
Village Centers	Commercial	0	0.00
Urban Center	Commercial	0	0.00
Interchange	Commercial	0	0.00
MdS Blvd	Multi-Family	0	0.00
Residential	Single Family	881212	20.23
Senior Community	Senior Community	0	0.00
UNM 440	UNM	0	0.00
UNM 40	UNM	0	0.00
TOTAL			20.23

Area Calc			
Name	Type	Area (ft)	Area (ac)
Community Center	Commercial	0	0.00
Employment Center	Commercial	0	0.00
Village Centers	Commercial	0	0.00
Urban Center	Commercial	0	0.00
Interchange	Commercial	0	0.00
MdS Blvd	Multi-Family	0	0.00
Residential	Single Family	1135759	26.07
Senior Community	Senior Community	0	0.00
UNM 440	UNM	0	0.00
UNM 40	UNM	0	0.00
TOTAL			26.07

Area Calc			
Name	Type	Area (ft)	Area (ac)
Community Center	Commercial	0	0.00
Employment Center	Commercial	0	0.00
Village Centers	Commercial	1000524	22.97
Urban Center	Commercial	0	0.00
Interchange	Commercial	0	0.00
MdS Blvd	Multi-Family	0	0.00
Residential	Single Family	10278659	235.97
Senior Community	Senior Community	0	0.00
UNM 440	UNM	0	0.00
UNM 40	UNM	0	0.00
TOTAL			258.93

Area Calc			
Name	Type	Area (ft)	Area (ac)
Community Center	Commercial	0	0.00
Employment Center	Commercial	0	0.00
Village Centers	Commercial	0	0.00
Urban Center	Commercial	0	0.00
Interchange	Commercial	0	0.00
MdS Blvd	Multi-Family	2944040	67.59
Residential	Single Family	4917739	112.90
Senior Community	Senior Community	0	0.00
UNM 440	UNM	0	0.00
UNM 40	UNM	0	0.00
TOTAL			180.48

Drainage Area	Area (acres)	Population	Average Flow (MGD) ¹	Peak Flow (MGD) ¹	Design Flow (MGD) ¹
Residential	523.68	10131	0.76	2.48	2.97
Senior Community	0.00	0	0.00		
Multi-Family	67.83	3065	0.23		
Commercial	28.86	NA	0.04	0.05	0.06
TOTAL	620	13196	1.03	2.52	3.03

SAS 1-4 (includes flow from SAS 1-1 & 1-2 & 1-3 & 1.1 & SAS B)

Drainage Area	Area (acres)	Population	Average Flow (MGD) ¹	Peak Flow (MGD) ¹	Design Flow (MGD) ¹
Residential	527.88	10212	0.77	2.49	2.99
Senior Community	0.00	0	0.00		
Multi-Family	67.83	3065	0.23		
Commercial	36.86	NA	0.05	0.06	0.07
TOTAL	633	13277	1.04	2.55	3.06

SAS 1-5 (includes flow from SAS 1-1 & 1-2 & 1-3 & 1-4 & 1.1 & 1.2 & 4.4 & SAS B)

Drainage Area	Area (Acres)	Population	Average Flow (MGD)	Peak Flow (MGD)	Design Flow (MGD)
Residential	580.78	11236	0.84	2.66	3.19
Senior Community	0.00	0	0.00		
Multi-Family	67.83	3065	0.23		
Commercial	251.11	N/A	0.31	0.41	0.49
TOTAL	900	14301	1.38	3.07	3.68

SAS 1-6 (includes flow from SAS 1-1 & 1-2 & 1-3 & 1-4 & 1-5 & 1.1 & 1.2 & SAS A & SAS B)

Drainage Area	Area (Acres)	Population	Average Flow (MGD)	Peak Flow (MGD)	Design Flow (MGD)
Residential	1010.96	19558	1.47	4.71	5.65
Senior Community	21.37	171	0.01		
Multi-Family	166.11	7505	0.56		
Commercial	303.76	N/A	0.37	0.49	0.59
TOTAL	1502	27234	2.41	5.20	6.24

Notes
1. See Assumptions sheet for values used in calculations.

Area Calc			
Name	Type	Area (ft)	Area (ac)
Community Center	Commercial	256586	5.89
Employment Center	Commercial	0	0.00
Village Centers	Commercial	0	0.00
Urban Center	Commercial	0	0.00
Interchange	Commercial	0	0.00
MdS Blvd	Multi-Family	10810	0.25
Residential	Single Family	202910	4.66
Senior Community	Senior Community	0	0.00
UNM 440	UNM	0	0.00
UNM 40	UNM	0	0.00
TOTAL			10.80

Area Calc			
Name	Type	Area (ft)	Area (ac)
Community Center	Commercial	108092	2.48
Employment Center	Commercial	240403	5.52
Village Centers	Commercial	0	0.00
Urban Center	Commercial	0	0.00
Interchange	Commercial	0	0.00
MdS Blvd	Multi-Family	0	0.00
Residential	Single Family	182933	4.20
Senior Community	Senior Community	0	0.00
UNM 440	UNM	0	0.00
UNM 40	UNM	0	0.00
TOTAL			12.20

Area Calc			
Name	Type	Area (ft)	Area (ac)
Community Center	Commercial	0	0
Employment Center	Commercial	9360173	214.88
Village Centers	Commercial	0	0
Urban Center	Commercial	0	0
Interchange	Commercial	0	0
MdS Blvd	Multi-Family	0	0
Residential	Single Family	1168279	26.82
Senior Community	Senior Community	0	0
UNM 440	UNM	0	0
UNM 40	UNM	0	0
TOTAL			241.70

Area Calc			
Name	Type	Area (ft)	Area (ac)
Community Center	Commercial	0	0.00
Employment Center	Commercial	1442538	33.12
Village Centers	Commercial	0	0.00
Urban Center	Commercial	0	0.00
Interchange	Commercial	0	0.00
MdS Blvd	Multi-Family	0	0.00
Residential	Single Family	14210	0.33
Senior Community	Senior Community	0	0.00
UNM 440	UNM	0	0.00
UNM 40	UNM	0	0.00
TOTAL			33.44



Drainage Area for SAS 3
Gravity line to main pump station in southeast quadrant of mesa area.

SAS 3-1 (includes flows from SAS 2 & SAS C)					
Drainage Area	Area (acres)	Population	Average Flow (MGD) ¹	Peak Flow (MGD) ¹	Design Flow (MGD) ¹
Residential	2401.77	46464	3.48	8.22	9.86
Senior Community	503.21	4026	0.30		
Multi-Family	10.66	482	0.04		
Commercial	1959.32	NA	2.41	3.18	3.81
TOTAL	4875	50971	6.23	11.39	13.67

Notes
1. See Assumptions sheet for values used in calculations.

Drainage Area for SAS_4
Gravity line along northwest quadrant.

SAS 4.1					
Drainage Area	Area (acres)	Population	Average Flow (MGD) ¹	Peak Flow (MGD) ¹	Design Flow (MGD) ¹
Residential	0.00	0	0.00	0.00	0.00
Senior Community	0.00	0	0.00		
Multi-Family	0.00	0	0.00		
Commercial	111.23	NA	0.14	0.18	0.22
TOTAL	111	0	0.14	0.18	0.22

SAS 4.2					
Drainage Area	Area (acres)	Population	Average Flow (MGD) ¹	Peak Flow (MGD) ¹	Design Flow (MGD) ¹
Residential	0.00	0	0.00	0.00	0.00
Senior Community	0.00	0	0.00		
Multi-Family	0.00	0	0.00		
Commercial	142.60	NA	0.18	0.23	0.28
TOTAL	143	0	0.18	0.23	0.28

Area Calc			
Name	Type	Area (ft)	Area (ac)
Community Center	Commercial	0	0.00
Employment Center	Commercial	0	0.00
Village Centers	Commercial	628758	14.43
Urban Center	Commercial	0	0.00
Interchange	Commercial	0	0.00
MdS Blvd	Multi-Family	0	0.00
Residential	Single Family	30452766	699.10
Senior Community	Senior Community	0	0.00
UNM 440	UNM	0	0.00
UNM 40	UNM	0	0.00
TOTAL			713.53

Area Calc			
Name	Type	Area (ft)	Area (ac)
Community Center	Commercial	0	0.00
Employment Center	Commercial	4845146	111.23
Village Centers	Commercial	0	0.00
Urban Center	Commercial	0	0.00
Interchange	Commercial	0	0.00
MdS Blvd	Multi-Family	0	0.00
Residential	Single Family	0	0.00
Senior Community	Senior Community	0	0.00
UNM 440	UNM	0	0.00
UNM 40	UNM	0	0.00
TOTAL			111.23

Area Calc			
Name	Type	Area (ft)	Area (ac)
Community Center	Commercial	0	0.00
Employment Center	Commercial	5682791	130.46
Village Centers	Commercial	0	0.00
Urban Center	Commercial	0	0.00
Interchange	Commercial	0	0.00
MdS Blvd	Multi-Family	0	0.00
Residential	Single Family	0	0.00
Senior Community	Senior Community	0	0.00
UNM 440	UNM	528843	12.14
UNM 40	UNM	0	0.00
TOTAL			142.60

SAS 4.3-1					
Drainage Area	Area (Acres)	Population	Average Flow (MGD)	Peak Flow (MGD)	Design Flow (MGD)
Residential	0.00	0	0.00	0.00	0.00
Senior Community	0.00	0	0.00		
Multi-Family	0.00	0	0.00		
Commercial	130.50	N/A	0.16	0.21	0.25
TOTAL	131	0	0.16	0.21	0.25

SAS 4.3-2 (includes flow from 4.3-1)					
Drainage Area	Area (Acres)	Population	Average Flow (MGD)	Peak Flow (MGD)	Design Flow (MGD)
Residential	0.00	0	0.00	0.00	0.00
Senior Community	0.00	0	0.00		
Multi-Family	0.00	0	0.00		
Commercial	141.35	N/A	0.17	0.23	0.27
TOTAL	141	0	0.17	0.23	0.27

SAS 4.3-3 (includes flow from 4.3.1, 4.3.2 & 4.5)					
Drainage Area	Area (Acres)	Population	Average Flow (MGD)	Peak Flow (MGD)	Design Flow (MGD)
Residential	0.00	0	0.00	0.00	0.00
Senior Community	0.00	0	0.00		
Multi-Family	0.00	0	0.00		
Commercial	373.30	N/A	0.46	0.61	0.73
TOTAL	373	0	0.46	0.61	0.73

SAS 4.4					
Drainage Area	Area (acres)	Population	Average Flow (MGD) ¹	Peak Flow (MGD) ¹	Design Flow (MGD) ¹
Residential	0.00	0	0.00	0.00	0.00
Senior Community	0.00	0	0.00		
Multi-Family	0.00	0	0.00		
Commercial	124.64	NA	0.15	0.20	0.24
TOTAL	125	0	0.15	0.20	0.24

Area Calc			
Name	Type	Area (ft)	Area (ac)
Community Center	Commercial	0	0.00
Employment Center	Commercial	5684580	130.50
Village Centers	Commercial	0	0.00
Urban Center	Commercial	0	0.00
Interchange	Commercial	0	0.00
MdS Blvd	Multi-Family	0	0.00
Residential	Single Family	0	0.00
Senior Community	Senior Community	0	0.00
UNM 440	UNM	0	0.00
UNM 40	UNM	0	0.00
TOTAL			130.50

Area Calc			
Name	Type	Area (ft)	Area (ac)
Community Center	Commercial	0	0
Employment Center	Commercial	472626	10.85
Village Centers	Commercial	0	0
Urban Center	Commercial	0	0
Interchange	Commercial	0	0
MdS Blvd	Multi-Family	0	0
Residential	Single Family	0	0
Senior Community	Senior Community	0	0
UNM 440	UNM	0	0
UNM 40	UNM	0	0
TOTAL			10.85

Area Calc			
Name	Type	Area (ft)	Area (ac)
Community Center	Commercial	0	0.00
Employment Center	Commercial	945252	21.70
Village Centers	Commercial	0	0.00
Urban Center	Commercial	0	0.00
Interchange	Commercial	0	0.00
MdS Blvd	Multi-Family	0	0.00
Residential	Single Family	0	0.00
Senior Community	Senior Community	0	0.00
UNM 440	UNM	0	0.00
UNM 40	UNM	0	0.00
TOTAL			21.70

Area Calc			
Name	Type	Area (ft)	Area (ac)
Community Center	Commercial	400945	9.20
Employment Center	Commercial	5028467	115.44
Village Centers	Commercial	0	0.00
Urban Center	Commercial	0	0.00
Interchange	Commercial	0	0.00
MdS Blvd	Multi-Family	0	0.00
Residential	Single Family	0	0.00
Senior Community	Senior Community	0	0.00
UNM 440	UNM	0	0.00
UNM 40	UNM	0	0.00
TOTAL			124.64

SAS 4.5

Drainage Area	Area (acres)	Population	Average Flow (MGD) ¹	Peak Flow (MGD) ¹	Design Flow (MGD) ¹
Residential	0.00	0	0.00	0.00	0.00
Senior Community	0.00	0	0.00		
Multi-Family	0.00	0	0.00		
Commercial	210.24	NA	0.26	0.34	0.41
TOTAL	210	0	0.26	0.34	0.41

Area Calc			
Name	Type	Area (ft)	Area (ac)
Community Center	Commercial	0	0.00
Employment Center	Commercial	9158197	210.24
Village Centers	Commercial	0	0.00
Urban Center	Commercial	0	0.00
Interchange	Commercial	0	0.00
MdS Blvd	Multi-Family	0	0.00
Residential	Single Family	0	0.00
Senior Community	Senior Community	0	0.00
UNM 440	UNM	0	0.00
UNM 40	UNM	0	0.00
TOTAL			210.24

SAS 4-3 (includes flow from 4-1, 4-2 & 4.1 & 4.2)

Drainage Area	Area (acres)	Population	Average Flow (MGD) ¹	Peak Flow (MGD) ¹	Design Flow (MGD) ¹
Residential	0.00	0	0.00	0.00	0.00
Senior Community	0.00	0	0.00		
Multi-Family	0.00	0	0.00		
Commercial	675.24	NA	0.83	1.09	1.31
TOTAL	675	0	0.83	1.09	1.31

Area Calc			
Name	Type	Area (ft)	Area (ac)
Community Center	Commercial	0	0.00
Employment Center	Commercial	2551908	58.58
Village Centers	Commercial	0	0.00
Urban Center	Commercial	0	0.00
Interchange	Commercial	0	0.00
MdS Blvd	Multi-Family	0	0.00
Residential	Single Family	0	0.00
Senior Community	Senior Community	0	0.00
UNM 440	UNM	6292070	144.45
UNM 40	UNM	0	0.00
TOTAL			203.03

~~SAS 4.6~~

Drainage Area	Area (acres)	Population	Average Flow (MGD) ¹	Peak Flow (MGD) ¹	Design Flow (MGD) ¹
Residential	0.00	0	0.00	0.00	0.00
Senior Community	0.00	0	0.00		
Multi-Family	0.00	0	0.00		
Commercial	102.06	NA	0.13	0.17	0.20
TOTAL	102	0	0.13	0.17	0.20

Area Calc			
Name	Type	Area (ft)	Area (ac)
Community Center	Commercial	0	0.00
Employment Center	Commercial	4445745	102.06
Village Centers	Commercial	0	0.00
Urban Center	Commercial	0	0.00
Interchange	Commercial	0	0.00
MdS Blvd	Multi-Family	0	0.00
Residential	Single Family	0	0.00
Senior Community	Senior Community	0	0.00
UNM 440	UNM	0	0.00
UNM 40	UNM	0	0.00
TOTAL			102.06

SAS 4-4 (includes flow from 4-1, 4-2, 4-3 & 4.1, 4.2+ 4.3(incl 4.3-1, 4.3-2, 4.3-3, 4.5))

Drainage Area	Area (Acres)	Population	Average Flow (MGD)	Peak Flow (MGD)	Design Flow (MGD)
Residential	0.00	0	0.00	0.00	0.00
Senior Community	0.00	0	0.00		
Multi-Family	0.00	0	0.00		
Commercial	1158.67	N/A	1.43	1.88	2.25
TOTAL	1159	0	1.43	1.88	2.25

Area Calc			
Name	Type	Area (ft)	Area (ac)
Community Center	Commercial	0	0.00
Employment Center	Commercial	1037067	23.81
Village Centers	Commercial	0	0.00
Urban Center	Commercial	0	0.00
Interchange	Commercial	0	0.00
MdS Blvd	Multi-Family	0	0.00
Residential	Single Family	0	0.00
Senior Community	Senior Community	0	0.00
UNM 440	UNM	3760219	86.32
UNM 40	UNM	0	0.00
TOTAL			110.13

SAS 4-1

Drainage Area	Area (acres)	Population	Average Flow (MGD) ¹	Peak Flow (MGD) ¹	Design Flow (MGD) ¹
Residential	0.00	0	0.00	0.00	0.00
Senior Community	0.00	0	0.00		
Multi-Family	0.00	0	0.00		
Commercial	193.20	NA	0.24	0.31	0.38
TOTAL	193	0	0.24	0.31	0.38

Area Calc			
Name	Type	Area (ft)	Area (ac)
Community Center	Commercial	0	0.00
Employment Center	Commercial	8415759	193.20
Village Centers	Commercial	0	0.00
Urban Center	Commercial	0	0.00
Interchange	Commercial	0	0.00
MdS Blvd	Multi-Family	0	0.00
Residential	Single Family	0	0.00
Senior Community	Senior Community	0	0.00
UNM 440	UNM	0	0.00
UNM 40	UNM	0	0.00
TOTAL			193.20

SAS 4-5 (includes flow from 4-1, 4-2, 4-3, 4-4 & 4.1, 4.2+ 4.3(incl 4.3-1, 4.3-2, 4.3-3, 4.5))

Drainage Area	Area (Acres)	Population	Average Flow (MGD)	Peak Flow (MGD)	Design Flow (MGD)
Residential	0.00	0	0.00	0.00	0.00
Senior Community	0.00	0	0.00		
Multi-Family	0.00	0	0.00		
Commercial	1190.95	N/A	1.46	1.93	2.32
TOTAL	1191	0	1.46	1.93	2.32

Area Calc			
Name	Type	Area (ft)	Area (ac)
Community Center	Commercial	64600	1.48
Employment Center	Commercial	276266	6.34
Village Centers	Commercial	0	0.00
Urban Center	Commercial	0	0.00
Interchange	Commercial	0	0.00
MdS Blvd	Multi-Family	0	0.00
Residential	Single Family	0	0.00
Senior Community	Senior Community	0	0.00
UNM 440	UNM	1065127	24.45
UNM 40	UNM	0	0.00
TOTAL			32.28

SAS 4-2 (includes flow from 4-1 & 4.1)

Drainage Area	Area (acres)	Population	Average Flow (MGD) ¹	Peak Flow (MGD) ¹	Design Flow (MGD) ¹
Residential	0.00	0	0.00	0.00	0.00
Senior Community	0.00	0	0.00		
Multi-Family	0.00	0	0.00		
Commercial	329.61	NA	0.41	0.53	0.64
TOTAL	330	0	0.41	0.53	0.64

Area Calc			
Name	Type	Area (ft)	Area (ac)
Community Center	Commercial	0	0.00
Employment Center	Commercial	1096999	25.18
Village Centers	Commercial	0	0.00
Urban Center	Commercial	0	0.00
Interchange	Commercial	0	0.00
MdS Blvd	Multi-Family	0	0.00
Residential	Single Family	0	0.00
Senior Community	Senior Community	0	0.00
UNM 440	UNM	0	0.00
UNM 40	UNM	0	0.00
TOTAL			25.18

SAS 4-6 (includes flow from 4-1, 4-2, 4-3, 4-4, 4-5 & 4.1, 4.2+ 4.3(incl 4.3-1, 4.3-2, 4.3-3, 4.5))

Drainage Area	Area (Acres)	Population	Average Flow (MGD)	Peak Flow (MGD)	Design Flow (MGD)
Residential	0.00	0	0.00	0.00	0.00
Senior Community	0.00	0	0.00		
Multi-Family	0.00	0	0.00		
Commercial	1214.18	N/A	1.49	1.97	2.36
TOTAL	1214	0	1.49	1.97	2.36

Area Calc			
Name	Type	Area (ft)	Area (ac)
Community Center	Commercial	832422	19.11
Employment Center	Commercial	0	0.00
Village Centers	Commercial	0	0.00
Urban Center	Commercial	0	0.00
Interchange	Commercial	0	0.00
MdS Blvd	Multi-Family	0	0.00
Residential	Single Family	0	0.00
Senior Community	Senior Community	0	0.00
UNM 440	UNM	179457	4.12
UNM 40	UNM	0	0.00
TOTAL			23.23

Notes

1. See Assumptions sheet for values used in calculations.



Drainage Area for SAS Un
Existing gravity line in University Blvd downstream of SAS 1

SAS Un.1					
Drainage Area	Area (acres)	Population	Average Flow (MGD) ¹	Peak Flow (MGD) ¹	Design Flow (MGD) ¹
Residential	0.00	0	0.00	0.00	0.00
Senior Community	0.00	0	0.00		
Multi-Family	0.00	0	0.00		
Commercial	71.23	NA	0.09	0.12	0.14
TOTAL	71	0	0.09	0.12	0.14

Area Calc			
Name	Type	Area (ft)	Area (ac)
Community Center	Commercial	0	0.00
Employment Center	Commercial	3102734	71.23
Village Centers	Commercial	0	0.00
Urban Center	Commercial	0	0.00
Interchange	Commercial	0	0.00
MdS Blvd	Multi-Family	0	0.00
Residential	Single Family	0	0.00
Senior Community	Senior Community	0	0.00
UNM 440	UNM	0	0.00
UNM 40	UNM	0	0.00
TOTAL			71.23

Drainage Area for SAS_West Force Main
Force main west to proposed City of Albuquerque pump station.

SAS_West Force Main (includes the flow from SAS_6, SAS_7, SAS_8, & SAS_F, & SAS_G)					
Drainage Area	Area (acres)	Population	Average Flow (MGD) ¹	Peak Flow (MGD) ¹	Design Flow (MGD) ¹
Residential	254.07	4915	0.37	1.03	1.24
Senior Community	0.00	0	0.00		
Multi-Family	0.00	0	0.00		
Commercial	141.28	NA	0.17	0.23	0.27
TOTAL	395	4915	0.54	1.26	1.51

Area Calc			
Name	Type	Area (ft)	Area (ac)
Community Center	Commercial	0	0.00
Employment Center	Commercial	0	0.00
Village Centers	Commercial	0	0.00
Urban Center	Commercial	0	0.00
Interchange	Commercial	0	0.00
MdS Blvd	Multi-Family	0	0.00
Residential	Single Family	0	0.00
Senior Community	Senior Community	0	0.00
UNM 440	UNM	0	0.00
UNM 40	UNM	0	0.00
TOTAL			0.00

SAS UN.2 (includes flow from SAS UN.2A)

Drainage Area	Area (Acres)	Population	Average Flow (MGD)	Peak Flow (MGD)	Design Flow (MGD)
Residential	0.00	0	0.00	0.00	0.00
Senior Community	0.00	0	0.00		
Multi-Family	0.00	0	0.00		
Commercial	282.96	N/A	0.35	0.46	0.55
TOTAL	283	0	0.35	0.46	0.55

Area Calc			
Name	Type	Area (ft)	Area (ac)
Community Center	Commercial	0	0
Employment Center	Commercial	9169380	210.50
Village Centers	Commercial	0	0
Urban Center	Commercial	0	0
Interchange	Commercial	0	0
MdS Blvd	Multi-Family	0	0
Residential	Single Family	0	0.00
Senior Community	Senior Community	0	0
UNM 440	UNM	0	0
UNM 40	UNM	0	0
TOTAL			210.50

Flows for SAS_A and SAS_1 with West Force Main Flows

SAS_A with flow from Force Main

Drainage Area	Area (acres)	Population	Average Flow (MGD) ¹	Peak Flow (MGD) ¹	Design Flow (MGD) ¹
Residential	329.88	6382	0.48	1.59	1.91
Senior Community	0.00	0	0.00		
Multi-Family	36.16	1634	0.12		
Commercial	141.28	NA	0.17	0.23	0.27
TOTAL	507	8015	0.77	1.82	2.18

SAS UN-1 (includes flow from SAS Un.1 & SAS 1)

Drainage Area	Area (Acres)	Population	Average Flow (MGD)	Peak Flow (MGD)	Design Flow (MGD)
Residential	1010.96	19558	1.47	4.71	5.65
Senior Community	21.37	171	0.01		
Multi-Family	166.11	7505	0.56		
Commercial	380.00	N/A	0.47	0.62	0.74
TOTAL	1578	27234	2.51	5.33	6.39

Area Calc			
Name	Type	Area (ft)	Area (ac)
Community Center	Commercial	0	0.00
Employment Center	Commercial	243611	5.59
Village Centers	Commercial	0	0.00
Urban Center	Commercial	0	0.00
Interchange	Commercial	0	0.00
MdS Blvd	Multi-Family	0	0.00
Residential	Single Family	0	0.00
Senior Community	Senior Community	0	0.00
UNM 440	UNM	0	0.00
UNM 40	UNM	0	0.00
TOTAL			5.59

SAS_1_1 (includes flow from SAS_A and Force Main)

Drainage Area	Area (acres)	Population	Average Flow (MGD) ¹	Peak Flow (MGD) ¹	Design Flow (MGD) ¹
Residential	274.30	5306	0.40	1.10	1.32
Senior Community	0.00	0	0.00		
Multi-Family	0.00	0	0.00		
Commercial	141.28	NA	0.17	0.23	0.27
TOTAL	416	5306	0.57	1.33	1.60

SAS_1_2 (includes flow from SAS_1_1 & SAS_A & Force Main)

Drainage Area	Area (acres)	Population	Average Flow (MGD) ¹	Peak Flow (MGD) ¹	Design Flow (MGD) ¹
Residential	752.86	14565	1.09	3.46	4.16
Senior Community	0.00	0	0.00		
Multi-Family	103.74	4687	0.35		
Commercial	164.25	NA	0.20	0.27	0.32
TOTAL	1021	19252	1.65	3.73	4.48

SAS UN-2 (includes flow from SAS Un-1 & Un.1 & Un.2 & Un.2A & SAS 1)

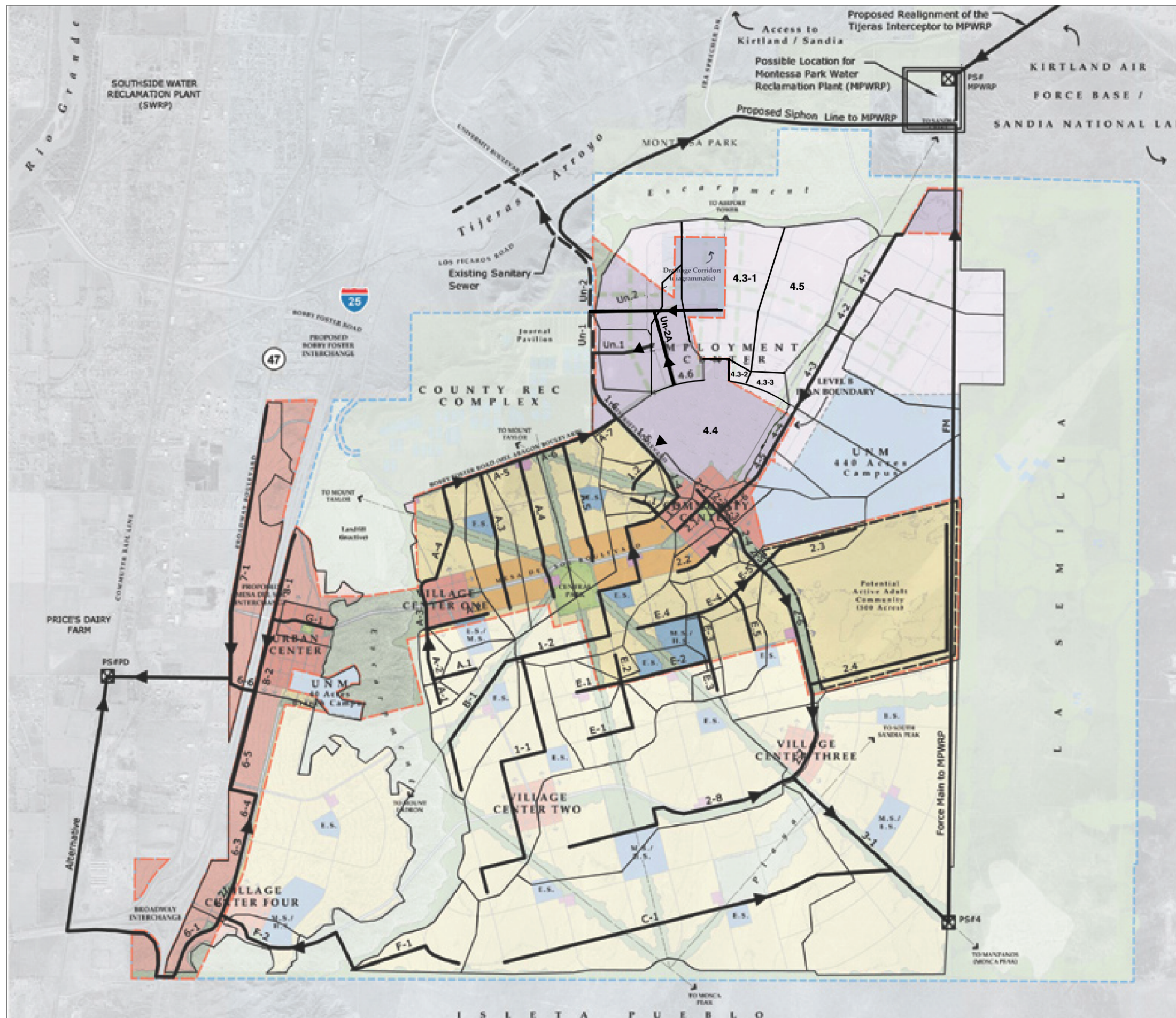
Drainage Area	Area	Population	Average Flow	Peak Flow	Design Flow
Residential	1010.96	19558	1.47	4.71	5.65
Senior Community	21.37	171	0.01		
Multi-Family	166.11	7505	0.56		
Commercial	663.51	N/A	0.82	1.08	1.29
TOTAL	1862	27234	2.86	5.79	6.94

SAS UN.2A

Drainage Area	Area (Acres)	Population	Average Flow (MGD)	Peak Flow (MGD)	Design Flow (MGD)
Residential	0.00	0	0.00	0.00	0.00
Senior Community	0.00	0	0.00		
Multi-Family	0.00	0	0.00		
Commercial	72.46	N/A	0.09	0.12	0.14
TOTAL	72	0	0.09	0.12	0.14

Area Calc			
Name	Type	Area (ft)	Area (ac)
Community Center	Commercial	0	0
Employment Center	Commercial	3156320	72.46
Village Centers	Commercial	0	0
Urban Center	Commercial	0	0
Interchange	Commercial	0	0
MdS Blvd	Multi-Family	0	0
Residential	Single Family	0	0.00
Senior Community	Senior Community	0	0
UNM 440	UNM	0	0
UNM 40	UNM	0	0
TOTAL			72.46

Notes
1. See Assumptions sheet for values used in calculations.



SANITARY SEWER MASTER PLAN INCLUDING LEVEL A AREA

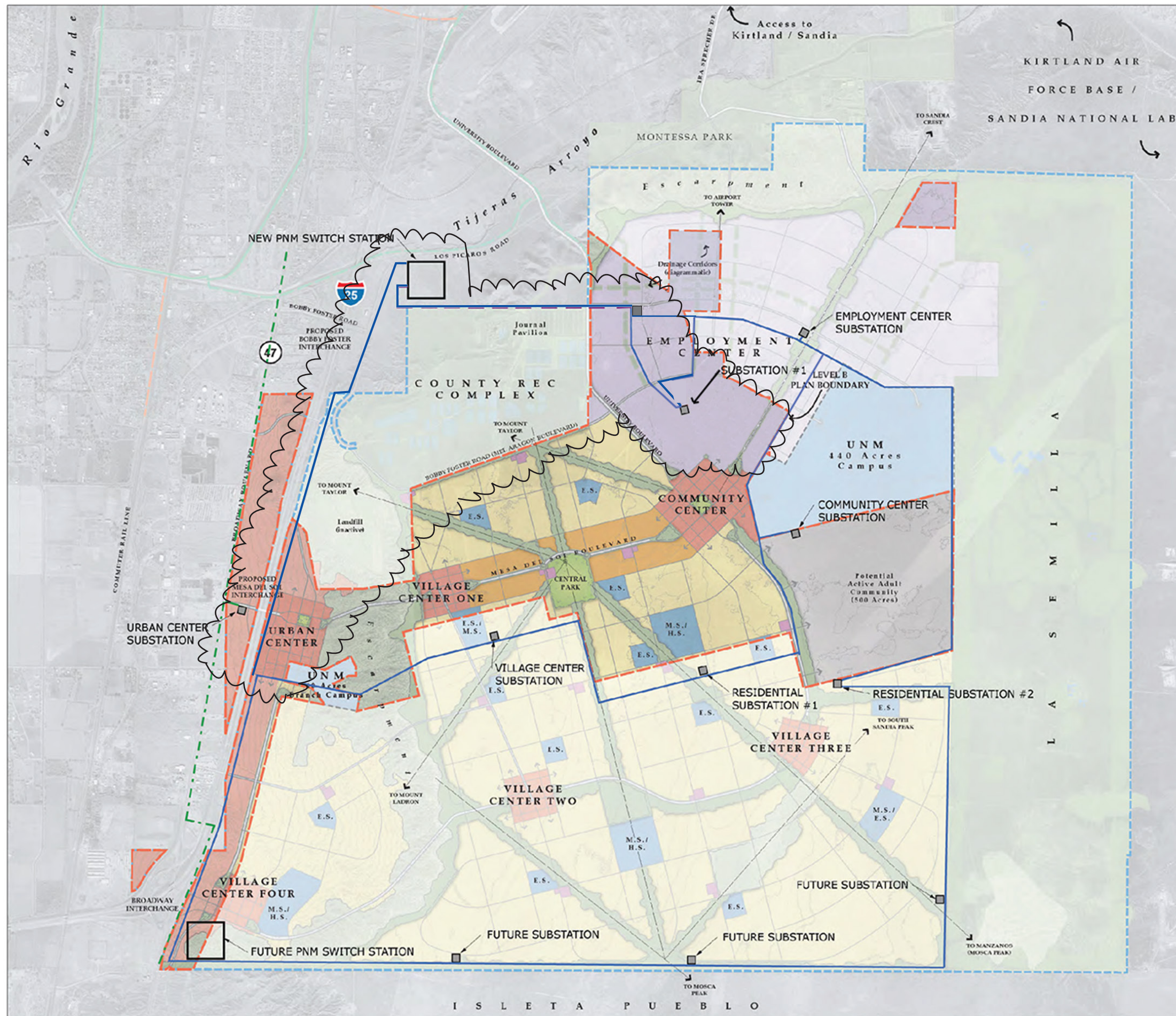
Figure 5B-5

Revised August 2021 - modifications to utility infrastructure within southern area of Employment Center.

Legend

- A-1** Sewer Line (Trunk Line) and Identifier
- A.1** Sewer Line (Level B Collector) and Identifier
- FM** Force Main
- PS#1** Pump Station and Identifier
- Basin Boundaries**





TRANSMISSION LINE ROUTING

Figure 5C-1

Revised September 2012 - addition of Tract D and removal of Tract 8 from plan area.
 Revised August 2021 - modifications to utility corridors within southern area of Employment Center. Updated Transmission Line Routing to show relocated Substation #1 and transmission line through project area."

Legend

- Mixed Use Centers
- Neighborhood Centers (diagrammatic placement)
- Commercial
- Schools and UNM Land
- Office / R&D
- Corridor Residential
- Residential
- Large Parks
- Trunk Open Space Network
- Steep Slopes and Playas

- Overhead Transmission Line
- Existing Transmission Line

