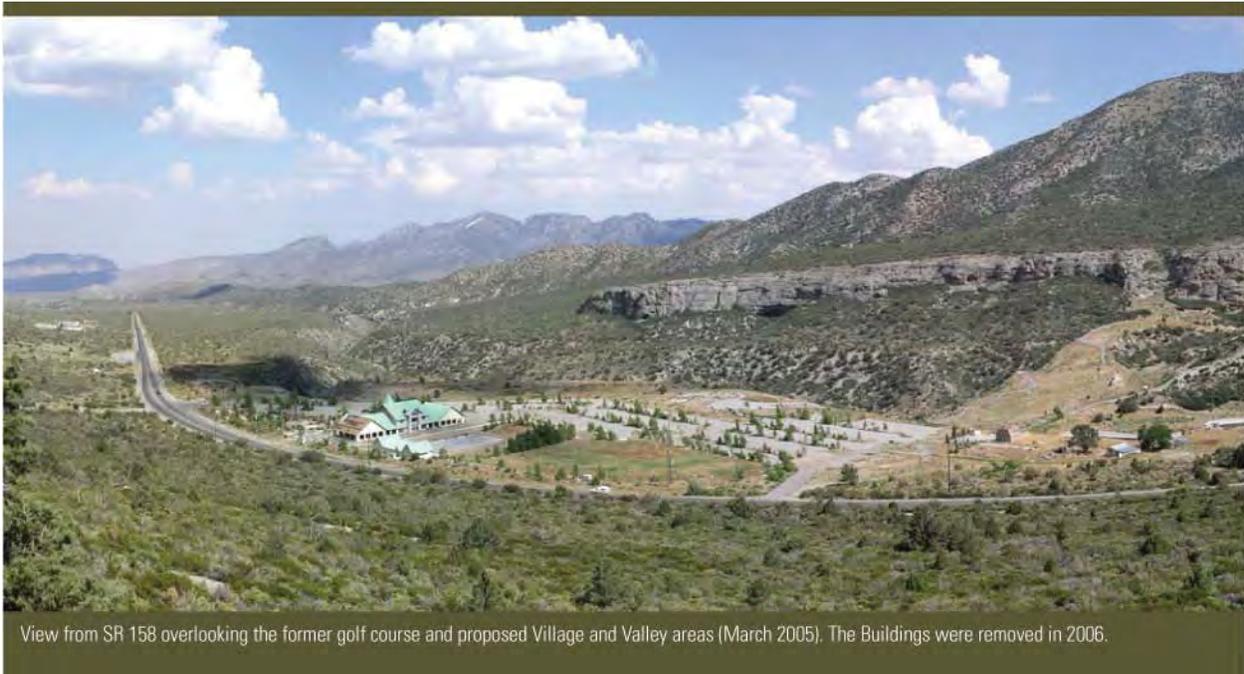


Chapter 2

Alternatives, Including the Proposed Action



View from SR 158 overlooking the former golf course and proposed Village and Valley areas (March 2005). The Buildings were removed in 2006.

2.1 Introduction

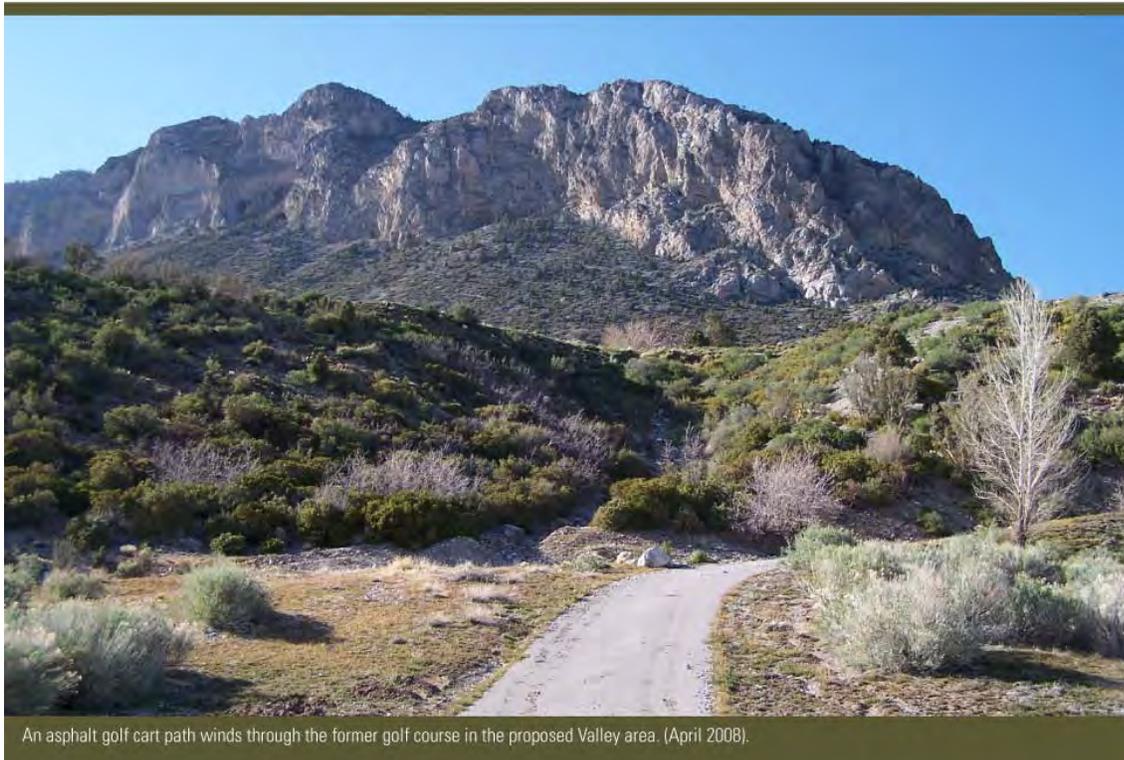
This chapter describes the Proposed Action and alternatives considered for the Middle Kyle Complex project. The alternatives are also presented in comparative form to identify the differences between each alternative and provide a clear basis for comparison of alternative components by the decision-maker and the public.

2.2 Alternatives Considered in Detail

The Council on Environmental Quality (CEQ) regulations direct that Environmental Impact Statements (EISs) evaluate a reasonable range of alternatives including a No Action Alternative (40 CFR 1502. 14[c and d]). This

section describes in detail Alternative 1 (No Action Alternative), Alternative 2 (Proposed Action), and Alternative 3 (Market Supported Alternative).

In 2006, the U.S. Department of Agriculture Forest Service (Forest Service) engaged PricewaterhouseCoopers (PwC) to study the market demand and financial issues related to the development of recreation and visitor facilities proposed in the *Middle Kyle Canyon Framework Plan* (Framework Plan) and a master plan developed for the west side of the Spring Mountain National Recreation Area (SMNRA). This plan, the *Spring Mountains National Recreation Area Market, Financial and Operational Analysis* (Business Plan) was initiated to evaluate the scope, scale, and location of the proposed development in a manner that would be consistent with market demand and support the long-term operation and maintenance of the new facilities. An additional purpose of the analysis was to prepare a financial plan for the operation and maintenance of the new visitor center and recreation facilities included in the Proposed Action. Completion of the financial plan for operations and maintenance is required to obtain a waiver from the Forest Service's national headquarters in Washington D.C. due to the current Forest Service moratorium on construction of new visitor centers. While the Business Plan also evaluated development on the west side of the SMNRA, recommendations included in the Business Plan for this area are not discussed in this EIS.



An asphalt golf cart path winds through the former golf course in the proposed Valley area. (April 2008).

In addition to the Business Plan analysis, conceptual site planning and engineering and mapping studies were completed and included the following:

- *Spring Mountains National Recreation Area Built Environment Image Guide* (Shapins Associates and AJC Architects 2007). This study provides

sustainable design and architectural and site design guidelines for the SMNRA and the Middle Kyle Complex project.

- *Utility Feasibility Studies for Middle Kyle Canyon Development* (AJC Architects et al. 2007). This study analyzed existing and proposed utility infrastructure systems (water, wastewater, electric utilities, telecommunications, solid waste, and alternative energy).
- *Middle Kyle Complex Development: Geotechnical, Materials and Related Studies* (Case, Lowe & Hart 2007). This study analyzed major drainage crossings, garage parking structure, hydraulic and hydrologic data, flood plain mapping, geologic hazard assessment, and geotechnical investigations in the Middle Kyle Complex project area.
- *The Middle Kyle Canyon Development Traffic Study* (PBS&J 2007). This study was prepared to address traffic impacts that may occur as a result of increased traffic. The study analyzed traffic conditions, the existing and proposed roadway network, forecasted and distributed future traffic volumes. The study also estimated the effect of additional traffic generated by the Middle Kyle Complex project and provided recommendations to improve safety and facilitate traffic movement along State Route (SR) 157.
- *Middle Kyle Complex Project, Travel Analysis* (Forest Service 2009b). The travel analysis addressed transportation planning and travel management in the Middle Kyle Complex area, including existing National Forest System (NFS) roads and trails and user-created roads and trails. The travel analysis provides recommendations for improvement, closure, or change in designated use or restrictions on NFS and user-created roads and trails. This document informed the EIS decision-making process. The draft travel analysis plan was circulated with the September 2009 Draft Environmental Impact Statement (DEIS) to accommodate public review and comment. The final travel analysis plan is posted on the Humboldt-Toiyabe National Forest Web site.
- *Middle Kyle Canyon Transportation Options Report* (Jacobs Carter & Burgess 2007). This study was prepared to investigate financial considerations of various transit model alternatives for shuttle bus service in upper Kyle, Deer Creek, and Lee Canyons originating from the Middle Kyle Complex. The report also explored options for on-street bicycle lanes on SR 156, 157, and 158.

Information and findings in these studies and scoping comments were used to refine the infrastructure components of the Proposed Action and to develop the Market Supported Alternative.

Design criteria common to the Proposed Action and Market Supported Alternative are presented in Section 2.3.1.

2.2.1 Alternative 1 – No Action Alternative

The No Action Alternative represents the existing conditions in the project area and is the baseline for comparing impacts and opportunities associated with the Proposed Action and the Market Supported Alternative. Existing conditions are

described in Section 1.3, *Purpose and Need for Action*. Following is a summary of the No Action Alternative.

Under the No Action Alternative, current management decisions would continue to guide the following activities and facility operations in the project area:

- Recreation activities such as camping and picnicking (dispersed and developed), hiking, mountain biking, snow play, and equestrian and off-highway vehicle (OHV) use;
- Forest Service facilities such as the shop and warehouse, maintenance yard, fire station, above-ground fuel tanks, living quarters for permanent and seasonal staff, Kyle Canyon Interim Visitor Center, public restrooms and parking, roads and helipad (used for fire response); and
- Forest Service permitted occupancies would remain in their existing locations. Such occupancies include utility corridors, highway easements, a solid waste transfer facility, and the Las Vegas Metropolitan Police Department (Metro) office. Permitted outfitter guide activities in the area would continue.

Using Southern Nevada Public Land Management Act (SNPLMA) funding, the Forest Service purchased a 128-acre privately owned parcel in February 2004. This property, site of a former golf course, is located south of SR 157 would undergo limited restoration to a more natural state including removal of non-native vegetation, debris, and some asphalt under the No Action Alternative. In the event of a fire in the Kyle Canyon area, the asphalt parking area on the property may be used as a fire command post with the human-made ponds and upper storage reservoirs serving as the source of water for fire suppression activities.

Forest Service management presence in the Middle Kyle Complex project area would remain near current levels. Unauthorized activities, such as illegal dumping of trash, vandalism of cultural sites, and creation of unauthorized trails and roads would continue.



Under the No Action Alternative, the Kyle Canyon Interim Visitor Center would continue as the main source of information for visitors. Opportunities to reduce resource impacts in the upper canyon area and to improve environmental information, interpretative facilities, and the visitor experience in the SMNRA would remain the same. Recreation opportunities and facilities would be unchanged. Existing Forest Service administrative facilities would remain in the same location and existing conditions in this area would persist.

Under this alternative, the demand for recreational facilities, environmental interpretation, and information is anticipated to continue to increase as SMNRA visitation increases. Figure 2-1 depicts the existing Forest Service facilities, roads, and designated trails in the project area that would continue to be utilized under the No Action Alternative.

2.2.2 Alternative 2 – Proposed Action

This alternative was originally proposed by the Forest Service in the Notice of Intent (NOI), published in the Federal Register (FR) on February 21, 2006. It was based on Option 1 described in the Framework Plan dated August 2005. The focus of the Framework Plan was to gather information and analyze a range of potential land use options. These options would provide a balance of resource protection, recreation and administrative facility development needs, and opportunities for environmental education. Facilities and activities described in the Framework Plan were based on a projected 1.8 million annual visitors to the SMNRA. The Framework Plan was intended to serve as a master plan for development of the middle Kyle Canyon area over 15 to 20 years.

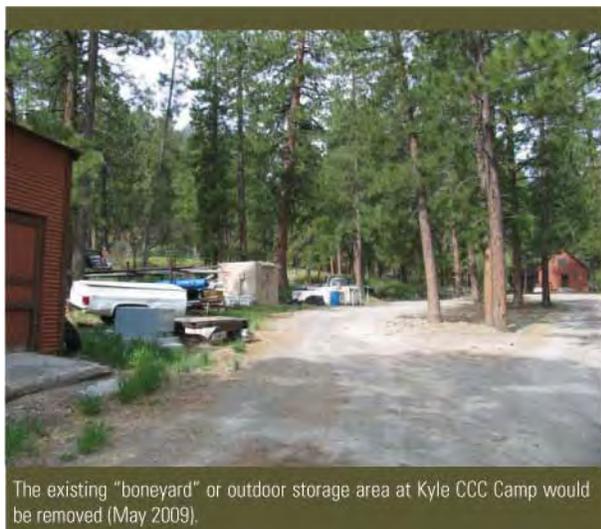
Several recommendations included in the Framework Plan were not carried forward in the Proposed Action because the activities were outside Forest Service regulatory jurisdiction. These activities included a multi-use trail separate from the Middle Kyle Complex project and parallel to SR 157 extending to the intersection with US 95, a sewer main from the project area extending to US 95, and infrastructure associated with shuttle stops and transit system extending outside of the project area.

The Middle Kyle Complex project area, originally represented as 2,500 acres in size, was based on a conceptual rectangular area identified in the Framework Plan. Subsequent revisions put the project area at 4,300 acres, an area that more closely reflects the footprint of the project as shown on Figures 1-2 and 1-3. An additional area of approximately 4,900 acres located outside the project area encompasses those areas that would be closed to dispersed camping under the administrative action proposed by the Forest Service as part of the Middle Kyle Complex project. The areas proposed to be closed to dispersed camping are discussed in the section titled *Other Actions* and are shown on Figure 1-4.

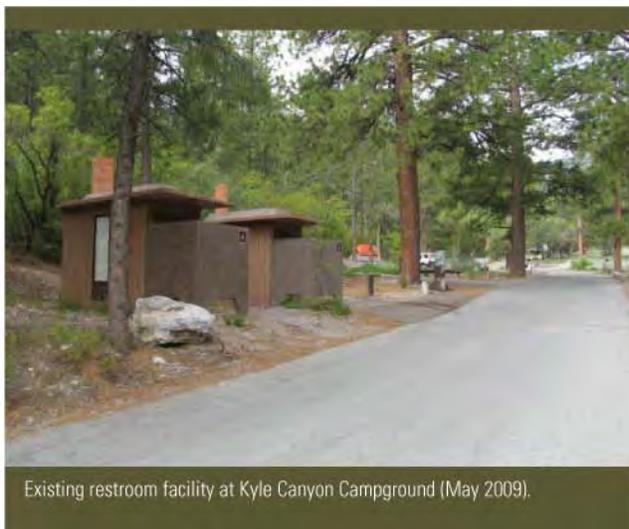
The Proposed Action was described in the NOI published February 2006, in the FR. After release of the NOI, the Forest Service conducted resource surveys and economic feasibility studies to determine potential environmental impacts, and to assess whether the facilities included in the proposed project could economically

support operations and maintenance costs of the Middle Kyle Complex in the long term.

In April 2008, modifications were made to the Proposed Action as it had been described in the published NOI. The authorization for these changes is provided in Forest Service National Environmental Policy Act (NEPA) regulations at 36 CFR 220.5(e)(1). The changes included the addition of a water main replacement and reconstruction of the Kyle Canyon Campground. The water main serves the entire western section of the project area including Fletcher View Campground, Kyle Civilian Conservation Corps (CCC) Camp, and Kyle Canyon Campground. Reconstruction of Kyle Canyon Campground was added to the Proposed Action because several elements of this alternative connect (e.g., trails, utilities) to existing facilities within the campground.



The existing "boneyard" or outdoor storage area at Kyle CCC Camp would be removed (May 2009).

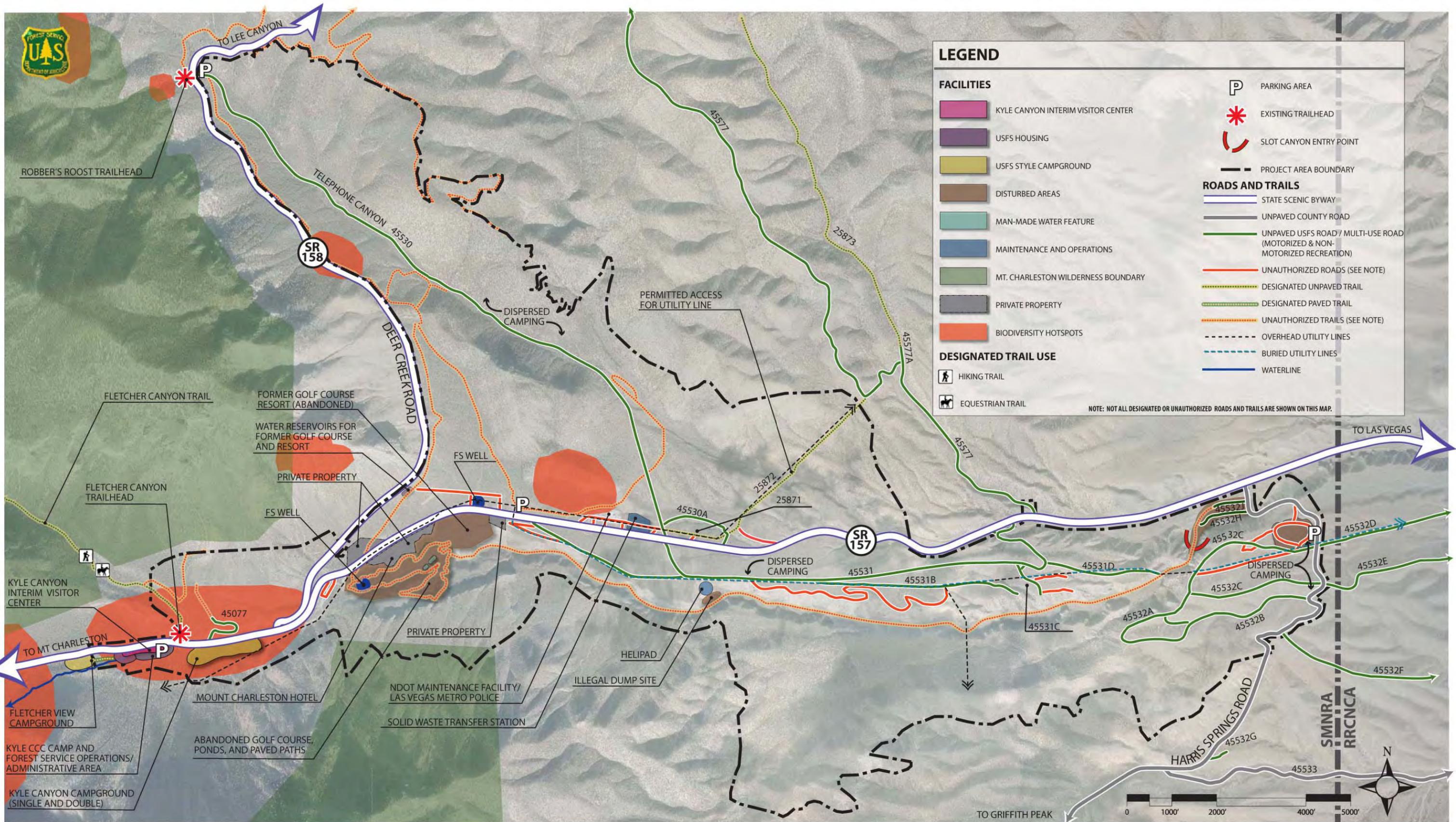


Existing restroom facility at Kyle Canyon Campground (May 2009).

In order to spatially describe the location of proposed facilities and activities identified in this alternative, six general geographic areas are used for the project area: the Western Area, the Village, the Valley, the Main Camping and Picnic Areas, the Northern Area, and the Eastern Area. Figure 1-3 depicts the location of proposed facilities and Table 2-1, which appears later in the chapter, provides a summary comparison of project components and facilities under each alternative. See Appendix B for a one-to-one comparison of project components and facilities under each alternative. The locations of improvements proposed at Kyle CCC Camp and Fletcher Canyon Trailhead are shown on Figure 2-2. Figure 2-3 depicts the proposed reconstruction of Kyle Canyon Campground.

Western Area: The Western Area comprises the existing developed sites, including Fletcher View Campground, the Kyle CCC Camp and Interim Visitor Center, Fletcher Canyon Trailhead and Kyle Canyon Campground.

The existing drainage culvert in Kyle wash at the entrance to the Fletcher View Campground would be replaced and upgraded to meet current Forest Service standards. The water main would be replaced from the Rainbow Subdivision to Kyle CCC Camp serving the entire western section of the project area including Fletcher View Campground, Kyle CCC Camp, and Kyle Canyon Campground.



MIDDLE KYLE COMPLEX

USDA FOREST SERVICE • SPRING MOUNTAINS NATIONAL RECREATION AREA

FIGURE 2 - 1: EXISTING CONDITIONS



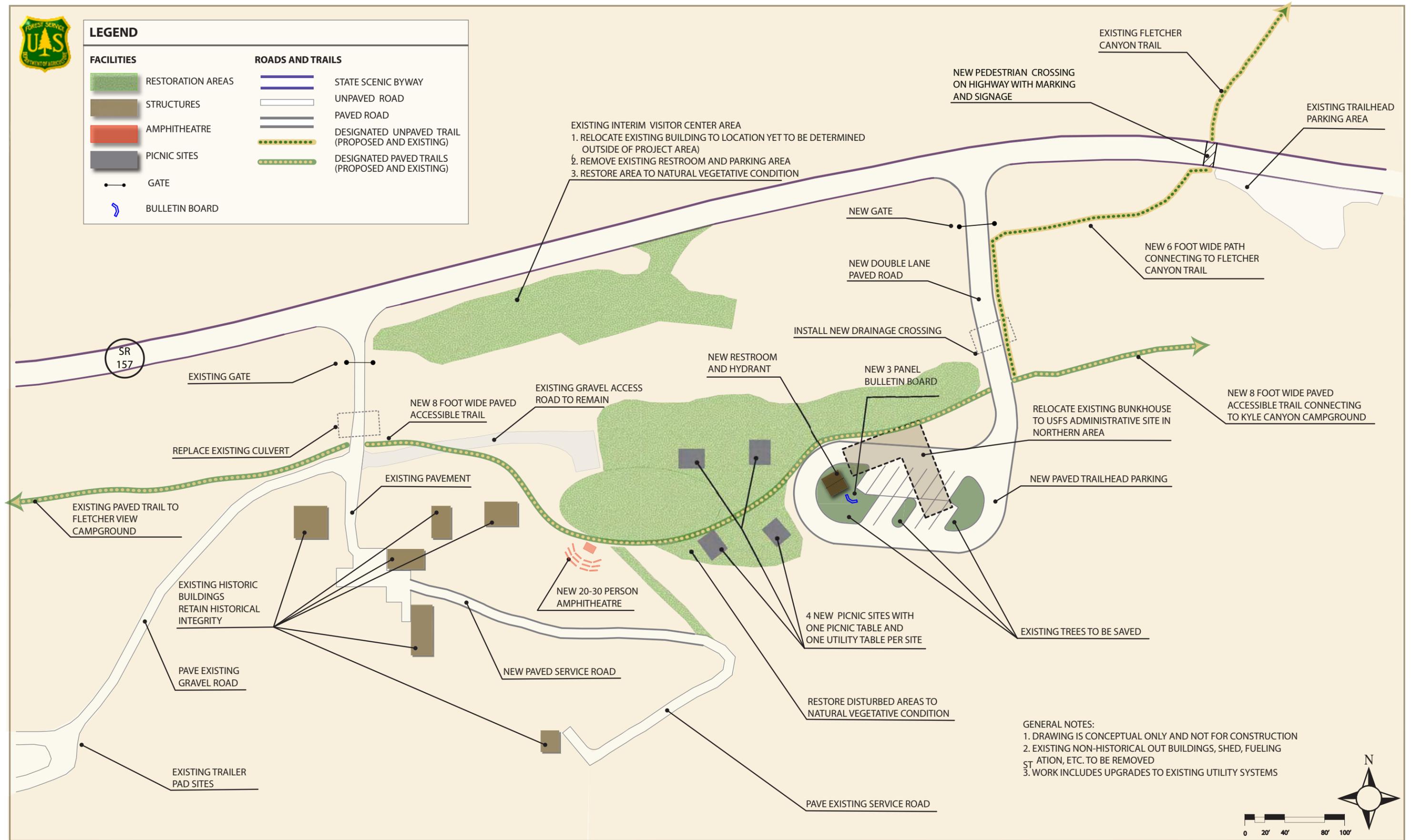
LEGEND

FACILITIES

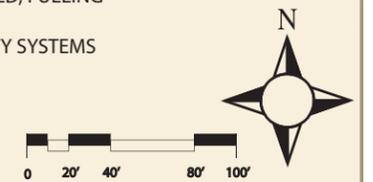
- RESTORATION AREAS
- STRUCTURES
- AMPHITHEATRE
- PICNIC SITES
- GATE
- BULLETIN BOARD

ROADS AND TRAILS

- STATE SCENIC BYWAY
- UNPAVED ROAD
- PAVED ROAD
- DESIGNATED UNPAVED TRAIL (PROPOSED AND EXISTING)
- DESIGNATED PAVED TRAILS (PROPOSED AND EXISTING)



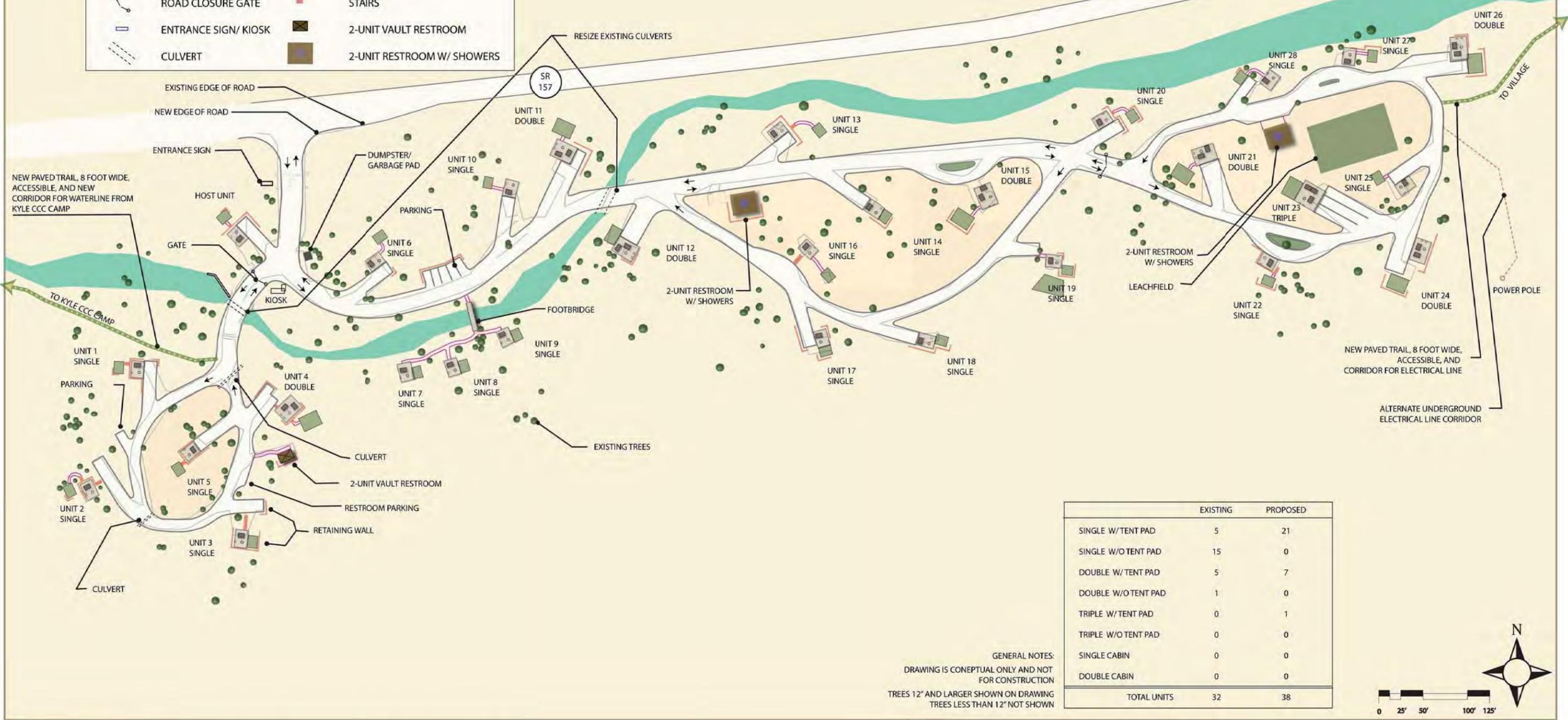
GENERAL NOTES:
 1. DRAWING IS CONCEPTUAL ONLY AND NOT FOR CONSTRUCTION
 2. EXISTING NON-HISTORICAL OUT BUILDINGS, SHED, FUELING STATION, ETC. TO BE REMOVED
 3. WORK INCLUDES UPGRADES TO EXISTING UTILITY SYSTEMS





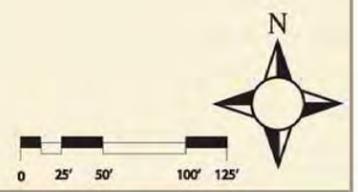
LEGEND

FACILITIES		ROADS AND TRAILS	
	STRUCTURES		STATE SCENIC BYWAY
	TENT PAD		NEW PAVED ROAD
	KYLE WASH		EXISTING ROAD
	CAMP SITE		PAVED TRAILS
	ROAD CLOSURE GATE		ASPHALT PATH
	ENTRANCE SIGN/ KIOSK		MODULAR CONCRETE RETAINING WALL
	CULVERT		STAIRS
			2-UNIT VAULT RESTROOM
			2-UNIT RESTROOM W/ SHOWERS



	EXISTING	PROPOSED
SINGLE W/ TENT PAD	5	21
SINGLE W/O TENT PAD	15	0
DOUBLE W/ TENT PAD	5	7
DOUBLE W/O TENT PAD	1	0
TRIPLE W/ TENT PAD	0	1
TRIPLE W/O TENT PAD	0	0
SINGLE CABIN	0	0
DOUBLE CABIN	0	0
TOTAL UNITS	32	38

GENERAL NOTES:
 DRAWING IS CONCEPTUAL ONLY AND NOT FOR CONSTRUCTION
 TREES 12" AND LARGER SHOWN ON DRAWING
 TREES LESS THAN 12" NOT SHOWN

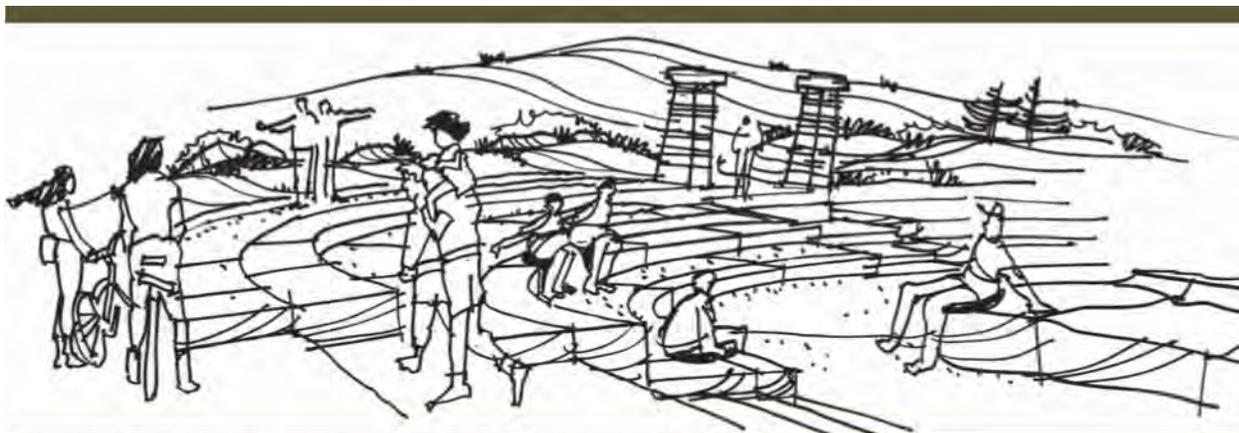


MIDDLE KYLE COMPLEX

USDA FOREST SERVICE • SPRING MOUNTAINS NATIONAL RECREATION AREA

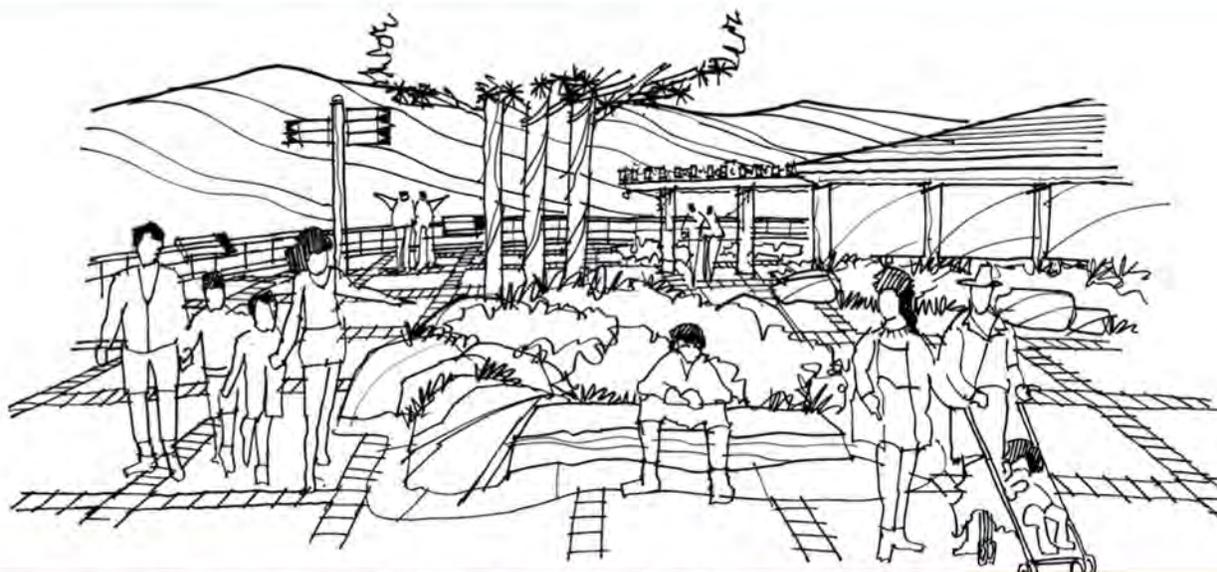
FIGURE 2 - 3: PROPOSED ACTION
 PROPOSED RECONSTRUCTION OF KYLE CANYON CAMPGROUND

Improvements proposed at the Kyle CCC Camp include restoration of existing historic buildings for managed public use and installation of a gate at the existing entrance. Non-historic outbuildings present on the site would be removed, as would aboveground fuel tanks and the existing Kyle Canyon Interim Visitor Center building, restrooms, and parking area. Abandoned roads, parking areas, and the outdoor storage area would be restored and infrastructure improvements would be made to retained roads and trails. Existing and new drainage crossings of Kyle wash would be sized to meet Forest Service standards. Programs offering interpretation of the historic site would be offered at a small amphitheater proposed as part of these improvements.



Conceptual sketch of small amphitheater or outdoor classroom (SMNRA Built Environment Image Guide, 2007).

The existing Fletcher Canyon Trailhead parking would remain in its current location on the south side of SR 157 and an unpaved trail would connect the trailhead to the new parking area. An existing low standard access road would be reconstructed east of the existing entrance to the Kyle CCC Camp, and new parking facilities, a new public restroom, and four picnic sites would be constructed. The pedestrian crossing on SR 157 accessing the Fletcher Canyon Trail would be marked and signed. A new trail loop north of SR 157 would be added to the Fletcher Canyon Trail providing a connection to proposed trails in the Northern Area via pedestrian and equestrian crossing on SR 158. A paved accessible trail meeting Forest Service Trail Accessibility Guidelines (FSTAG) would extend through the Kyle CCC Camp providing a connection from Fletcher View Campground to the Kyle Canyon Campground and to the Village area via the proposed Kyle Canyon Wash Trail (also FSTAG-accessible).



Conceptual sketch of Village outdoor plaza area (SMNRA Built Environment Image Guide, 2007).

Kyle Canyon Campground would be rehabilitated to meet Forest Service accessibility standards for people with disabilities to the extent practicable within topographic and resource constraints. Reconstruction would include updated campsites (new picnic tables, fire rings, grills, utility tables, and wheel stops), and new restrooms (with power, heat, showers, and flush toilets). Three new walk-in campsites would be added on the south bank of Kyle wash accessed by a foot bridge over the wash. Selected roads and parking stalls would be widened and rehabilitated to accommodate two-way traffic and larger recreational vehicles (RVs). The sewer system would be upgraded including installation of sewer lines, a septic tank, and drain fields (located within eastern most loop of the campground). The electrical infrastructure would be upgraded and installed underground utilizing road and trail corridors. Existing drainage crossings and culverts in Kyle wash would be replaced and upgraded to meet Forest Service standards. A campground vegetation management and treatment plan has been developed and will be implemented prior to initiating construction, see the December 2009 *Vegetation Management Plan for the Kyle Campground, Kyle CCC Camp and the Proposed Middle Kyle Complex (Above and Beyond Ecosystems Enterprise Unit 2009)*. The proposed Kyle Canyon Wash Trail would be paved providing an FSTAG -accessible connection from the campground to the Village area.

The Village: The Village would be the center of proposed activities and would be located south of SR 157 on the previously disturbed 128-acre site acquired by the Forest Service. Facilities at the Village would include a new Visitor Center, indoor group meeting area, retail space, food concession areas, residential space (security staff/artist-in-residence), one outdoor and one indoor classroom, plaza area, and landscaped play areas, 1,500-person amphitheater, three large group picnic sites with shelters and restrooms, commons area, underground parking structure and surface parking area, transit center, new hiking and biking trails,

and an access road. A biomass facility would provide heating and cooling for the facilities proposed in this area.

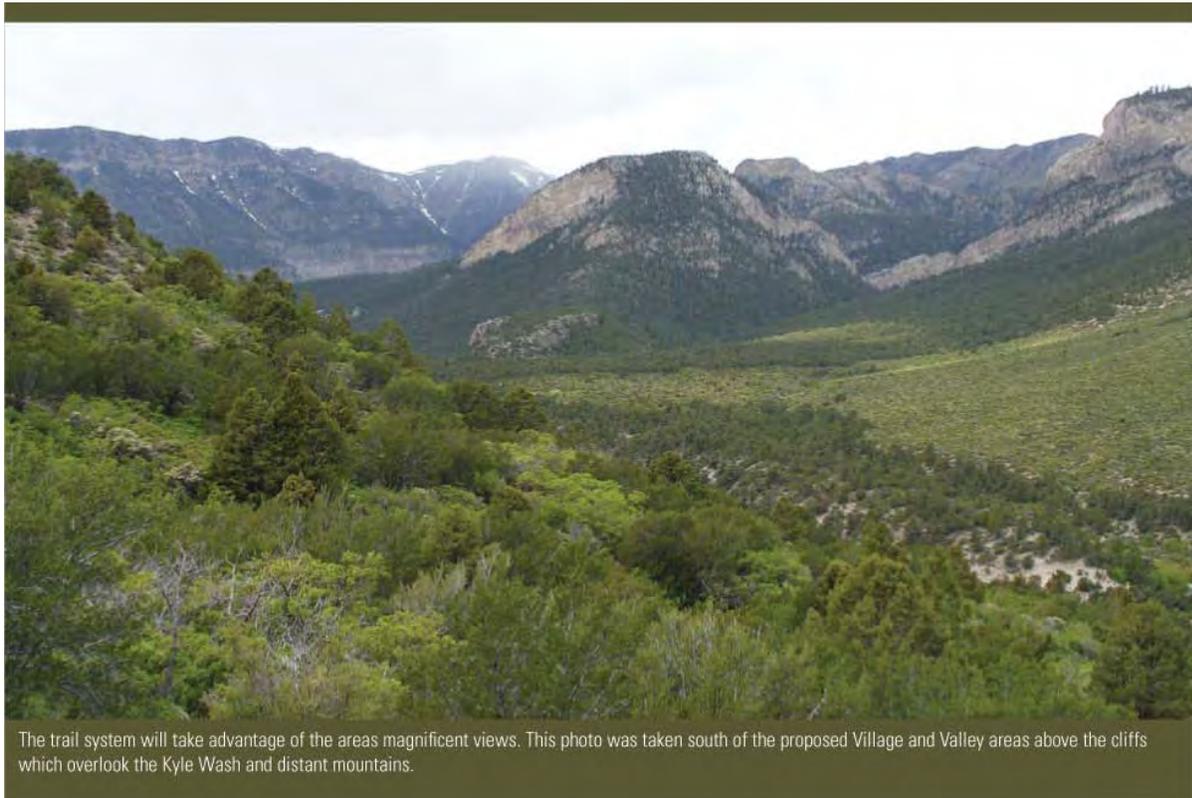
The Valley: The Valley would be located adjacent to the Village, near the Kyle wash and southern uplands of the 128-acre parcel. Activities would include reconstruction and restoration of the existing human-made ponds, including restoration of the uplands surrounding the ponds and Kyle wash. Log structures in Kyle wash would be removed as would remnants of the golf course such as the golf cart paths, tee boxes, and other associated infrastructure.



Facilities proposed for this area include wildlife/fishing ponds for children, two outdoor classrooms, a small amphitheater, picnic tables, an area designated for winter snow play, public restrooms, paved and unpaved trails including a new crossing over Kyle wash and connection to the Village, an FSTAG-accessible interpretive trail, and a trail connecting to the Resort on Mount Charleston, formerly known as the Mount Charleston Hotel.

Main Camping and Picnic Area: The Main Camping and Picnic Areas would be located on a large flat area immediately east of the Village, south of SR 157. An entry station and camp store would be located at the entrance with a RV dump station nearby. The picnic areas would be located on the west and include individual sites, group sites, restrooms, shelters, parking areas, and a paved access road. Traditional Forest Service-style campgrounds would include tent and RV sites with full hook-ups, group camping areas, shower and restroom facilities, a small amphitheater, walk-in campsites, and a paved access road. Hiking and biking trails would also be included in the camping and picnic areas connecting to the main multi-use trail system.

Northern Area: Proposed facilities located north of SR 157 would include single- and multi-use hiking, biking, and equestrian trails and an OHV trailhead to access existing trails. A pedestrian/equestrian crossing would be marked and signed on SR 158 and would connect the Northern Area trails to the Fletcher Canyon trails. The proposed OHV trailhead would be located east of NFS road 45577 on the north side of SR 157. A vault toilet and access to existing roads and trails would also be provided.



The trail system will take advantage of the areas magnificent views. This photo was taken south of the proposed Village and Valley areas above the cliffs which overlook the Kyle Wash and distant mountains.

Proposed equestrian facilities would include a horse rental concession and corrals at the trailhead in the Telephone Canyon area. This trailhead would also provide parking and access to the trails for hikers and bikers. An equestrian campground with corrals is also proposed for the area east of the Forest Service administrative facilities and includes a second trailhead with additional parking.

Forest Service administrative facilities proposed for this area would include fire and administrative offices and warehouse, concessionaire office, research center, helipads, and seasonal employee housing. A biomass facility would provide heating and cooling for the proposed administrative facilities in this area.

Facility and office space may be included for other agencies including the Nevada Division of Forestry, Clark County Fire Department, Nevada Highway Patrol, and Metro. The existing Metro facility would be relocated to the proposed administrative area and the existing site restored. The present solid waste transfer station would be removed and the site restored. Access to the existing Nevada Department of Transportation (NDOT) maintenance yard would be realigned to connect to the new entrance road leading into the administrative

facilities and equestrian campground areas. Existing water storage reservoirs would be restored and revegetated, as would abandoned roads. Telephone Canyon Road would be gated and closed to motor vehicle use north of the employee housing area, although authorized vehicles would be allowed to access the proposed water storage tank. A pedestrian crossing on SR 157 would be signed and marked and access roads would be paved.

Eastern Area: The Eastern Area would be located south of SR 157 adjacent to the Harris Springs Road. Two paved trailheads and access roads would be constructed west of Harris Springs Road. The first trailhead would have a vault toilet and proposed trails would connect to hiking trails in the canyon bottom; a paved trail would connect to the Rim Trail. A second trailhead is proposed further south on Harris Springs Road and would include restrooms, a mountain bike rental and concession, and mountain bike/hiking trails. Harris Springs Road would be widened and paved to include a bike lane from the intersection with SR 157 to the proposed mountain bike rental and concession facility. The existing drainage crossing would be improved across Kyle wash. Many of the existing NFS roads and trails in the project area extending westward from Harris Springs Road would be closed to motorized vehicle use and converted to use as hiking and biking trails. Signs and traffic management devices would be constructed to discourage vehicle use west of Harris Springs Road.

Other Actions: Other proposed facilities or actions proposed under this alternative may include: installation of infrastructure to support the planned facilities (e.g., roads, utilities, stormwater management, wastewater treatment); improvements to SR 157 to provide for safe intersections for vehicles and pedestrians; restoration and revegetation of abandoned roads, trails, and utility sites; removal of illegally dumped materials; removal of portions of existing aerial utility lines and installation of the lines underground; removal of selected non-native trees and shrubs in the Village area; closure of selected Forest Service roads to motor vehicle use; and conversion of selected Forest Service roads to non-motorized trail use. The SMNRA Motorized Vehicle Use Map (MVUM) would be updated to be consistent with the transportation decisions made through the Middle Kyle Complex Project Travel Analysis and this EIS process. Under this alternative the water system for all proposed facilities east of the Western Area would be constructed entirely on lands owned and operated by the Forest Service. The sewer system would consist of several on-site septic tanks and drain field systems. Several of the high-use recreation and administrative areas may include select plantings of non-native, non-invasive tree and turf species.

Under the Proposed Action the Forest Service may also implement the following administrative action that encompasses approximately 4,900 acres and extends outside of the Middle Kyle Complex project area (see Figure 1-4):

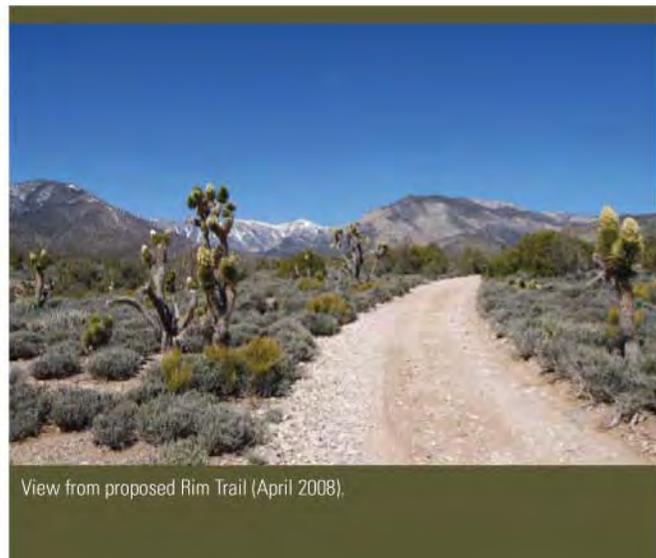
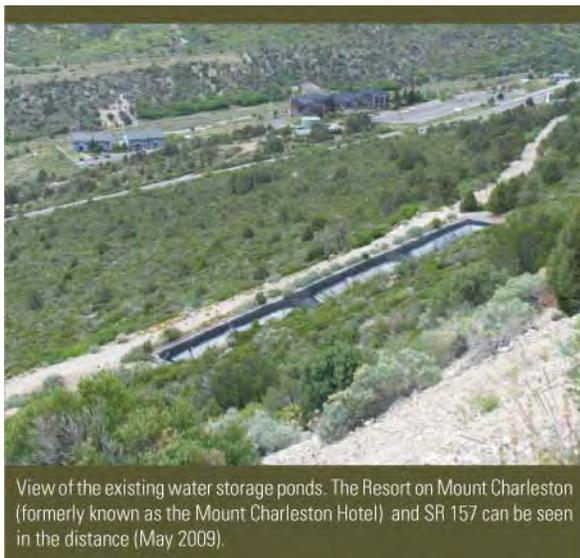
- Dispersed camping would be prohibited within 300 feet on either side of Forest Service roads and trails open to motorized vehicles, trailheads, county roads, and state highways within the Lee Canyon, Kyle Canyon, and Deer Creek areas of the SMNRA, including connecting and tributary Forest Service routes such as those in the Macks Canyon and Harris Springs areas.

Construction of the Proposed Action is anticipated to begin within 1 year after publication and circulation of this EIS and Record of Decision. Design and

construction of the Proposed Action may occur in phases over a period of approximately 15 years. SNPLMA funding would support the majority of the costs of design and construction of the facilities identified in the Proposed Action.

2.2.3 Alternative 3 – Market Supported Alternative

The Business Plan included analysis of the facilities included in the Proposed Action as originally described in the NOI. The Market Supported Alternative was developed in response to economic sustainability concerns relative to Forest Service recreational facilities and comments received from the public.



Several of the key findings in the Business Plan relevant to the development of the Market Supported Alternative are discussed below:

- Complexity and dynamism of the Las Vegas area make accurate long-range market and financial projections very challenging. The maximum time frame in the analysis used for market demand and financial projections is 10 years. Facility sizing recommendations were based on this criterion.
- SMNRA visitation estimates used to inform the development of the Proposed Action in the NOI were determined to be overstated. The estimates, based primarily on NDOT traffic counts and Las Vegas growth projections, indicated SMNRA current visitation at 1.8 million people annually with expectations that visitation would grow to 3.9 million by the year 2020. Visitation analysis in the Business Plan, however, puts estimated SMNRA visitation currently at approximately 335,600 people annually; that number is projected to grow to 500,000 by 2017 (PwC 2008). The change in visitation projections reduced facility sizing recommendations and transit considerations under the Market Supported Alternative.
- The SMNRA is primarily used for day-use activities by local users. This pattern is expected to continue into the future as residential developments are completed and the Las Vegas metropolitan area population grows. For

example, a master plan for 16,000 new homes has been approved at the intersection of SR 157 and US 95. This development would be located within 12 miles of the SMNRA boundary (PwC 2008). Because of national and regional economic conditions, this development is on hold but is anticipated to eventually undergo residential or mixed use development.

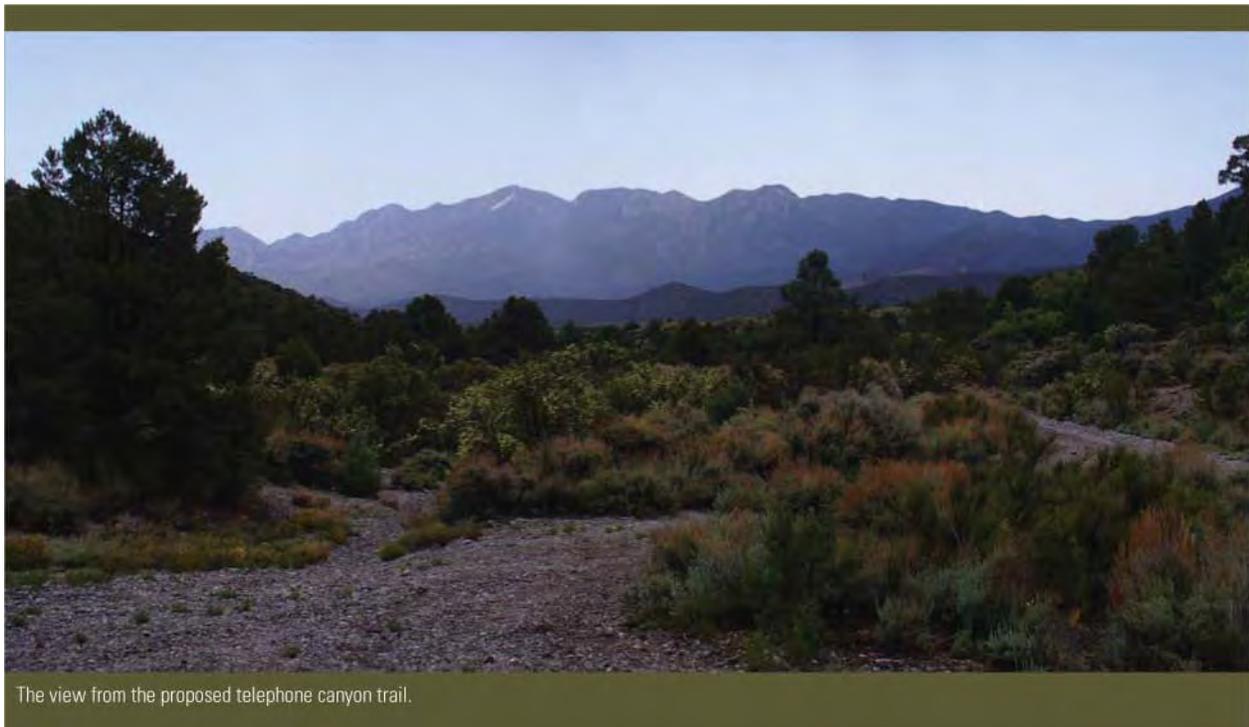
- Analysis of the OHV market in the Business Plan indicated that the Middle Kyle Complex project area has inadequate trail mileage or various levels of challenging terrain to sustain a viable OHV trail system. This conclusion takes into consideration the adjacent Mt. Charleston Wilderness Area, the Red Rock Canyon National Conservation Area (RRCNCA) restrictions on OHV use, air quality restrictions, and biological concerns. Relative to the east side, the analysis identified the west and north sides of the SMNRA and adjacent Bureau of Land Management (BLM) administered public lands as more viable and sustainable for an OHV system.
- Equestrian camping was supported by the analysis; however, it was determined that the Lee Canyon and Blue Tree areas are more appropriate locations to site equestrian camping due to placement of a more extensive equestrian trail network. The length of equestrian trails available in the project area is more suited for day use.
- The 1,500-seat amphitheater and associated 1,200-car parking garage, originally considered as a primary revenue source under the Proposed Action, was not supported by the analysis in the Business Plan. The amphitheater was downsized to 150 seats and a surface parking area of approximately 250 spaces is included in this alternative.
- Stand-alone bicycle rental and equestrian rental, large meeting spaces, full-service cabin rentals, artist-in-residence, multiple food service concessionaires, general retail, and large group campgrounds were not supported in the Business Plan market analysis.
- Based on ridership projections and analysis of shuttle operations and maintenance costs, transit was found to be neither market supported nor cost-effective within the analysis period. Transit facilities and operations are not included in this alternative; however, space has been reserved for future use.

Under the Market Supported Alternative, the Forest Service proposes the construction and operation of the facilities described below. Many elements are similar to those included in the Proposed Action; therefore, only those aspects of the Market Supported Alternative that differ from the Proposed Action are described. Table 2-1 provides a summary of the proposed facilities and land uses considered under the No Action Alternative, Proposed Action, and Market Supported Alternative. Appendix B provides a one-to-one comparison of project components and facilities under each of these alternatives. Proposed facilities and activities under this alternative are shown on Figure 2-4. Improvements proposed at Kyle CCC Camp and Fletcher Canyon Trailhead are shown on Figure 2-5. Figure 2-6 depicts the reconstruction of Kyle Canyon Campground.

The geographic areas used to describe the spatial location of proposed facilities and activities considered under the Market Supported Alternative are the same as those under the Proposed Action, beginning at the Fletcher View Campground on the west and extending to Harris Springs Road on the east. Areas proposed to be

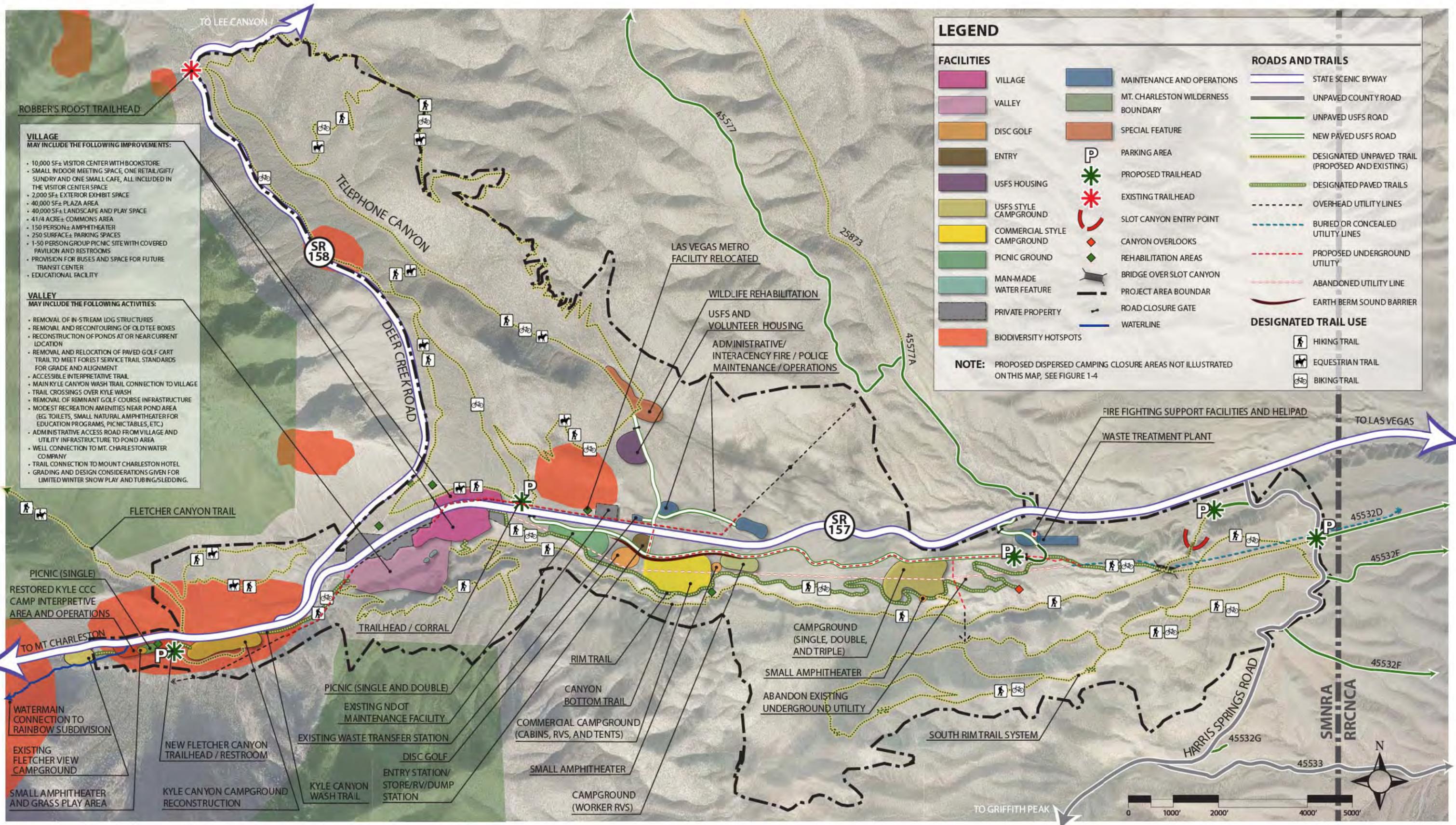
closed to dispersed camping under this alternative are the same as those areas discussed under the Proposed Action and are shown on Figure 1-4.

Western Area: Kyle CCC Camp improvements proposed under the Market Supported Alternative include similar activities described under the Proposed Action, but would include relocating the Fletcher Canyon Trailhead parking south of SR 157 to a site east of and adjacent to the Kyle CCC Camp public parking area. Facilities at this parking area would include restrooms, picnic area, and a small amphitheater as described in the Proposed Action with the addition of a grass play area and additional trailhead parking. The new trail loop to the Fletcher Canyon Trail would be constructed as in the Proposed Action but the connector trail leading to SR 158 and the pedestrian/equestrian crossing would not be constructed.



Reconstruction of the Kyle Canyon Campground would be similar to the Proposed Action with the following changes: replacement of five single-unit campsites with camp cabins¹; construction of a looped hiking trail south of Kyle Canyon Campground; construction of fencing along portions of the south side of the campground to prevent the creation of unauthorized trails; rehabilitation and widening of selected roads and parking stalls only at locations where removal of mature ponderosa pines could be avoided; installation of a sewer collection system that would connect to facilities in Kyle CCC Camp and proposed Middle Kyle Complex facilities; addition of a small play space in the east campground loop; and provision of full hook-ups for select campground sites.

¹ Camp cabins are not permanent structures and are constructed on temporary foundations. A typical floor plan and photos can be found on the Web at <http://www.pkscabins.com/cabine1room.htm>.



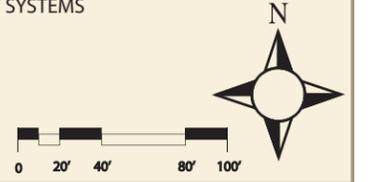
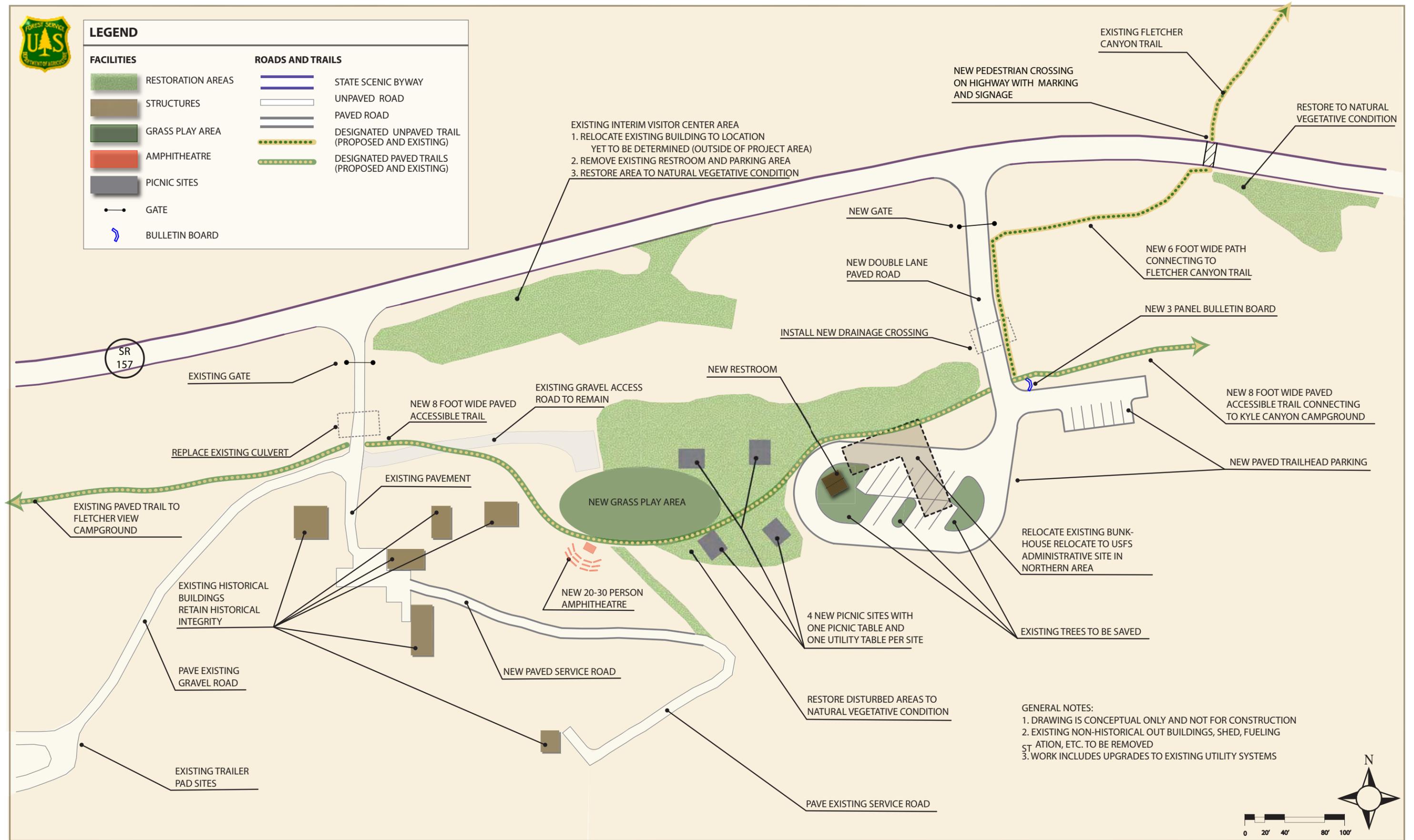
MIDDLE KYLE COMPLEX

USDA FOREST SERVICE • SPRING MOUNTAINS NATIONAL RECREATION AREA

FIGURE 2 - 4: MARKET SUPPORTED ALTERNATIVE



LEGEND	
	RESTORATION AREAS
	STRUCTURES
	GRASS PLAY AREA
	AMPHITHEATRE
	PICNIC SITES
	GATE
	BULLETIN BOARD
	STATE SCENIC BYWAY
	UNPAVED ROAD
	PAVED ROAD
	DESIGNATED UNPAVED TRAIL (PROPOSED AND EXISTING)
	DESIGNATED PAVED TRAILS (PROPOSED AND EXISTING)



MIDDLE KYLE COMPLEX

USDA FOREST SERVICE • SPRING MOUNTAINS NATIONAL RECREATION AREA

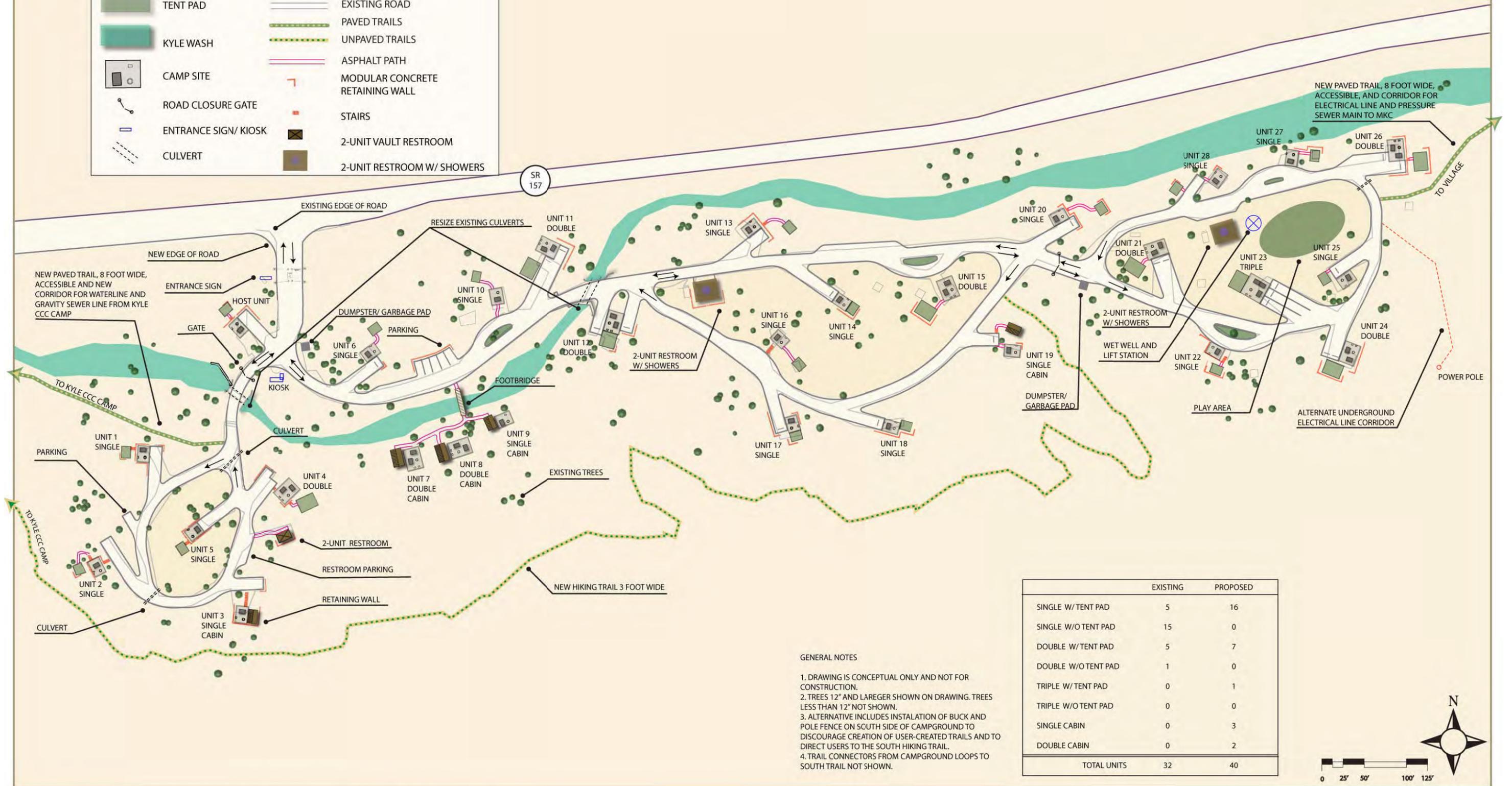
FIGURE 2 - 5 : MARKET SUPPORTED ALTERNATIVE

PROPOSED IMPROVEMENTS TO KYLE CCC CAMP AND FLETCHER CANYON TRAILHEAD



LEGEND

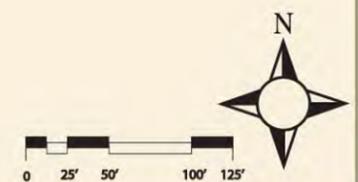
FACILITIES		ROADS AND TRAILS	
[Brown rectangle]	STRUCTURES	[Blue line]	STATE SCENIC BYWAY
[Green rectangle]	TENT PAD	[Grey line]	NEW PAVED ROAD
[Light green rectangle]	KYLE WASH	[White line]	EXISTING ROAD
[Cabin icon]	CAMP SITE	[Green dashed line]	PAVED TRAILS
[Gate icon]	ROAD CLOSURE GATE	[Yellow dashed line]	UNPAVED TRAILS
[Sign icon]	ENTRANCE SIGN/ KIOSK	[Pink line]	ASPHALT PATH
[Dashed line]	CULVERT	[Pink dashed line]	MODULAR CONCRETE RETAINING WALL
		[Red square]	STAIRS
		[Brown square]	2-UNIT VAULT RESTROOM
		[Brown square]	2-UNIT RESTROOM W/ SHOWERS



	EXISTING	PROPOSED
SINGLE W/ TENT PAD	5	16
SINGLE W/O TENT PAD	15	0
DOUBLE W/ TENT PAD	5	7
DOUBLE W/O TENT PAD	1	0
TRIPLE W/ TENT PAD	0	1
TRIPLE W/O TENT PAD	0	0
SINGLE CABIN	0	3
DOUBLE CABIN	0	2
TOTAL UNITS	32	40

GENERAL NOTES

1. DRAWING IS CONCEPTUAL ONLY AND NOT FOR CONSTRUCTION.
2. TREES 12" AND LARGER SHOWN ON DRAWING. TREES LESS THAN 12" NOT SHOWN.
3. ALTERNATIVE INCLUDES INSTALLATION OF BUCK AND POLE FENCE ON SOUTH SIDE OF CAMPGROUND TO DISCOURAGE CREATION OF USER-CREATED TRAILS AND TO DIRECT USERS TO THE SOUTH HIKING TRAIL.
4. TRAIL CONNECTORS FROM CAMPGROUND LOOPS TO SOUTH TRAIL NOT SHOWN.



MIDDLE KYLE COMPLEX ENVIRONMENTAL IMPACT STATEMENT

USDA FOREST SERVICE • SPRING MOUNTAINS NATIONAL RECREATION AREA

FIGURE 2 - 6 : MARKET SUPPORTED ALTERNATIVE PROPOSED RECONSTRUCTION OF KYLE CANYON CAMPGROUND

The Village: The facilities at the Village would include similar facilities described for the Proposed Action with the following differences: the new Visitor Center would be smaller in size; there would be no residential space (security/artist-in-residence); the plaza area would be reduced in size by approximately 20,000 square feet; there would be no outdoor classrooms and instead the proposed amphitheater would be used for educational programs; the separate building for meeting space, retail shops and food vendors would be eliminated (space for one retail/gift/sundry and small café would be included in visitor center building); a separate education facility may be included; the amphitheater would be downsized to accommodate 150 persons; a single 50-person group picnic site would be provided; a surface parking lot rather than an underground parking structure would be constructed; a bus stop and space for a future transit center would be provided; the main multi-use trail east of the Village leading to the main picnic and camping area would be located within SR 157 right-of-way to avoid the need for right-of-way across private land. The biomass heating/cooling facility would not be constructed under this alternative.

This alternative proposes moving the Village area adjacent to and on both sides of SR 157, in essence making the highway the “main street” of the village. Traffic calming devices and/or a roundabout would be constructed on SR 157 to reduce traffic speeds through the Village area. The construction of a roundabout on SR 157 at this location would require granting additional easement width to NDOT. A pedestrian crossing on SR 157 would be added in this area.

The Valley: The actions proposed at the Valley area are similar to those described in the Proposed Action with the exception that the outdoor classrooms would be eliminated, only a few picnic sites adjacent to primary Valley attractions would be constructed, and there would be no designated snow play area. Limited snow-play would be available only when suitable natural conditions exist on site and provide the opportunity.

Main Camping and Picnic Area: The picnic area would be downsized to a single picnic loop without group sites. A disc golf course may be constructed east of the picnic area. The total number of camping units would be reduced. Two styles of campgrounds are proposed for construction under this alternative, a commercial-style campground and traditional Forest Service-style campground. The campground located nearest the entrance and registration area would be a commercial-style campground with approximately 144 sites located in a concentrated area and would include a smaller campground for workers. A conceptual layout of a commercial-style campground is shown on Figure 2-7. A Laundromat would be constructed near the camp store. An earthen berm would be constructed and act as a sound barrier between the commercial-style campground and SR 157. An irrigated grassy play area, splash pad, playground, small amphitheater, and multi-use playing field are proposed east of the commercial-style campground. The easternmost campground would be constructed in the traditional Forest Service style with two camping loops including tent and RV sites with hook-ups and a small amphitheater. No group camping sites are proposed under this alternative. A new trailhead is proposed east of the traditional-style campground and would connect to trails in the canyon bottom and Harris Springs Road area. The registration and entrance station layout would be revised to accommodate larger Class A RV vehicles in the

proposed commercial-style campground, and the RV dump station would be located in this area instead of within the fee area. The helipad and firefighting support facilities would be located east of the campgrounds and south of SR 157 instead of in the Northern Area. The proposed sewage treatment facility and lagoons would also be located in this area.



View from proposed canyon bottom trail as it exits the slot canyon.

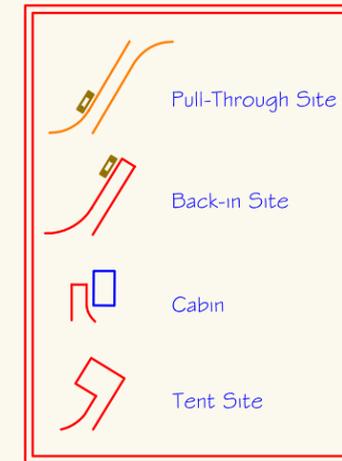
Northern Area: Proposed facilities located north of SR 157 would include similar facilities and actions described for the Proposed Action with the following differences: There would be no horse rental concession or equestrian campground and no trail connecting the equestrian facilities identified in the Proposed Action; there would be no pedestrian/equestrian crossing on SR 158 and no connection to the new loop added to the Fletcher Canyon Trail; and there would be no OHV trailhead constructed.

Under the Market Supported Alternative, Forest Service administrative facilities in the Northern Area are in different locations than in the Proposed Action and would include fire and administrative office/warehouse and employee housing buildings. The employee housing buildings proposed for this area would include duplexes, barracks, trailer pads, and an outdoor play area. The separate research facility would not be constructed. The helipad would be constructed south of SR 157. A wildlife rehabilitation facility is proposed north of the access gate on Telephone Canyon Road. The biomass heating/cooling facility would not be constructed.

Under this alternative the access road off SR 157 to the NDOT maintenance station would not be realigned. The solid waste transfer station would remain in its existing location; however a new access road would connect this site to the main administrative road. The existing access road would be removed and revegetated.



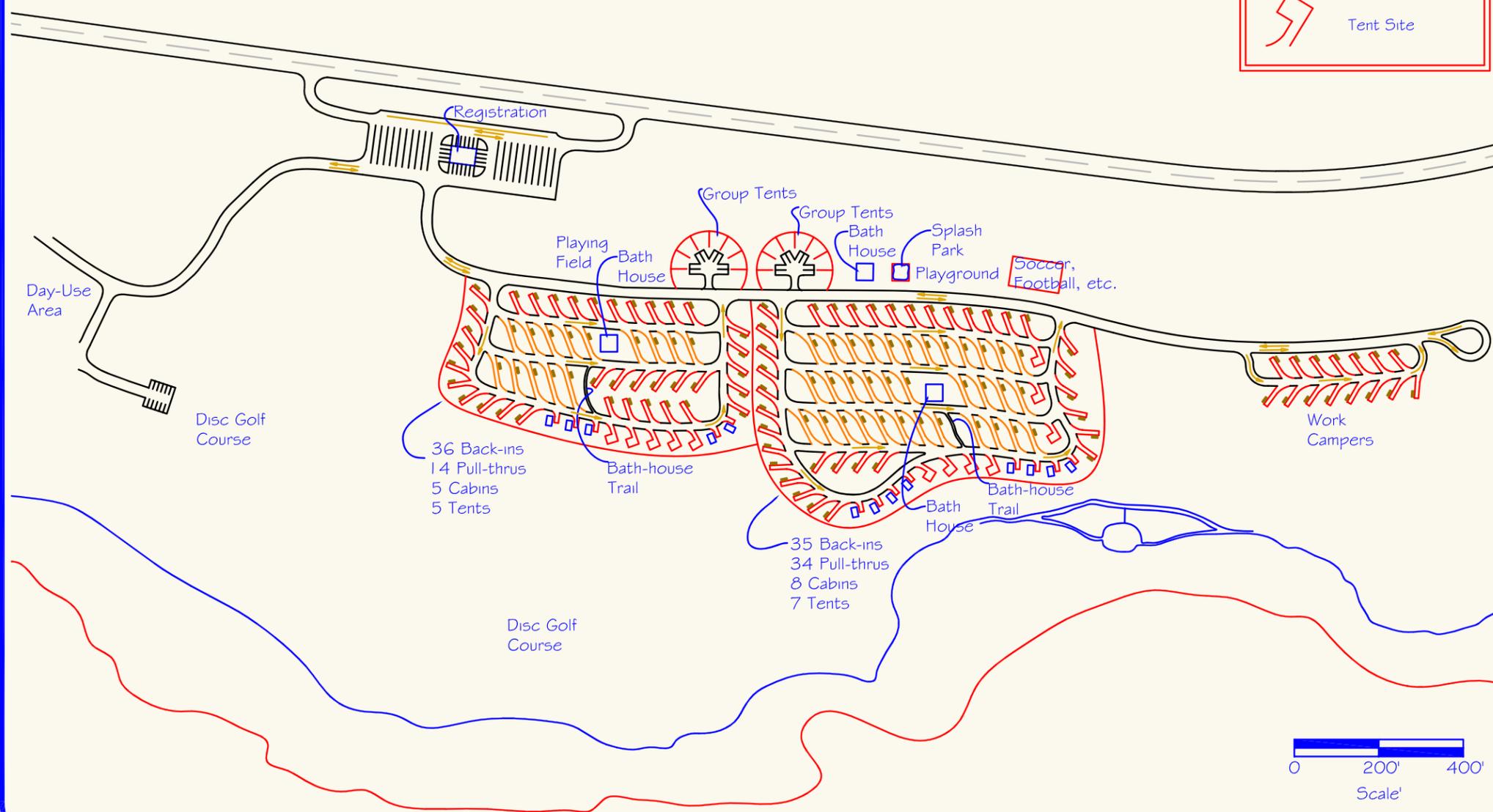
NOTE: THIS DRAWING ILLUSTRATES CONCEPTUALLY THE LAYOUT AND AMENITIES THAT COULD BE INCLUDED IN A COMMERCIAL STYLE CAMPGROUND FACILITY. THIS DRAWING IS FOR INFORMATION PURPOSES ONLY AND DOES NOT REPRESENT APPROVED CONSTRUCTION DRAWINGS.



General Notes

Site Count
 48 Pull-Throughs
 71 Back-in/Deluxe Tents
 13 Cabins
 28 Tents
 160 Total

Note: Conceptual Drawing Only. Adjust for existing trees, elevation and boundaries.



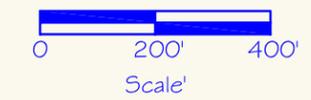
Drawn by: NS

No.	Revision/Issue	Date

Firm Name and Address
 Staves Consulting, Inc.
 (406) 656-7086

Project Name and Address
 Middle Kyle Canyon Campground,
 Spring Mtn, NV

Project Ref: Overall	Sheet
Date: 12.15.07	1 of 1
Scale:	



MIDDLE KYLE COMPLEX

FIGURE 2 - 7: MARKET SUPPORTED ALTERNATIVE
 CONCEPTUAL LAYOUT FOR COMMERCIAL STYLE CAMPGROUND

Eastern Area: Facilities proposed for the Eastern Area include similar facilities considered under the Proposed Action with the following differences: the new trailhead east of the Forest Service-style campground would lead to a proposed trail with a bridge connecting the Rim Trail to the trail system to the southeast. There would be no mountain bike rental/concession and both trailheads parking areas and access roads would not be paved; utilities (including water, sewer and electricity) would not be extended to this area, although there would be a vault toilet at each trailhead; the paved hiking and biking trail near Kyle wash would not be constructed; and Harris Springs Road improvements would not be constructed.

Other Actions: Other proposed facilities and actions considered under the Market Supported Alternative are similar to the other actions described under the Proposed Action. Additionally, under this alternative the water system for all proposed facilities east of the Western Area would be connected to an existing commercial water system (the Mt. Charleston Water Company [MCWC]). These changes would include connecting the two existing Forest Service wells to the MCWC system. The water storage tank in Telephone Canyon would not be constructed; however, a smaller water storage tank located on private land adjacent to an existing MCWC storage tank may be constructed. The sewer system under this alternative would consist of a sewer collection system with a central waste treatment facility.

Under the Market Supported Alternative, the Forest Service may also implement the following administrative action that includes approximately 4,900 acres outside of the Middle Kyle Complex project area as shown on Figure 1-4:

- Dispersed vehicle camping would be prohibited within 300 feet on either side of Forest Service roads and trails open to motorized vehicles, trailheads, county roads, and state highways within the Lee Canyon, Kyle Canyon, and Deer Creek areas of the SMNRA, including connecting and tributary Forest Service routes such as those in the Macks Canyon and Harris Springs areas.

Construction of the Market Supported Alternative is anticipated to begin within 1 year after publication and circulation of this EIS and Record of Decision. Design and construction of the Market Supported Alternative may occur in phases over a period of 15 years. SNPLMA funding would support the majority of the costs of design and construction of the Market Supported Alternative.

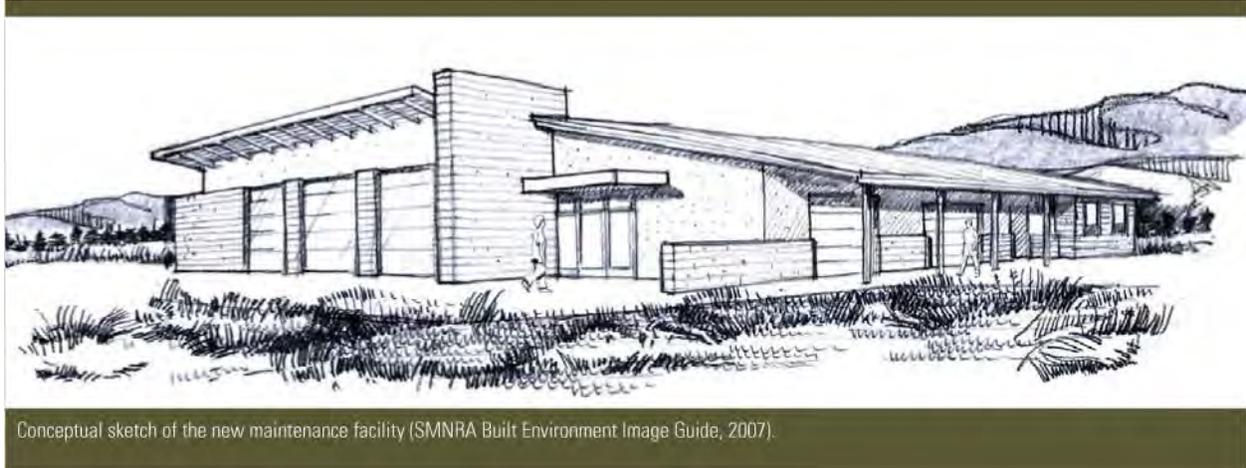
2.3 Summary Comparison of Alternatives

This section compares the project components by alternative and the effects of implementing the alternatives presented in this chapter. Table 2-1 summarizes and compares the design and operational features considered under the alternatives in detail. For expanded detail on the information presented in Table 2-1, see Appendix B.

Table 2-2 compares the effects that the No Action Alternative, Proposed Action, and Market Supported Alternative would have on the significant issue identified

in Section 1.7.1, *Significant Issues*. Mitigation measures designed to minimize the impact on the resource/issue are also included in this table.

Table 2-3 compares the effects of implementing each alternative. Information in the table is focused on activities and effects where different levels of effects or outputs can be distinguished quantitatively or qualitatively among alternatives.



Conceptual sketch of the new maintenance facility (SMNRA Built Environment Image Guide, 2007).

Table 2-1. Summary Comparison of Alternatives

Land Use Type/Activity	No Action Alternative	Proposed Action	Market Supported Alternative
SITE INTERPRETATION AND EDUCATION			
Kyle Canyon Interim Visitor Center	Yes, at current location (800 square feet)	Removed	Removed
Kyle CCC Camp/Fletcher Canyon Trailhead	Yes (current configuration and uses retained)	Yes (historic buildings restored and converted to public use, non-historic buildings removed)	Yes (same as Proposed Action, plus trailhead relocated off SR 157 and enlarged parking area)
▪ Outdoor Classroom/Amphitheater	No	Yes (1)	Yes (1)
▪ Play Area	No	No	Yes (1)
▪ Picnic Area	No	Yes (4 single sites ¹ , included in tally below)	Yes (4 single sites, included in tally below)
Village (Indoor Facilities)	No	Yes	Yes
▪ Visitor Center with Bookstore	No	12,000 square feet	10,000 square feet
▪ Meeting Space, Retail Space with Rentals, and Food Area	No	Yes (separate 4,200-square-foot building with meeting space, 4 to 6 retailers, 3 food vendors)	Yes (1 retail/sundry/gift space and 1 cafe included in visitor center space above)
▪ Artist-in-Residence	No	Yes (separate 2,400-square-foot building including security)	No
▪ Transit Center Building	No	Yes, 2,000-square-foot building	No, but space reserved for future building
Village and Valley(Outdoor Facilities)	No	Yes	Yes
▪ Plaza Area	No	60,000 square feet	40,000 square feet
▪ Landscape and Play Space	No	40,000 square feet	40,000 square feet
▪ Village Amphitheater	No	1 (1,500 capacity)	1 (150 capacity)
▪ Outdoor Classroom	No	3 (located in Village and Valley areas)	1 (at Village amphitheater space)
▪ Commons (Multipurpose Green Space)	No	4.25 acres	4.25 acres
▪ Exterior Interpretive Exhibits	No	2,000 square feet	2,000 square feet
▪ Education Facility	No	No	Yes
▪ Parking	No	Yes, 1,300 +/- garage and surface parking	Yes, 250 +/- surface parking
Improved Wayfinding System	No	Yes	Yes

Land Use Type/Activity	No Action Alternative	Proposed Action	Market Supported Alternative
PICNICKING FACILITIES			
Picnic Sites–Individual (see notes at end of table for site/unit definition)	No	89 sites/136 units (42 single, 47 double)	46 sites/69 units (23 single, and 23 double)
Picnic Sites–Group	No	6 group sites (4 50-person, 2 25-person)	1 group site (1 50-person group)
CAMPING FACILITIES			
Dispersed Camping	Yes	No	No
Kyle Canyon Campground–RV/Tent	26 sites/32 units (20 single, 6 double)	29 sites/38 units (21 single, 7 double, 1 triple)	29 sites/40 units (16 single, 7 double, 1 triple, 3 single camp cabins, 2 double camp cabins, 1 play area)
RV Dump Station	No	Yes	Yes
Registration area with camp store	No	Yes	Yes, with parking for Class-A RVs
Campground–Individual RV/Tent	No	211 sites/291 units (167 single, 35 double, 9 triple), with small amphitheater	48 sites/62 units (36 single, 10 double, and 2 triple), with small amphitheater
Campground–Small Group RV	No	10 sites	No
Campground–Large Group Tent	No	100 sites (2 areas, 50 sites each)	No
Campground–Equestrian	No	10 sites	No
Commercial Style Campground –capable of accommodating Class-A RVs	No	No	144 sites (71 back-in sites, 48 pull-thru sites, 12 tent sites and 13 camp cabins; with 15-unit workers' camp)
▪ Camp Store and Laundromat	No	No	1
▪ Frisbee Golf	No	No	1
▪ Splash Pad	No	No	1
▪ Small Amphitheater	No	No	1
▪ Playground	No	No	1
▪ Playing Field (Multi-Use)	No	No	2
MISCELLANEOUS FACILITIES/USES			
Horse Corral	No	2	1
Equestrian Rental Building/Facility	No	Yes	No

Land Use Type/Activity	No Action Alternative	Proposed Action	Market Supported Alternative
Designated Winter Snow Play Area	No	Yes, sledding hill	No, limited and only when suitable natural conditions exist
Mountain Bike Rental Building	No	Yes	No
TRAILS			
Non-motorized multi-use trails (Hiking, Biking, Equestrian)	Yes	Yes	Yes
▪ Designated Hiking Only Trails	No	8.6 miles	8.6 miles
▪ Designated Biking Only Trails	No	2.8 miles	2.8 miles
▪ Designated Equestrian/Hiking Trails	1.6 miles	6.0 miles	4.2 miles
▪ Designated Hiking/Biking Trails	No	17.4 miles	16.4 miles
▪ Designated Hiking/Biking/Equestrian Trails	No	13.3 miles	11.8 miles
▪ Designated Trailheads	1 total	6 total (5 new, including 1 OHV)	5 total (5 new, no OHV trailhead)
▪ Slot Canyon Bridge	No	No	Yes
Motorized Trails	1.4 miles	0 miles	0 miles
Motorized Trails Closed/Restored ²	0 miles	1.4 miles	1.4 miles
Unauthorized Trails	16.0 miles	0 miles	0 miles
ROADS			
NFS Roads – unsurfaced	12.9 miles	0.3 mile	0.6 mile
NFS Roads – paved	0.7 mile	17.1 miles	12.2 miles
NFS Roads – closed/restored	0 mile	5.2 miles	5.2 miles
NFS Roads – converted to trail	0 mile	6.0 miles	5.6 miles
County Road-unsurfaced	1.2 miles	0.5 mile (0.7 mile paved)	1.2 miles
Unauthorized Roads	6.9 miles	0 miles	0 miles
ADMINISTRATIVE AND INTERAGENCY FACILITIES/USES			
Forest Service employee housing	3 single-family residences, 1 12-person barracks, 5 trailer pads	3 single-family residences, 1 12-person barracks, 8 trailer pads	4 duplex houses, 2 12-person barracks, 8 trailer pads

Land Use Type/Activity	No Action Alternative	Proposed Action	Market Supported Alternative
Forest Service administrative facilities	Forest Service would continue to operate out of existing facilities.	Administrative office space included in interagency fire facility space below. Includes space for Forest Service law enforcement.	8,200-square-foot Forest Service administrative office with 5,000-square-foot warehouse
Interagency Fire	Nevada Division of Forestry, Clark County Fire Department, and Forest Service would continue operating out of separate existing facilities.	10,000-square-foot interagency fire facility for Nevada Division of Forestry, Clark County Fire Department, and Forest Service fire crews	13,400-square-foot interagency fire facility for Nevada Division of Forestry, Clark County Fire Department, and Forest Service fire crews
Interagency Law Enforcement	Las Vegas Metro, Nevada Highway Patrol, and Forest Service would continue operating out of separate existing facilities.	Relocate Las Vegas Metro facility to location near Forest Service and interagency fire facility. Nevada Highway Patrol operations would be same as No Action Alternative.	5,000-square-foot interagency law enforcement building for Las Vegas Metro, Nevada Highway Patrol, and Forest Service law enforcement
Helipad	1	2	1
Concessionaire Office	No	Yes, 2,000-square-foot office	Same as Proposed Action
Research Center	No	Yes, 3,000-square-foot office	No separate building; office space provided in Forest Service administrative office space above
RESTORATION AND VEGETATION TREATMENTS			
Kyle CCC Camp Restoration	0 acres	1.4 acres	1.2 acres
Fletcher Canyon Trailhead Parking Restoration	0 acres	0 acres	0.1 acre
Valley (former golf course) Restoration	3.0 acres (includes some restoration in Village area)	2.7 acres	2.7 acres
Northern Area Restoration	0 acres	8.0 acres	7.6 acres
Dump Removal and Restoration	0 acres	0.9 acre	0.9 acre
Closed Designated Routes ³ Restored	0 acres	6.7 acres	6.7 acres
Closed Unauthorized Routes Restored	0 acres	15.9 acres	15.9 acres
Vegetation Treatment	Maintain vegetation in existing developed sites with limited treatments, e.g., removal of hazard trees	Vegetation treatment and management plan would be implemented	Same as Proposed Action

Land Use Type/Activity	No Action Alternative	Proposed Action	Market Supported Alternative
OTHER ACTIONS AND PERMITTED USES			
Right-of-Way (ROW) Acquisitions Needed	No	Yes, 1 road ROW (0.09 acre), 1 trail/utility ROW (0.32 acre)	Yes, 1 road ROW (0.09 acre)
Public Utility Company Affected	No	Yes, 2 utilities—NV Energy and Embarq	Yes, 2 utilities—NV Energy and Embarq
Water Systems	Western Area – Las Vegas Valley Water District (LVVWD)	Western Area – LVVWD Other Middle Kyle Complex Project Areas – Forest Service water system	Western Area – LVVWD Other Middle Kyle Complex Project Areas—Mt. Charleston Water Co.
Wastewater Systems	Maintain existing septic tank/leachfield systems	New uses placed on septic tank/leachfield systems	Sewage collection system with central waste treatment plant
Public Road Agencies Affected	No	Yes, NDOT and Clark County	Yes, NDOT
Permitted Uses			
<ul style="list-style-type: none"> ▪ Clark County/Republic Services Solid Waste Transfer Station ▪ Las Vegas Metro Substation 	No change to existing permit	Permit cancelled, site rehabilitated	Permit reissued at current location with modifications
<ul style="list-style-type: none"> ▪ Wildlife Rehabilitation Facilities 	No change to existing permit	Permit reissued at new location	Permit cancelled, space provided at proposed interagency law enforcement building
	No	No	Yes

Notes:

¹When referring to picnic or camp sites, a “site” is an individually developed area that may be a single unit, double unit or triple unit. The term “unit” refers to the number of family units at a site. For example, a triple unit would have parking space for three vehicles, three picnic tables, and three tent pads at a single location, and would be counted as three units.

²The terms “restored” and/or “restoration” used throughout this EIS refer to rehabilitation activities that may vary in intensity depending on the land use impacts and resources affected: it can range from a simple road or trail closure left to revegetate on its own through natural processes, to full recontouring and revegetation with erosion control measures. The intensity of restoration that would be implemented will be determined in the design process and is not identified in the EIS.

³The term “route” refers to both trails and roads, e.g., motorized NFS routes would include both NFS roads and motorized NFS trails.

All quantities presented in this table are approximate; actual quantities may vary after final design and site layout has been completed. Information presented in this table is a summary detail only. For additional information refer to the alternative descriptions and figures provided in this chapter and Appendix B, *Detailed Comparison of Alternatives*. Quantities provided in this table are for the Middle Kyle Complex boundary area shown on Figure 1-2.

Table 2-2. Issue Comparison by Alternative

Measure or Mitigation	No Action Alternative	Proposed Action	Market Supported Alternative
ISSUE 1			
Construction and use of the proposed Kyle Canyon Wash Trail from Kyle Canyon Campground to the Village through Spring Mountains acastus checkerspot butterfly (<i>Chlosyne acastus robusta</i>) habitat may adversely impact this species.			
Measure—Area of known foraging habitat within the Kyle wash and adjacent habitat that would experience impacts due to the project:	The dispersed recreational use of Kyle wash downstream from the Kyle Canyon Campground would continue; however, the acreage is unquantified.	Temporary: 2.0 acres Permanent: 1.30.0 acres (includes approximately 29.4 acres of the former golf course property)	Same as the Proposed Action.
Measure—Acres of known mate selection habitat within the Kyle wash that would experience impacts due to the project:	No change to existing condition.	Temporary: 0.7 acre Permanent: 0.6 acre	Same as the Proposed Action.
Measure—Description of threats to resource due to construction and operations of the project:	No change to existing condition. Impacts would continue to occur, including dispersed recreation use and creation of new unauthorized trails within important host and nectar plan populations.	Construction: equipment noise, vibration would disturb mate selection. Operations: increased public use, recreational activities on and off-trail would disturb mate selection; hiking would trample host plants. This alternative has the highest potential to impact foraging habitat and mate selection habitat from increased recreation use as it has the highest level of development and parking capacities. This alternative includes some beneficial effect by expanding linear habitat in the mate selection area through planned restoration in the Valley area and at Kyle CCC Camp.	Construction: equipment noise, vibration would disturb mate selection. Operations: increased public use, recreational activities on and off-trail would disturb mate selection; hiking would trample host plants. This alternative would have less impact on foraging and mate selection habitats from increased recreation use than the Proposed Action due to a lower scale of development, but would have more impact than the No Action Alternative. This alternative includes some beneficial effects through restoration in the Valley area and at Kyle CCC Camp at a level slightly higher than the Proposed Action.
Design Criteria		Design criterion W5 (see Table 2-4) incorporated in action alternatives to minimize effects from construction activities.	
Mitigation		Install permanent fence at Kyle Canyon Campground to funnel trail users onto the Kyle Canyon Wash Trail, including fence along the first 100 feet of the trail. Monitor recreation use of the Kyle Canyon Wash Trail in the mate selection habitat area for impacts off the designated trail and install additional fence sections if necessary to prevent impacts from user-created trails.	

Table 2-3. Summary Comparison of Effects by Alternative

	No Action Alternative	Proposed Action	Market Supported Alternative
RECREATION			
Quantity and Diversity of Recreation	<p>This alternative provides visitors to the project area with the lowest quantity and diversity of recreation facilities.</p> <p>Picnicking would continue to occur in developed and dispersed areas.</p> <p>Kyle Canyon Campground would continue to provide camping, but would not be reconstructed.</p> <p>Fletcher Canyon Trail (1.6 miles) and trailhead would be maintained for hiking and equestrian use.</p>	<p>This alternative offers an increased diversity of recreation opportunities (Table 2-1) in developed settings with group picnic and campgrounds, an equestrian campground, OHV trailhead and 48 miles of non-motorized multi-use trails. Equestrian and mountain bike rental facilities would also be available.</p>	<p>This alternative offers a diverse range of developed recreation opportunities; however, the capacity of the facilities would be smaller than in the Proposed Action (Table 2-1). Facilities proposed include one group picnic site, no group campgrounds, camp cabins, a commercial campground capable of accommodating Class A RVs, no OHV trailhead and 44 miles of non-motorized multi-use trails. Rental facilities are not included.</p>
	<p>Dispersed camping would continue alongside roads and motorized trails.</p>	<p>The Forest Service may implement an administrative action that would prohibit dispersed camping within 300 feet on either side of Forest Service roads and trails open to motorized vehicles, trailheads, county roads, and state highways within the Lee Canyon, Kyle Canyon, and Deer Creek areas of the SMNRA, including connecting and tributary Forest Service routes such as those in the Macks Canyon and Harris Springs areas.</p>	<p>Same as the Proposed Action.</p>
	<p>Unauthorized trails and roads would remain undesignated and may be closed as necessary to reduce or prevent resource damage.</p> <p>Hunting and trapping would continue to occur in the project area, as permitted by Nevada Department of Wildlife (NDOW) and Nevada Revised Statutes (NRS). Recreational shooting of firearms (e.g., target practice) would continue to occur.</p>	<p>Opportunities for dispersed unmanaged recreation activities in undefined areas in the project area would be reduced. Unauthorized trails and routes in the project area would be closed and restored or converted to designated uses. Much of that use would be redirected to the developed facilities proposed for construction, while some users would likely be displaced to other areas of the SMNRA. Shooting of firearms would also be redirected to other areas of the SMNRA as permitted by NDOW and NRS due to the prohibition on discharging firearms near developed</p>	<p>Same as the Proposed Action.</p>

	No Action Alternative	Proposed Action	Market Supported Alternative
		<p>recreation and Forest Service facilities. Hunting and trapping within the project area would continue as permitted by NDOW and the NRS and as allowed under 36 CFR 261Subpart A 261.10 (d)(1and 2).</p>	
<p>Safety and Accessibility for Persons with Disabilities and the Elderly</p>	<p>Visitor safety and accessibility are compromised due to the unstructured nature of the recreation facilities and uses. Many of the existing facilities and services do not meet the standards set forth by the Forest Service Outdoor Recreation Accessibility Guidelines (FSORAG) or Forest Service Trail Accessibility Guidelines (FSTAG). There are no trails outside of the existing developed areas accessible to people with disabilities or the elderly.</p>	<p>Visitor safety and accessibility would be improved with defined structures, facilities, and uses. New recreation facilities would meet accessibility standards set forth by FSORAG and FSTAG. Existing facilities would be upgraded to the extent practicable to meet these same standards.</p> <p>Accessibility to recreation resources would be increased for a wide variety of skill and ability levels. Trails would be designed to meet the needs of different user groups including people with disabilities and the elderly.</p>	<p>Same as the Proposed Action.</p>
	<p>Passenger car access would continue to be limited to the existing developed sites and trails immediately accessible from the highway.</p> <p>Safety of existing unauthorized trail infrastructure is compromised due to the improvised nature of many of the facilities, lack of designated use areas, and limited information. Lack of trail use designations has led to unsafe conditions and user conflicts.</p>	<p>All newly developed recreation facilities would have high standard road access, allowing for safe travel by all types of passenger vehicles.</p> <p>Trails would be designated, designed, and managed for appropriate mixes or individual user groups to enhance safety. Conflict between non-motorized and motorized trail users would be limited.</p> <p>Trails and roads would be signed and designated uses clearly identified. Information kiosks with trail maps and mileages would be posted at trailheads.</p>	<p>Same as the Proposed Action.</p>
<p>Recreation Opportunity Spectrum (ROS)</p>	<p>The majority of the project area, accessed via SR 157 and SR 158, has been inventoried as Roded Natural. Some outlying areas, including areas east of Telephone Canyon Road, fall within the Semi-primitive Motorized category. These classifications would remain under the No Action Alternative.</p>	<p>Implementation of the Proposed Action would expand the ROS spectrum to include the Rural and Urban classifications for the developed areas. The developed areas (Village, Valley, and Northern Area) are located on land already disturbed by the abandoned golf course and located in an area where development is already present with the existing hotel and condominium. The remainder of the project area, would have less developed facilities (trails and trailheads) or no facilities, and would still provide a Roded Natural recreation setting.</p>	<p>Same as the Proposed Action. However, the smaller size of the Village and the smaller facilities would make it feel less urban, but it would still be a developed area. Conversely, the commercial-style campground would be more developed than the campground in the Proposed Action, but it would still generally fall within the Rural classification.</p>

	No Action Alternative	Proposed Action	Market Supported Alternative
BIOLOGICAL RESOURCES			
General Biological Resources	The project area would continue to be used for dispersed recreation resulting in adverse impacts on individual plants and degradation of wildlife habitat.	Approximately 425 acres of permanent and approximately 653 acres of temporary construction disturbance would occur on wildlife and plant habitat.	Approximately 331 acres of permanent and approximately 579 acres of temporary construction disturbance would occur on wildlife and plant habitat.
Federally Listed Threatened, Endangered or Candidate Species	No Effect.	No Effect.	No Effect.
Regional Forester's (R4) List of Sensitive Species for the Toiyabe National Forest	The project area would continue to be used for dispersed recreation resulting in adverse effects on individual plants and degradation of wildlife habitat.	May affect individuals of eight species, but is not likely to cause a trend to federal listing or loss of viability.	Same as the Proposed Action.
Conservation Agreement and MSHCP Covered Species	The project area would continue to be used for dispersed recreation resulting in adverse effects on individual plants and degradation of wildlife habitat.	The Proposed Action would adversely affect habitat of 19 species, but would not affect species viability. The Proposed Action would adversely affect individual plants and habitat of four species, but would not affect the species viability.	Same as the Proposed Action.
Management Indicator Species of the SMNRA	The project area would continue to be used for dispersed recreation resulting in adverse effects on individual plants and degradation of wildlife habitat.	Not expected to adversely affect six species viability. Beneficial habitat changes could increase the population of three species.	Same as the Proposed Action.
CULTURAL RESOURCES			
	Effects on historic properties would continue as they have in the past. Cultural resource sites located in areas where recreational use occurs would continue to be affected by trampling, soil erosion, vertical and horizontal artifact displacement, and artifact breakage. Vandalism, site disturbance and artifact collection would continue to	Recommendations for National Register of Historic Places (NRHP) eligibility have been generated so that impacts on eligible sites could be assessed. Evaluation and assessment of effects on cultural resources with the Nevada State Historic Preservation Office (SHPO) and culturally affiliated tribes is ongoing and would continue through project implementation. The Kyle CCC Camp was previously determined eligible for the NRHP and four newly	Effects on cultural resources under this alternative would be similar to those of the Proposed Action. Slot canyon trail bridge construction and the commercial-style campground were identified by the Nuwuvi Working Group as areas of high concern regarding impacts on the landscape.

No Action Alternative	Proposed Action	Market Supported Alternative
<p>occur as a result of the dispersed nature of recreation activities in the project area.</p> <p>The historic structures at the Kyle CCC Camp would remain in the same location and setting. Existing non-historic structures would remain in the same location and existing Forest Service functions in this area would continue.</p>	<p>recorded sites have been recommended eligible for the NRHP.</p> <p>Effects on cultural resources are anticipated to result from construction of proposed facilities in the form of vertical and horizontal displacement and artifact breakage. Recreational activities may also result in trampling, breakage, vandalism, site disturbance and artifact collection and removal. Dispersed recreation in the project area would be reduced and effects on cultural resources associated with this type of use would also be reduced.</p> <p>This is a sacred landscape to Nuwuvi people. The proposed activities and development in general would not be culturally compatible in areas of Nuwuvi significance, and would have an adverse impact on the landscape.</p> <p>Under this alternative, the historic structures located at the Kyle CCC Camp would be restored and maintained for managed public use as a historic site. Non-historic structures would be removed and the areas restored.</p> <p>The Forest Service and the Nevada SHPO have developed a Programmatic Agreement that will guide Section 106 of the National Historic Preservation Act (NHPA) consultation between the Forest Service, Nevada SHPO, and culturally affiliated tribes throughout project design and construction. In addition, the agreement will guide the development of any cultural resource mitigation identified through the Section 106 consultation process.</p>	<p>This alternative is anticipated to attract fewer visitors than the Proposed Action and, therefore, operational impacts on cultural resources would be less.</p>

	No Action Alternative	Proposed Action	Market Supported Alternative
VISUAL RESOURCES			
Effects on Inventoried Visual Quality Objective (VQO) Zones	For the most part there would be no change in existing Retention and Partial Retention VQOs. Lands within the project area fall within three inventory VQO classes: Preservation, Retention or Partial Retention. However, views of the 128-acre former golf course property would not achieve the Retention VQO and would be consistent with the Modification VQO. Restoration of the former gold course property would allow for a higher VQO to be met over time.	<p>The effects on the visual character would be adverse because of the increased amount of apparent landscape alterations associated with the new recreation and administrative facilities.</p> <p>Proposed trail networks would negatively impact visual quality objectives on lands inventoried as Retention and Partial Retention. However, roads and trails (authorized and user created) already exist and reducing the width of existing roads and trails when converted to non-motorized trails would reduce the visual impact of these existing roads and trails.</p> <p>The majority of the development would occur within areas inventoried as Retention. Developed facilities such as the Village, Main Camping and Picnic Area, and the Northern Area could affect views from primary viewpoints or from SR 157. Therefore, the Retention VQO would not be met and the Modification VQO would be maintained.</p>	<p>The qualitative nature of the effects on the visual character would be the same as the Proposed Action except for the following:</p> <ul style="list-style-type: none"> ▪ The wildlife rehabilitation center is located on land inventoried as Partial Retention. The visual effect of this facility would not exceed the thresholds set by the Partial Retention VQO. ▪ A general downsizing of recreation facilities would reduce the extent of the associated landscape alterations. ▪ The commercial campground would create a more intensively developed area but would cover a smaller area than the campgrounds in the Proposed Action.
Effects on Natural Landscape Character	There would be no effect on the natural landscape character including the high desert shrublands, low conifer zone, or forest zone.	There would be no major changes to the overall natural landscape character in the project area. Localized effects on landscape character would be greatest in the low conifer zone, where the majority of the development would occur. Changes to existing landscape character in this zone would be evident from SR 157 and SR 158. The most obvious change would be the more developed nature of the Village area and other nearby facilities. While restoration and revegetation efforts would have a moderate beneficial effect on natural landscape character, the more urban character of the Village would be the most obvious	Same as the Proposed Action, with the exception that the denser, more developed character of the commercial campground would create a more urban zone than the traditional Forest Service-style campgrounds in the Proposed Action. The more urban character of the commercial campground would be most visible from the viewpoints along SR 158.

No Action Alternative	Proposed Action	Market Supported Alternative	
	<p>change. Proposed facilities in high desert shrubland areas would be mostly trails, which would result in a negligible effect on the natural landscape character. Developments in the forest zone would also be minimal, with little or no effect on landscape character.</p> <p>The Forest Service acknowledges that all new construction would have a degree of impact on the American Indian experience of viewscapes and isolationism. In the design and construction phases of the Middle Kyle Complex, consultation will be conducted with culturally affiliated American Indian nations to ensure that these impacts are mitigated where and when feasible.</p>		
COMPLIANCE WITH THE GENERAL MANAGEMENT PLAN (GMP) FOR THE SMNRA			
GMP Standard 0.31	No construction would occur within the 100-yard buffer zone of potential habitat for rough angelica in compliance with the GMP.	A project-specific amendment to the GMP would be required. Approximately 4 acres of permanent and approximately 17 acres of temporary construction disturbance would occur on potential rough angelica habitat.	Same as the Proposed Action, with the exception that an additional approximate 0.5 acre of potential rough angelica habitat would be disturbed on both a permanent and temporary basis.
GMP Guideline 11.71	The Harris Springs site would continue to be available for permitted designated group use, including blackpowder shooting and other uses in compliance with the GMP.	A project-specific amendment to the GMP would be required. Construction of recreation facilities at the Harris Springs site would not comply with Guideline 11.71. Construction of these facilities would eliminate use of this area for permitted designated group uses, including blackpowder shooting.	Same as the Proposed Action.

2.3.1 Design Criteria and Mitigation Common to All Alternatives

The Forest Service developed design criteria and minimization measures to be implemented under the Proposed Action and Market Supported Alternative in order to minimize the environmental impact of any action on the project area. The design criteria common to all alternatives are displayed in Table 2-4.

Mitigation measures were identified to minimize the significant effects of specific actions on resources. The comparison of effects with and without implementation of mitigation measures is disclosed in Chapter 3. Proposed mitigation measures are listed in Table 2-5.

Table 2-4. Design Criteria Common to Action Alternatives

Resource	Objective	Location	Number	Design Criteria
Air Quality	Minimize Criteria Pollutants (PM ₁₀ , PM _{2.5} , CO, VOC, NO _x , SO ₂ , CO ₂)	Project area	AQ1	<ul style="list-style-type: none"> ▪ Treatments for construction slash, stumps, and logs to utilize chipping, burial, and/or removal methods; pile and burn disallowed. ▪ Comply with applicable best management practice dust control measures in the Dust Control Plan (Humboldt-Toiyabe National Forest 2003) and the CCDAQEM Construction Activities Dust Control Handbook. ▪ Biomass heating /cooling systems will utilize clean woodchip/pellet fuel stocks free of extraneous debris and garbage. ▪ Design and construct new motorized public access roads in compliance with CCDAQEM Air Quality Regulations, Section 91.
Botany	Ensure impacts on sensitive plants are minimized by clearly defining construction areas.	General project area other than trail construction.	B1	<ul style="list-style-type: none"> ▪ Construction areas, other than trails, will have temporary fencing erected along the construction limits of proposed improvements prior to any ground-disturbing activities. Construction limits will be established to minimize ground disturbance. Contractor will be required to contain all construction activities within the approved construction limits and maintain temporary fencing until notified by the Contracting Officer.
	Minimize impacts on succulents.	Project area	B2	<ul style="list-style-type: none"> ▪ Joshua tree (<i>Yucca brevifolia</i>), other yuccas, and cacti located within construction limits that could be affected by construction activities will be flagged and avoided to the extent practicable.
	Emphasize use of native species in the restoration and landscaping of the proposed project area.	Project area	B3	<ul style="list-style-type: none"> ▪ Implement recommendations included in <i>Vegetation Management Plan for the Kyle Campground, Kyle CCC Camp and the Proposed Middle Kyle Complex</i>. ▪ Areas near buildings and turf areas may utilize limited amounts of non-native, non-invasive plants to accomplish landscaping goals.
	Minimize impacts on sensitive species and their habitat, and enhance regulatory compliance.	Project area	B4	<ul style="list-style-type: none"> ▪ Upon award of construction contract(s), key construction personnel will receive a briefing regarding the sensitive species and habitats that occur within the project area. This will include providing informational materials to each member of the construction crew relative to sensitive species identification and impact avoidance; methods used in protection of resources, and management requirements.

Resource	Objective	Location	Number	Design Criteria
	Minimize impacts on sensitive plants from trail construction and trail users.	Proposed trail construction in project area	B5	<ul style="list-style-type: none"> During trail design and layout, proposed trail alignments will be adjusted to the extent feasible to avoid populations of rough angelica (<i>Angelica scabrida</i>), Clokey greasebush (<i>Glossopetalon clokeyi</i>), inch high fleabane (<i>Erigeron uncialis</i> var. <i>conjugans</i>) (in stable cliff habitat), Jaeger beardtongue (<i>Penstemon thompsoniae</i> ssp. <i>jaegeri</i>), Charleston pinewood lousewort (<i>Pedicularis semibarbata</i> var. <i>charlestonensis</i>), Jaeger's ivesia (<i>Ivesia jaegeri</i>), Clokey milkvetch (<i>Astragalus aequalis</i>), New York Mountains Catseye (<i>Cryptantha tumulsa</i>), and Charleston violet (<i>Viola purpurea</i> var. <i>charlestonensis</i>, syn. <i>Viola charlestonensis</i>).
	This will minimize impacts on sensitive plants, soils, and habitat.	Project area	B6	<ul style="list-style-type: none"> Vegetation removal around sensitive plants and their habitats will be conducted using appropriate methods and equipment (manual or mechanized).
	Utilization of native plants for restoration and use of seed from plants that would be lost from construction, will maintain the genetic variability of those species in the area.	Project area	B7	<ul style="list-style-type: none"> Where feasible, collect seed from sensitive plants and other target species from areas that would be directly impacted to use in revegetating restoration areas in suitable habitat. Areas suitable for revegetation will be defined prior to implementation of revegetation/restoration activities in consultation with the SMNRA or Forest Service botanist. The establishment of sensitive and rare plants and host and larval plants for sensitive and rare butterflies in areas of developed landscaping will be considered experimental and educational populations and will not be managed for species viability.
Facility Design	Ensure new and reconstructed facilities reflect the unique settings of the SMNRA and are attractive, functional, and sustainable.	Project area	FD1	<ul style="list-style-type: none"> Follow guidelines in 2007 <i>Spring Mountains National Recreation Area Built Environment Image Guide</i> for the design, construction, and rehabilitation of project facilities. Follow applicable Forest Service requirements for compliance with U.S. Green Building Council Leadership in Energy and Environmental Design (LEED).
	Ensure new facilities meet required standards.	Project area	FD2	<ul style="list-style-type: none"> Design new facilities to comply with appropriate Forest Service Manual and Handbook requirements, and applicable codes, regulations, accessibility standards and Executive Orders. Design primary facilities and infrastructure for year-round use.
	Minimize resource impacts from construction staging areas.	Project area	FD3	<ul style="list-style-type: none"> Locate/designate construction staging areas in areas where intensive development is planned or in previously disturbed areas designated for restoration.

Resource	Objective	Location	Number	Design Criteria
Cultural Resources	Protect known and undiscovered cultural resource sites.	Project area	HR1	<ul style="list-style-type: none"> ▪ If unanticipated resources are discovered during project implementation, all work will stop in the vicinity, the Contracting Officer will be notified, and work will not resume until cleared by a qualified cultural resources manager. ▪ Design requirements for proposed historic building renovations will be under the direction of an architectural historian and consultation with SHPO will be initiated as required.
Noxious Weeds	Prevent weed introduction and control the spread of invasive and non-native species.	Project area	NW1	<ul style="list-style-type: none"> ▪ Employ Forest Service and Humboldt-Toiyabe National Forest best management practices for weed control.
	Prevent the spread of noxious weeds on disturbed soils.	Project area	NW2	<ul style="list-style-type: none"> ▪ Revegetate temporary disturbance areas at first appropriate opportunity following project work with specified seeding and plantings. ▪ Use weed-free rock sources for any imported soil and aggregate materials. The Forest Service will determine if a source is weed free or not. A list of approved local commercial sources will be included in contract construction documents. ▪ All vehicles and equipment must be pressure washed prior to entering and operating in the project area. Wash areas will be designated and monitored by the Forest Service for 3 years after use of the wash areas for infestation of invasive and noxious weeds. Wash locations would either be areas that will have later project development such as a parking lot, or an area where a small plastic-lined sump can be located to collect washed material if needed. ▪ Minimize soil disturbance within project area by locating equipment staging and material storage areas within previously disturbed areas and/or areas designated for permanent improvements. ▪ Use native plant material and/or noxious weed-free seed material and mulches for rehabilitation, restoration, and when possible/appropriate in landscaping.
	Ensure successful mitigation after project construction is completed.	Project area	NW3	<ul style="list-style-type: none"> ▪ Monitor and treat infestations of noxious weeds following construction activities following mitigations in the Humboldt-Toiyabe National Forest Decision Notice for the Noxious Weed Control Program (1996).

Resource	Objective	Location	Number	Design Criteria
Soils	Minimize soil erosion, maintain soil productivity, prevent soil quality and productivity impacts, and maintain regional soil quality standards.	Project area	S1	<ul style="list-style-type: none"> ▪ Implement best management practices found in the Forest Service 1988 <i>Soil and Water Conservation Practices Handbook</i>. ▪ Where appropriate, revegetate closed roads, trails and restoration areas consistent with the <i>Vegetation Management Plan for the Kyle Campground, Kyle CCC Camp and the Proposed Middle Kyle Complex</i>.
Visual Quality	Reduce light pollution potential from developed sites.	Project area	VQ1	<ul style="list-style-type: none"> ▪ Utilize appropriate lighting to minimize light pollution and preserve dark skies, as specified under Section A.2, <i>Light</i>, in Appendix A of the 2007 <i>SMNRA Built Environment Image Guidelines</i>.
	Manage viewshed within project area to retain visual quality objectives.	Project area	VQ2	<ul style="list-style-type: none"> ▪ Take care in the design of facilities in areas of high visibility or high public use. In particular, such areas would include the Village and Valley, which would be major new primary use areas and are also within plain view of the scenic byway, especially from the overlook on SR 158. ▪ Install all new electrical and communication utilities underground where feasible. ▪ Ensure that design and construction of all new government-owned and permitted facilities comply with the 2007 <i>SMNRA Built Environment Image Guidelines</i>.
Water	Minimize sediment transport into stream channels during construction.	Project area	WA1	<ul style="list-style-type: none"> ▪ Implement site-appropriate best management practices found in the June 2008 Nevada Contractors Field Guide for Construction Site Best Management Practices. ▪ Implement appropriate principles in the January 2009 Las Vegas Valley Construction Site Best Management Practices Guidance Manual. ▪ Implement best management practices found in the Forest Service 1988 <i>Soil and Water Conservation Practices Handbook</i>.
	Prevent structural damage and minimize hazards to public safety from seasonal debris flows.	Project area	WA2	<ul style="list-style-type: none"> ▪ Locate permanent buildings outside the 50-year floodplain of Kyle wash and its tributaries to prevent structural damage and to avoid a hazard to public safety caused by debris and flood flows. ▪ Provide information at appropriate locations to warn visitors of seasonal debris and flood flow hazards.
	Water conservation.	Project area	WA3	<ul style="list-style-type: none"> ▪ Implement appropriate water and waste water conservation design and construction technologies and strategies consistent with LEED and agency Environmental Management System (EMS) goals.

Resource	Objective	Location	Number	Design Criteria
	Minimize impacts on surface and ground water quality.	Project area	WA4	<ul style="list-style-type: none"> ▪ Design, construct, and maintain facilities in compliance with applicable sections of Chapter 24.40 of the Clark County Code, “Storm Sewer System Discharge.” Coordinate with Clark County Department of Air Quality and Environmental Management as appropriate. ▪ Comply with EPA Spill Prevention Control and Countermeasures Plan requirements for construction activities. ▪ Follow low-impact development (LID) design practices for storm water management that emphasize the use of naturally occurring and constructed features to reduce the impacts of increased flow rates and volumes associated with increases in impervious area. ▪ Implement grading, drainage, parking, and wastewater system design and construction consistent with 2007 <i>SMNRA Built Environment Image Guidelines</i> and appropriate LEED technologies and strategies.
	Compliance with Clark County 208 Area-wide Water Quality Management Plan (WQMP)	Project area	WA5	<ul style="list-style-type: none"> ▪ Coordinate with Clark County Department of Air Quality and Environmental Management for project compliance with Clark County 208 Area-Wide Water Quality Management Plan recommendations and provisions throughout project design and implementation phases as appropriate.
Wildlife	Minimize direct impacts on nesting migratory birds.	Project area and active nest sites	W1	<ul style="list-style-type: none"> ▪ Coordinate with the Forest Service District biologist to identify survey needs for active nesting sites prior to land clearing. If nests are located, or if other evidence of nesting (i.e., mated pairs, territorial defense, carrying nesting material, transporting food, etc.) is observed, a protective buffer as determined by the biologist (the size depending on the habitat requirements of the species and type of construction activities) should be delineated and the entire area avoided to prevent destruction or disturbance to nests until they are no longer active. ▪ Avoid impacts on western burrowing owl during nesting season by establishing an appropriate buffer area around active burrow sites and avoiding the area.
	Limit reduction of important cover/foraging habitat for wildlife (e.g., small mammals, amphibians, reptiles, invertebrates, and neotropical birds).	All known habitat areas within project area	W2	<ul style="list-style-type: none"> ▪ Provide a minimum of five wildlife cover sites per acre within developed or primitive recreation sites by maintaining or adding dead and down wood material or rocks at appropriate locations. ▪ Disturb brush piles prior to removing or burning to encourage wildlife to exit piles.

Resource	Objective	Location	Number	Design Criteria
	Prevent wildlife from becoming trapped in open trenches or excavations during construction.	All known habitat areas within project area	W3	<ul style="list-style-type: none"> Wildlife escape ramps or ladders would be placed every 200 feet in open utility pipeline trench segments or other excavations during construction to avoid wildlife entrapment. Wildlife escape ramps and ladders may consist of tree branches, wood boards, rock piles, and sloped soil. The escape ramps and ladders should span from trench/excavation floor to top of trench wall, at an incline not exceeding 45 degrees, to facilitate effective wildlife escape. The perimeters of excavations that have side slopes exceeding 45 degrees will be fenced to exclude wildlife or will be covered with plywood or similar material to prevent wildlife falls/entrapment.
	Limit reduction of important nesting/foraging habitat for wildlife (e.g., bats; woodpeckers; chickadees; flamulated, western screech, and pygmy owls; and insects).	All known habitat areas within project area	W4	<ul style="list-style-type: none"> Retain all standing dead trees, or snags, that do not pose a threat to public safety or extreme fire danger. Snags are retained to provide habitat for cavity-nesting animals and animals that forage on insects living within snags. This criterion applies to Pinyon/Juniper, Mixed Conifer, and Bristlecone Pine land cover associations. Important wildlife snags will be flagged for retention within all project areas unless they present a falling hazard that could affect private lands, travel corridors, and/or developed facilities.
	Minimize habitat impacts on Spring Mountains acastus checkerspot butterfly species.	Spring Mountains acastus checkerspot butterfly documented breeding/mate selection areas within project area.	W5	<ul style="list-style-type: none"> Employ construction techniques to minimize temporary disturbance through known Spring Mountains acastus checkerspot butterfly breeding areas. Prohibit construction of Kyle Canyon Wash Trail and buried utilities from early May to mid July. Erect temporary construction fencing along the proposed construction limits of planned improvements prior to any ground-disturbing activities. Contractor will be required to contain all construction activities within the approved construction limits and maintain temporary fencing until notified by the Contracting Officer. Avoid where possible, occurrences of butterfly larval host plants including rubber rabbitbrush (<i>Chrysothamnus nauseosus</i>), yellow (sticky-leaf) rabbitbrush (<i>Chrysothamnus viscidiflorus</i>), viscid rabbitbrush (<i>Chrysothamnus viscidiflorus</i> var. <i>viscidiflorus</i>), downy rabbitbrush (<i>Chrysothamnus viscidiflorus</i> var. <i>puberulus</i>), white rubber rabbitbrush (<i>Ericameria nauseosa</i> var. <i>holocea</i>), smooth fruit rabbitbrush (<i>Chrysothamnus nauseosus</i> var. <i>leiospermus</i>), and Mojave rabbitbrush (<i>Chrysothamnus nauseosus</i> var. <i>mojavensis</i>). Based on recommendations from Forest Service botanist/biologist collect native seed from appropriate larval host and nectar plants and revegetate temporary construction disturbance areas following completion of construction. Implement construction dust control measures to minimize impacts on blooming nectar plant populations.

Resource	Objective	Location	Number	Design Criteria
	Avoid impacts on bat species during construction.	Project area	W6	<ul style="list-style-type: none"> ▪ Restrict work to daylight hours. ▪ Maintain 500-foot distance between construction activities and potential bat roosts during winter months. ▪ Design underground parking structures in a manner that will minimize bat mortality and breeding/nesting activity within the parking structure.
	Minimize impacts on sensitive species and their habitat, and enhance regulatory compliance.	Project area	W7	<ul style="list-style-type: none"> ▪ Prior to entering the construction area, key construction personnel will receive a briefing regarding the sensitive species and habitats that occur within the project area. This will include providing informational materials to each member of the construction crew relative to sensitive species identification and impact avoidance; Contracting Officer notification procedures if a sensitive, threatened, or endangered species is encountered; and, permit retention and compliance procedures.
	Vector control	Artificial open water bodies	W8	<ul style="list-style-type: none"> ▪ Design open water bodies and/or employ appropriate environmentally friendly techniques to control mosquito populations.
	Minimize wildlife impacts at waste treatment plants	Lagoon treatment plants or other waste water treatment options with potential to adversely affect wildlife	W9	<ul style="list-style-type: none"> ▪ Coordinate with Nevada Department of Wildlife (NDOW) on appropriate wildlife protection measures at waste water treatment plants depending on technical issues, water quality, or other concerns to minimize adverse effects on wildlife.
	Comply with Nevada State fishing/stocking regulations	Project area	W10	<ul style="list-style-type: none"> ▪ Coordinate with NDOW on any proposed commercial or stocked fishing activities.

Table 2-5. Proposed Mitigation Measures

Number	Resource	Location/Alternative	Mitigation Description
MM- Wildlife 1	Spring Mountains acastus checkerspot habitat	Area in Kyle wash where proposed Kyle Canyon Wash Trail construction would occur, from Kyle Canyon Campground to the Village / Proposed Action and Market Supported Alternative	Install permanent fence at Kyle Canyon Campground to funnel trail users onto the Kyle Canyon Wash Trail, including fence along the first 100 feet of the trail. Monitor recreation use of the Kyle Canyon Wash Trail in the mate selection habitat area for impacts off the designated trail and install additional fence sections if necessary to prevent impacts from user-created trails.
MM- Botany 1	Clokey milkvetch	Kyle Canyon Campground / Market Supported Alternative	A botanist will provide layout/location recommendations for the fence proposed on the southern perimeter of the Kyle Canyon Campground under the Market Supported Alternative to protect existing plant populations and habitat on the periphery of the campground and to direct users to designated trails.
MM- Botany 2	Clokey greasebush, inch high fleabane (in stable cliff habitat), Jaeger beardtongue, Jaeger's ivesia, Clokey milkvetch, and Charleston violet	Trail on upland south of Village Area / Proposed Action and Market Supported Alternative	Design and layout of trail alignments will be adjusted to provide a setback from the cliff edge as great as 25 feet, to avoid populations of sensitive cliff-dwelling plants and Clokey milkvetch.

2.4 Alternatives Considered but Eliminated from Detailed Study

Federal agencies are required by NEPA to rigorously explore and objectively evaluate all reasonable alternatives and to briefly discuss the reasons for eliminating any alternatives that were not developed in detail (40 CFR 1502.14). Reasons for not developing an alternative in detail may include: 1) failure to meet purpose and need²; 2) technologically infeasible; 3) clearly unreasonable; 4) unreasonable environmental harm; 5) cannot be implemented; 6) remote or speculative; 7) illegal; and 8) duplication within the existing range of alternatives. Therefore, a number of alternatives were considered, but dismissed from detailed consideration for reasons summarized below.

² Refer to Section 1.3 for the Purpose and Need of the Middle Kyle Complex.

2.4.1 Traditional Day Use Alternative

This alternative was identified in the Business Plan (PwC 2008). This alternative is a scaled-back version of Emerging Destination Alternative, also described in that report. Under this alternative, a small visitor center would serve as a contact station with operations similar to the current interim visitor center. This alternative focused on providing day use activities such as hiking and picnicking that would attract repeat visitors from Las Vegas.

This alternative was eliminated from further consideration because it does not meet the purpose and need for action. Specifically, this alternative would not provide for a comprehensive destination visitor facility and does not expand on environmental interpretation activities.

2.4.2 Modified Status Quo Alternative

This alternative was also analyzed in the Business Plan (PwC 2008). Under this alternative the existing Kyle Canyon Interim Visitor Center would be maintained and existing facilities in Lee and Kyle Canyons would be maintained or improved using approved SNPLMA funding. The only new improvement under this alternative would be a wayfinding system.

This alternative was eliminated from further consideration because it does not meet the purpose and need for action. Specifically, this alternative would not provide for recreation opportunities outside the sensitive upper canyon areas and would not meet the expected increase in demand for recreation opportunities.

2.4.3 Middle Kyle Canyon Framework Plan Option 2

This alternative was identified in the pre-NEPA planning document *Middle Kyle Canyon Framework Plan* (Shapins Associates 2005). Under this alternative, new facilities would be located in areas that were already ecologically disturbed. Small buildings and outdoor spaces that support environmental interpretation activities would be emphasized. Day-use recreation facilities would be sized only to replace facilities in the upper canyon. It protects resources through conservation and more stringent management of visitor use. Facilities in the upper canyons would be expected to continue to serve visitors.

This alternative would provide for additional recreation and environmental interpretation opportunities outside the upper canyon area, although not to the extent as provided under the Proposed Action. It addresses the Spring Mountains acastus checkerspot butterfly issue as no new construction would occur in those areas under this alternative. Refer to *Middle Kyle Canyon Framework Plan* (Shapins Associates 2005) for a more detailed explanation of this alternative.

This alternative was eliminated from further consideration because it does not meet the purpose and need for action. This alternative would not provide a

diverse range of additional recreation opportunities, a comprehensive destination visitor facility near the entrance to the SMNRA, or a focused destination for visitors to the SMNRA with multiple opportunities for on-site interpretation and information.

2.4.4 Middle Kyle Canyon Framework Plan Option 3

This alternative was identified in the pre-NEPA planning document *Middle Kyle Canyon Framework Plan* (Shapins Associates 2005) and emphasizes revenue generation, focusing on retail and food venues, event spaces, and rental activities. A high proportion of revenue-generating uses to recreation facilities would ensure that the SMNRA could meet long-term operations and maintenance expenses. On-going programs that do not pay for themselves would be minimized. Refer to *Middle Kyle Canyon Framework Plan* (Shapins Associates 2005) for a detailed description of this alternative.

This alternative would provide for some additional recreation and environmental interpretation opportunities outside the upper canyon area. It addresses the Spring Mountains acastus checkerspot butterfly issue because no new construction is proposed in those areas under this alternative. This alternative was eliminated from further consideration because the likelihood of successful implementation was remote or speculative. The Business Plan analysis showed inadequate market demand to justify the various elements of the proposal and the unlikelihood that sufficient revenue would be generated.

2.4.5 Restoration of 128-Acre Site Alternative

This alternative would include similar components as the No Action Alternative but would restore the 128-acre site acquired by the Forest Service in 2004. Restoration of the property would consist of removing rubbish/trash illegally dumped on the site, removal of asphalt, sod, and ornamental trees and non-native vegetation to restore the property to a more natural state. The existing ponds would be used for fire suppression activities. This alternative was eliminated from further consideration because it did not meet the purpose and need of the project.

2.4.6 No Retail Alternative

Under this alternative retail facilities would not be included beyond what currently exists at the existing Kyle Canyon Interim Visitor Center. This alternative was eliminated because it does not meet any of the purpose and need statements of the project.

2.4.7 Utilize Partially Built Structures for Administrative Facilities

This alternative would use existing structures on the 128-acre site acquired by the Forest Service. Construction of these structures was never completed and under this alternative they would be utilized for Forest Service administrative facilities. This alternative would relocate the administrative facilities outside the Kyle CCC Camp, allowing for restoration of the historic structures. No visitor use or recreation facilities were proposed as part of this alternative. This alternative was eliminated because it was not economically feasible to retrofit the structures and it did not address the purpose and need of providing additional recreation and environmental interpretation opportunities. The remaining structures were removed in 2006 due to public safety considerations.

2.4.8 Relocate Cathedral Rock Picnic Facilities to 128-acre Site

The focus of this alternative was to relocate the existing picnic facilities at Cathedral Rock to the 128-acre site to reduce impacts on sensitive species in the upper canyon. This alternative would also provide expanded trailhead parking at the existing Cathedral Rock site, but the picnic sites would be closed and rehabilitated. This alternative was eliminated because it does not meet the purpose and need of the project to provide a diverse range of recreation opportunities or a focused destination for visitors to the SMNRA.

2.4.9 Interagency Visitor Center Alternative

This alternative focused on establishing a single visitor center in the lower Kyle Canyon area, near the intersection of SR 157 and US 95 that would serve the needs of both the Forest Service and the U.S. Fish and Wildlife Service. This alternative was dropped from consideration when the U.S. Fish and Wildlife Service decided that a different location would be beneficial for their agency.

2.4.10 Utilize Lee Canyon More Extensively Alternative

This alternative focused on expanding SMNRA visitor use to Lee Canyon, thereby relieving pressure in Kyle Canyon. A new visitor center and expanded camping and day-use facilities would be constructed east of SR 158 near the intersection with SR 156.

Under this alternative, the cost was prohibitive to extend commercial power to Lee Canyon. Also, much of the terrain suitable for new development is located east of SR 158 in private ownership, and additional water rights would need to be

secured or existing Forest Service water rights transferred to a new point of diversion.

Locating a visitor center in Lee Canyon would not “intercept” the majority of visitors upon entering the SMNRA. Due to high costs and other considerations, this alternative was determined clearly unreasonable and was dismissed from further consideration.

2.4.11 Close SR 156 and SR 157 at SMNRA Boundaries Alternative

This alternative focused on reducing vehicular traffic in the upper canyons by creating fee entry points on SR 156 and SR 157 at the SMNRA boundary. NDOT, which administers these state routes, is not authorized to establish fee or toll roads without special legislation. Transferring jurisdiction of the SRs to the Forest Service is not feasible as the Forest Service does not received funding sufficient to cover operation or maintenance costs for these routes. It is not anticipated that fee collections from entry stations would be adequate to offset highway maintenance costs. The alternative was determined to be clearly unreasonable and was dropped from further consideration.

2.4.12 Limited Visitor Center Alternative

This alternative would include construction of a small-scale visitor center on the 128-acre site to provide basic interpretive materials, trail maps, etc. Recreational facilities and use in the upper canyon would be maintained. This alternative was eliminated from consideration because it does not address the purpose and need of the project to provide additional recreation opportunities outside the upper canyon area.