

APPENDIX B

Cultural Resources Investigations for the Verizon Fort Irwin Fiber Optic Project

Cultural Resources Investigations for the Verizon Fort Irwin Fiber Optic Project, San Bernardino County, California

Submitted to:



Verizon
16071 Mojave Drive
Building A
Victorville, CA 92395

and



U.S. Army Garrison at Fort Irwin
Directorate of Public Works
P.O. Box 105085
Fort Irwin, CA 92310

Submitted by:

January 2016



ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

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Directorate of Public Works
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***U.S. Geological Survey 7.5-minute
Quadrangles:*** Fort Irwin, California 1984;
Langford Well, California 1986; Paradise Range,
1998

Previously-Recorded Cultural Resources:
P36-010894/CA-SBR-10894

Area Surveyed: 139.61 total acres

Keywords: Cultural Resources Survey,
Ethnohistory, Prehistory, Serrano, Kawaiisu,
Southern Paiute, History, Barstow, Fort Irwin,
Cantonment Area

MANAGEMENT SUMMARY.....	1
1.0 INTRODUCTION.....	3
2.0 UNDERTAKING AND AREA OF POTENTIAL EFFECTS	5
2.1 Project Description.....	5
2.1.1 Underground Placement	5
2.1.2 Aerial Placement	7
2.1.3 Staging Area.....	8
2.2 Project Alternatives.....	8
2.3 Area of Potential Effects (APE).....	14
3.0 LOCATION AND ENVIRONMENTAL SETTING	18
4.0 CULTURAL SETTING.....	20
4.1 Prehistory	20
4.2 Ethnohistory.....	23
4.2.1 Serrano-Vanyume	23
4.2.2 Kawaiisu.....	24
4.2.3 Southern Paiute	25
4.3 History.....	25
5.0 METHODS.....	28
5.1 Records Search Methods	28
5.2 Sacred Lands File Search Methods.....	28
5.3 Field Survey Methods	28
5.4 National Register Eligibility Evaluation Methods	29
6.0 RESULTS	31
6.1 Records Search Results	31
6.2 Sacred Lands File Search Results	40
6.3 Field Survey Results.....	40
7.0 SUMMARY AND RECOMMENDATIONS	42
7.1 Post Review Discoveries	42
8.0 REFERENCES.....	43
9.0 REPORT AND FIELD PERSONNEL.....	47
9.1 Report Preparers	47
9.2 Field Personnel	47

LIST OF TABLES

Table 1.	Criteria for Inclusion of a Property on the National Register of Historic Places	29
Table 2.	Qualities of Integrity Related to Eligibility for the National Register	29
Table 3.	Previous Investigations within 1 Mile (1.6 Kilometers) of the Project APE	31
Table 4.	Additional Investigations Supplied by For Irwin within 1 Miles (1.6 Kilometers) of Project Area APE	34
Table 5.	Previously Recorded Cultural Resources within 1 Mile (1.6 Kilometers) of the Project APE	36

LIST OF FIGURES

Figure 1.	Project Area Vicinity, San Bernardino County, California	4
Figure 2.	Underground Route A	9
Figure 3.	Underground Route B	10
Figure 4.	Aerial Placement Route A	11
Figure 5.	Aerial Placement Route B	12
Figure 6.	Staging Area	13
Figure 7-1.	Area of Potential Effects Southwestern Portion	15
Figure 7-2.	Area of Potential Effects Central Portion	16
Figure 7-3.	Area of Potential Effects Northeastern Portion	17

APPENDICES

Appendix A	Native American Coordination	
Appendix B	Fort Irwin Cultural Resources Database Previous Survey Boundaries	
Appendix C	Site Location Map (CONFIDENTIAL)	
Appendix D	DPR Record Update to Site P36-010894/CA-SBR-10894 (CONFIDENTIAL)	
Appendix E	<i>Historic Property Survey Report for the Fort Irwin Road Project, from Interstate 15 to the Southerly Boundary of the National Training Center, Fort Irwin, San Bernardino County, California.</i> Statistical Research, Inc., 2002 (CONFIDENTIAL)	

MANAGEMENT SUMMARY

In response to increasing demand for broadband service at Fort Irwin for residential customers, government/education facilities, military facilities, and businesses, Verizon is proposing the installation of a fiber optic line within the U.S. Army National Training Center (NTC) at Fort Irwin. The Project is located in training areas B1, B2, and B3, and within the cantonment area of Fort Irwin. Five Project alternatives have been analyzed for the proposed undertaking. These consist of the Proposed Action Alternative, Alternatives 1 through 3, and the No Action Alternative. The four build alternatives, Proposed Action Alternative and Alternatives 1 through 3, consist of a combination of one of two proposed underground routes (Underground Route A and Underground Route B), one of two proposed aerial placement routes (Aerial Placement Route A and Aerial Placement Route B), and a single staging area. The No Action Alternative would consist of no construction activities being conducted. The Area of Potential Effects (APE) is defined as all areas where physical activities would occur associated with the proposed Project. For the current undertaking, the 56.5-hectare (139.6 acre) APE consists of the full extent of all Project components and all four build alternatives plus a 32 foot (10 meter) survey buffer on all sides of the underground routes and aerial placement routes, and a 98 foot (30 meter) survey buffer on all sides of the Staging Area.

In support of this Project, a cultural resources investigation was conducted by ECORP Consulting, Inc. (ECORP) under contract to Verizon. This investigation was completed in compliance with the National Environmental Policy Act (NEPA), Section 106 of the National Historic Preservation Act (NHPA), and following the requirements of 36 *Code of Federal Regulations* (CFR) 800, Department of Defense Instruction (DoDI) 4715.16, and Army Regulation 200-1. To identify existing cultural resources that would be affected by the proposed Project, a cultural resources records search was conducted using the California Historical Information System (CHRIS) at the San Bernardino Archaeological Information Center (SBAIC) at the San Bernardino County Museum in Redlands, California using a 1 mile (1.6 kilometer) records search buffer. The results of the records search at the SBAIC indicated that a total of 25 cultural resources investigations were conducted within the 1 mile (1.6 kilometer) records search radius of the APE between 1946 and 2014, four of which overlapped portions of the Project APE and four were located adjacent to the Project APE. Additional survey information supplied by Fort Irwin identified an additional 20 studies within the vicinity of the APE that were conducted between 2002 and 2013. The SBAIC and Fort Irwin data indicate that approximately 90 percent of the APE has been previously surveyed. The records search results from the SBAIC also revealed that 49 cultural resources have been previously recorded within the 1 mile (1.6 kilometer) records search radius. Of these, only one previously recorded historic-age site, a wood pole transmission line (P36-10894/CA-SBR-10894), is located within the Project APE. As part of the records search efforts, Fort Irwin cultural staff was also contacted in order to obtain records that may not be located at the SBAIC. The Fort Irwin cultural staff indicated that there was no additional information on previous surveys and known sites for the Project APE beyond what was already identified at the SBAIC.

In addition to the cultural resources records search, a request for a search of the Sacred Lands File from the Native American Heritage Commission (NAHC) was submitted. The results of the search of the Sacred Lands File failed to indicate the presence of Native American cultural resources within the Project APE. One Native American contact associated with tribes that have

traditional and/or historical ties to the Project APE was provided by the NAHC. Following a review of the records search results, field surveys were conducted for the entire Project APE on May 26, 27 and 28, 2015.

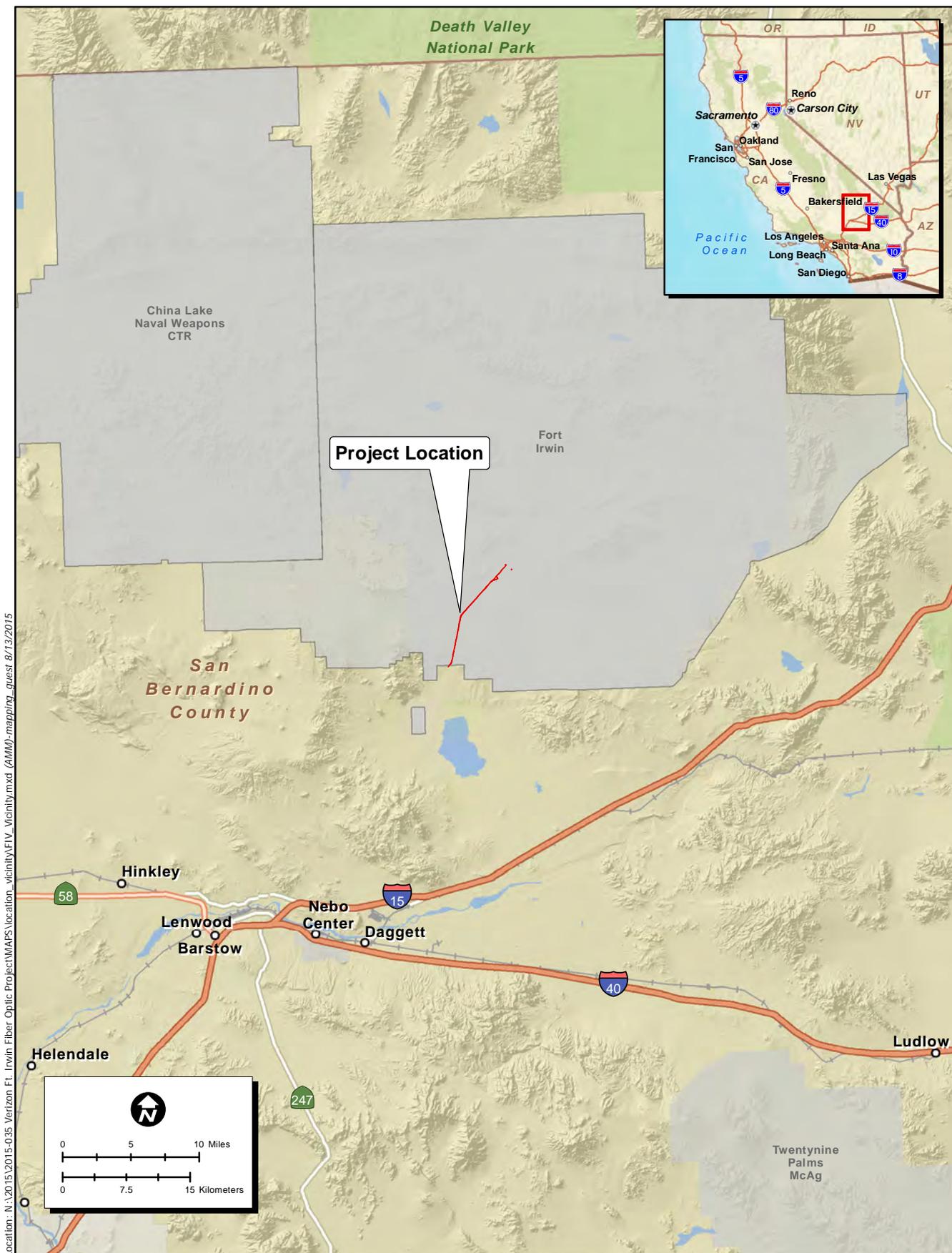
Following a review of the records search results, an intensive field survey was conducted for the entire 139.6 acre APE. During the survey of the Project APE, no additional prehistoric or historic-period sites or isolates were identified. The previously recorded historic-period site, a wood pole utility line (P36-010894/CA-SBR-10894), was updated. P36-010894 was previously evaluated as not eligible for the NRHP in 2003 by Statistical Research Inc. (Lerch and Majewski 2003). ECORP's investigations found the site to be consistent with the 2003 site record and report and, thus, ECORP's evaluation concurs with the 2003 results of not eligible. No properties listed in the NRHP, or eligible for listing in the NRHP, exist within the APE for this proposed undertaking. Therefore, a finding of "No Historic Properties Affected" is appropriate for this undertaking, in accordance with 36 CFR 800.4(d)(1).

1.0 INTRODUCTION

Fort Irwin is located approximately 37 miles (59.5 kilometers) northeast of Barstow, California, in the north-central part of the Mojave Desert (Figure 1). Fort Irwin encompasses approximately 1,193 square miles (1,920 kilometers/763,477 acres). The proposed Project is located within training areas B1, B2, and B3 southwest of the main gate and within the cantonment area. In May 2015, ECORP Consulting, Inc. (ECORP) conducted a cultural resources investigation in support of Verizon's proposed fiber optic line. Approximately half of Fort Irwin's land area is used for desert battlefield training. A cantonment area occupies approximately 3 square miles (7.8 square kilometers), provides temporary and permanent living quarters for soldiers and their families, and contains the support facilities for the installation. The cantonment area consists of residential areas, support facilities, retail centers, restaurants, health care facilities, and industrial areas. The purpose of the Verizon Fiber Optic Project (Proposed Action) is to respond to increasing broadband demand in the Fort Irwin service area to support the installation's current and future broadband requirements for residential customers, government/education facilities, military facilities, and businesses. Current broadband capacity is insufficient to meet the needs of users in the Verizon Fort Irwin service area and additional capacity is required to meet current and future broadband demand. The objective of the Proposed Action is to provide sufficient data bandwidth for voice, video and data to Fort Irwin and install a new fiber optic cable through the most cost-efficient and least environmentally damaging construction methods.

To identify existing cultural resources that would be affected by the proposed Project, a cultural resources records search was conducted using the California Historical Information System (CHRIS) at the San Bernardino Archaeological Information Center at the San Bernardino County Museum in Redlands, California. Following a review of the records search results, an intensive field survey was conducted for the entire 139.6 acre Area of Potential Effects (APE). Details about the Project alternatives, components, and APE boundaries can be found in *Chapter 2.0* below. In addition to the field survey, a search of the Sacred Lands File was requested from the Native American Heritage Commission. Evaluations using National Register of Historic Places (NRHP) eligibility criteria were conducted for all previously unevaluated resources identified during the field survey.

This report presents the methods and results of the records search, Sacred Lands File Search, field survey, and NRHP evaluations that were conducted for the Project, along with management recommendations. This survey was completed in compliance with Section 106 of the National Historic Preservation Act (NHPA).



Location: N:\2015\2015-035 Verizon Ft. Irwin Fiber Optic Project\MAPS\location_vicinity\FIV_Vicinity.mxd (AMM)-mapping_quest_8/13/2015

Map Date: 8/13/2015
 Service Layer Credits: Sources: Esri, USGS, NOAA

Figure 1. Vicinity

2015-035 Fort Irwin - Verizon Fiber Optic Line

2.0 UNDERTAKING AND AREA OF POTENTIAL EFFECTS

2.1 Project Description

Five Project alternatives have been analyzed for the proposed undertaking. These consist of the Proposed Action Alternative, Alternatives 1 through 3, and the No Action Alternative.

All alternatives comprise three elements:

- Placing new conduit and fiber optic cable underground from an existing interconnection located on the west side of Fort Irwin Road approximately 0.25 mile (0.4 kilometer) southwest of the Fort Irwin welcome sign and static helicopter and tank display to the existing riser utility pole 4659666E located in the Fort Irwin cantonment area west of Barstow Road approximately 725 feet (220 meters) north of the intersection of Barstow Road and Outer Loop Road (Fort Irwin Grid NU 210 890).
- Aerial placement of the fiber optic cable on existing utility poles from utility riser pole 4659666E to the Verizon Fort Irwin Central Office located in Building 12, north of Inner Loop Road and west of Barstow Road (Fort Irwin Grid: NV 272 900).
- Use of a 210 foot (64 meter) by 70 foot (22 meter) area for construction staging in the cantonment area south of Langford Lake Road and west of H Avenue.

The Project alternatives include combinations of different routes for the underground and aerial components of the Project. The staging area would be in the same location for all Project alternatives. Project components are described in greater detail below.

2.1.1 Underground Placement

Underground Route A

Underground Route A would be approximately 7.8 miles in length. Underground Route A would begin at the existing Verizon manhole pickup located on the west side of Fort Irwin Road, approximately 0.25 mile south of the Fort Irwin welcome sign and static helicopter and tank display. From here, the route would follow an existing tank trail approximately 165 feet west of Fort Irwin Road until the trail ends at Outer Loop Road. The route would cross Outer Loop Road and the fiber optic line would transition to an aerial route at existing riser utility pole 4659666E, approximately 725 feet north of the intersection of Barstow Road and Outer Loop Road (Figure 2).

A 14 inch-wide, 36 inch deep trench would be excavated the majority of the length of the route, from the existing Verizon manhole pickup described above to Outer Loop Road, using back hoes. Where large rocks are encountered, a rock saw would be used. A four-inch sand cushion will be placed under the fiber optic cable, and the cable will be covered with 32 inches of native soil. The total work area that would be temporarily disturbed during construction would be approximately 30 feet wide (15 feet on center from the trench). A maximum of 1,000 feet of trench would be open each day. Any open trenches would be covered at the end of the day temporary fencing would be placed to secure each location for the duration the trenches remain open. Directional boring would be used to tunnel under Outer Loop Road to existing riser utility pole 4659666E to avoid cutting into the road surface. The directional bore portion of

Underground Route A would be approximately 670 feet in length. Please see the description of underground Route B, below, for a more detailed description of the directional boring process.

Hand holes (small access boxes) of dimensions 2 feet wide by 3 feet long by 30 inches deep would be placed along the route every 1,000 feet. Approximately 41 hand holes would be required. The hand holes will be buried a minimum of 10 inches below grade, and a geographic positioning system (GPS) locator device would be placed inside the hand hole to aid in locating the hand hole for future maintenance, if required. A 50 foot coil of fiber optic cable would be placed inside every third hand hole (every 3,000 feet). In the event of accidental damage to the fiber optic cable, these 50 foot coils would be used to repair the damaged cable. Detailed traffic control methods will be provided in a Traffic Control Plan (TCP) to be approved by Fort Irwin.

Underground Route B

Underground Route B is approximately 8.1 miles in length. Underground Route B would begin at the same existing Verizon manhole pickup as Underground Route A. The pickup is located on the west side of Fort Irwin Road, approximately 0.25 mile south of the Fort Irwin welcome sign and static helicopter and tank display. The route would continue north/northeast on the west side of Fort Irwin Road, approximately 72 inches from the edge of pavement, to the intersection of Fort Irwin Road and Outer Loop Road, proceed west on the south side of Outer Loop Road and north on the west side of Barstow Road. Approximately 725 feet north of the intersection of Barstow Road and Outer Loop Road, the fiber optic line would transition to an aerial route at existing riser utility pole 4659666E (Figure 3).

Verizon would use a directional bore method of construction for Underground Route B. Directional boring, also called horizontal directional drilling, is a trenchless method of installing underground pipes, conduits, and cables in a shallow arc along a prescribed bore path using a surface-launched drilling rig. Directional boring is used when trenching or excavating is not practical, such as for crossing waterways or drainages, roadways, urban areas with traffic or other constraints, and environmentally sensitive areas. The process starts with the excavation of receiving hole and entrance pits. For the project at Fort Irwin, directional boring would be accomplished by placing 4 foot wide by 4 foot long by 40 inch deep bore and receiving pits 72 inches west of the edge of the pavement of Fort Irwin Road at approximately 1,000 foot intervals. Approximately 43 bore pits would be required for the 8.1 mile bore route. The total area that would be disturbed by boring is approximately 30 feet by 75 feet around the bore and receiving pits.

The first stage drills a pilot hole on the designed path, and the second stage (reaming) enlarges the hole by passing a larger cutting tool known as the back reamer. The third stage places the conduit in the enlarged hole by way of the drill stem; it is pulled behind the reamer to allow centering of the pipe in the newly reamed path.

For this project, 2 inch schedule 40 polyvinyl chloride (PVC) conduit would be glued together the length of the bore and pulled from bore pit to receive pit. Upon completion of each section, duct plugs would be installed to prevent wildlife from entering the vacant conduit. These plugs would be removed during the cable placement phase. Approximately 43 hand holes, as described in the description for underground Route A, above, would be placed in the bore/receive pit locations. Fiber optic cable would be placed inside the 2 inch conduit, and a 50

foot coil of fiber optic cable would be placed inside each hand hole. In the event of accidental damage to the fiber optic cable, these 50 foot coils would be used to repair the damaged cable.

Horizontal directional drilling is done with the help of a viscous fluid known as drilling fluid. It is a mixture of water and bentonite or polymer continuously pumped to the cutting head or drill bit to facilitate the removal of cuttings, stabilize the bore hole, cool the cutting head, and lubricate the passage of the product pipe. The drilling fluid is sent into a machine called a reclaimer, which removes the drill cuttings and maintains the proper viscosity of the fluid. Drilling fluids hold the cuttings in suspension to prevent them from clogging the bore. A clogged bore creates back pressure on the cutting head, slowing production. Drilling fluid would be collected with a vacuum in the bore pits and taken to the staging area to dry out. Once dried, the spoils, which are not considered a hazardous waste and can be disposed in a municipal landfill, would be taken either to the Fort Irwin landfill or the nearest off-installation landfill, in Barstow.

If the directional bore is blocked by unforeseen geologic substructure, a 1 foot wide by 36 inch deep trench may be required to bypass the blockage. Directional boring would continue after the blockage is passed. With Underground Route B, trenching is expected to be limited because large boulders and other obstructions are likely to have been removed during the construction of Fort Irwin Road.

Open bore and receive pits would be barricaded and temporary fencing would be placed to secure each location for the duration the pits remain open. Traffic control would be in compliance with the Work Area Traffic Control Handbook, the California Manual on Uniform Traffic Control Devices, and Fort Irwin requirements. Detailed traffic control methods will be provided in a TCP to be approved by Fort Irwin.

Routine maintenance of the fiber optic line would not occur. If specific repairs are required, the fiber optic line would be accessed using the hand holes and would be repaired using the 50 foot coils of fiber optic line that were left in the hand hold during construction.

2.1.2 Aerial Placement

Aerial Placement Route A

Aerial Placement Route A (Aerial Route A) is approximately one mile in length (Figure 4). With Aerial Route A, the line would cross Barstow Road continue north on existing poles on the east side of Barstow Road, cross Barstow Road and Bastogne Street, continue north on the west side of Bastogne Street, travel briefly east on the north side of Salerno Drive to poles on the west side of Barstow Road, then travel north to terminate at the existing Verizon Fort Irwin Central Office located in Building 12. All cable would be placed on existing utility poles in compliance with California General Order 95 Rules for Overhead Line Construction from equipment located on existing paved and dirt roads. Detailed traffic control methods will be provided in a TCP to be approved by Fort Irwin.

Aerial Placement Route B

Aerial Placement Route B (Aerial Route B) would also begin at existing utility riser pole 4659666E and end at Building 12, and would also be approximately 1 mile in length (Figure 5). The line would remain on the west side of Barstow Road until its terminus at Building 12. Existing utility poles would be used, and all cable would be placed in compliance with California General Order 95 Rules for Overhead Line Construction from equipment located on existing paved and dirt roads. A TCP, approved by Fort Irwin, would be required for work in the cantonment area.

2.1.3 Staging Area

A temporary staging area has been identified by Fort Irwin for temporary use by the project. The staging area would be located within the cantonment in the area known as Green Acres, northwest of the intersection of South Loop Road and Langford Lake Road. Green Acres is regularly used by contractors working at Fort Irwin to stage material, equipment, and for trailer space (Figure 6). The staging area would be an approximately 210 feet long by 70 feet wide area with a concrete pad and gravel. An existing fueling station is located southeast of the staging area. Equipment and supplies would be moved from the selected underground route and aerial alignment to the staging area each evening, and would be moved from the staging area to the active construction area each morning to avoid storage of equipment and supplies overnight in the construction area.

2.2 Project Alternatives

Five alternatives have been proposed for this Project. These include four build alternatives (Proposed Action Alternative and Alternatives 1 to 3) and one no action alternative. All four build alternatives use overlapping combinations of the Project components described above. The Proposed Action alternative consists of Underground Route A, Aerial Placement Route A, and the Staging Area. Alternative 1 consists of Underground Route B, Aerial Placement Route A, and the Staging Area. Alternative 2 consists of Underground Route A, Aerial Placement Route B, and the Staging Area. Alternative 3 consists of Underground Route B, Aerial Placement Route B, and the Staging Area. With the No Action Alternative, the fiber optic line would not be installed at Fort Irwin. Environmental consequences associated with the Proposed Action would not occur within Fort Irwin, including those related to construction, operation, and maintenance of the Proposed Action. Although the environmental consequences with the project would not occur within Fort Irwin, the installation would continue to have insufficient data bandwidth for voice, video and data.



☉ Utility Pole
 - - - - - Underground Route A

0 0.375 0.75 Miles
 0 0.5 1 Kilometers



Location: N:\2015\2015-035 Verizon Ft. Irwin Fiber Optic Project\MAPS\CEOA\FIV_DBA_20150922.mxd (MAG./DS)_Svager 9/23/2015

Map Date: 9/23/2015

Photo Source: NAIP 2014



Figure 2. Underground Route A

2015-035 Ft. Irwin Verizon

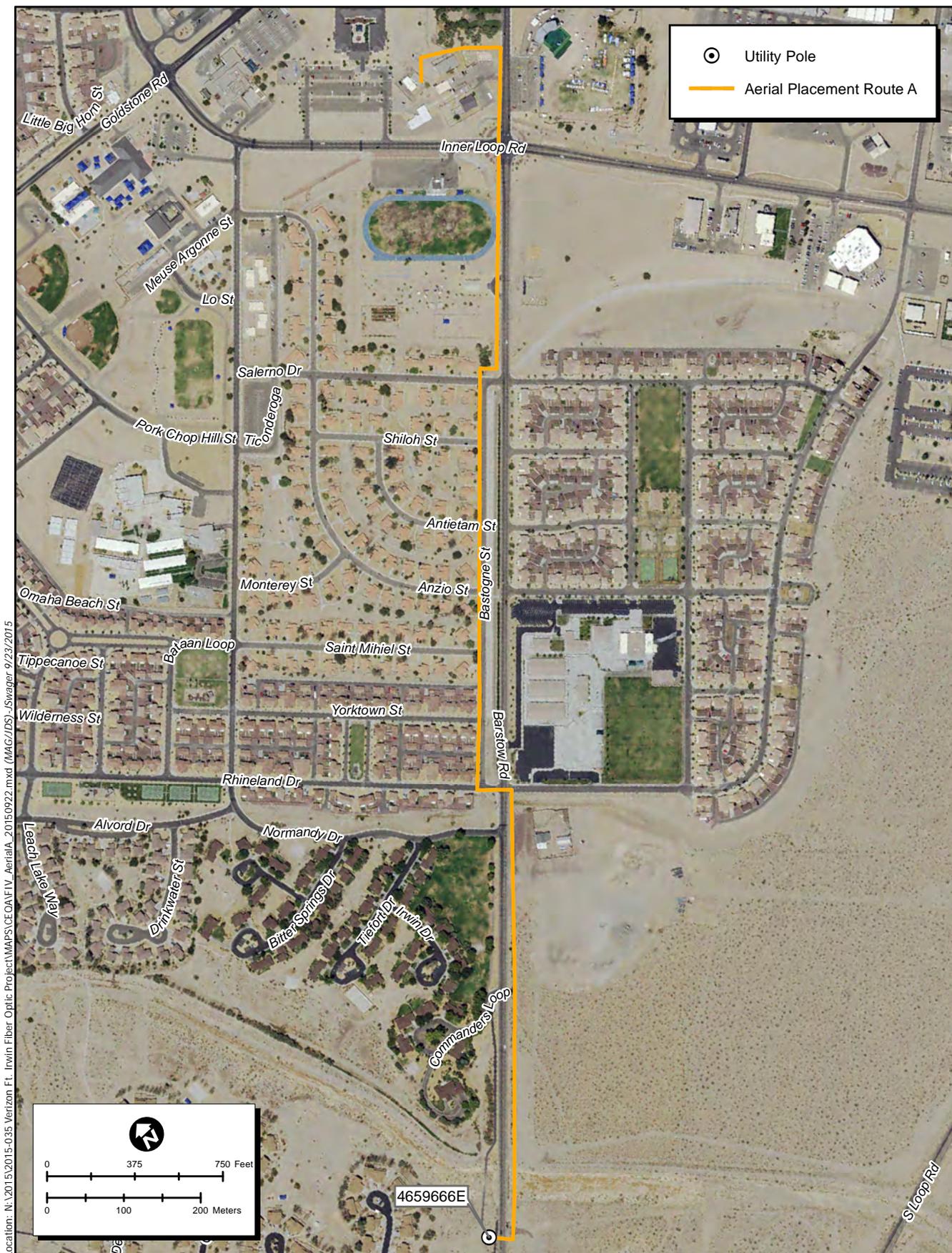


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Map Date: 9/23/2015
Photo Source: NAIP 2014

Figure 3. Underground Route B

2015-035 Ft. Irwin Verizon

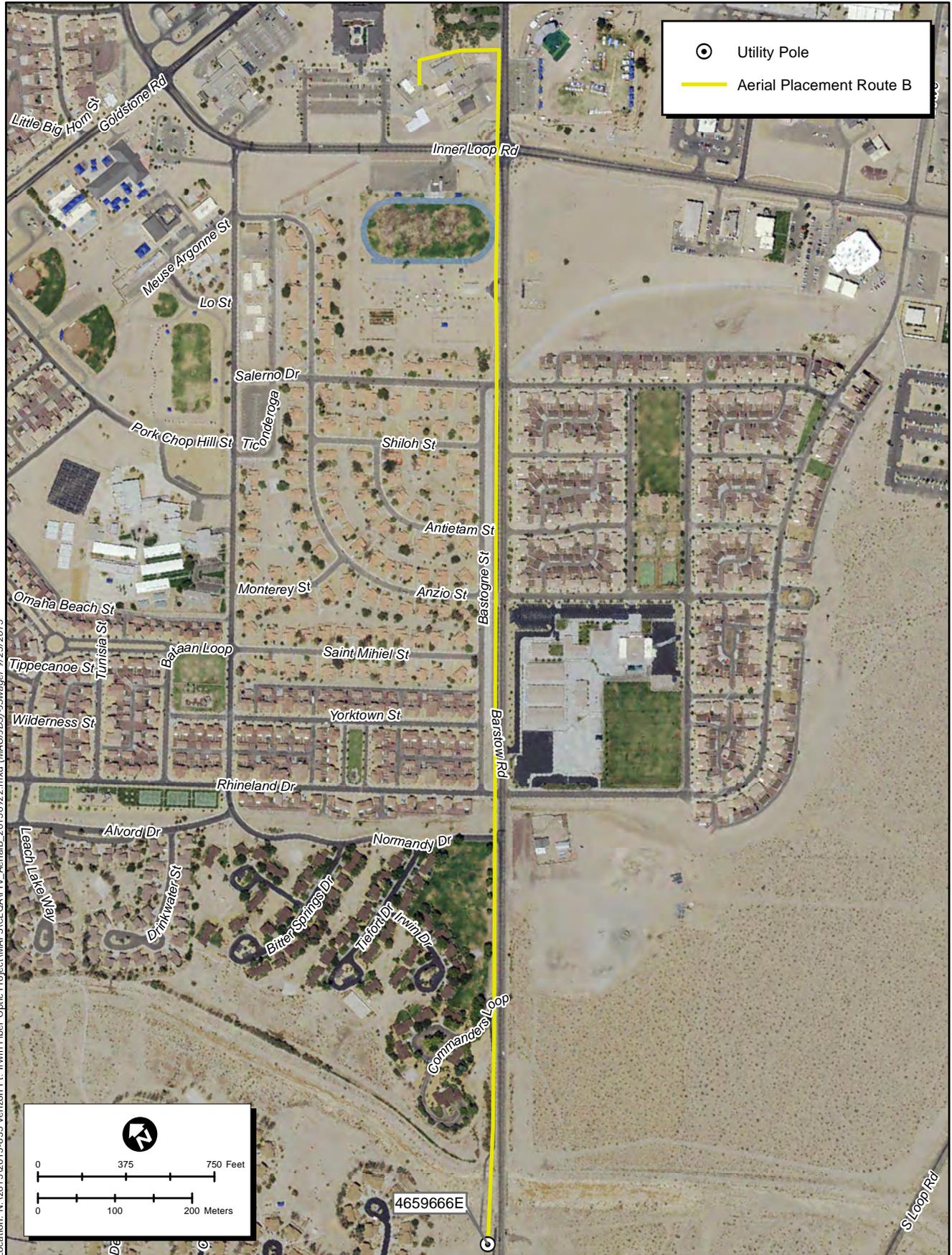


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Map Date: 9/23/2015
Photo Source: NAIP 2014

Figure 4. Aerial Placement Route A

2015-035 Ft. Irwin Verizon



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Map Date: 9/23/2015
 Photo Source: NAIP 2014

Figure 5. Aerial Placement Route B

2015-035 Ft. Irwin Verizon



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Map Date: 8/13/2015
Photo Source: NAIP 2012

Figure 6. Staging Area

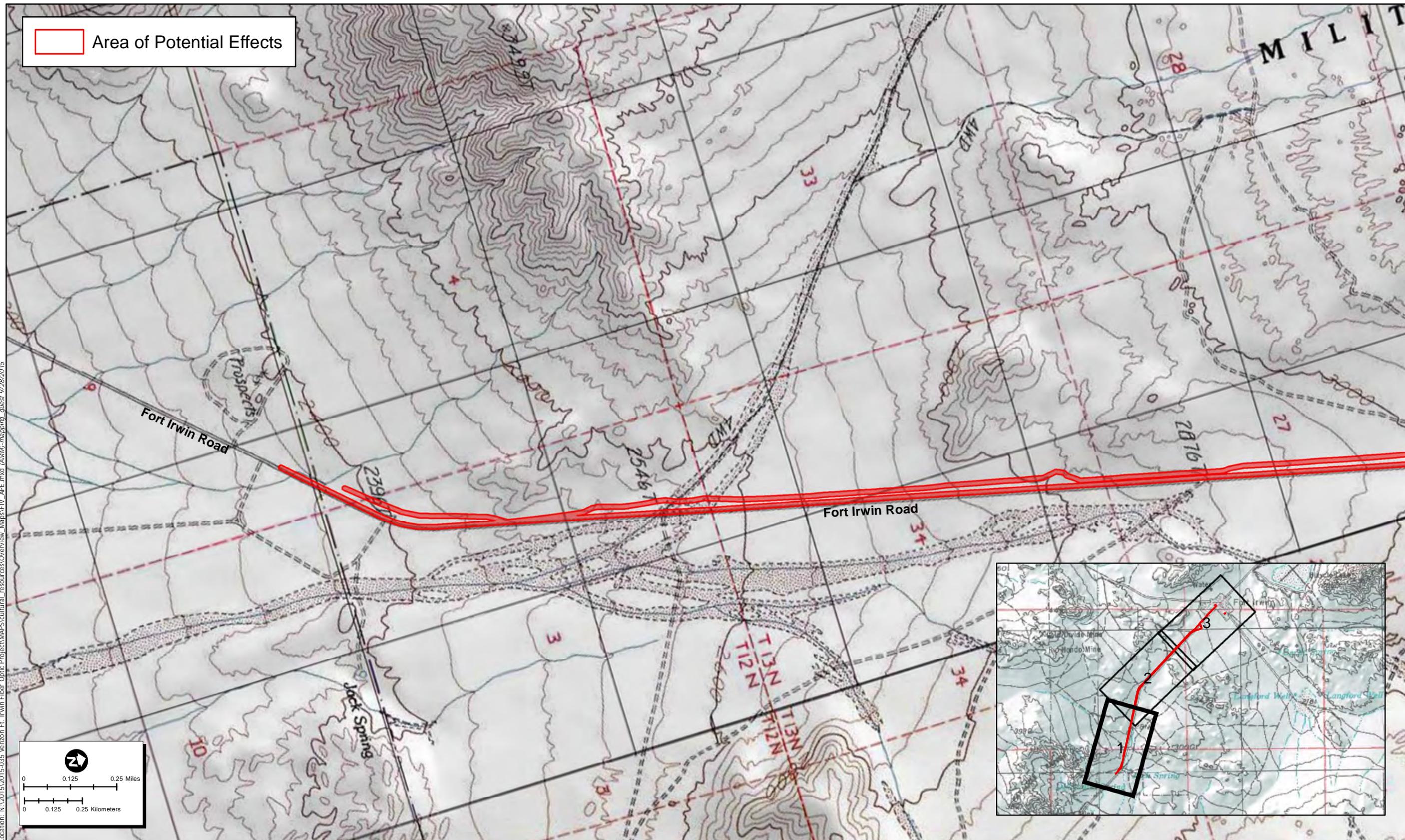
2015-035 Ft. Irwin Verizon

2.3 Area of Potential Effects (APE)

For the purposes of the current Project, the APE is defined as all areas where physical activities would occur associated with the proposed Project, including the full extent of all Project components and alternatives, as described in the paragraphs above. A summary of these alternatives is provided below:

- The entire 7.8 mile (12.5 kilometer) Underground Route A corridor plus a 32 foot (10 meter) survey buffer on either side of the corridor;
- The entire 8.1 mile (13 kilometer) Underground Route B corridor plus a 32 foot (10 meter) survey buffer on either side of the corridor;
- The entire 1 mile (1.6 kilometer) Aerial Placement Route A corridor plus a 32 foot (10 meter) survey buffer on either side of the corridor;
- The entire 1 mile (1.6 kilometer) Aerial Placement Route B corridor plus a 32 foot (10 meter) survey buffer on either side of the corridor; and
- The entire 210 feet long (64 meters) by 70 feet wide (21 meters) Staging Area plus a 98 foot (30 meter) survey buffer around the staging area.

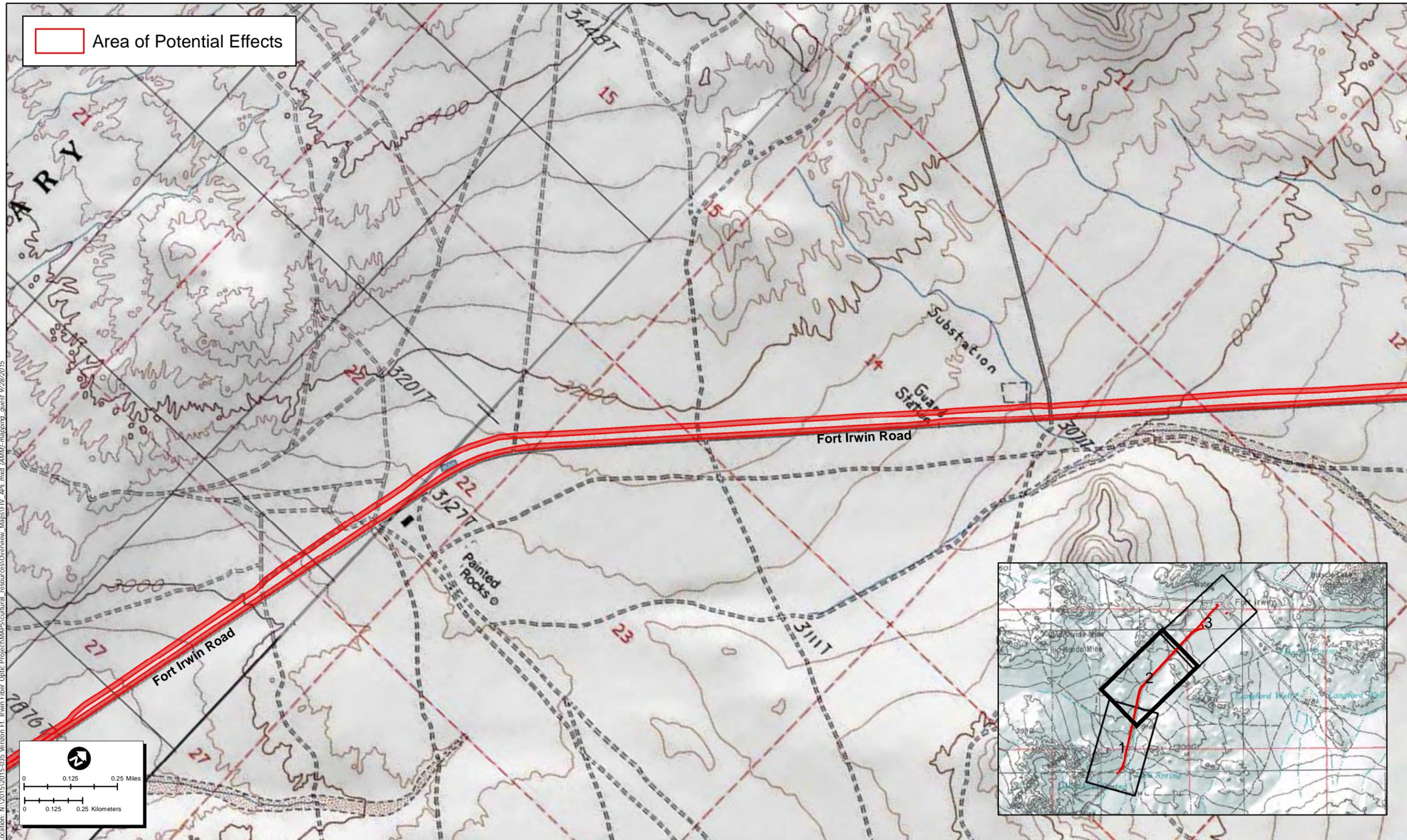
In total the Project APE (including the overlapping routes of all four build alternatives) contains a total area of 56.5 hectares (139.6 acres). The entire Project APE was surveyed as part of the current undertaking (Figures 7.1 to 7.3).



Location: N:\2015\2015-035 Verizon Ft. Irwin Fiber Optic Project\MAPS\Cultural_resources\Overview_Maps\FIV_APE.mxd (AMM)_mapping_guest_9/28/2015
 Map Date: 8/13/2015

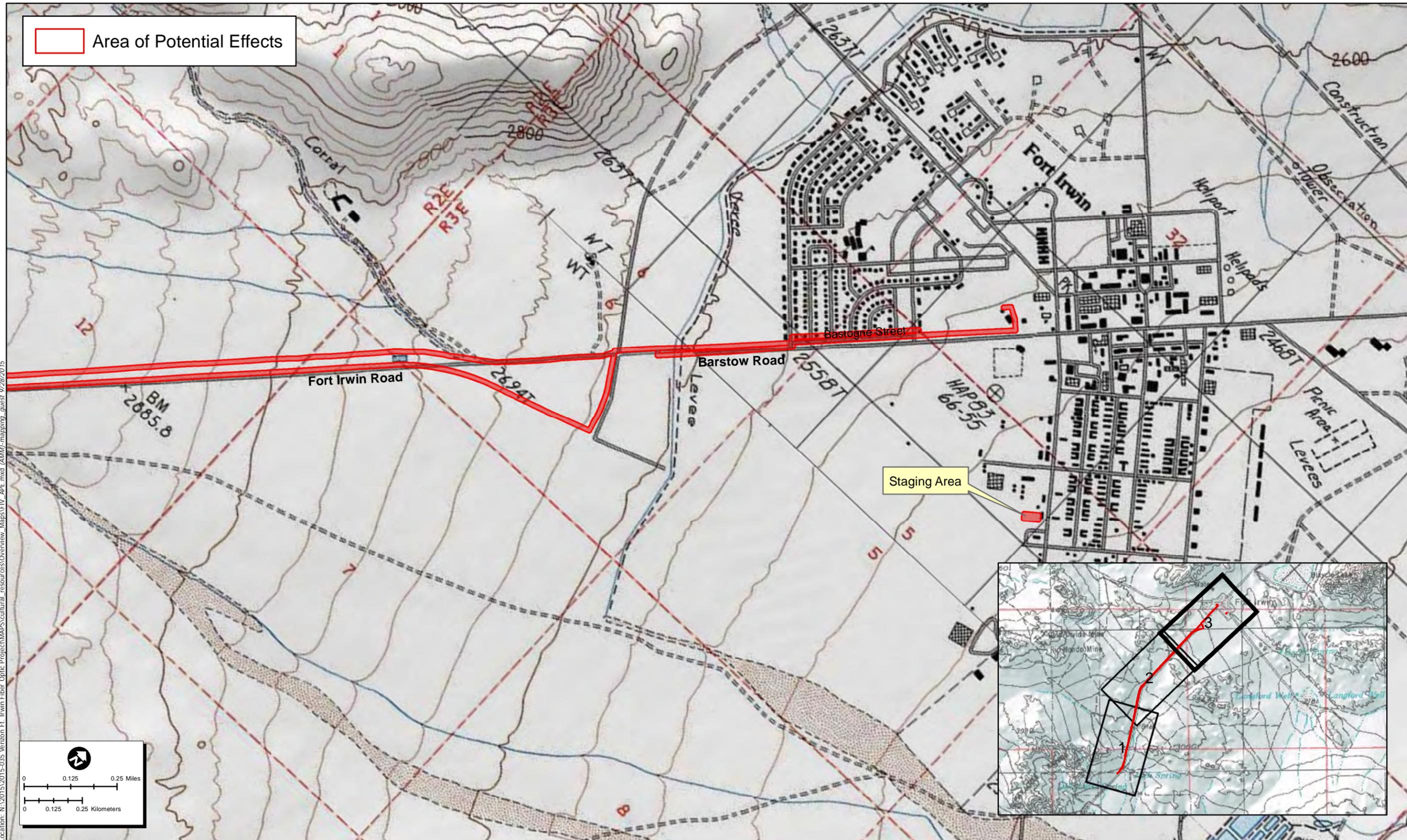
**Figure 7-1. Area of Potential Effects
 Southwestern Portion**

2015-035 Fort Irwin - Verizon Fiber Optic Line



Location: N:\2015\2015-035 Verizon Ft. Irwin Fiber Optic Project\Map\Scultural_resources\Overview_Maps\FIV_APE.mxd (AMM)_mapping_guest_9/28/2015
Map Date: 8/13/2015

**Figure 7-2. Area of Potential Effects
Central Portion**



Location: N:\2015\2015-035 Verizon Ft. Irwin Fiber Optic Project\MAPS\Cultural_resources\Overview_Maps\FIV_APE.mxd (AMM)_mapping_guest_9/28/2015

Map Date: 8/13/2015

**Figure 7-3. Area of Potential Effects
Northeastern Portion**

2015-035 Fort Irwin - Verizon Fiber Optic Line

3.0 LOCATION AND ENVIRONMENTAL SETTING

The Project APE lies in Sections 5 and 6 of Township 13 North, Range 3 East San Bernardino Base and Meridian (SBBM) and Section 32 of Township 14 North, Range 3 East SBBM on the United States Geological Survey (USGS) 7.5-minute Fort Irwin, California (1986) quadrangle map; in Sections 6 and 7 of Township 13 North, Range 3 East SBBM and Sections 12, 13, 14, 22, and 23 of Township 13 North, Range 2 East SBBM on the USGS 7.5-minute Langford Well, California (1986) quadrangle map; and in Sections 22, 27, and 34 of Township 13 North, Range 2 East SBBM and Sections 3, 4, and 9 of Township 12 North, Range 2 East SBBM on the USGS 7.5-minute Paradise Range, California (1986) quadrangle map (see Figures 7-1 through 7-3).

The Project site is located in the Mojave Desert province of Southern California. This region is a southern subsection of the Basin and Range physiographic province. The Basin and Range province is characterized by north-south-trending mountain ranges separated by broad alluvial valleys containing alluvial fans, playas, and dunes (Coulter 2015). The project APE overlies predominantly middle to late Holocene alluvial fan deposits, although the APE route also crosses areas of early Holocene alluvial fan deposits, Pleistocene alluvial fan deposits, Cretaceous granitic rocks, and Jurassic gabbro (Yount et al. 1994).

Fort Irwin has an arid desert climate characterized by hot summer temperatures that average 90 to 100 degrees Fahrenheit in the summer, mild winter temperatures that average from 30 to 40 degrees Fahrenheit in January, and low rainfall averaging 1 to 2 inches (2 to 5 centimeters) in winter and 0 to 0.5 inches (0 to 1.2 centimeters) in summer (Higdon 2004).

Dominant vegetation communities in the Project APE and nearby vicinity include creosote bush scrub and desert wash scrub, as well as saltbush scrub. Creosote bush scrub is dominated by creosote bush (*Larrea tridentata*). Subdominant shrubs include white bur-sage (*Ambrosia dumosa*), brittlebush (*Encelia farinosa*), California jointfir (*Ephedra californica*), Mojave Desert California buckwheat (*Eriogonum fasciculatum* var. *polifolium*), and water jacket (*Lycium andersonii*). Although there are areas where creosote bush scrub is intact, the majority of this vegetation community within the APE has been disturbed by vehicular travel and/or development of buildings and sidewalks. Desert wash scrub is a low, shrubby, diverse community occurring in open washes, arroyos, and canyons throughout the desert. Within the study area, dominant shrubs of this vegetation community that were observed include cheesebush (*Ambrosia salsola*), desert alyssum (*Lepidium fremontii*), indigo bush (*Psoralea arborescens* var. *minutiflora* and *P. a.* var. *arborescens*), sandpaper plant (*Petalonyx thurberi*), and desert senna (*Senna armata*). Saltbush scrub is a low, shrubby, vegetation community dominated by saltbush species of the genus *Atriplex*. Within the Project vicinity, dominant shrubs of this vegetation community that were observed include allscale (*Atriplex polycarpa*) and a subdominant species that was observed on occasion includes hopsage (*Grayia spinosa*). Saltbush scrub was mainly observed growing in close proximity to Fort Irwin Road and in some cases was found overlapping with creosote bush scrub vegetation communities.

Common wildlife within the Project vicinity included lizards, birds, squirrels, and rabbits. Lizards were abundant throughout the Project vicinity and included species such as zebra-tailed lizard (*Callisaurus draconoides*), side-blotched lizard (*Uta stansburiana elegans*), and Great Basin whiptail lizard (*Aspidoscelis tigris tigris*). Common avian species within the Project vicinity

include sage sparrow (*Artemisospiza belli*), white-crowned sparrow (*Zonotrichia leucophrys*), and common raven (*Corvus corax*). Common mammals within the study area include white-tailed antelope squirrel (*Ammospermophilus leucurus*) and black-tailed jackrabbit (*Lepus californicus bennettii*). Desert tortoise (*Gopherus agassizii*) are also present in the Project vicinity.

The portion of the Project APE that lies southwest of North Loop Road has sustained disturbances from road construction, road shoulder maintenance, construction of berms for floodwater diversion, and continual use of the tank road as a convoy route through the installation. The portion of the Project APE northeast of North Loop Road is in the built environment of the cantonment area and can be considered an urban setting. The construction staging area is located in a cleared and graded area within the cantonment area. The area has been heavily disturbed by grading and staging of heavy machinery.

4.0 CULTURAL SETTING

4.1 Prehistory

Late Pleistocene Period – 10,000 to 8,000 B.C.

The presence of humans in the Mojave Desert prior to 10,000 B.C. cannot be discounted in the face of growing evidence of earlier occupations in other regions of North America. The oldest well-identified cultural complex in the Mojave, however, is the Clovis complex (ca. 10,000 to 8,000 B.C.), characterized by the long, fluted Clovis projectile point and Clovis-like points known as Great Basin Concave Base points (Basgall and Overly 2004:63-64). Reliable radiocarbon dates for organic material associated with fluted points in the Mojave Desert are lacking, but obsidian hydration has established that these points have older relative ages than stemmed points from the same region. A possible Clovis occupation site has been identified in the Mojave Desert, at China Lake Naval Air Weapons Station west of Fort Irwin. Other fluted points in the region have been recorded as isolated finds. A few Clovis-type points have been found within Fort Irwin boundaries but all appeared to be out of context (Jackson 2015a). Very little can be inferred about the people who created these fluted points except that they most likely lived in highly mobile small groups and camped near reliable sources of water. Fluted point finds in the Mojave Desert are concentrated in the China Lake and Lake Thompson (predecessor of Rosamond, Rogers, and Buckhorn lakes) areas, which are known to have had significant stream runoff and to have been good water sources during the Pleistocene/Holocene Transition, continuing during the early Holocene (Sutton et al. 2007: 234).

Lake Mojave Period (Early Holocene) – 8,000 to 5,000 B.C.

The best-documented cultural complex in the region during the early Holocene is the Lake Mojave period, characterized by Great Basin Stemmed (Lake Mojave and Silver Lake) points, numerous bifaces, crescents, unifaces, and sometimes ground stone artifacts. Non-local lithic materials and shell beads found in Lake Mojave assemblages indicate long foraging trips and/or trade with other regions (Sutton et al. 2007: 233-237). The small number of ground stone implements, and the lack of extensive wear on them, suggests that vegetal resources were not heavily used. As with the Late Pleistocene Period, social groups of the Lake Mojave Period appear to have been small, highly mobile, and attracted to a variety of environments where water was available. Interestingly, archaeofaunal data indicate a reliance on small game like rabbits, hares, rodents, and reptiles, rather than the bigger game implied by the large projectile points. Lake Mojave Period artifacts have been mostly surface finds, making absolute dating by radiocarbon methods difficult (Sutton et al. 2007: 233-237). Numerous Lake Mojave Period artifacts have been documented at Rosamond Lake (Edwards Air Force Base), ancient Lake Mojave (Silver and Soda dry lakes), and on neighboring military installations such as Fort Irwin, China Lake Naval Air Weapons Station (NAWS), and Twentynine Palms.

Pinto Period (Early to Middle Holocene) – 5,000 to 2,000 B.C.

Previous investigators (e.g., Warren 1984) defined the Pinto Period as a response to Mid-Holocene climatic warming and desiccation in the Great Basin, including the Mojave Desert. In this scenario, the Pinto Period began after the Lake Mojave Period at about 5,000 B.C., corresponding roughly with the Holocene Maximum warming trend. At first, groups of hunter-

gatherers adapted to the drying, warming conditions, possibly by abandoning the desert floor and occupying the higher, wetter margins for a thousand years or more. As the climate cooled again, the desert was repopulated as springs, streams, and shallow lakes reappeared (Warren 1984). Information gathered during the past two decades suggests that the Pinto Period began during the early Holocene and overlapped the Lake Mojave Period (Sutton et al. 2007: 237-239). Recently obtained radiocarbon dates from Pinto Basin, Little Lake, Fort Irwin, and Twentynine Palms indicate ages of at least 9,000 years for some Pinto sites. Although there is still some debate about the inception of the Pinto complex, it is clear that it is probably older than had been previously thought.

Pinto artifact assemblages have less diversity of lithic materials than their Lake Mojave predecessors, suggesting a reduced range of movement across the landscape. At the same time, the presence of *Olivella* shell beads suggests that there was trade with coastal groups. Ground stone milling tools are much more prevalent in Pinto assemblages than in Lake Mojave assemblages, indicating that extensive plant food processing began at the end of the early Holocene, before the beginning of the dry, warm conditions that affected the desert floor during the middle Holocene (Sutton et al. 2007: 238).

Gypsum Period (Middle to Late Holocene) - 2,000 B.C. to A.D. 500

Near the end of the middle Holocene, harsh climatic conditions associated with the Holocene Maximum warming trend (also known as the Altithermal) may have resulted in very low population densities, and even temporary abandonment, of large expanses of the Mojave Desert. Very few sites have been dated to the time span between about 3,000 and 2,000 B.C. that separates the Pinto and Gypsum complexes. The appearance of corner-notched (Elko), concave-base (Humboldt), and contracting-stemmed (Gypsum) projectile points in late Holocene sites of the western and northern Mojave signals the beginning of the Gypsum Period, as temperatures began to ameliorate during the First Neoglacial episode at the beginning of the late Holocene (Warren 1984; Sutton et al. 2007: 241).

In addition to the characteristic projectile point types, Gypsum assemblages include leaf-shaped points, stone knives, flake scrapers, T-shaped drills, choppers, hammer stones, shaft smoothers, ornamental items, split-twig animal figures, and paint. Some of these items, along with the presence of rock art, suggest ritual activities. Manos, metates, mortars, and pestles are found as well (Warren 1984; Sutton et al. 2007: 241). Gypsum sites are generally smaller and more numerous than earlier components and are spread over a wider variety of environments. Socio-economic contact with the California coast is indicated by the presence of shell beads. Gypsum Period sites show evidence of exploitation of split-hoofed animals, rabbits, hares, and rodents, as well as hard seeds and mesquite. Better technology and somewhat more complex social organization (compared to the previous Pinto population) probably helped peoples of the Gypsum complex adapt to the warming and drying conditions that began again after about 2,000 years ago. A more successful adaptation to the warm dry conditions is indicated because another population hiatus did not occur in the Mojave Desert during this period (Warren 1984; Sutton et al. 2007: 241-242). By around 1,000 B.C., the Northern Uto-Aztec peoples, who had probably come from northern Mexico around the end of the Pinto Period, had separated into Tubatulabalic, Hopic, Numic, and Tatic language groups (Sutton et al. 2007: 241-242).

Saratoga Spring or Rose Spring Period (Late Holocene) – A.D. 500 to 1200

Although the climate was warmer at the beginning of the Saratoga Spring Period than it had been during the First Neoglacial episode, conditions were sufficiently mesic to support springs and streams in the Mojave Desert, and possibly even shallow perennial lake stands at some of the desert playas (Sutton et al. 2007: 241). Archaeological data suggest a significant increase in population, especially in the western Mojave. Projectile points indicate that the bow and arrow were introduced to the Mojave Desert during the Saratoga Spring Period. While the bow and arrow probably do not indicate a major cultural change in the region (Warren 1984), they were a technological advance that may have improved hunting efficiency and increased the carrying capacity of the land, resulting in a rise in population (Sutton et al. 2007: 244).

Saratoga Spring sites in the southern Mojave Desert reflect the influence of Hakataya culture from the lower Colorado River by the inclusion of buffware and brownware pottery sherds and Desert Side-Notched and Cottonwood points. Hakataya intrusion or influence probably extended as far north and west as the east side of Antelope Valley (Warren 1984). Anasazi pottery and turquoise mining sites indicate the presence and influence of Pueblo peoples in the eastern Mojave during the Saratoga Spring Period (Warren 1984). In the western Mojave, particularly Antelope Valley, the effects of Hakataya and Anasazi contact or intrusion appear to have been minimal. Large village sites with cemeteries and well-developed middens, indicating long-term occupations, have been documented there. Among the artifacts found in Saratoga Spring sites of the Antelope Valley are steatite items and large numbers of shell beads, probably indicating trade with coastal groups (Warren 1984; Sutton et al. 2007: 241-242). Evidence of Anasazi contact in the east-central Mojave have been documented at the turquoise mines at Halloran springs. An analysis of pottery found at the mines indicate that the Anasazi were present in the Central Mojave between 700 to 900 A.D. The Anasazi were followed by the Hakataya, who occupied the area until 1200 to 1300 A.D. (Warren and Crabtree 1986: 191)

The rise in temperature and return to xeric conditions and occasional severe droughts associated with the Medieval Climatic Anomaly affected roughly the second half of the Saratoga Spring Period, beginning around A.D. 700. Deteriorating climatic conditions in the Mojave Desert led to a population decline and may have been partially responsible for bringing the Saratoga Spring complex to an end around A.D. 1200 (Sutton et al. 2007: 242).

Late Prehistoric Period (Late Holocene) – A.D. 1200 to Contact (ca. 1770)

The several tribes occupying the Mojave Desert at the time of contact with Europeans are believed to have had their genesis in the separate cultural complexes that developed during the Late Prehistoric Period (Warren 1984). Toward the end of the Medieval Climatic Anomaly, the population of the Mojave continued a decline that had begun during the Saratoga Spring Period. Hakataya and Anasazi cultural influences remained in the eastern and southern parts of the region. By around A.D. 1000, the Numic speakers of the western Mojave Desert had differentiated into Southern Paiute, spreading eastward and occupying an area north of the Mojave River, and Shoshone, whose territory was farther north. South of the Mojave River, and in much of southern California, Takic speaking groups were predominant (Sutton et al. 2007: 244).

Late Prehistoric sites are abundant in the Mojave Desert, and they range from temporary campsites to large villages with middens and cemeteries. Artifacts include Desert series projectile points, ground stone milling tools, shell beads, incised stones and pendants, and brownware and buffware ceramics. Obsidian was not used as frequently as during earlier periods. Faunal remains at archaeological sites indicate that deer, rabbits, hares, rodents, and reptiles were eaten along with a wide variety of vegetal foods, indicated by ground stone grinding implements (Sutton et al. 2007: 242-244). Trade, especially along the Mojave River and in the Antelope Valley, appears to have enabled the transport of resources over long distances, possibly mitigating against shortages and making a more sedentary, village-oriented existence possible during the Late Prehistoric Period (Warren 1984). Sedentary village sites, however, are not known to occur away from prominent, stable water resources and none have been identified at Fort Irwin.

4.2 Ethnohistory

The Project APE is located within the territory known to have been used by the Serrano-Vanyume, Kawaiisu, and Southern Paiute group of Native Americans at the time of contact with Europeans around A.D. 1769 (Bean and Smith 1978: 570; Kelly and Fowler 1978: 369; and Zigmund 1978: 399). The Project APE may have also been used seasonally by other Native Americans from the surrounding regions, including the Kawaiisu, who lived in the southern Sierras, and the Southern Paiute from the Las Vegas Area.

4.2.1 Serrano-Vanyume

The Serrano occupied an area in and around the San Bernardino Mountains and northward into the Mojave Desert. Their territory also extended west along the north slope of the San Gabriel Mountains, east as far as Twentynine Palms, north into the Victorville and Lucerne Valley areas, and south to the Yucaipa Valley and San Jacinto Valley (Cultural Systems Research 2005). The Serrano speakers in the Mojave Desert who lived along the Mojave River were known as the Vanyume. Serrano is a language within the Takic family of the Uto-Aztecan language stock.

The Serrano were mainly hunters and gatherers who occasionally fished. Game that was hunted included mountain sheep, deer, antelope, rabbits, small rodents, and various birds, particularly quail. Vegetable staples consisted of acorns, pinyon nuts, bulbs and tubers, shoots and roots, juniper berries, mesquite, barrel cacti, and Joshua tree (Bean and Smith 1978: 570). A variety of materials were used for hunting, gathering, and processing food, as well as for shelter, clothing, and luxury items. Shells, wood, bone, stone, plant materials, and animal skins and feathers were used for making baskets, pottery, blankets, mats, nets, bags and pouches, cordage, awls, bows, arrows, drills, stone pipes, musical instruments, and clothing (Bean and Smith 1978: 571-572).

Settlement locations were determined by water availability, and most Serranos lived in villages near water sources. Houses and ramadas were round and constructed of poles covered with bark and tule mats (Kroeber 1925). Most Serrano villages also had a ceremonial house used as a religious center. Other structures within the village might have included granaries and sweatshouses (Bean and Smith 1978: 571).

Serrano social and political units were clans, or patrilineal exogamous territorial groups. Each clan was led by a chief who had both political and ceremonial roles. The chief lived in a principal village within the clan's territory. The clans were part of a moiety system such that each clan was either a wildcat or coyote clan and marriages could only occur between members of opposite moieties (Earle 2004). On the north side of the San Bernardino Mountains, clan villages were located along the desert-mountain interface on Deep Creek, on the upper Mojave River, in Summit Valley, and in the Cajon Pass. The principal plant food available near these villages was juniper berries. These villages also had access to mountain resources, such as acorns and pinyon nuts.

Vanyume villages were located along the Mojave River from south of Victorville to Soda Lake. These river villages had populations of 40 to 80 people. Marriage ties between the Serrano foothill villages and Vanyume desert villages facilitated access to mountain resources, such as acorns and pinyon nuts, by the desert villages. The principal desert resources were mesquite beans, screw beans, tule reed roots, and carrizo grass sugar (produced by aphids that lived on the Carrizo grass). Animal resources were rabbits, jackrabbits, desert bighorn sheep, pronghorn, and desert tortoise (Earle 2005:10). The Vanyume also collected salt from Soda Lake and from the Barstow-Daggett area to exchange for acorns and other resources from the mountains (Earle 2005:11).

Partly due to their mountainous and desert inland territory, contact between Serrano and European-Americans was minimal prior to the early 1800s. In 1819, an *asistencia* (mission outpost) was established near present-day Redlands and was used to help relocate many Serrano to Mission San Gabriel. However, small groups of Serrano remained in the area northeast of the San Gorgonio Pass and were able to preserve some of their native culture. Today, most Serrano live either on the Morongo or San Manuel reservations (Bean and Smith 1978: 573).

4.2.2 Kawaiisu

The Kawaiisu were primarily situated around a low mountainous ridge between the Mojave Desert and the San Joaquin Valley, which included portions of the Tehachapi and Sierra Nevada mountains. The Kawaiisu language makes up the westernmost Numic branch of the Uto-Aztecan family; however, some linguists classify it as an entirely separate language. Kawaiisu territorial limits are difficult to establish since they had little concept of territory or boundary and only a general recognition of a home base. They are known to have moved about over large areas in search of seasonal food resources. The Kawaiisu utilized over 110 different types of plant resources as food including acorns, juniper, pinyon, mariposa, rice grass, fiddleneck, wild celery, chia, mesquite, screwbean, box thorn, mustard, yucca, and Joshua tree. Game food also included a wide variety of species. Deer was the favorite source of meat but was supplemented with antelope, mountain sheep, rodents, chuckwalla, birds, insects, and many other animal species (Zigmond 1986: 400).

Structures included winter houses made of wood poles, willow, bark, and brush; open, flat-roofed shade houses for the summer; and earth-covered sweathouses. Bark and tule mats were used to fortify structures with extra protection from the rain and also served as doors. Circular brush enclosures were created for encampments and ceremonies. Granaries about 2 feet (0.6 meters) tall were constructed to store acorns, nuts, and seeds. Kawaiisu technology included

the bow and arrow, bone and thorn awls, undecorated pottery (possibly obtained through trade), twined and coiled baskets, cordage for use in nets and mats and to tie and bind other materials, and stone bowls and pestles (Zigmond 1986: 401).

Social and political organization among the Kawaiisu was primarily limited to the family unit. Some families tended to dwell close to one another and work together in search of food and other resources. The Kawaiisu were generally known to be friendly, peaceful people (Zigmond 1986: 399). On occasion, the Kawaiisu participated in intertribal game drives with the Chumash and Yokuts, their neighbors to the west and northwest, respectively. Mortuary practices consisted of wrapping the body in a tule mat, placing it in a rock cleft, and covering it with a split basket and layer of rocks (Zigmond 1986: 399).

The aboriginal population of the Kawaiisu was probably around 500 prior to contact with Europeans around 1769. After trappers and miners settled in the area in the 1800s, the population had dwindled to around 150. Like the Vanyume, all manifestations of tribal life had disappeared by the 1960s and very few descendants of the Kawaiisu culture are known today (Zigmond 1986: 410).

4.2.3 Southern Paiute

Ethnographic accounts indicate that the Southern Paiute once occupied a broad strip of territory extending across southern Utah, southern Nevada, northern Arizona north of the Colorado River, and, following the sharp bend in the Colorado River, southward into California as far as present-day Blythe. The Southern Paiute belong to the Southern Numic branch of the Uto-Aztecan linguistic family. Ethnographers have divided the Southern Paiute into 16 identifiable groups, which include two groups whose ancestral territory is located in California, the Chemehuevi and the Las Vegas Paiute. Of these two, the Las Vegas Paiute territory is the closest to Fort Irwin (Kelly and Fowler 1986: 369). There was no overall "tribal" organization; each group was a geographic unit associated with a definite, economically self-sufficient, territory. Because the terrain occupied by the Southern Paiute varied considerably (from the high Colorado Plateaus, through the Basin and Range, to the Mojave Desert), local diets also varied among the different groups. Small game, including rabbits, gophers, squirrels, birds, certain lizards, and snakes, was the main source of protein for all groups; however, most groups also hunted larger game, particularly bighorn sheep. Fish was a main staple food for the Panguitch group only, although all groups did some fishing except for the Chemehuevi. Many different plant foods were widely exploited by the Southern Paiute groups. Pine nuts were a common staple among those groups who had pinyon trees within their territory. A variety of roots and berries were exploited in the Colorado Plateau region while agave was heavily utilized in the Basin and Range and Mojave Desert areas. Native agriculture developed relatively late in the region and a few of the Southern Paiute groups remained non-agricultural. However, most groups did engage in limited agriculture cultivating corn, squash, melons, and sunflower. Agriculture was practiced on a larger scale among the western groups, especially among the Chemehuevi and Las Vegas (Kelly and Fowler 1986: 370-371).

4.3 History

The first significant European settlement of California began during the Spanish Period (1769 to 1821) when 21 missions and 4 presidios were established between San Diego and Sonoma.

Although located primarily along the coast, the missions dominated economic and political life over the majority of the California region during this period. The purpose of the missions was primarily Indian control, along with economic support to the presidios, forced assimilation of the Indians to Hispanic society, and conversion of the native population to Spanish Catholicism (Castillo 1978; Cleland 1941). During this period, Father Francisco Garces became one of the first Europeans to travel through the western Mojave on his search for a route from Arizona to the missions in northern California. He passed near the future site of Barstow in 1776 (Mojave River Valley Museum 2006).

The Mexican Period (1821 to 1848) began with the success of the Mexican Revolution in 1821, but changes to the mission system were slow to follow. When secularization of the missions occurred in the 1830s, the vast land holdings of the missions in California were divided into large land grants called *ranchos*. The Mexican government granted ranchos throughout California to Spanish and Hispanic soldiers and settlers (Castillo 1978); however, few of these ranchos were located in the desert regions of California. During this period, the Barstow area experienced little settlement, but it was part of an important transportation route into Southern California known as the "Old Spanish Trail," which passed just a few miles east of present-day Barstow (Mojave River Valley Museum 2006). A portion of the northern route of the Old Spanish trail runs through the southeastern section of Fort Irwin (Old Spanish Trail Association 2015).

In 1848, the Treaty of Guadalupe Hidalgo ended the Mexican-American War and marked the beginning of the American Period (1848 to present). The discovery of gold the same year initiated the 1849 California Gold Rush, bringing thousands of miners and settlers to California, most of whom settled in the north. For those settlers who chose to come to southern California, much of their economic prosperity was fueled by cattle ranching rather than gold. This prosperity, however, came to a halt in the 1860s as a result of severe floods and droughts which put many ranchos into bankruptcy (Castillo 1978; Cleland 1941).

The first settlement of the Barstow region occurred in the 1860s with settlers establishing way stations for the many travelers passing through the area. Limited agriculture and stock raising also began during this period. That same decade, silver was discovered near Calico and Daggett. By 1885, the transcontinental Atchison, Topeka, and Santa Fe Railroad, which connected Kansas City with Los Angeles, was completed to San Bernardino via Barstow. The Santa Fe Railroad extended to Los Angeles in 1887. Barstow was named in 1886 for William Barstow Strong, president of the Santa Fe Railroad (Bryant 1974, Gudde 1969).

The Old Spanish Trail brought both travelers and traders through Fort Irwin. This led to the discovery of precious minerals in the Fort Irwin area. One of the larger mines in the vicinity was the Amargosa Mine. In 1849, two Mormon missionaries discovered gold in the Salt Springs Hills to the northeast of Fort Irwin. News of the discovery spread and soon prospectors and mining companies were investigating the deposits, eventually tracing the source back to the Amargosa. By 1850, two mining companies, the Los Angeles Company and the Desert Mining Company were mining these gold deposits. In 1852, both companies were purchased by Salt Springs Mining Company. After the high salt content of the water near the mine ruined equipment, the mine was closed. In 1863, The Amargosa Gold and Silver Mining Company of San Francisco began working the mine once again. After salt clogged the equipment of the new venture, the mine was once again closed in 1864. Two independent prospectors, one in 1894 and one in 1902, briefly mined the deposit after its official closure. Other mining activities in the

area were located in the Avawatz Range, Five Points Mountain, Denning Spring, Cave Spring, Quail Spring, Soda Lake, and Bonanza Mountain (Vrendenburgh 1994).

Over the next several decades, the railroad was the main source of employment for residents in Barstow and other desert communities. In 1911, Casa del Desierto was completed in downtown Barstow. Serving as a railroad depot, hotel, and restaurant, it became known as the Harvey House for its owner, the Fred Harvey Company. The Harvey House is listed on the National Register of Historic Places (NRHP) (Mojave River Valley Museum 2006).

In the 1930s, local prominent businessmen pressured state officials to locate the intersection of Routes 66 and 91 in Barstow, bringing even more travelers through the city. In the 1940s, several military installations were established in the vast expanses of the Mojave Desert, including Fort Irwin, located approximately 37 miles (59 kilometers) northeast of Barstow. This led to an increase in jobs and economic opportunities for the residents of the area. The City of Barstow incorporated in 1947, and the population continued to increase at a slow but steady pace. Strategically located along Interstate 15 between San Bernardino and Las Vegas, the main source of employment remains the service industry, catering to travelers passing through the area, followed closely by employment at Fort Irwin. In 2013, the population of Barstow was 23,000 (United States Census Bureau 2013).

According to the Fort Irwin Integrated Cultural Resources Management Plan (Department of the Army, Fort Irwin 2011), Fort Irwin was authorized by President Franklin D. Roosevelt in 1940 as the Mojave Anti-Aircraft Range and the facility began operation in 1942 (Science Application International Corporation (SAIC) 1996). The facility was renamed Camp Irwin. Two years later, Camp Irwin was closed and designated as a surplus facility. In 1951, the facility was reopened as the Armored Combat Training Area and was used to train troops during the Korean War (National Training Center Fort Irwin 2015). This installation became permanent in 1961 and was designated the Fort Irwin Army and Desert Training Center in 1961. Fort Irwin was active throughout the Vietnam War but was once again deactivated in 1971 and placed on maintenance status. In 1979, Fort Irwin was selected as the site of the National Training Center, Fort Irwin. The National Training Center was initially activated in 1980 and Fort Irwin returned to full active status in 1981. Fort Irwin continues to be one of the main training centers in the country (National Training Center Fort Irwin 2015).

5.0 METHODS

5.1 Records Search Methods

A cultural resources records search was conducted in March 2015 at the San Bernardino Archaeological Information Center (SBAIC), located at the San Bernardino County Museum in Redlands, California. This records search covered the entire 11.4 mile (18.35 kilometer) long APE plus a 1 mile (1.6 kilometer) buffer on all sides. The purpose of the records search was to determine the extent of previous cultural resources investigations and the presence of previously-recorded archaeological sites or historic-period (i.e., over 50 years in age) resources within a 1 mile (1.6 kilometer) radius of the Project. Materials reviewed included reports of previous cultural resources investigations, archaeological site records, historical maps, and listings of resources on the National Register of Historic Places (NRHP), California Register of Historical Resources (CRHR), California Points of Historical Interest, California Landmarks, and National Historic Landmarks.

In addition to the archaeological records check at the SBAIC, in order to gather any additional data an ECORP archaeologist contacted Fort Irwin cultural resources personnel to request a records search for any known resources that may not have been captured by the search at the SBAIC. During this process, ECORP staff members were informed by Base Archaeologist Brantley Jackson that survey reports and site records for all previously recorded resources at Fort Irwin have been sent to the SBAIC. Mr. Jackson stated that the Base had nothing pending and that the Base would not have any records that were not also located at the SBAIC. Thus, an in house records search at Fort Irwin was not required (Jackson 2015b). Subsequent communication with Fort Irwin indicated that there were additional surveys within the APE vicinity that were not included in the records search results from the SBAIC. Information on those surveys was provided to ECORP by Fort Irwin.

5.2 Sacred Lands File Search Methods

A Sacred Lands File search was requested from the Native American Heritage Commission (NAHC) in Sacramento. The NAHC was asked to conduct a search of the Sacred Lands File to identify any known sensitive or sacred Native American resources located in or near the Project APE. The NAHC was also asked to provide a list of Native American groups that have historic or traditional ties to the Project APE. A copy of the letter sent to the NAHC is included with this report as Appendix A.

5.3 Field Survey Methods

The initial archaeological field work was conducted by ECORP archaeologists between May 26 and 28, 2015, and consisted of an intensive systematic pedestrian survey. The field crew consisted of ECORP archaeologists Robert Cunningham and Andrew Myers. Following revisions to the APE boundary, ECORP archaeologist Robert Cunningham conducted additional survey on September 25, 2015. This second survey was conducted in order to capture any areas within the new APE not surveyed during the initial May surveys. The entire Project APE was examined for the presence of cultural artifacts and features by walking parallel transects spaced 15 meters (49 feet) apart. Notes were taken on the environmental setting and disturbances within

the Project APE. All archaeological resources encountered were mapped into a handheld Juno GPS unit, which has an accuracy ranging from sub-meter to 2 meters (6.5 feet).

5.4 National Register Eligibility Evaluation Methods.

The National Park Service has developed four criteria, A through D, for assessing the historical significance of cultural resources to determine eligibility for the NRHP (see Table 5-1). At least one criterion of the National Register Criteria of Evaluation must be met for a property to be considered eligible for the NRHP (National Park Service 1991). Federal laws and regulations regarding the management and treatment of historic properties are invoked by the property's NRHP eligibility as determined in consultation with the appropriate State Historic Preservation Office. It is not necessary that a potentially eligible property actually be listed on the NRHP to be subject to special management considerations.

Table 1. Criteria for Inclusion of a Property on the National Register of Historic Places

Criterion	Association	Characteristic
A	Event	Properties associated with events that have made a significant contribution to the broad patterns of U.S. history.
B	Person	Properties associated with the lives of persons significant in U.S. history.
C	Design/ Construction	Properties that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction.
D	Information Potential	Properties that have yielded, or may be likely to yield, information important in prehistory or history.

Source: National Park Service 1991

Table 2. Qualities of Integrity Related to Eligibility for the National Register

Quality	Description
Location	The place the historic property was constructed or the historic event occurred.
Design	The combination of elements creating the property's form, plan, space, structure, and style.
Setting	The physical environment of the historic property.
Materials	The physical elements combined at a particular period of time and in a particular pattern or configuration to form a historic property.
Workmanship	The physical evidence of the craft of a particular culture or people during any given period.

Quality	Description
Feeling	The property's expression of the aesthetic or historic sense of a particular period of time.
Association	The direct link between an important historic event or person and the property.

Source: National Park Service 1991

In addition to historical significance, a property must have integrity to be eligible for the NRHP. Integrity is the property's ability to convey its demonstrated historical significance. Seven individual elements comprise integrity (see Table 5-2). It is not required that a historic property display all these qualities. A property must display only two of these aspects of integrity to be considered NRHP-eligible (National Park Service 1991).

6.0 RESULTS

6.1 Records Search Results

The results of the records search at the SBAIC indicated that 25 cultural resources investigations have been conducted within the 1 mile (1.6 kilometer) records search radius of the Project APE between 1946 and 2014. Of these 25 investigations, three overlap portions of the Project APE (Lerch and Majewski 2003; McKenna 2006; and Wohlgemuth 2006). According to the maps at the SBAIC, four previous surveys were located immediately adjacent to the Project APE (Directorate of Public Works 2002; Newman and Belcourt 2010; Underwood et al. 1982; and Underwood, et al. 1983). A listing of these investigations is presented below in Table 3.

Table 3. Previous Investigations within 1 Mile (1.6 Kilometers) of the Project APE

Report Author	Report Name	Year	Type/Distance to Closest Project APE
Peck, Ethel G. and Stuart L. Peck	<i>Jack Spring and Bicycle Lake</i> (NADB-1060017)	1946	Block survey located approximately 2,000 feet (610 meters) southeast of the southwestern end of the Project APE
Eckhardt, William T. and M. Jay Hatley	<i>Report of Intensive Survey, Instrumented Range Assembly Area, Fort Irwin, San Bernardino County, California; Addendum: Survey, Testing and Documentation, Assembly and Offense Areas, Fort Irwin, California</i> (NADB-1061292)	1982	Large block survey located approximately 625 feet (191 meters) west of the central portion of the Project APE
Underwood, Jackson, Kenneth Daly, and M. Diane Pitz	<i>A Cultural Resources Survey of Portions of the Force-On-Force and Maneuver areas, Fort Irwin, San Bernardino County, California</i> (NADB-1061314)	1982	Large block survey located adjacent to the central portion of the Project APE
Underwood, Jackson, Sheila J. Vaughan, and Kenneth Daly	<i>Final: Intensive Archaeological Survey of Areas 7P, 7Q and 7K, Fort Irwin, San Bernardino County, California</i> (NADB-1061416)	1983	Large block survey located adjacent to the central portion of the Project APE
Mikkelsen, Patricia J. and M.C. Hall	<i>A Cultural Resources Sample Survey of the Proposed Fort Irwin Land Expansion Area, San Bernardino County, California</i> (NADB-1062235)	1990	Large block survey located approximately 375 feet (114 meters) southeast of the southwest end of the Project APE
Directorate of Public Works	<i>Survey Report: Off Road Vehicle Area, Fort Irwin, California</i> (NADB-1067341)	2002	Block Survey located adjacent to the northeast end of the Project APE

CULTURAL RESOURCES INVESTIGATIONS FOR THE VERIZON FORT IRWIN FIBER OPTIC PROJECT
SAN BERNARDINO COUNTY, CALIFORNIA

Report Author	Report Name	Year	Type/Distance to Closest Project APE
Lerch, Michael K. and Teresita Majewski	<i>Historic Property Survey Report for the Fort Irwin Road Project, from Interstate 15 to the Southerly Boundary of the National Training Center, Fort Irwin, San Bernardino County, California</i> (NADB-1066261)	2003	Linear survey overlapping a segment of the southwestern end of the project .(overlapping approximately 10 percent of the Project APE)
Gundrum, Darrel and Lance McNees	<i>Cultural Resources Inventory and Evaluation of the Proposed Fiber Optic Line (FOL) From Fort Irwin National Training Center to China Lake Naval Air Weapons Station (NAWS) B Range, San Bernardino County, California</i> (NADB-1066759)	2006	Linear survey located 4,625 feet (1,410 meters) northeast of the northeast end of the Project APE
McKenna, Jeanette A.	<i>Results of a Class III Archaeological Survey for the Proposed Johnson Controls Fort Irwin NTC-CHP ECM Pipeline Alternative Studies at Fort Irwin, San Bernardino County, California</i> (NADB-1067170)	2006	Linear survey diagonally overlapping the Project APE along Fort Irwin Road, beginning near the northeast end of the Project APE, and extending into the southwest end of the Project APE (approximately 50 percent of the Project APE)
Pollock, Katherine H. and Michael K. Lerch	<i>Deteriorated Pole Replacement Project: Archaeological Survey of Five Pole Locations on Remote 33kV Transmission Line, Bureau of Land Management, San Bernardino County, California</i> (NADB-1064894)	2006	Utility poles located approximately 2,500 feet (762 meters) and 1,000 feet (304 meters) southwest of the southwest end of the Project APE
Wohlgemuth, Eric	<i>Cultural Resources Inventory and Evaluation of Select High Probability Areas in the Southern Corridor, Fort Irwin NTC, San Bernardino County, California</i> (NADB-1067361)	2006	Large block survey overlapping approximately 3,500 feet (1,066 meters) of the southwestern end of the Project APE (approximately 3 percent of the Project APE)
Hatoff, Brian	<i>Barstow Road/South Depot Loop</i> (NADB-1067353)	2007	Telecommunications Tower located approximately 250 feet (76 meters) southeast of the northeast end of the Project APE
Belcourt, Tria Marie and Paula Sutton	<i>DPW 108 North Barracks Construction Project</i> (NADB-1067335)	2009	Block survey located approximately 5,250 feet (1,600 meters) northeast of the northeast end of the Project APE
Gilbreath, Amy, Michael Darcangelo, and Kasey O'Horo	<i>Cultural Resources Inventory in the Southern Corridor Area, Fort Irwin NTC, San Bernardino County, California</i> (NADB-1067354)	2009	Large block survey located approximately 1,625 feet (495 meters) east of the central portion of the Project APE

CULTURAL RESOURCES INVESTIGATIONS FOR THE VERIZON FORT IRWIN FIBER OPTIC PROJECT
SAN BERNARDINO COUNTY, CALIFORNIA

Report Author	Report Name	Year	Type/Distance to Closest Project APE
Ramirez de Bryson, Luz	<i>DPW-114, Building 237</i> (NADB-1066853)	2009	Report for Building 237, located approximately 1,875 feet (572 meters) north of the northeast end of the Project APE
Belcourt, Tria Marie	<i>Tortoise Fencing Gap Closure Project</i> (NADB-1066890)	2010	Linear survey approximately 125 feet (38 meters) southeast of the southwestern end of the Project APE
Belcourt, Andrew and Tria Marie Belcourt	<i>Water Spray and Mini Golf Park (FY10-032)</i> (NADB-1067325)	2010	Block survey approximately 1,125 feet (343 meters) north of the northeast end of the Project APE
Belcourt, Andrew and Tria Marie Belcourt	<i>Vehicle Protection Barrier Construction (FY10-040)</i> (NADB-1067326)	2010	Block survey located approximately 3,125 feet (953 meters) north of the northeast end of the Project APE
Ellison, Tria Marie and Paula Sutton	<i>Evaporative Cooler Replacement (FY10-008)</i> (NADB-1067327)	2010	Building study of Barracks Buildings, approximately 2,250 feet (686 meters) east of the northeast end of the Project APE
Belcourt, Tria Marie and Paula Sutton	<i>Switch Back Ramp Construction (FY10-013)</i> (NADB-1067331)	2010	Block survey located approximately 1,125 feet (343 meters) northwest of the northeast end of the Project APE
Newman, Tiffany L. and Tria Marie Belcourt	<i>Departure Park Water Well Discovery</i> (NADB-1067336)	2010	Block survey adjacent to the northeast end of the Project APE
Belcourt, Andrew N. and Paula Sutton	<i>Combative Facility. (FY10-007)</i> (NADB-1067339)	2010	Block survey located approximately 2,500 feet (762 meters) north/northeast of the northeast end of the Project APE
Newman, Tiffany L.	<i>Weed Army Community Hospital and 11th ACR Headquarters Replacement</i> (NADB-1067340)	2010	Block survey located approximately 3,000 feet (914 meters) north of the northeast end of the Project APE
Bonner, Wayne H. and Sarah A. Williams	<i>Cultural Resources Records Search and Site Visit Results for AT&T Mobility, LLC Candidate ESO346 (Fort Irwin Baseball Field), [East Corner of] Intersection of Barstow Road and Inner Loop Road, Fort Irwin, San Bernardino County, California</i> (NADB-1067551)	2013	Telecommunications tower located approximately 500 feet (153 meters) southeast of the northeast end of the Project APE
Yacubic, Matt, Katie Burnett, Armando Abeyta, and Amber Fankhauser	<i>Military Munitions Response Program Project (FY14-1013)</i> (NADB- 1067794)	2014	Block survey approximately 1,125 feet (5,125 feet) north of the northeast end of the Project APE

Subsequent communication with Fort Irwin disclosed that 20 additional cultural resources investigations have been conducted within the vicinity of the Project APE. A map of these investigations in relation to the Project APE is located in Appendix B. A listing of these investigations is presented below in Table 4. Based on both the SBAIC and Fort Irwin information, approximately 90 percent of the APE has been previously surveyed.

Table 4. Additional Investigations Supplied by Fort Irwin in the APE Vicinity

Report Author	Report Name/Report Number	Year	Type/Distance to Closest Project APE
REFERENCE INFORMATION NOT PROVIDED	R-155	--	Block surveys located adjacent to the northern end and southeast end of the Project APE
REFERENCE INFORMATION NOT PROVIDED	R-138	--	Large block survey located adjacent to the south end of the Project APE
Geo-Marine, Inc.	Research Design for Cultural Resources Inventory and Evaluation, Including Geomorphic Characterization, of the 200 km (124.5 mile) Fiber Optic Network, Phase II, Fort Irwin, National Training Center, California (R-134/R-130)	2004	Large linear survey located adjacent to the southern and central portions of the Project APE and 820 feet (250 meters) east of the northern portion of the Project APE
REFERENCE INFORMATION NOT PROVIDED	R-030	--	Large block survey located adjacent to the southern and central portions of the Project APE
REFERENCE INFORMATION NOT PROVIDED	R-029C	--	Large block survey located approximately 426 feet (130 meters) west of the southern central portion of the Project APE
REFERENCE INFORMATION NOT PROVIDED	R-033	--	Large block survey located adjacent to the central portion of the project APE
REFERENCE INFORMATION NOT PROVIDED	R-149	--	Block survey located 2,309 feet (704 meters) east of the southern central portion of the Project APE
REFERENCE INFORMATION NOT PROVIDED	DPW-070	--	Small block survey located immediately east of central portion of Project APE
REFERENCE INFORMATION NOT PROVIDED	FY15-239	--	Small linear survey located approximately 984 feet (300 meters) east of central portion of Project APE
Versar, Inc.	Anti-Terrorist Force Protection Project, Fort Irwin, CA (DPW-034)	2002	Small block surveys located adjacent to central portion of Project APE and approximately 2,050 feet (625 meters) west of north central portion of Project APE

CULTURAL RESOURCES INVESTIGATIONS FOR THE VERIZON FORT IRWIN FIBER OPTIC PROJECT
SAN BERNARDINO COUNTY, CALIFORNIA

Report Author	Report Name/Report Number	Year	Type/Distance to Closest Project APE
CH2MHILL	Archaeological Resources Inventory Report for the Fort Irwin Solar Project, San Bernardino County, CA (R-162)	2013	Large block survey located adjacent to north central portion of Project APE
Chambers Group, Inc.	Fort Irwin unable to locate report (DPW-134/FY09-128)	2009	Block survey located 3,300 feet (1.0 kilometer) west of central portion of the Project APE
REFERENCE INFORMATION NOT PROVIDED	FY10-060	--	Block survey located 1,017 feet (310 meters) west of north central portion of Project APE
REFERENCE INFORMATION NOT PROVIDED	FY15-1003	--	Small block survey located immediately east of northern portion of Project APE
REFERENCE INFORMATION NOT PROVIDED	R-155.3	--	Large block survey located adjacent to the north end of the Project APE and the Staging Area
REFERENCE INFORMATION NOT PROVIDED	DPW-020	--	Block survey located adjacent to the northeast end of the project APE
REFERENCE INFORMATION NOT PROVIDED	DPW-148	--	Small block survey located adjacent to the northwest end of the Project APE
REFERENCE INFORMATION NOT PROVIDED	FY10-093	--	Small block survey located 1845 feet (562 meters) northeast of northern end of the Project APE
REFERENCE INFORMATION NOT PROVIDED	FY10-058	--	Small linear survey located approximately 1,435 feet (437 meters) northeast of the north end of the Project APE
Geo-Marine, Inc.	R-127	2004	Linear survey located approximately 1,640 feet (500 meters) east of the northeast end of the Project APE and adjacent to the Staging Area.

The records search results from the SBAIC also revealed that 49 cultural resources have been previously recorded within the 1 mile (1.6 kilometer) records search radius. Of these 49 cultural resources, 24 are historic-period sites. Of the 24 historic-period sites, 14 are historic-age buildings located within the Fort Irwin cantonment area and the other 10 are historic-period archaeological sites. The remaining 25 resources include 7 prehistoric sites, 11 prehistoric isolates, 4 historic-period isolates, 2 multicomponent sites, and 1 site of unknown age.

Of the 49 previously recorded resources, only one site, a historic-age wood pole transmission line (P36-010894/CA-SBR-10894), is located within the Project APE. Details of all 49 previously recorded cultural resources are presented below in Table 5.

Table 5. Previously Recorded Cultural Resources within 1 Mile (1.6 Kilometers) of the Project APE

Location Relative to Project APE	Resource Designation	Age or Period of Resource	Description	Reference(s)
875 feet (267 meters) northwest of the northeast end of the Project APE	P36-000432 CA-SBR-0432	Prehistoric	Quarry Site, Lithic Scatter, Habitation Site	McKinney DPR Record (1965) Michael Messersmith DPR Record (nd)
300 feet (91 meters) east of the southwest end of the Project APE	P36-004525 CA-SBR-4525	Historic	Barstow-Silver Lake Road	Robert Reynolds DPR Record (1981) Suzanne Baker DPR Record (1994) Dr. J. Underwood and S. Rose DPR Record (2000)
750 feet (229 meters) west of the central portion of the Project APE	P36-004865 CA-SBR-4865	Unknown	Rock Cairn	Cornerstone Research DPR Record (1981)
4,625 feet (1,410 meters) west of the central portion of the Project APE	P36-004894 CA-SBR-4894	Prehistoric	Lithic Scatter	J. Underwood and P Ainsworth DPR Record (1981)
125 feet (38 meters) northwest of the northeast end of the Project APE	P36-005998	Prehistoric	Lithic Scatter	R. Helman and R.H. Norwood DPR Record (1980)
125 feet (38 meters) northeast of the southwest end of the Project APE	P36-010893 CA-SBR-10893	Historic	Wood Pole Utility Line	Kenneth M. Becker DPR Record (2001)
Overlaps the central portion of the Project APE	P36-010894 CA-SBR-10894	Historic	Wood Pole Transmission Line	Kenneth M. Becker DPR Record (2001)
250 feet (76 meters) northwest of the northeast end of the Project APE	P36-010925 CA-SBR-10925	Prehistoric/ Historic	Military Training Range, Refuse Deposit, Survey Marker, Lithic Scatter	Harold Brewer, Darrell Gundrum, Shannon Freeman, and Jay Sander DPR Record (2002) N. Lawson, G. Cardenas, W. Johnson DPR Record (2012)
2,375 feet (724 meters) northwest of the northeast end of the Project APE	P36-010926 CA-SBR-10926	Historic	Military Ammunition Storage Area	Harold Brewer, Darrell Gundrum, Shannon Freeman, and Jay Sander DPR Record (2002)
4,875 feet (1,486 meters) west of the northeast end of the Project APE	P36-012035 CA-SBR-12035	Unknown Prehistoric	Lithic scatter	M. Johnson DPR Record (2005)

CULTURAL RESOURCES INVESTIGATIONS FOR THE VERIZON FORT IRWIN FIBER OPTIC PROJECT
SAN BERNARDINO COUNTY, CALIFORNIA

Location Relative to Project APE	Resource Designation	Age or Period of Resource	Description	Reference(s)
1,500 feet (457 meters) east of the central Project APE	P36-012036 CA-SBR-12036	Historic	Military Refuse Deposit	M. Johnson DPR Record (2005)
2,125 feet (648 meters) east of the southwest end of the Project APE	P36-012162 CA-SBR-12165	Prehistoric	Lithic Scatter/ Habitation Site	M. Darcengelo, T. Torres, J. Belk, M. Shearer DPR Record (2005)
1,625 feet (495 meters) east of the southwest end of the Project APE	P36-012163 CA-SBR-12166	Prehistoric	Lithic Scatter/ Habitation Site	M. Darcengelo, T. Torres, J. Belk, M. Shearer DPR Record (2005)
1,375 feet (419 meters) east of the southwest end of the Project APE	P36-012164 CA-SBR-12167	Prehistoric	Lithic Scatter	M. Darcengelo, T. Torres, J. Belk, M. Shearer DPR Record (2005)
750 feet (229 meters) east of the southwest end of the Project APE	P36-012172 CA-SBR-12175	Prehistoric	Lithic Scatter/ Habitation Debris	M. Darcengelo, T. Torres, J. Belk, M. Shearer DPR Record (2005)
1,500 feet (457 meters) east of the southwest end of the Project APE	P36-012181	Prehistoric	Isolated Find: obsidian flake	M. Darcengelo, T. Torres, J. Belk, M. Shearer DPR Record (2005)
1,375 feet (419 meters) east of the southwest end of the Project APE	P36-012182	Prehistoric	Isolated Find: Obsidian Flake	M. Darcengelo, T. Torres, J. Belk, M. Shearer DPR Record (2005)
1,250 feet (381 meters) east of the southwest end of the Project APE	P36-012183	Prehistoric	Isolated Find: Obsidian Biface Fragment	M. Darcengelo, T. Torres, J. Belk, M. Shearer DPR Record (2005)
625 feet (191 meters) east of the southwest end of the Project APE	P36-012184	Prehistoric	Isolated Find: Rose Springs Type Projectile Point	M. Darcengelo, T. Torres, J. Belk, M. Shearer DPR Record (2005)
125 feet (38 meters) northwest of the northeast end of the Project APE	P36-021159	Historic	Departure Park Well	Tiffany L. Newman DPR Record (2010)
1,625 feet (495 meters) north of the northeast end of the Project APE	P36-021648	Historic	Building 143- Water Pump	Scott Solliday DPR Record (2010)
1,875 feet (572 meters) north of the northeast end of the Project APE	P36-021649	Historic	Building 149- Water Well	Scott Solliday DPR Record (2010)

CULTURAL RESOURCES INVESTIGATIONS FOR THE VERIZON FORT IRWIN FIBER OPTIC PROJECT
SAN BERNARDINO COUNTY, CALIFORNIA

Location Relative to Project APE	Resource Designation	Age or Period of Resource	Description	Reference(s)
875 feet (267 meters) east of the northeast end of the Project APE	P36-021650	Historic	Building 308- Clothing Sales Store	Scott Solliday DPR Record (2010)
1,125 feet (343 meters) east of the northeast end of the Project APE	P36-021651	Historic	Building 312- In/Out Processing Center Admin. Building	Scott Solliday DPR Record (2010)
1,250 feet (381 meters) northeast of the northeast end of the Project APE	P36-021652	Historic	Building 319- Water Well	Scott Solliday DPR Record (2010)
1500 feet (452 meters) northeast of the northeast end of the Project APE	P36-021653	Historic	Building 322- Memorial Fitness Center	Scott Solliday DPR Record (2010)
2,250 feet (686 meters) east of the northeast end of the Project APE	P36-021654	Historic	Building 452- BDE Headquarters Building	Scott Solliday DPR Record (2010)
2,750 feet (838 meters) northeast of the northeast end of the Project APE	P36-021655	Historic	Building 614- Vehicle Maintenance Shop	Scott Solliday DPR Record (2010)
3,500 feet (1,067 meters) northeast of the northeast end of the Project APE	P36-021656	Historic	Building 663- Water Well	Scott Solliday DPR Record (2010)
2,125 feet (648 meters) northeast of the northeast end of the Project APE	P36-021662	Historic	Building 365- Engineers Administrative Building	Scott Solliday DPR Record (2010)
4,500 feet (1,372 meters) southeast of the northeast end of the Project APE	P36-021664	Historic	Building 842- Battalion Classroom	Scott Solliday DPR Record (2010)
1,875 feet (572 meters) southeast of the northeast end of the Project APE	P36-021667	Historic	Building 934- General Purpose Warehouse	Scott Solliday and Angela McArdle DPR Record (2010)
1,375 feet (419 meters) west of the northwest end of the Project APE	P36-021668	Historic	Building 1318- Apple Installation Building	Scott Solliday DPR Record (2010)
1,750 feet (533 meters) north of the northeast end of the Project APE	P36-023407	Historic	Building 237	Luz Ramirez de Bryson DPR Record (2009)

CULTURAL RESOURCES INVESTIGATIONS FOR THE VERIZON FORT IRWIN FIBER OPTIC PROJECT
SAN BERNARDINO COUNTY, CALIFORNIA

Location Relative to Project APE	Resource Designation	Age or Period of Resource	Description	Reference(s)
500 feet (152 meters) southeast of the northeast end of the Project APE	P36-025412	Prehistoric	Isolated Find: Lithic Scatter	J. Lev-Tov, S. Shelley, and M. Hyland DPR Record (2012)
1,125 feet (343 meters) southeast of the northeast end of the Project APE	P36-025413	Prehistoric	Isolated Find: Lithic Scatter	J. Lev-Tov, S. Shelley, and M. Hyland DPR Record (2012)
1,375 feet (419 meters) east of the central portion of the Project APE	P36-025435	Prehistoric	Isolated Find: Chert Flake	S. Kremkau and M. Hyland DPR Record (2012)
500 feet (153 meters) northwest of the northeast end of the Project APE	P36-026776	Historic	Excavated Areas	N. Lawson, G. Cardenas, W. Johnson DPR Record (2012)
625 feet (191 meters) northwest of the northeast end of the Project APE	P36-026778	Historic	Excavated Areas	N. Lawson, G. Cardenas, W. Johnson DPR Record (2012)
2,625 feet (800 meters) northwest of the northeast end of the Project APE	P36-026780	Prehistoric	Isolated Find: Chert Flake	N. Lawson, G. Cardenas, W. Johnson DPR Record (2012)
2,750 feet (838 meters) northwest of the northeast end of the Project APE	P36-026781	Historic	Isolated Find: Refuse Deposit	N. Lawson, G. Cardenas, W. Johnson DPR Record (2012)
2,500 feet (762 meters) northwest of the northeast end of the Project APE	P36-026782	Historic	Isolated Find: Hole-in-top Can	N. Lawson, G. Cardenas, W. Johnson DPR Record (2012)
2,375 feet (724 meters) northwest of the northeast end of the Project APE	P36-026783	Prehistoric	Isolated Find: Lithic Scatter	N. Lawson, G. Cardenas, W. Johnson DPR Record (2012)
1,938 feet (591 meters) northwest of the northeast end of the Project APE	P36-026784	Historic	Isolated Find: Hole-in-top Can	N. Lawson, G. Cardenas, W. Johnson DPR Record (2012)
1,875 feet (572 meters) northwest of the northeast end of the Project APE	P36-026785	Prehistoric	Isolated Find: Chert Shatter	N. Lawson, G. Cardenas, W. Johnson DPR Record (2012)
750 feet (227 meters) northwest of the northeast end of the Project APE	P36-026786	Prehistoric	Isolated Find: Chert Tool Fragment	N. Lawson, G. Cardenas, W. Johnson DPR Record (2012)

Location Relative to Project APE	Resource Designation	Age or Period of Resource	Description	Reference(s)
1,375 feet (419 meters) northwest of the northeast end of the Project APE	P36-026787	Historic	Isolated Find: .30-06 Casing With 1935 Headstamp	N. Lawson, G. Cardenas, W. Johnson DPR Record (2012)
4,500 feet (1,372 meters) south of the southwest end of the Project APE	P36-064565	Historic	Unpaved Road	Kenneth M. Becker DPR Record (2001)
725 feet (221 meters) southwest of the southwest end of the Project APE	P36-064566	Historic	Unpaved Road	Kenneth M. Becker DPR Record (2001)

6.2 NAHC Sacred Lands File Search Results

The Sacred Lands File did not indicate the presence of Native American cultural resources within 1 mile (1.6 kilometers) of the Project APE. In addition to the search of the Sacred Lands File, the NAHC identified one Native American group, the Kern Valley Indian Council, with historical and traditional ties to the project vicinity. ECORP does not conduct government to government consultation with Tribes. Consultation between the Tribes and Fort Irwin is ongoing. A copy of the consultation letter provided to each affiliated federally recognized Native American tribe is included as Appendix A to this report.

6.3 Field Survey Results

No new prehistoric or historic-period sites or isolates were identified during the pedestrian survey of the Project APE. The APE runs parallel to and encompasses a section of the paved Fort Irwin Road and an unpaved, graded tank road to the north. Thus, the majority of the APE contained heavily disturbed and graded sediments. Ground visibility in the APE was generally good and ranged from 80 percent in undisturbed areas to 100 percent in graded areas (such as the road and road shoulders).

One previously recorded historic-period site was located within the Project APE (Appendix C). This site consists of a wood pole transmission line (P36-010894/CA-SBR-10894). The site was updated as part of the pedestrian survey of the Project APE. The updated site record may be found in Appendix D.

P36-010894/CA-SBR-10894 is a historic-period Southern California Edison (SCE) power line that runs from Barstow northeast to Fort Irwin. This resource was originally recorded in 2001 by Statistical Research, Inc. (Becker 2001). They note that this resource is a wood pole transmission line dating to 1940 and 1941 that parallels Fort Irwin Road (Becker 2001). The 2001 record also notes that many of the poles along the alignment appear to be modern replacements. P36-010894 was evaluated for inclusion in the NRHP by Statistical Research, Inc. in 2003 (Lerch and Majewski 2003). This evaluation can be found on page 11 of their Historic Property Survey Report for the Fort Irwin Road Project, San Bernardino County, California (Appendix E). Employing the criteria and quality of integrity standards discussed above in Section 5.4, P36-010894 Statistical Research, Inc. recommended the site not eligible for listing

in the NRHP (Lerch and Majewski 2003). In May 2015, as part of the current undertaking for Verizon, ECORP archaeologists visited an approximately 2 mile (3.2 kilometer) portion of this resource that overlaps the Project APE. The 2 mile (3.2 kilometer) segment runs from near the corner of Nasa Road to 0.5 mile (0.8 kilometer) southwest of North Loop Road. ECORP archaeologists found this segment of the power line to be consistent with the previous site record prepared by Becker (2001). The ECORP archaeologists noted that all of the wooden poles within the segment of the power line that overlaps the Project APE appear to consist of modern replacements rather than original poles. Given the replacement of the historic-age electrical poles with modern poles in the segment of the site visited during the current undertaking, ECORP archaeologists found no evidence that would contradict the Statistical Research, Inc.'s evaluation recommendation from 2003. As such, ECORP concurs that this site is recommended not eligible for the NRHP.

7.0 SUMMARY AND RECOMMENDATIONS

During the survey of the Verizon Wireless fiber optic line Project APE, no previously unrecorded prehistoric or historic-period sites or isolates were identified. One previously recorded historic-period resource, a wood pole utility line (P36-010894/CA-SBR-10894), was updated. P36-010894 was previously evaluated and recommended not eligible for the NRHP by Statistical Research, Inc. Caltrans subsequently determined that the site is not eligible for the NRHP as described in the Historic Property Survey Report (Lerch and Majewski 2003). ECORP archaeologists found no evidence that would contradict Statistical Research, Inc.'s evaluation recommendation or Caltrans' determination. As such, ECORP concurs that this site is not eligible for the NRHP.

There are no Historic Properties in the Project APE. Therefore, the Project will not affect Historic Properties. A finding of "No Historic Properties Affected" per 36 CFR 800.4(d)(1) is appropriate for this Project.

Consultation by Fort Irwin with affiliated federally recognized Native American tribes is ongoing. Any concerns expressed by the Native American tribes, should they have any, will be addressed and provided in a subsequent document. Should the affiliated federally recognized Native American tribes express no concerns, no further correspondence will be provided.

7.1 Post-Review Discoveries

If historic properties are discovered or unanticipated effects on historic properties are found in the APE after the Section 106 process has been completed, the Army will comply with the post-review discovery procedures pursuant to 36 CFR 800.13(b)(1), (2), or (3), as appropriate. The Army will suspend work in the area and notify the Cultural Resources Manager and staff in the Directorate of Public Works, Environmental Division in order to determine the appropriate action.

8.0 REFERENCES

Basgall, M.E., and S.A. Overly

- 2004 *Prehistoric Archaeology of the Rosamond Lake Basin, Phase II Cultural Resources Evaluations at 41 Sites in Management Region 2, Edwards Air Force Base, California*. Prepared for U.S. Army Corps of Engineers, Sacramento District. Prepared by M.E. Basgall and S.A. Overly. On file at the Base Historic Preservation Office, Edwards Air Force Base, California.

Bean, Lowell J., and Charles R. Smith

- 1978 Serrano. In *Handbook of North American Indians, Volume 8, California*, edited by Robert F. Heizer, pp. 570-574. William C. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.

Becker, Kenneth M.

- 2001 DPR Site Record for Site P36-064565. On file at the San Bernardino Archaeological Information Center, San Bernardino County Museum, Redlands, California.

Bryant, Keith L., Jr.

- 1974 *History of the Atchison, Topeka and Santa Fe Railway*. Macmillan Publishing Company, New York.

Castillo, Edward D.

- 1978 The Impact of Euro-American Exploration and Settlement. In *Handbook of North American Indians, Volume 8, California*, edited by Robert F. Heizer, pp. 99-127. William C. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.

Cleland, Robert G.

- 1941 *The Cattle on a Thousand Hills: Southern California, 1850-1870*. Huntington Library, San Marino, California.

Coulter, Poppy

- 2015 The Basin and Range Province. Indiana University Research Projects. Bloomington, Indiana. Electronic document. <http://www.indiana.edu/~sierra/papers/2005/coulter.html>, accessed August 6, 2015.

Cultural Systems Research

- 2005 *Inland Feeder Project: Final Report, Native American Ethnography and Ethnohistory*. Prepared for Metropolitan Water District of Southern California, Los Angeles. Cultural Systems Research, Inc., Menlo Park. Report # RI-5088 on file at the Eastern Information Center, University of California, Riverside.

Earle, David D.

- 2004 Native Population and Settlement in the Western Mojave Desert in the Eighteenth and Nineteenth Centuries. In *Proceedings of the Millennium Conference: the Human Journey and Ancient Life in California's Deserts, Barstow, California, May 9-12, 2001*. Maturango Museum Press, Ridgecrest, California.
- 2005 The Mojave River and the Central Mojave Desert: Native Settlement, Travel, and Exchange in the Eighteenth and Nineteenth Centuries. *Journal of California and Great Basin Anthropology* 25(1):1-37.

Department of the Army, Fort Irwin

- 2011 Fort Irwin Integrated Cultural Resources Management Plan, 2011-2015 and Environmental Assessment for Fort Irwin and the National Training Center. On file, Environmental Division, Directorate of Public Works, Fort Irwin, California.

Gudde, E. G.

- 1969 *California Place Names: The Origin and Etymology of Current Geographical Names*. Third edition. University of California Press, Berkeley.

Higdon, Melody

- 2004 National Training Center Fort Irwin, A Full Year Study. AFCCC/CCD-04/006. Electronic document. <http://www.irwin.army.mil/PdfFiles/USAFWeather/ft.%20irwin%20climo.pdf>, accessed August 6, 2015.

Jackson, Brantly

- 2015a Personal Communication – Comments on the ECORP Response to Comments document. October 7, 2015.
- 2015b Personal Communication to ECORP Archaeologist Robert Cunningham on May 26, 2015.

Kelly, I.T., and C.S. Fowler

- 1986 Southern Paiute. In *Handbook of North American Indians, Volume 11, Great Basin*, edited by W.L. D'Azevedo, pp. 368-411. William C. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.

Kroeber, Alfred L.

- 1925 *Handbook of the Indians of California*. Bureau of American Ethnology Bulletin 78. Smithsonian Institution, Washington, D.C.

Mojave River Valley Museum

- 2006 A Brief History of Barstow. Article available online at: www.wemweb.com/traveler/towns/13barsto/13histor/history.html

National Park Service

- 1991 *National Register Bulletin 15: How to Apply the National Register Criteria for Evaluation*. U.S. Department of the Interior, Interagency Resources Division, Washington, D.C.

NRCS National Resources Conservation Service (2013).

- 2013 Web Soil Survey. Available at <http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>. Accessed on November 18, 2013.

National Training Center Fort Irwin

- 2015 Fort Irwin History. Electronic document. <http://www.irwin.army.mil/Pages/VisitorsTab/FtIrwinHistory.html>, accessed August 21, 2015.

Old Spanish Trail Association

- 2015 Old Spanish Historic Trail (Interactive Map). Electronic document. <http://tour.mapsalive.com/5788/page9.htm?cs=2>, accessed August 7, 2015.

Science Applications International Corporation (SAIC)

- 1996 *Cultural Resources Survey, Inventory and Assessment of Historical Resources*. On file, Environmental Division, Directorate of Public Works, Fort Irwin, California.

Lerch, Michael and Teresita Majewski

- 2003 *Historic Property Survey Report for the Fort Irwin Road Project from Interstate 15 to the Southerly Boundary of the National Training Center, Fort Irwin, San Bernardino County, California*. On file, Environmental Division, Directorate of Public Works, Fort Irwin, California.

Sutton, Mark Q., Mark E. Basgall, Jill K. Gardner, and Mark W. Allen

- 2007 *Advances in Understanding Mojave Desert Prehistory*. In *California Prehistory: Colonization, Culture, and Complexity*, edited by Terry L. Jones and Kathryn A. Klar, pp. 229-245. Altamira Press, a division of Rowman & Littlefield Publishers, Inc., Lanham, New York, Toronto, Plymouth (UK).

United States Census Bureau

- 2015 State and County Quickfacts, Barstow (city), California. Accessed online at <http://quickfacts.census.gov/qfd/states/06/0604030.html>

Vrendenburgh, Larry

- 1994 Fort Irwin and Vicinity: History of Mining Development. in *Off Limits in the Mojave Desert*, San Bernardino County Museum Association Special Publication 94:81-90.

Warren, Claude N.

- 1984 The Desert Region. In *California Archaeology*, by Michael J. Moratto, pp. 339-430. Academic Press, Orlando, Florida.

Warren, Claude N. and Robert H. Crabtree

- 1986 Prehistory of the Southwestern Area. In *Handbook of North American Indians, Volume 11, Great Basin*, edited by W.L. D'Azevedo, pp. 183-193. William C. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.

WRCC

- 2014 Local Climate Data. Western Regional Climate Center. Desert Research Institute. Available online at: <http://www.wrcc.dri.edu/>

- Yount, James C., Elizabeth R. Schermer, Tracey J. Felger, David M. Miller, and Kirk, A. Stevens
1994 Preliminary Geologic Map of Fort Irwin Basin, North-Central Mojave Desert, California. U.S. Department of the Interior, U.S. Geological Survey. Open File Report 94-173.

Zigmond, Maurice

- 1986 Kawaiisu. In *Handbook of North American Indians, Volume 11, Great Basin*, edited by Warren L. D'Azevedo, pp. 398-411. William C. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.

9.0 REPORT AND FIELD PERSONNEL

9.1 Report Preparers

Wendy Blumel, M.A./RPA, Assistant Cultural Resources Manager
2004 M.A., Anthropology, Louisiana State University, Baton Rouge
2000 B.A., Anthropology, Beloit College, Beloit, Wisconsin
Years of experience: 7

Robert Cunningham, Staff Archaeologist
2007 B.A., Anthropology, University of California, Los Angeles
Years of experience: 10

9.2 Field Personnel

Robert Cunningham
2007 B.A., Anthropology, University of California, Los Angeles
Years of experience: 10

Andrew Myers
2011 B.A., Anthropology/Sociology, University of California, Santa Barbara
Years of experience: 4

Appendix A
Native American Coordination

June 17, 2015
(2015-035)

Ms. Katy Sanchez
1550 Harbor Boulevard
Suite 100
West Sacramento, CA 95691
Phone: (916) 373-3710

VIA EMAIL nahc@nahc.ca.gov

Subject: Cultural Resources Survey for the Verizon Fort Irwin Fiber Optic Line Project located at U.S. Army National Training Center (NTC) at Fort Irwin, San Bernardino County, California.

Dear Ms. Sanchez:

We are requesting on behalf of our client that a review of the Sacred Lands File be conducted for a cultural resources study in support of a proposed 11.4-mile long fiber optic line located on the U.S. Army National Training Center (NTC) at Fort Irwin, San Bernardino County. The Verizon Fort Irwin Fiber Optic Line Project (Project) will include trenching for approximately 10.1 miles along Fort Irwin Road (approximately 5.2 miles south of the Main Gate and 4.9 miles north of the Main Gate), then west for 0.25 mile along Outer Loop Road. In addition directional boring may be used at locations where surface features are not conducive to trenching. The length of the overall Project is 11.4 miles, generally running parallel to Fort Irwin Road, Outer Loop Road, and Barstow Road.

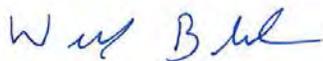
As shown on the U.S. Geological Survey (USGS) Fort Irwin (1984), Langford Well (1986), and Paradise Range (1984) 7.5-minute California topographic quadrangles the project area is located within Sections 3, 4, and 9 of Township 12 North, Range 2 East; Sections 5, 6, and 7 of Township 13 North, Range 3 East; Sections 12, 14, 22, 23, 27, and 34 of Township 13 North, Range 2 East; and Section 32 of Township 32 North, Range 3 East of the San Bernardino Base and Meridian (see attached maps).

Please email the results of this search to me at wblumel@ecorpconsulting.com. They can also be faxed to my attention at **(909) 307-0056**. For correspondence, please reference 2015-035. If you have any questions regarding this request, please do not hesitate to contact me at (909) 307-0046 or via the email listed above. Thank you for your assistance with this project.

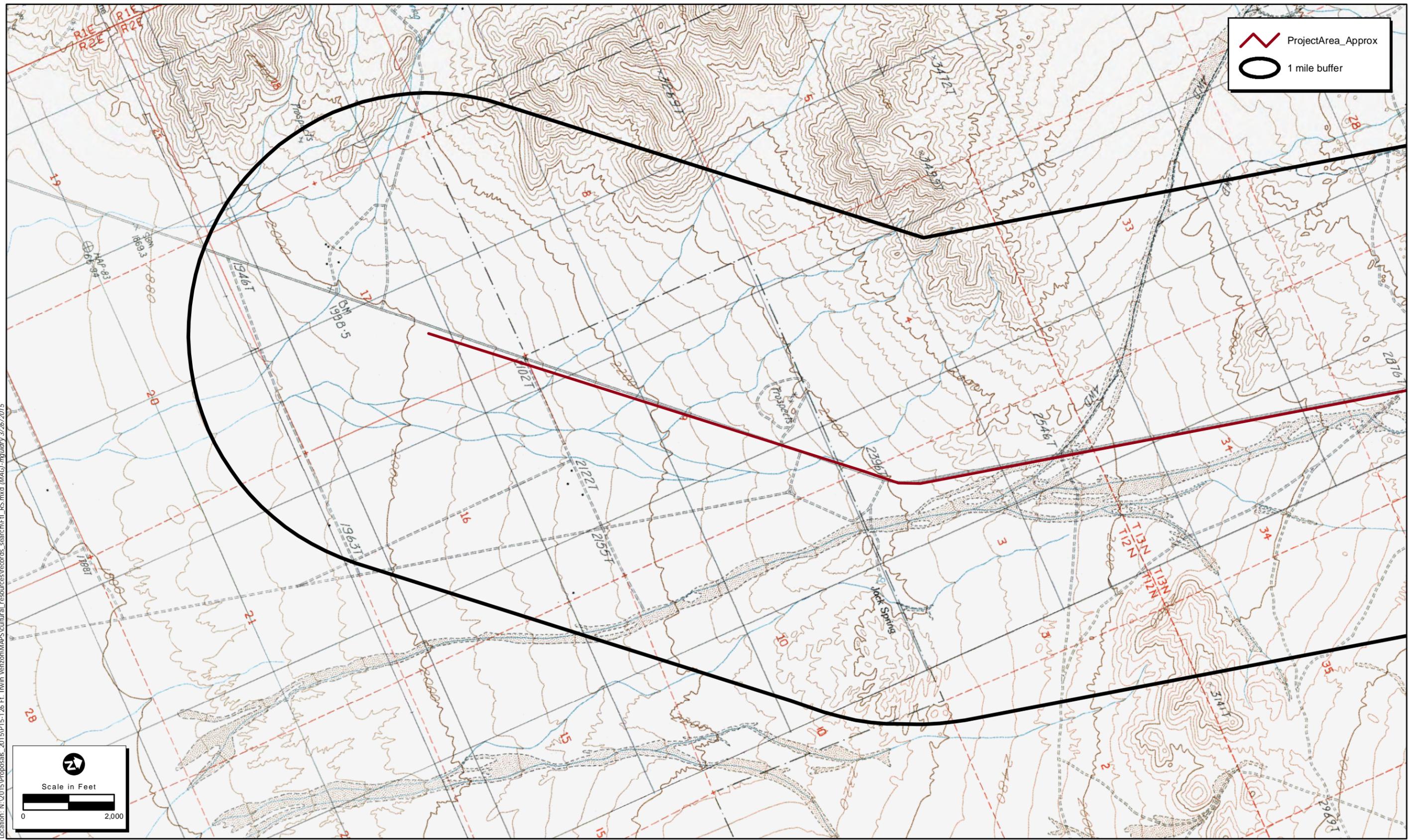
Sincerely,

ECORP Consulting, Inc.

Wendy Blumel
Senior Archaeologist



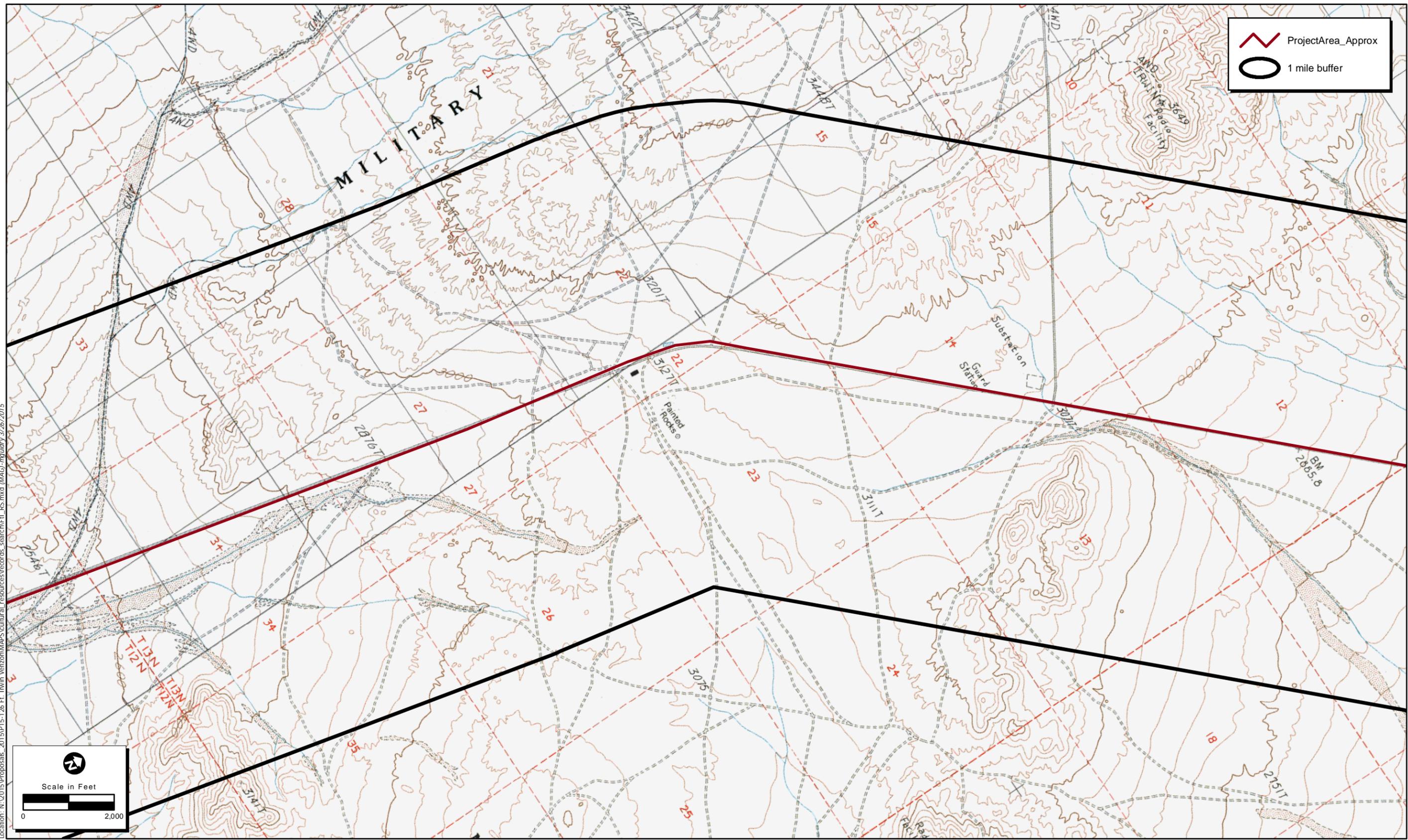
Attachment: as stated



Location: N:\2015\Proposals_2015\PT15-126 Ft. Irwin Verizon\MAPS\Cultural_resources\records_search\HIL_RS.mxd (MAG) - mgridby 3/26/2015

Map Date: 3/20/2015
 USGS Quadrangle: Fort Irwin (1984), Langford Well (1986), Coyote Lake (1986), Paradise Range (1984)





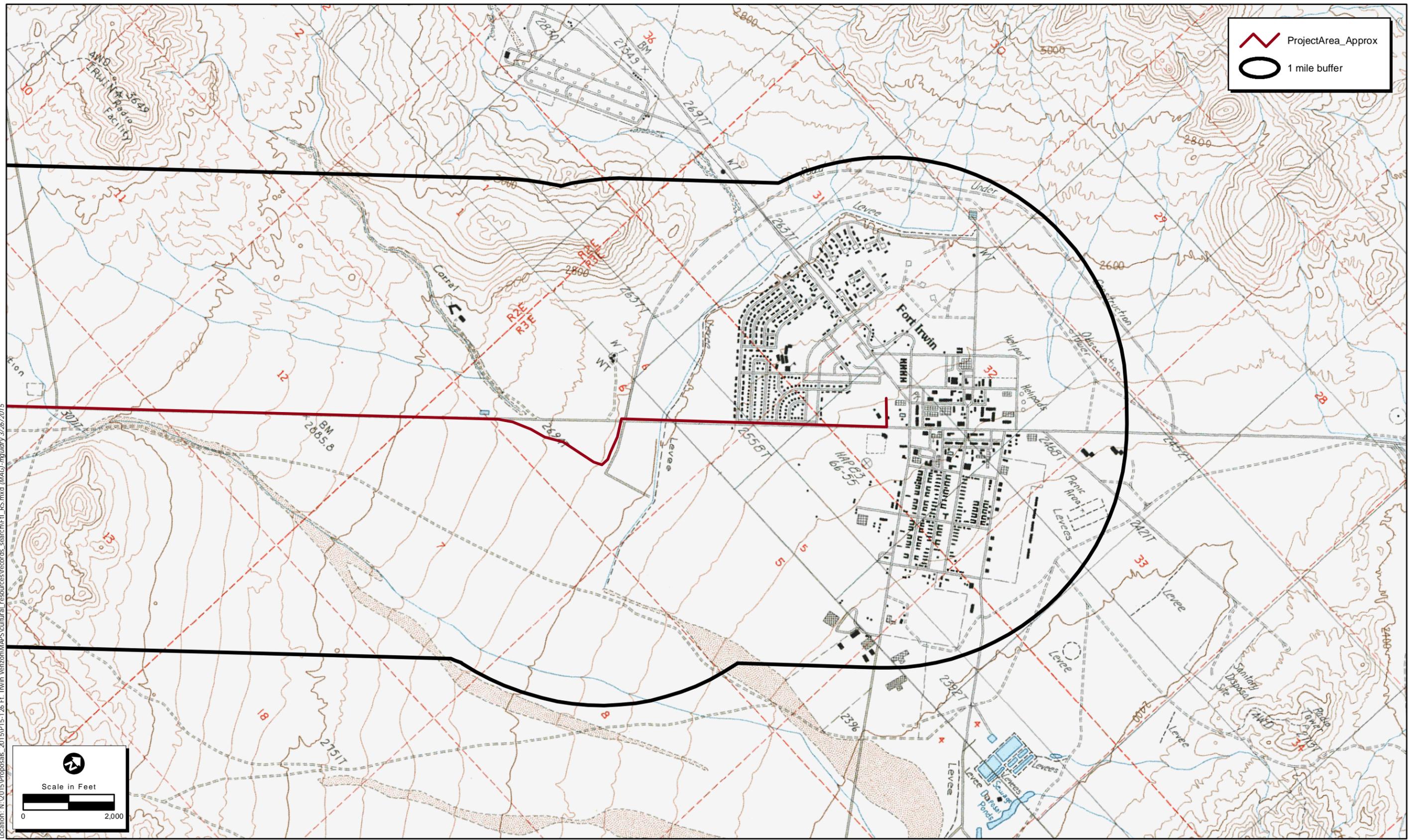
 ProjectArea_Approx
 1 mile buffer

Location: N:\2015\Proposals_2015\PT15-126 Ft. Irwin Verizon\MAPS\Cultural_resources\records_search\FIL_RS.mxd (MAG) - mxd 3/26/2015


 Scale in Feet


Map Date: 3/20/2015
 USGS Quadrangle: Fort Irwin (1984), Langford Well (1986), Coyote Lake (1986), Paradise Range (1984)





Location: N:\2015\Proposals_2015\PT15-126 Ft. Irwin Verizon\MAPS\Cultural_resources\records_search\FIL_RS.mxd (MAG) - ngdruidy 3/26/2015

Map Date: 3/20/2015
 USGS Quadrangle: Fort Irwin (1984), Langford Well (1986), Coyote Lake (1986), Paradise Range (1984)

STATE OF CALIFORNIAEdmund G. Brown, Jr., Governor**NATIVE AMERICAN HERITAGE COMMISSION**

1550 Harbor Blvd., ROOM 100
West SACRAMENTO, CA 95891
(916) 373-3710
Fax (916) 373-5471



July 15, 2015

Wendy Blumel
ECORP Consulting, Inc.
215 North 5th Street
Redlands, CA 92374

Sent by Fax: (909) 307-0056
Number of Pages: 2

Re: Verizon Fort Irwin Fiber Optic Line Project, U.S. Army National Training Center (NTC), Fort Irwin, San Bernardino County.

Dear Ms. Blumel,

A record search of the sacred land file has failed to indicate the presence of Native American cultural resources in the immediate project area. The absence of specific site information in the sacred lands file does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Enclosed is a list of Native Americans individuals/organizations who may have knowledge of cultural resources in the project area. The Commission makes no recommendation or preference of a single individual, or group over another. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated, if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe or group. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from any of these individuals or groups, please notify me. With your assistance we are able to assure that our lists contain current information. If you have any questions or need additional information, please contact me at (916) 373-3712.

Sincerely,

A handwritten signature in black ink that reads "Katy Sanchez".

Katy Sanchez
Associate Government Program Analyst

**Native American Contact List
San Bernardino County
July 15, 2015**

Kern Valley Indian Council
Robert Robinson, Co-Chairperson
P.O. Box 401 Tubatulabal
Weldon , CA 93283 Kawaiisu
brobinson@iwvisp.com Koso
(760) 378-4575 Home Yokuts
(760) 549-2131 Work

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of the statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting locative Americans with regard to cultural resources for the proposed Verizon Fort Irwin Fiber Optic Line Project, U.S. Army National Training Center (NTC), Fort Irwin, San Bernardino County.

STATE OF CALIFORNIAEdmund G. Brown, Jr., Governor**NATIVE AMERICAN HERITAGE COMMISSION**

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Sincerely,

A handwritten signature in cursive script that reads "Katy Sanchez".

Katy Sanchez
Associate Government Program Analyst

**Native American Contact List
San Bernardino County
July 15, 2015**

Kern Valley Indian Council
Robert Robinson, Co-Chairperson
P.O. Box 401 Tubatulabal
Weldon , CA 93283 Kawaiisu
brobinson@iwvisp.com Koso
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DEPARTMENT OF THE ARMY
HEADQUARTERS, UNITED STATES ARMY GARRISON
BLDG 237, B AVE, P.O. Box 105021
FORT IRWIN, CA 92310-5000

January 7, 2016

Subject: Verizon Fort Irwin Fiber Optic Line Project located at Fort Irwin, San Bernardino County, California

Mr. Gerald Howard
Chairman
Bishop Paiute Tribe
50 Tu Su Lane
Bishop, CA 93514

Dear Mr. Howard:

The purpose of this letter is to consult with your tribe about a proposed Undertaking, as defined by the National Historic Preservation Act of 1966 (as amended) at Fort Irwin, located in San Bernardino County, California. In agreement with Fort Irwin, Verizon, Southeast Division, in response to increasing demand for broadband service at Fort Irwin, proposes to install a fiber optic line to enhance service at the installation. The project is located in training areas B1, B2, and B3, and within the cantonment area (see enclosed report). Five Project alternatives were analyzed for the proposed undertaking, but no decision has yet been reached on which alternative will be built. All construction alternatives are included within the Area of Potential Effect and the entire APE was examined by archaeologists for this project.

The APE is defined as all areas where physical activities would occur associated with the proposed project, including the full extent of all project components and alternatives, as described in the enclosed report. The APE consists of two non-contiguous, parallel linear areas where fiber optic line would be installed under the four build alternatives and one block area proposed as a staging area. One of the linear areas is adjacent to the western side of Fort Irwin Road and measures 20 meters (67 feet) wide by 9.1 miles (14.6 kilometers) long. The second linear area runs along an unpaved tank track located approximately 30 meters west and northwest of Fort Irwin Road. This area measures 20 meters (67 feet) wide by 8.5 miles (13.6 kilometers) long. The block area, encompassing the proposed staging area, measures 81 meters (263 feet) long by 41 meters (134 feet) wide. In total the APE (including the overlapping routes of all four build alternatives) contains a total area of 56.5 hectares (139.6 acres). Access to the APE will be via existing dirt roads.

To identify existing cultural resources that would be affected by the proposed Project, a cultural resources records search was conducted using the California Historical Information System (CHRIS) at the San Bernardino Archaeological Information Center (SBAIC) at the San Bernardino County Museum in Redlands, California using a 1 mile (1.6 kilometer) records search buffer. The results of the records search at the SBAIC indicated that a total of 25 cultural resources investigations were conducted within the 1 mile (1.6 kilometer) records search radius of the APE between 1946 and 2014, four of which overlapped portions of the Project APE and four were located adjacent to the Project APE. Additional survey information supplied by Fort Irwin identified an additional 20 studies within the vicinity of the APE that were conducted

between 2002 and 2013. The SBAIC and Fort Irwin data indicate that approximately 90 percent of the APE has been previously surveyed. The records search results from the SBAIC also revealed that 49 cultural resources have been previously recorded within the 1 mile (1.6 kilometer) records search radius. Of these, only one previously recorded historic-age site, a wood pole transmission line (P36-10894/CA-SBR-10894), is located within the Project APE. No prehistoric sites were identified within previously surveyed portions of the APE.

A Sacred Lands File search was requested from the Native American Heritage Commission (NAHC) to identify any known sensitive or sacred Native American resources located in or near the project area. The Sacred Lands File did not indicate the presence of Native American cultural resources within 1-mile of the APE.

Following a review of the records search results, an intensive field survey was conducted for the entire 139.6-acre APE (see enclosed maps). Field work was conducted by two ECORP archaeologists between May 26 and May 28, 2015, and consisted of an intensive systematic pedestrian survey. The Project APE was examined for the presence of cultural artifacts and features by walking parallel transects spaced 15 meters (49 feet) apart. Notes were taken on the environmental setting and disturbances within the APE. The field survey identified only one cultural resource, the previously recorded historic-age transmission line (CA-SBR-10894), overlapping the APE. This line was field checked and the record updated. ECORP archaeologists found the segment of the power line to be consistent with the previous record. They noted that all of the wooden poles within the segment are in good condition with little weathering and no date nails. Thus the poles in this segment are likely modern replacements rather than original poles. CA-SBR-10894 was evaluated for the NRHP by Statistical Research, Inc. in 2003 and was recommended not eligible for listing in the NRHP.

We request your review of this project and its APE (see attached maps). We value your assistance and look forward to consulting with you further if cultural resources of significance to your tribe may be affected by this project. If you have any comments or questions, please contact Mr. Clarence Everly (Fort Irwin Natural and Cultural Resources Program Manager) at (760) 380-3740 or at clarence.a.everly.civ@mail.mil. Written correspondence regarding this undertaking should be addressed to: Mr. Muhammad Bari, Directorate of Public Works, Environmental Division, ATTN: IMNT_PWE, PO Box 105085, Fort Irwin, CA 92310-5085.

Sincerely,



Muhammad A. Bari, P.E.
Director of Public Works
USAG Fort Irwin, CA

Enclosure



DEPARTMENT OF THE ARMY
HEADQUARTERS, UNITED STATES ARMY GARRISON
BLDG 237, B AVE, P.O. Box 105021
FORT IRWIN, CA 92310-5000

January 7, 2016

Subject: Verizon Fort Irwin Fiber Optic Line Project located at Fort Irwin, San Bernardino County, California

Mr. Dennis Patch
Chairman
Colorado River Indian Tribes
26600 Mohave Road
Parker, AZ 85344

Dear Mr. Patch:

The purpose of this letter is to consult with your tribe about a proposed Undertaking, as defined by the National Historic Preservation Act of 1966 (as amended) at Fort Irwin, located in San Bernardino County, California. In agreement with Fort Irwin, Verizon, Southeast Division, in response to increasing demand for broadband service at Fort Irwin, proposes to install a fiber optic line to enhance service at the installation. The project is located in training areas B1, B2, and B3, and within the cantonment area (see enclosed report). Five Project alternatives were analyzed for the proposed undertaking, but no decision has yet been reached on which alternative will be built. All construction alternatives are included within the Area of Potential Effect and the entire APE was examined by archaeologists for this project.

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Sincerely,



Muhammad A. Bari, P.E.
Director of Public Works
USAG Fort Irwin, CA

Enclosure

CF: Ms. Wilene Fisher-Holt
Director, Colorado River Indian Tribes Museum



DEPARTMENT OF THE ARMY
HEADQUARTERS, UNITED STATES ARMY GARRISON
BLDG 237, B AVE, P.O. Box 105021
FORT IRWIN, CA 92310-5000

January 7, 2016

Subject: Verizon Fort Irwin Fiber Optic Line Project located at Fort Irwin, San Bernardino County, California

Mr. George Gholson
Chairman
Timbisha Shoshone Tribe
621 W. Line Street, Suite 109
Bishop, CA 93514

Dear Mr. Gholson:

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Sincerely,



Muhammad A. Bari, P.E.
Director of Public Works
USAG Fort Irwin, CA

Enclosure

CF: Ms. Barbara Durham
Tribal Historic Preservation Officer



DEPARTMENT OF THE ARMY
HEADQUARTERS, UNITED STATES ARMY GARRISON
BLDG 237, B AVE, P.O. Box 105021
FORT IRWIN, CA 92310-5000

January 7, 2016

Subject: Verizon Fort Irwin Fiber Optic Line Project located at Fort Irwin, San Bernardino County, California

Mr. Luther Salgado Sr.
Chairman
Cahuilla Band of Mission Indians
52701 Hwy 371
Anza, CA 92539-1760

Dear Mr. Salgado:

The purpose of this letter is to consult with your tribe about a proposed Undertaking, as defined by the National Historic Preservation Act of 1966 (as amended) at Fort Irwin, located in San Bernardino County, California. In agreement with Fort Irwin, Verizon, Southeast Division, in response to increasing demand for broadband service at Fort Irwin, proposes to install a fiber optic line to enhance service at the installation. The project is located in training areas B1, B2, and B3, and within the cantonment area (see enclosed report). Five Project alternatives were analyzed for the proposed undertaking, but no decision has yet been reached on which alternative will be built. All construction alternatives are included within the Area of Potential Effect and the entire APE was examined by archaeologists for this project.

The APE is defined as all areas where physical activities would occur associated with the proposed project, including the full extent of all project components and alternatives, as described in the enclosed report. The APE consists of two non-contiguous, parallel linear areas where fiber optic line would be installed under the four build alternatives and one block area proposed as a staging area. One of the linear areas is adjacent to the western side of Fort Irwin Road and measures 20 meters (67 feet) wide by 9.1 miles (14.6 kilometers) long. The second linear area runs along an unpaved tank track located approximately 30 meters west and northwest of Fort Irwin Road. This area measures 20 meters (67 feet) wide by 8.5 miles (13.6 kilometers) long. The block area, encompassing the proposed staging area, measures 81 meters (263 feet) long by 41 meters (134 feet) wide. In total the APE (including the overlapping routes of all four build alternatives) contains a total area of 56.5 hectares (139.6 acres). Access to the APE will be via existing dirt roads.

To identify existing cultural resources that would be affected by the proposed Project, a cultural resources records search was conducted using the California Historical Information System (CHRIS) at the San Bernardino Archaeological Information Center (SBAIC) at the San Bernardino County Museum in Redlands, California using a 1 mile (1.6 kilometer) records search buffer. The results of the records search at the SBAIC indicated that a total of 25 cultural resources investigations were conducted within the 1 mile (1.6 kilometer) records search radius of the APE between 1946 and 2014, four of which overlapped portions of the Project APE and four were located adjacent to the Project APE. Additional survey information supplied by Fort Irwin identified an additional 20 studies within the vicinity of the APE that were conducted

between 2002 and 2013. The SBAIC and Fort Irwin data indicate that approximately 90 percent of the APE has been previously surveyed. The records search results from the SBAIC also revealed that 49 cultural resources have been previously recorded within the 1 mile (1.6 kilometer) records search radius. Of these, only one previously recorded historic-age site, a wood pole transmission line (P36-10894/CA-SBR-10894), is located within the Project APE. No prehistoric sites were identified within previously surveyed portions of the APE.

A Sacred Lands File search was requested from the Native American Heritage Commission (NAHC) to identify any known sensitive or sacred Native American resources located in or near the project area. The Sacred Lands File did not indicate the presence of Native American cultural resources within 1-mile of the APE.

Following a review of the records search results, an intensive field survey was conducted for the entire 139.6-acre APE (see enclosed maps). Field work was conducted by two ECORP archaeologists between May 26 and May 28, 2015, and consisted of an intensive systematic pedestrian survey. The Project APE was examined for the presence of cultural artifacts and features by walking parallel transects spaced 15 meters (49 feet) apart. Notes were taken on the environmental setting and disturbances within the APE. The field survey identified only one cultural resource, the previously recorded historic-age transmission line (CA-SBR-10894), overlapping the APE. This line was field checked and the record updated. ECORP archaeologists found the segment of the power line to be consistent with the previous record. They noted that all of the wooden poles within the segment are in good condition with little weathering and no date nails. Thus the poles in this segment are likely modern replacements rather than original poles. CA-SBR-10894 was evaluated for the NRHP by Statistical Research, Inc. in 2003 and was recommended not eligible for listing in the NRHP.

We request your review of this project and it's APE (see attached maps). We value your assistance and look forward to consulting with you further if cultural resources of significance to your tribe may be affected by this project. If you have any comments or questions, please contact Mr. Clarence Everly (Fort Irwin Natural and Cultural Resources Program Manager) at (760) 380-3740 or at clarence.a.everly.civ@mail.mil. Written correspondence regarding this undertaking should be addressed to: Mr. Muhammad Bari, Directorate of Public Works, Environmental Division, ATTN: IMNT_PWE, PO Box 105085, Fort Irwin, CA 92310-5085.

Sincerely,



Muhammad A. Bari, P.E.
Director of Public Works
USAG Fort Irwin, CA

Enclosure



DEPARTMENT OF THE ARMY
HEADQUARTERS, UNITED STATES ARMY GARRISON
BLDG 237, B AVE, P.O. Box 105021
FORT IRWIN, CA 92310-5000

January 7, 2016

Subject: Verizon Fort Irwin Fiber Optic Line Project located at Fort Irwin, San Bernardino County, California

Mr. Robert Martin
Chairman
Morongo Band of Mission Indians
12700 Pumarra Road
Banning, CA 92220-2965

Dear Mr. Martin:

The purpose of this letter is to consult with your tribe about a proposed Undertaking, as defined by the National Historic Preservation Act of 1966 (as amended) at Fort Irwin, located in San Bernardino County, California. In agreement with Fort Irwin, Verizon, Southeast Division, in response to increasing demand for broadband service at Fort Irwin, proposes to install a fiber optic line to enhance service at the installation. The project is located in training areas B1, B2, and B3, and within the cantonment area (see enclosed report). Five Project alternatives were analyzed for the proposed undertaking, but no decision has yet been reached on which alternative will be built. All construction alternatives are included within the Area of Potential Effect and the entire APE was examined by archaeologists for this project.

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To identify existing cultural resources that would be affected by the proposed Project, a cultural resources records search was conducted using the California Historical Information System (CHRIS) at the San Bernardino Archaeological Information Center (SBAIC) at the San Bernardino County Museum in Redlands, California using a 1 mile (1.6 kilometer) records search buffer. The results of the records search at the SBAIC indicated that a total of 25 cultural resources investigations were conducted within the 1 mile (1.6 kilometer) records search radius of the APE between 1946 and 2014, four of which overlapped portions of the Project APE and four were located adjacent to the Project APE. Additional survey information supplied by Fort Irwin identified an additional 20 studies within the vicinity of the APE that were conducted

between 2002 and 2013. The SBAIC and Fort Irwin data indicate that approximately 90 percent of the APE has been previously surveyed. The records search results from the SBAIC also revealed that 49 cultural resources have been previously recorded within the 1 mile (1.6 kilometer) records search radius. Of these, only one previously recorded historic-age site, a wood pole transmission line (P36-10894/CA-SBR-10894), is located within the Project APE. No prehistoric sites were identified within previously surveyed portions of the APE.

A Sacred Lands File search was requested from the Native American Heritage Commission (NAHC) to identify any known sensitive or sacred Native American resources located in or near the project area. The Sacred Lands File did not indicate the presence of Native American cultural resources within 1-mile of the APE.

Following a review of the records search results, an intensive field survey was conducted for the entire 139.6-acre APE (see enclosed maps). Field work was conducted by two ECORP archaeologists between May 26 and May 28, 2015, and consisted of an intensive systematic pedestrian survey. The Project APE was examined for the presence of cultural artifacts and features by walking parallel transects spaced 15 meters (49 feet) apart. Notes were taken on the environmental setting and disturbances within the APE. The field survey identified only one cultural resource, the previously recorded historic-age transmission line (CA-SBR-10894), overlapping the APE. This line was field checked and the record updated. ECORP archaeologists found the segment of the power line to be consistent with the previous record. They noted that all of the wooden poles within the segment are in good condition with little weathering and no date nails. Thus the poles in this segment are likely modern replacements rather than original poles. CA-SBR-10894 was evaluated for the NRHP by Statistical Research, Inc. in 2003 and was recommended not eligible for listing in the NRHP.

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Sincerely,



Muhammad A. Bari, P.E.
Director of Public Works
USAG Fort Irwin, CA

Enclosure

CF: Mr. Raymond Huaute
Cultural Resource Specialist



DEPARTMENT OF THE ARMY
HEADQUARTERS, UNITED STATES ARMY GARRISON
BLDG 237, B AVE, P.O. Box 105021
FORT IRWIN, CA 92310-5000

January 7, 2016

Subject: Verizon Fort Irwin Fiber Optic Line Project located at Fort Irwin, San Bernardino County, California

Ms. Shannon Romero
Chairwoman
Big Pine Paiute Tribe of the Owens Valley
P.O. Box 700
Big Pine, CA 93513

Dear Ms. Romero:

The purpose of this letter is to consult with your tribe about a proposed Undertaking, as defined by the National Historic Preservation Act of 1966 (as amended) at Fort Irwin, located in San Bernardino County, California. In agreement with Fort Irwin, Verizon, Southeast Division, in response to increasing demand for broadband service at Fort Irwin, proposes to install a fiber optic line to enhance service at the installation. The project is located in training areas B1, B2, and B3, and within the cantonment area (see enclosed report). Five Project alternatives were analyzed for the proposed undertaking, but no decision has yet been reached on which alternative will be built. All construction alternatives are included within the Area of Potential Effect and the entire APE was examined by archaeologists for this project.

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To identify existing cultural resources that would be affected by the proposed Project, a cultural resources records search was conducted using the California Historical Information System (CHRIS) at the San Bernardino Archaeological Information Center (SBAIC) at the San Bernardino County Museum in Redlands, California using a 1 mile (1.6 kilometer) records search buffer. The results of the records search at the SBAIC indicated that a total of 25 cultural resources investigations were conducted within the 1 mile (1.6 kilometer) records search radius of the APE between 1946 and 2014, four of which overlapped portions of the Project APE and four were located adjacent to the Project APE. Additional survey information supplied by Fort Irwin identified an additional 20 studies within the vicinity of the APE that were conducted

between 2002 and 2013. The SBAIC and Fort Irwin data indicate that approximately 90 percent of the APE has been previously surveyed. The records search results from the SBAIC also revealed that 49 cultural resources have been previously recorded within the 1 mile (1.6 kilometer) records search radius. Of these, only one previously recorded historic-age site, a wood pole transmission line (P36-10894/CA-SBR-10894), is located within the Project APE. No prehistoric sites were identified within previously surveyed portions of the APE.

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Following a review of the records search results, an intensive field survey was conducted for the entire 139.6-acre APE (see enclosed maps). Field work was conducted by two ECORP archaeologists between May 26 and May 28, 2015, and consisted of an intensive systematic pedestrian survey. The Project APE was examined for the presence of cultural artifacts and features by walking parallel transects spaced 15 meters (49 feet) apart. Notes were taken on the environmental setting and disturbances within the APE. The field survey identified only one cultural resource, the previously recorded historic-age transmission line (CA-SBR-10894), overlapping the APE. This line was field checked and the record updated. ECORP archaeologists found the segment of the power line to be consistent with the previous record. They noted that all of the wooden poles within the segment are in good condition with little weathering and no date nails. Thus the poles in this segment are likely modern replacements rather than original poles. CA-SBR-10894 was evaluated for the NRHP by Statistical Research, Inc. in 2003 and was recommended not eligible for listing in the NRHP.

We request your review of this project and it's APE (see attached maps). We value your assistance and look forward to consulting with you further if cultural resources of significance to your tribe may be affected by this project. If you have any comments or questions, please contact Mr. Clarence Everly (Fort Irwin Natural and Cultural Resources Program Manager) at (760) 380-3740 or at clarence.a.everly.civ@mail.mil. Written correspondence regarding this undertaking should be addressed to: Mr. Muhammad Bari, Directorate of Public Works, Environmental Division, ATTN: IMNT_PWE, PO Box 105085, Fort Irwin, CA 92310-5085.

Sincerely,



Muhammad A. Bari, P.E.
Director of Public Works
USAG Fort Irwin, CA

Enclosure



DEPARTMENT OF THE ARMY
HEADQUARTERS, UNITED STATES ARMY GARRISON
BLDG 237, B AVE, P.O. Box 105021
FORT IRWIN, CA 92310-5000

January 7, 2016

Subject: Verizon Fort Irwin Fiber Optic Line Project located at Fort Irwin, San Bernardino County, California

Ms. Wendy Stine
Chairwoman
Fort Independence Reservation
P.O. Box 67
Independence, CA 93526

Dear Ms. Stine:

The purpose of this letter is to consult with your tribe about a proposed Undertaking, as defined by the National Historic Preservation Act of 1966 (as amended) at Fort Irwin, located in San Bernardino County, California. In agreement with Fort Irwin, Verizon, Southeast Division, in response to increasing demand for broadband service at Fort Irwin, proposes to install a fiber optic line to enhance service at the installation. The project is located in training areas B1, B2, and B3, and within the cantonment area (see enclosed report). Five Project alternatives were analyzed for the proposed undertaking, but no decision has yet been reached on which alternative will be built. All construction alternatives are included within the Area of Potential Effect and the entire APE was examined by archaeologists for this project.

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Sincerely,



Muhammad A. Bari, P.E.
Director of Public Works
USAG Fort Irwin, CA

Enclosure



DEPARTMENT OF THE ARMY
HEADQUARTERS, UNITED STATES ARMY GARRISON
BLDG 237, B AVE, P.O. Box 105021
FORT IRWIN, CA 92310-5000

January 7, 2016

Subject: Verizon Fort Irwin Fiber Optic Line Project located at Fort Irwin, San Bernardino County, California

Ms. Lynn Valbuena
Chairwoman
San Manuel Band of Mission Indians
26569 Community Center Drive
Highland, CA 92346

Dear Ms. Valbuena:

The purpose of this letter is to consult with your tribe about a proposed Undertaking, as defined by the National Historic Preservation Act of 1966 (as amended) at Fort Irwin, located in San Bernardino County, California. In agreement with Fort Irwin, Verizon, Southeast Division, in response to increasing demand for broadband service at Fort Irwin, proposes to install a fiber optic line to enhance service at the installation. The project is located in training areas B1, B2, and B3, and within the cantonment area (see enclosed report). Five Project alternatives were analyzed for the proposed undertaking, but no decision has yet been reached on which alternative will be built. All construction alternatives are included within the Area of Potential Effect and the entire APE was examined by archaeologists for this project.

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Sincerely,



Muhammad A. Bari, P.E.
Director of Public Works
USAG Fort Irwin, CA

Enclosure



DEPARTMENT OF THE ARMY
HEADQUARTERS, UNITED STATES ARMY GARRISON
BLDG 237, B AVE, P.O. Box 105021
FORT IRWIN, CA 92310-5000

January 7, 2016

Subject: Verizon Fort Irwin Fiber Optic Line Project located at Fort Irwin, San Bernardino County, California

Mr. Doug Wemas
Chairman
Cabazon Band of Mission Indians
84-245 Indio Springs Drive
Indio, CA 92203

Dear Mr. Wemas:

The purpose of this letter is to consult with your tribe about a proposed Undertaking, as defined by the National Historic Preservation Act of 1966 (as amended) at Fort Irwin, located in San Bernardino County, California. In agreement with Fort Irwin, Verizon, Southeast Division, in response to increasing demand for broadband service at Fort Irwin, proposes to install a fiber optic line to enhance service at the installation. The project is located in training areas B1, B2, and B3, and within the cantonment area (see enclosed report). Five Project alternatives were analyzed for the proposed undertaking, but no decision has yet been reached on which alternative will be built. All construction alternatives are included within the Area of Potential Effect and the entire APE was examined by archaeologists for this project.

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Sincerely,



Muhammad A. Bari, P.E.
Director of Public Works
USAG Fort Irwin, CA

Enclosure



DEPARTMENT OF THE ARMY
HEADQUARTERS, UNITED STATES ARMY GARRISON
BLDG 237, B AVE, P.O. Box 105021
FORT IRWIN, CA 92310-5000

January 7, 2016

Subject: Verizon Fort Irwin Fiber Optic Line Project located at Fort Irwin, San Bernardino County, California

Mr. Charles Wood
Chairman
Chemehuevi Indian Tribe
P.O. Box 1976
Havasu Lake, CA 92363

Dear Mr. Wood:

The purpose of this letter is to consult with your tribe about a proposed Undertaking, as defined by the National Historic Preservation Act of 1966 (as amended) at Fort Irwin, located in San Bernardino County, California. In agreement with Fort Irwin, Verizon, Southeast Division, in response to increasing demand for broadband service at Fort Irwin, proposes to install a fiber optic line to enhance service at the installation. The project is located in training areas B1, B2, and B3, and within the cantonment area (see enclosed report). Five Project alternatives were analyzed for the proposed undertaking, but no decision has yet been reached on which alternative will be built. All construction alternatives are included within the Area of Potential Effect and the entire APE was examined by archaeologists for this project.

The APE is defined as all areas where physical activities would occur associated with the proposed project, including the full extent of all project components and alternatives, as described in the enclosed report. The APE consists of two non-contiguous, parallel linear areas where fiber optic line would be installed under the four build alternatives and one block area proposed as a staging area. One of the linear areas is adjacent to the western side of Fort Irwin Road and measures 20 meters (67 feet) wide by 9.1 miles (14.6 kilometers) long. The second linear area runs along an unpaved tank track located approximately 30 meters west and northwest of Fort Irwin Road. This area measures 20 meters (67 feet) wide by 8.5 miles (13.6 kilometers) long. The block area, encompassing the proposed staging area, measures 81 meters (263 feet) long by 41 meters (134 feet) wide. In total the APE (including the overlapping routes of all four build alternatives) contains a total area of 56.5 hectares (139.6 acres). Access to the APE will be via existing dirt roads.

To identify existing cultural resources that would be affected by the proposed Project, a cultural resources records search was conducted using the California Historical Information System (CHRIS) at the San Bernardino Archaeological Information Center (SBAIC) at the San Bernardino County Museum in Redlands, California using a 1 mile (1.6 kilometer) records search buffer. The results of the records search at the SBAIC indicated that a total of 25 cultural resources investigations were conducted within the 1 mile (1.6 kilometer) records search radius of the APE between 1946 and 2014, four of which overlapped portions of the Project APE and four were located adjacent to the Project APE. Additional survey information supplied by Fort Irwin identified an additional 20 studies within the vicinity of the APE that were conducted

between 2002 and 2013. The SBAIC and Fort Irwin data indicate that approximately 90 percent of the APE has been previously surveyed. The records search results from the SBAIC also revealed that 49 cultural resources have been previously recorded within the 1 mile (1.6 kilometer) records search radius. Of these, only one previously recorded historic-age site, a wood pole transmission line (P36-10894/CA-SBR-10894), is located within the Project APE. No prehistoric sites were identified within previously surveyed portions of the APE.

A Sacred Lands File search was requested from the Native American Heritage Commission (NAHC) to identify any known sensitive or sacred Native American resources located in or near the project area. The Sacred Lands File did not indicate the presence of Native American cultural resources within 1-mile of the APE.

Following a review of the records search results, an intensive field survey was conducted for the entire 139.6-acre APE (see enclosed maps). Field work was conducted by two ECORP archaeologists between May 26 and May 28, 2015, and consisted of an intensive systematic pedestrian survey. The Project APE was examined for the presence of cultural artifacts and features by walking parallel transects spaced 15 meters (49 feet) apart. Notes were taken on the environmental setting and disturbances within the APE. The field survey identified only one cultural resource, the previously recorded historic-age transmission line (CA-SBR-10894), overlapping the APE. This line was field checked and the record updated. ECORP archaeologists found the segment of the power line to be consistent with the previous record. They noted that all of the wooden poles within the segment are in good condition with little weathering and no date nails. Thus the poles in this segment are likely modern replacements rather than original poles. CA-SBR-10894 was evaluated for the NRHP by Statistical Research, Inc. in 2003 and was recommended not eligible for listing in the NRHP.

We request your review of this project and it's APE (see attached maps). We value your assistance and look forward to consulting with you further if cultural resources of significance to your tribe may be affected by this project. If you have any comments or questions, please contact Mr. Clarence Everly (Fort Irwin Natural and Cultural Resources Program Manager) at (760) 380-3740 or at clarence.a.everly.civ@mail.mil. Written correspondence regarding this undertaking should be addressed to: Mr. Muhammad Bari, Directorate of Public Works, Environmental Division, ATTN: IMNT_PWE, PO Box 105085, Fort Irwin, CA 92310-5085.

Sincerely,



Muhammad A. Bari, P.E.
Director of Public Works
USAG Fort Irwin, CA

Enclosure



DEPARTMENT OF THE ARMY
HEADQUARTERS, UNITED STATES ARMY GARRISON
BLDG 237, B AVE, P.O. Box 105021
FORT IRWIN, CA 92310-5000

January 7, 2016

Subject: Verizon Fort Irwin Fiber Optic Line Project located at Fort Irwin, San Bernardino County, California

Mr. Timothy Williams
Chairman
Fort Mojave Indian Tribe
500 Merriman Ave
Needles, CA 92363

Dear Mr. Williams:

The purpose of this letter is to consult with your tribe about a proposed Undertaking, as defined by the National Historic Preservation Act of 1966 (as amended) at Fort Irwin, located in San Bernardino County, California. In agreement with Fort Irwin, Verizon, Southeast Division, in response to increasing demand for broadband service at Fort Irwin, proposes to install a fiber optic line to enhance service at the installation. The project is located in training areas B1, B2, and B3, and within the cantonment area (see enclosed report). Five Project alternatives were analyzed for the proposed undertaking, but no decision has yet been reached on which alternative will be built. All construction alternatives are included within the Area of Potential Effect and the entire APE was examined by archaeologists for this project.

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To identify existing cultural resources that would be affected by the proposed Project, a cultural resources records search was conducted using the California Historical Information System (CHRIS) at the San Bernardino Archaeological Information Center (SBAIC) at the San Bernardino County Museum in Redlands, California using a 1 mile (1.6 kilometer) records search buffer. The results of the records search at the SBAIC indicated that a total of 25 cultural resources investigations were conducted within the 1 mile (1.6 kilometer) records search radius of the APE between 1946 and 2014, four of which overlapped portions of the Project APE and four were located adjacent to the Project APE. Additional survey information supplied by Fort Irwin identified an additional 20 studies within the vicinity of the APE that were conducted

between 2002 and 2013. The SBAIC and Fort Irwin data indicate that approximately 90 percent of the APE has been previously surveyed. The records search results from the SBAIC also revealed that 49 cultural resources have been previously recorded within the 1 mile (1.6 kilometer) records search radius. Of these, only one previously recorded historic-age site, a wood pole transmission line (P36-10894/CA-SBR-10894), is located within the Project APE. No prehistoric sites were identified within previously surveyed portions of the APE.

A Sacred Lands File search was requested from the Native American Heritage Commission (NAHC) to identify any known sensitive or sacred Native American resources located in or near the project area. The Sacred Lands File did not indicate the presence of Native American cultural resources within 1-mile of the APE.

Following a review of the records search results, an intensive field survey was conducted for the entire 139.6-acre APE (see enclosed maps). Field work was conducted by two ECORP archaeologists between May 26 and May 28, 2015, and consisted of an intensive systematic pedestrian survey. The Project APE was examined for the presence of cultural artifacts and features by walking parallel transects spaced 15 meters (49 feet) apart. Notes were taken on the environmental setting and disturbances within the APE. The field survey identified only one cultural resource, the previously recorded historic-age transmission line (CA-SBR-10894), overlapping the APE. This line was field checked and the record updated. ECORP archaeologists found the segment of the power line to be consistent with the previous record. They noted that all of the wooden poles within the segment are in good condition with little weathering and no date nails. Thus the poles in this segment are likely modern replacements rather than original poles. CA-SBR-10894 was evaluated for the NRHP by Statistical Research, Inc. in 2003 and was recommended not eligible for listing in the NRHP.

We request your review of this project and it's APE (see attached maps). We value your assistance and look forward to consulting with you further if cultural resources of significance to your tribe may be affected by this project. If you have any comments or questions, please contact Mr. Clarence Everly (Fort Irwin Natural and Cultural Resources Program Manager) at (760) 380-3740 or at clarence.a.everly.civ@mail.mil. Written correspondence regarding this undertaking should be addressed to: Mr. Muhammad Bari, Directorate of Public Works, Environmental Division, ATTN: IMNT_PWE, PO Box 105085, Fort Irwin, CA 92310-5085.

Sincerely,



Muhammad A. Bari, P.E.
Director of Public Works
USAG Fort Irwin, CA

Enclosure

CF: Ms. Nora McDowell, Cultural Resources Coordinator
Ms. Linda Otero, Director, AhaMaKav Cultural Society



DEPARTMENT OF THE ARMY
HEADQUARTERS, UNITED STATES ARMY GARRISON
BLDG 237, B AVE, P.O. Box 105021
FORT IRWIN, CA 92310-5000

January 7, 2016

Subject: Verizon Fort Irwin Fiber Optic Line Project located at Fort Irwin, San Bernardino County, California

Ms. Mary Wuester
Chairperson
Lone Pine Paiute Shoshone Reservation
P.O. Box 747
Lone Pine, CA 93545

Dear Ms. Wuester:

The purpose of this letter is to consult with your tribe about a proposed Undertaking, as defined by the National Historic Preservation Act of 1966 (as amended) at Fort Irwin, located in San Bernardino County, California. In agreement with Fort Irwin, Verizon, Southeast Division, in response to increasing demand for broadband service at Fort Irwin, proposes to install a fiber optic line to enhance service at the installation. The project is located in training areas B1, B2, and B3, and within the cantonment area (see enclosed report). Five Project alternatives were analyzed for the proposed undertaking, but no decision has yet been reached on which alternative will be built. All construction alternatives are included within the Area of Potential Effect and the entire APE was examined by archaeologists for this project.

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between 2002 and 2013. The SBAIC and Fort Irwin data indicate that approximately 90 percent of the APE has been previously surveyed. The records search results from the SBAIC also revealed that 49 cultural resources have been previously recorded within the 1 mile (1.6 kilometer) records search radius. Of these, only one previously recorded historic-age site, a wood pole transmission line (P36-10894/CA-SBR-10894), is located within the Project APE. No prehistoric sites were identified within previously surveyed portions of the APE.

A Sacred Lands File search was requested from the Native American Heritage Commission (NAHC) to identify any known sensitive or sacred Native American resources located in or near the project area. The Sacred Lands File did not indicate the presence of Native American cultural resources within 1-mile of the APE.

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We request your review of this project and it's APE (see attached maps). We value your assistance and look forward to consulting with you further if cultural resources of significance to your tribe may be affected by this project. If you have any comments or questions, please contact Mr. Clarence Everly (Fort Irwin Natural and Cultural Resources Program Manager) at (760) 380-3740 or at clarence.a.everly.civ@mail.mil. Written correspondence regarding this undertaking should be addressed to: Mr. Muhammad Bari, Directorate of Public Works, Environmental Division, ATTN: IMNT_PWE, PO Box 105085, Fort Irwin, CA 92310-5085.

Sincerely,



Muhammad A. Bari, P.E.
Director of Public Works
USAG Fort Irwin, CA

Enclosure



DEPARTMENT OF THE ARMY
HEADQUARTERS, UNITED STATES ARMY GARRISON
BLDG 237, B AVE, P.O. Box 105021
FORT IRWIN, CA 92310-5000

January 7, 2016

Subject: Verizon Fort Irwin Fiber Optic Line Project located at Fort Irwin, San Bernardino County, California

Ms. Julianne Polanco
State Historic Preservation Officer
Office of Historic Preservation
Department of Parks and Recreation
1725 23rd Street, Suite 100
Sacramento, CA 95816-7100

Dear Ms. Polanco:

The purpose of this letter is to inform you of an Undertaking, as defined by the National Historic Preservation Act of 1966 (as amended) at Fort Irwin, located in San Bernardino County, California, as discussed in the enclosed report and supporting documents. In agreement with Fort Irwin, Verizon, Southeast Division, in response to increasing demand for broadband service at Fort Irwin, proposes to install a fiber optic line to enhance service at the installation. The project is located in training areas B1, B2, and B3, and within the cantonment area (see enclosed report). Five Project alternatives were analyzed for the proposed undertaking, but no decision has yet been reached on which alternative will be built. All construction alternatives are included within the Area of Potential Effect and the entire APE was examined by archaeologists for this project.

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CA-SBR-10894 was evaluated for the NRHP by Statistical Research, Inc. in 2003 and was recommended not eligible for listing in the NRHP (Lerch and Majewski 2003). I accept the recommendation of cultural resources professionals and have determined that CA-SBR-10894 within the APE is not eligible for listing in the National Register of Historic Places and request your concurrence with this determination. Based on the results of the cultural resources identification and evaluation efforts for this undertaking, I have determined that no properties listed in the NRHP, nor considered eligible for inclusion in the NRHP, exist within the APE of this undertaking. Therefore, a finding of "No Historic Properties Affected" is appropriate for this Undertaking in accordance with 36 CFR 800.4(d)(1) and I request your concurrence with this finding.

If you have any questions, please contact Mr. Clarence Everly (Fort Irwin Natural and Cultural Resources Program Manager) at (760) 380-3740 or at clarence.a.everly.civ@mail.mil. Written correspondence regarding this undertaking should be addressed to: Mr. Muhammad Bari, Directorate of Public Works, Environmental Division, ATTN: IMNT_PWE, PO Box 105085, Fort Irwin, CA 92310-5085.

Sincerely,



Muhammad A. Bari, P.E.
Director of Public Works
USAG Fort Irwin, CA

Enclosure

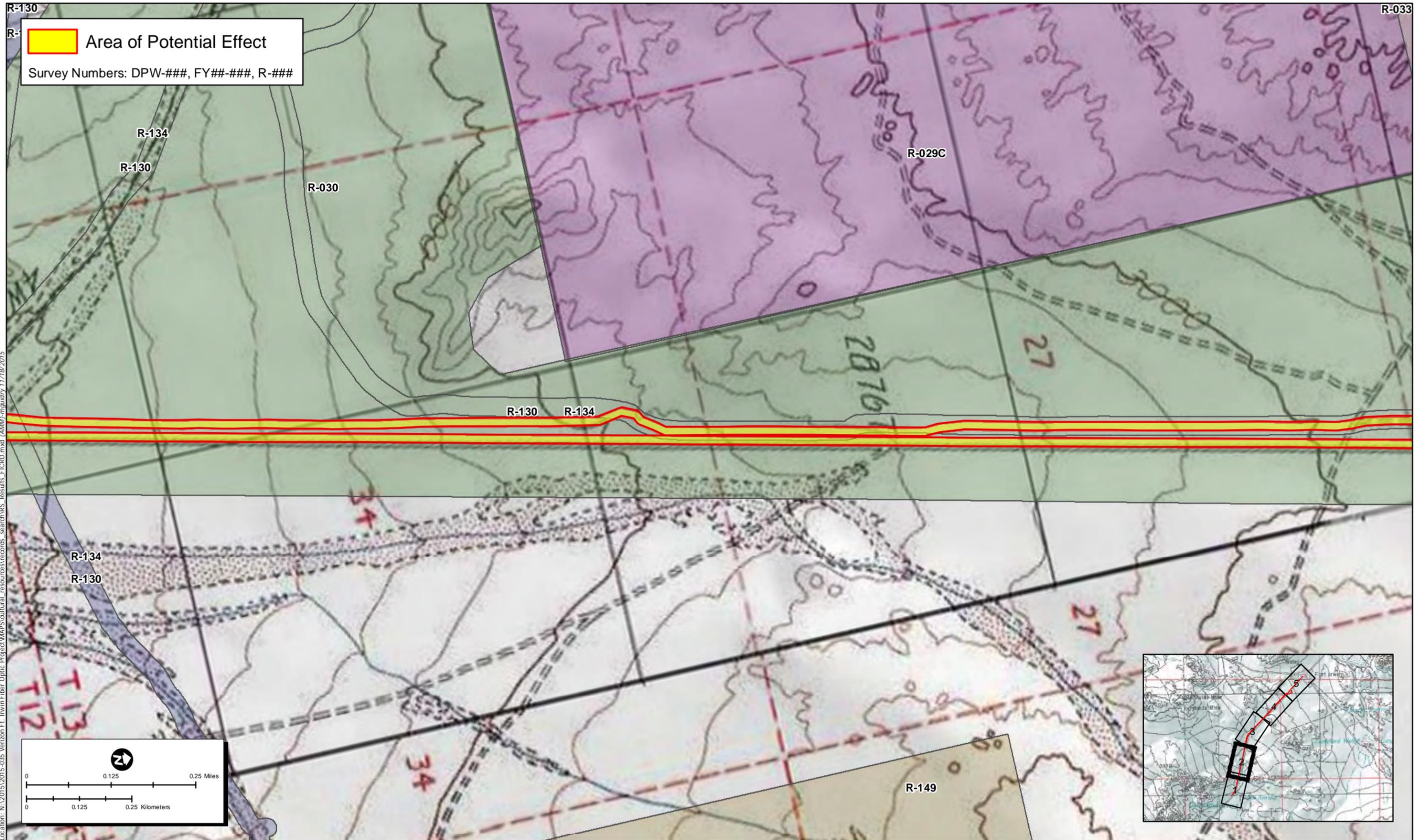
Appendix B
Fort Irwin Cultural Resources Database
Previous Survey Boundaries



Location: N:\2015\2015-035 Verizon Ft. Irwin Fiber Optic Project\WAPS\Cultural_resources\records_search\RS_Results_FICPD.mxd (4MM)\mapdata\11/18/2015

Figure B-1.

**Fort Irwin Cultural Resources Database
Previous Survey Boundaries**



Location: N:\2015\2015-035 Verizon Ft. Irwin Fiber Optic Project\WAPS\Cultural_resources\records_search\RS_Results_FICRD.mxd (4MM) mapday 11/18/2015

Figure B-2.
Fort Irwin Cultural Resources Database
Previous Survey Boundaries

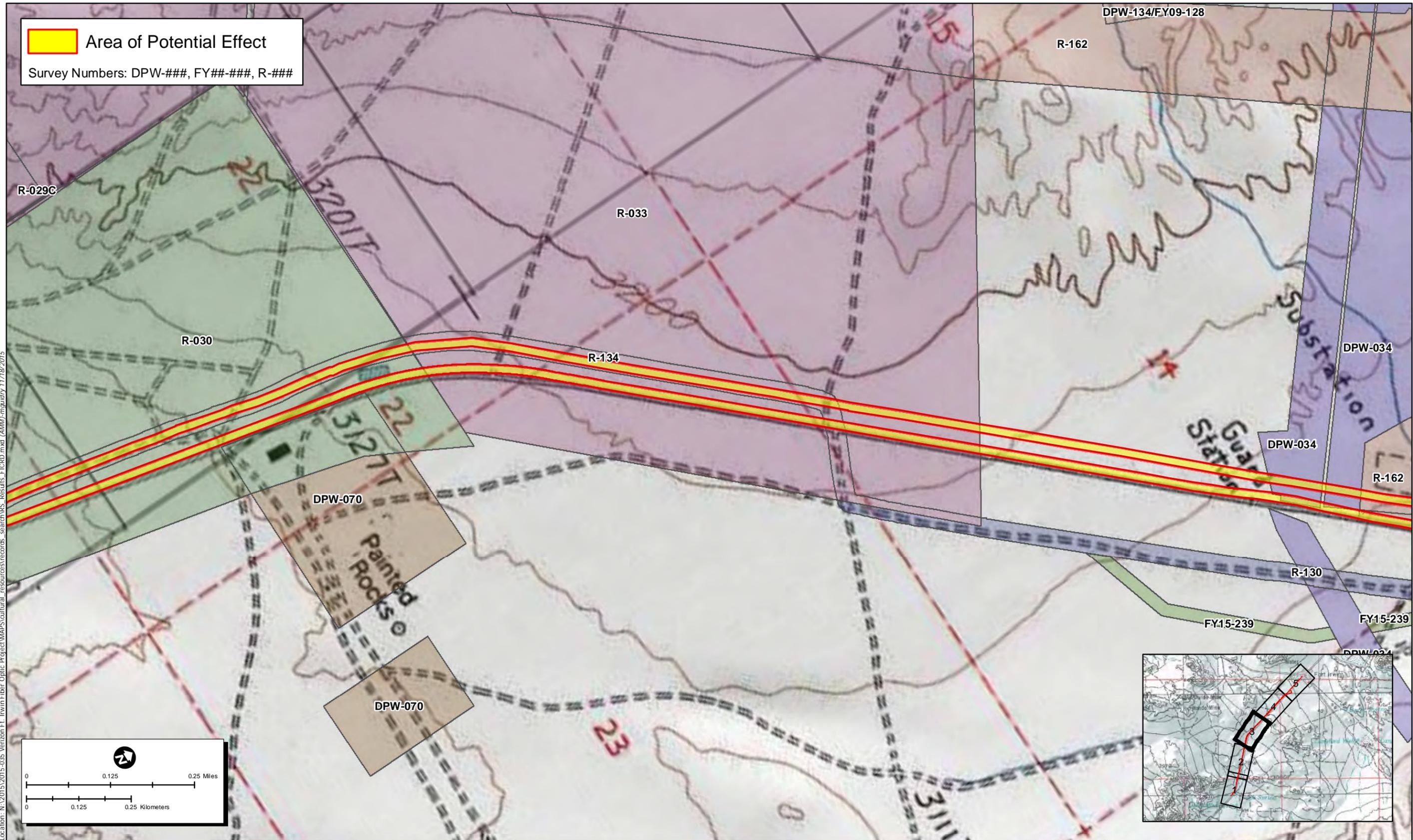
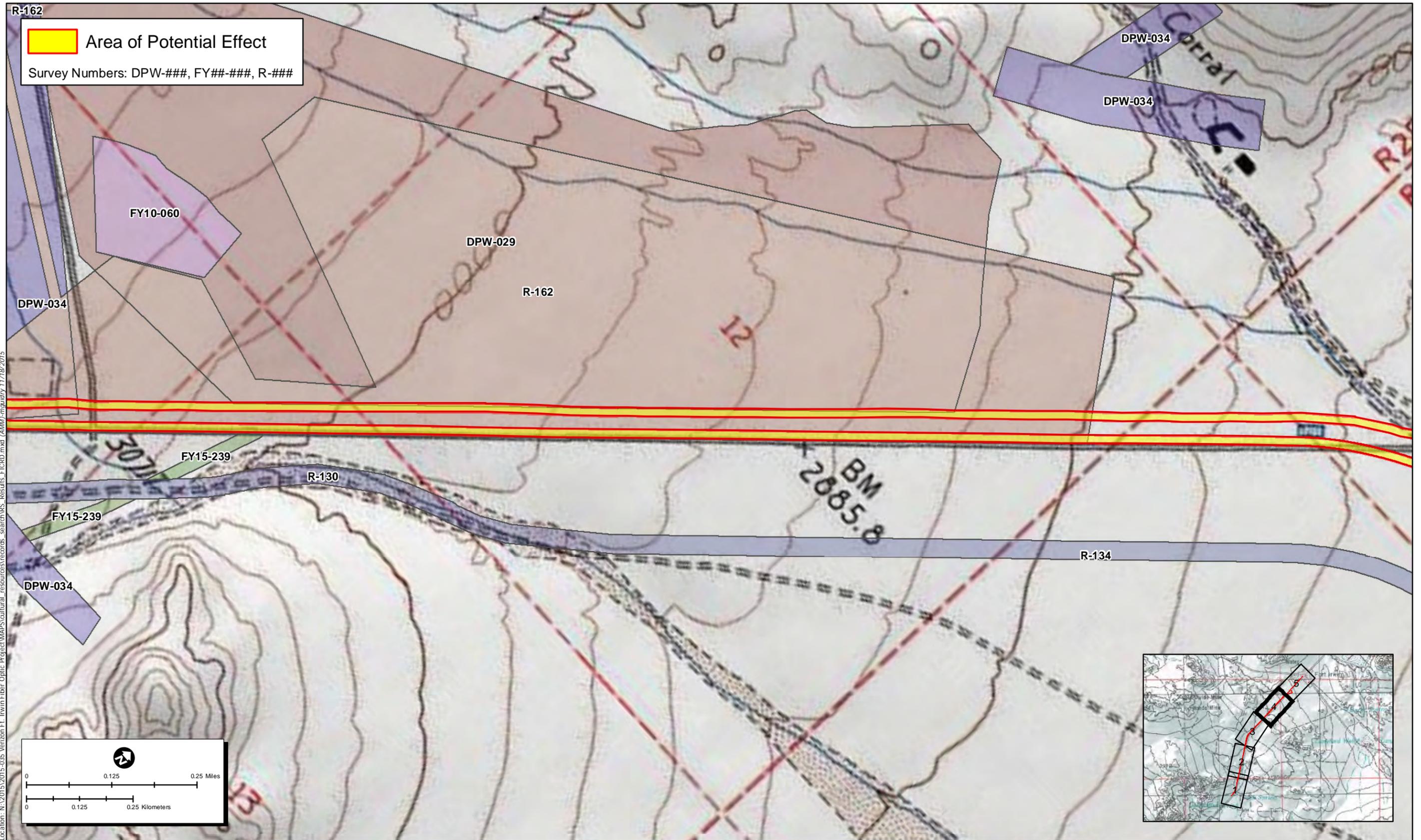


Figure B-3.
Fort Irwin Cultural Resources Database
Previous Survey Boundaries



Location: N:\2015\2015-035 Verizon Ft. Irwin Fiber Optic Project\WAPScultural_resources\records_search\RS_Results_FICRD.mxd (4MM)\mxd\dy 11/18/2015

Map Date: 11/5/2015

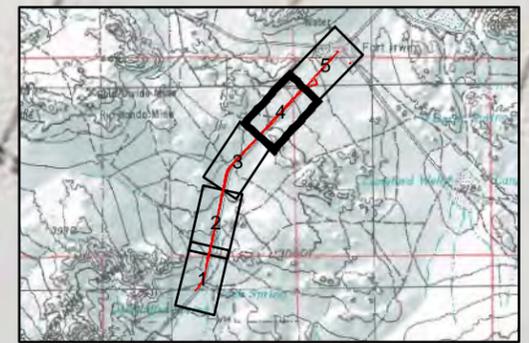


Figure B-4.
Fort Irwin Cultural Resources Database
Previous Survey Boundaries

Appendix C

Site Location Map (CONFIDENTIAL)

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Appendix D

**DPR Record Update to Site P36-010894/CA-SBR-10894
(CONFIDENTIAL)**

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Appendix E

Historic Property Survey Report for the Fort Irwin Road Project, from Interstate 15 to the Southerly Boundary of the National Training Center, Fort Irwin, San Bernardino County, California. Statistical Research, Inc., 2003

(CONFIDENTIAL)

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