DRAFT

NEPA ENVIRONMENTAL ASSESSMENT
BLM REFERENCE NUMBER _____
BLM NEPA CONTROL NUMBER _____
AND
CEQA INITIAL STUDY
FOR
HIGHWAY 127 BAKER TO NTC PROJECT

Lead Agencies:

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March 2015

BLM MISSION STATEMENT

"The Bureau of Land Management is responsible for the stewardship of our public lands. It is committed to manage, protect, and improve these lands in a manner to serve the needs of the American people at all times. Management is based upon the principles of multiple use and sustained yield of our nation's resources within a framework of environmental responsibility and scientific technology. These resources include recreation, rangelands, timber, minerals, watershed, fish and wildlife, air and scenic, scientific and cultural values."

COUNTY of SAN BERNARDINO VISION STATEMENT

"We envision a complete county that capitalizes on the diversity of its people, its geography, and its economy to create a broad range of choices for its residents in how they live, work, and play.

We envision a vibrant economy with a skilled workforce that attracts employers who seize the opportunities presented by the county's unique advantages and provide the jobs that create countywide prosperity.

We envision a sustainable system of high-quality education, community health, public safety, housing, retail, recreation, arts and culture, and infrastructure, in which development complements our natural resources and environment.

We envision a model community which is governed in an open and ethical manner, where great ideas are replicated and brought to scale, and all sectors work collaboratively to reach shared goals.

From our valleys, across our mountains, and into our deserts, we envision a county that is a destination for visitors and a home for anyone seeking a sense of community and the best life has to offer."

EXECUTIVE SUMMARY

This Environmental Assessment/Initial Study/Mitigated Negative Declaration (EA/IS/MND) has been prepared for AT&T Corporation (AT&T) to meet the requirements of the Bureau of Land Management (BLM) and the County of San Bernardino (County). This EA/IS analyzes the potential environmental impacts associated with the Proposed Action and alternatives for providing fiber-optic cable (FOC) infrastructure to the United States (U.S.) Army National Training Center (NTC) at Fort Irwin.

This EA/IS/MND is an informational document to advise decision-makers and the general public of the benefits and potential adverse impacts of the Proposed Action as well as feasible alternatives. This document assesses short-term, long-term, and cumulative impacts and benefits of the Proposed Action. The EA/IS/MND is also intended to provide information to all agencies whose discretionary approvals must be obtained for Proposed Project Actions.

The BLM is the Federal lead agency responsible for compliance with the National Environmental Policy Act (NEPA) of 1969 (42 U.S.C. § 4331 [1996]), and the County is the lead agency under the California Environmental Quality Act (CEQA) of 1970 (California Public Resources Code [PRC] § 21,000 et seq.), as amended. This EA/IS has been prepared at the project level of detail and complies with both NEPA and CEQA.

Under the Proposed Action, BLM would approve a Right-of-Way (ROW) Grant to AT&T to facilitate FOC installation activities from the unincorporated community of Baker, California, to Cell Site 9 at the NTC. The Proposed Action would perform installation activities along the approximately 12.25-mile Project Route (Route). Project activities within the Route consist of installing three new direct-buried 1.5–inch-diameter, high-density polyethylene (HDPE) ducts and twenty-five 3-foot-by-5-foot-by-3-foot direct-buried cable splice vaults spaced approximately 3,000 feet apart. In addition, maker poles and a buried maker ribbon will also be installed.

Under the No Action Alternative, BLM would not issue the ROW Grant Amendment approval to conduct installation activities for the FOC system. As a result, the Proposed Action would not be undertaken as proposed. AT&T's cellular network at the Shoshone Central Office, which is interconnected by wireless microwave transmitters, would continue to serve its existing system. The system currently has limited bandwidth, and maintenance requirements are increasing as it ages. The NTC's Combat Training Center – Instrumentation System Range Communications System (CTC-IS RCS) could continue to function via the two existing FOC lines which connect Fort Irwin with NTC's cellular and data network; one line operated by Verizon Wireless and the other operated by the China Lake Naval Air Weapons Station. However, both lines lack needed bandwidth capability and reliability.

The Proposed Action (or Proposed Project) is to install 12.25 miles of FOC from the unincorporated community of Baker to the U.S. Army NTC at Fort Irwin in California. The entire alignment falls within or near disturbed or moderately-disturbed roadway alignments. The majority of the Route roughly parallels Highway 127, also known as State Route (SR) 127. The new FOC is needed to support AT&T's Shoshone Central Office cellular network (Shoshone district) and the NTC's CTC-IS RCS.

The Project Route comprises four Segments totaling approximately 12.25 miles, beginning at the intersection of Mill Road and Baker Boulevard and ending at the NTC's Cell Tower Site 9 as described above and shown in Figure 1-2.

- Segment 1, approximately 1.58 miles, begins at the intersection of Mill Road and Baker Boulevard, runs north along Mill Road approximately 1.14 miles, then turns northeast, and runs along Silver Lane for approximately 0.44 mile to SR-127.

- Segment 2, approximately 7.20 miles, begins at Silver Lane and runs north along the west side of SR-127 to Silver Lake Road.

- Segment 3, approximately 2.87 miles, begins at SR-127 and runs west along Silver Lake Road to the border of Fort Irwin.

- Segment 4, approximately 0.60 mile, continues west from the border of Fort Irwin to Cell Tower Site 9.

TABLE OF CONTENTS

Page

LIST OF TABLES

Page

LIST OF FIGURES

Page

ACRONYMS AND ABBREVIATIONS

AB 32	Assembly Bill 32
ACECs	Areas of Critical Environmental Concern
amsl	above mean sea level
AT&T	AT&T Corporation
ATSF	Atchison, Topeka and Santa Fe Railway
BA	Biological Assessment
BLM	Bureau of Land Management
BMP	Best Management Practices
BTR	Biological Technical Report
C_2H_6	ethane
CAAQS	California Ambient Air Quality Standards
CAL/EPA	California Environmental Protection Agency
CAL/OSHA	California Occupational Safety and Health Administration
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CCR	California Code of Regulations
CDCA	California Desert Conservation Area
CDFW	California Department of Fish and Wildlife
CEQ	Council of Environmental Quality
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFCs	chlorofluorocarbons
CFR	Code of Federal Regulations
CH_4	methane
CM	Construction Measures
CNCA	California Noise Control Act
CNDDB	California Natural Diversity Database
CNEL	community noise equivalent level
CNPS	California Native Plant Society
CNPSEI	Electronic Inventory of Rare and Endangered Vascular Plants of California
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
COOP	Cooperative Observer Program
County	County of San Bernardino
CSC	California Species of Special Concern
CSLC	California State Lands Commission
CWA	Clean Water Act
dB	decibel
DTSC	Department of Toxic Substance Control
DWMAs	Desert Wildlife Management Areas
EA/IS/MND	Environmental Assessment/Initial Study/Mitigated Negative Declaration
EA	Environmental Assessment
EIS	Environmental Impact Statement
EO	Executive Order

EPA	Environmental Protection Agency
ESA	Endangered Species Act
FAA	Federal Aviation Administration
FACU	facultative upland
FACW	facultative wetland
FCAA	Federal Clean Air Act
FCR	field contact representative
FLPMA	Federal Land Policy and Management Act
FOC	fiber-optic cable
FONSI	Finding of No Significant Impact
FSC	Federal Species of Concern
GIS	Geographic Information Systems
GHGs	Greenhouse gases
GWP	global warming potential
HASB	high air speed blowing
HDPE	high-density polyethylene
HFCs	Hydrofluorocarbons
I-15	Interstate 15
I-40	Interstate 40
IPA	Intermountain Power Agency
IPCC	International Panel on Climate Change
LADWP	Los Angeles Department of Water and Power
MBTA	Migratory Bird Treaty Act
MDAB	Mojave Desert Air Basin
MDAQMD	Mojave Desert Air Quality Management District
MMRP	Mitigation Monitoring and Reporting Plan
mph	miles per hour
MYBP	million years before present
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
ND	Negative Declaration
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
NO_2	nitrogen dioxide
NOTCOM	not completed
NO_X	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NPS	National Park Service
NRCS	Natural Resources Conservation Service
O_3	ozone
OHVs	off-highway vehicles
OHWM	ordinary high water mark
ONAC	Office of Noise Abatement and Control
ONC	Office of Noise Control
OSHA	Occupational Safety Health Administration

PFCs	Perfluorocarbons
PFO	potential for occurrence
PM	particulate matter
PM_{10}	Respirable Particulate Matter
$PM_{2.5}$	Fine Particulate Matter
ppm	parts per million
quad	quadrangles
RCRA	Resource Conservation and Recovery Act
ROG	reactive organic gases
ROW	right-of-way
RWQCB	Regional Water Quality Control Board
SBAIC	San Bernardino Archaeological Information Center
SBC	San Bernardino County
SCPPA	Southern California Public Power Authority
SF_6	Sulfur Hexafluoride
SIP	State Implementation Plan
SO_2	Sulfur Dioxide
SOP	standard operating procedures
SR-247	California State Route 247
SSURGO	Soil Survey Geographic database
SWPPP	Stormwater Pollution and Prevention Plan
SWRCB	State Water Resources Control Board
T	tonnes
T&E	threatened and endangered
TAC	toxic air contaminants
tCO_2e	tonnes of carbon dioxide equivalent
TDS	total dissolved solids
UPRR	Union Pacific Railroad
USACE	United States Army Corps of Engineers
USC	United States Code
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
VdB	vibration velocity level
VOC	volatile organic compounds
VRM	Visual Resource Inventory Manual

SECTION 1.0 – INTRODUCTION

1.1 PROJECT BACKGROUND

The AT&T Corporation (AT&T) is proposing a fiber-optic cable (FOC) installation project (Proposed Project or Proposed Action) from the unincorporated community of Baker to the United States (U.S.) Army National Training Center (NTC) at Fort Irwin in California (

Figure 1-1: Regional Vicinity Map). The Project would install approximately 12.25 miles of FOC within or near disturbed to moderately-disturbed roadway alignments (Project Route, or Route). The majority of the Route roughly parallels Highway 127, also known as State Route (SR-) 127 (see Figure 1-2: Project Alignment). The new FOC is needed to support AT&T's Shoshone Central Office cellular network (Shoshone district) and the NTC's Combat Training Center – Instrumentation System Range Communications System (CTC-IS RCS).

The United States Bureau of Land Management (BLM) is the Federal lead agency responsible for compliance with the National Environmental Policy Act (NEPA); and the County of San Bernardino (County) is the lead agency responsible for compliance with the California Environmental Quality Act (CEQA).

1.2 ACTIVITIES TO BE AUTHORIZED, FUNDED, OR CARRIED OUT BY THE ACTION AGENCIES

NEPA requires Federal agencies to integrate environmental values into the decision-making processes by considering the environmental impacts of proposed actions and reasonable alternatives to those actions. CEQA is a statute that requires State and local agencies to identify the significant environmental impacts of proposed actions and to avoid or mitigate those impacts, if feasible.

For clarity, BLM and the County emphasize to the reader that this "joint environmental document" is being used by BLM, the County, and other agencies with decision-making authority, in separate and distinctly different licensing, permitting, and/or authorization processes. Overall, the decision-making agencies will rely on the Joint Environmental Assessment (EA)/Initial Study (IS) document to consider the Proposed Project's potential impacts on the environment.

Specifically, BLM has authority over the portion of the project that is on BLM lands administered by the BLM Barstow Field Office. As the lead agency, BLM will decide: whether or not to approve a portion of the project as submitted or approve an alternative course of action; and, if approved, what mitigation measures to include in the selected alternative.

1.3 PURPOSE AND NEED

The purpose of the Proposed Project is to provide needed bandwidth and reliability to support the Shoshone Central Office's cellular network and the NTC's CTC-IS RCS to meet present and future communication needs at these locations.

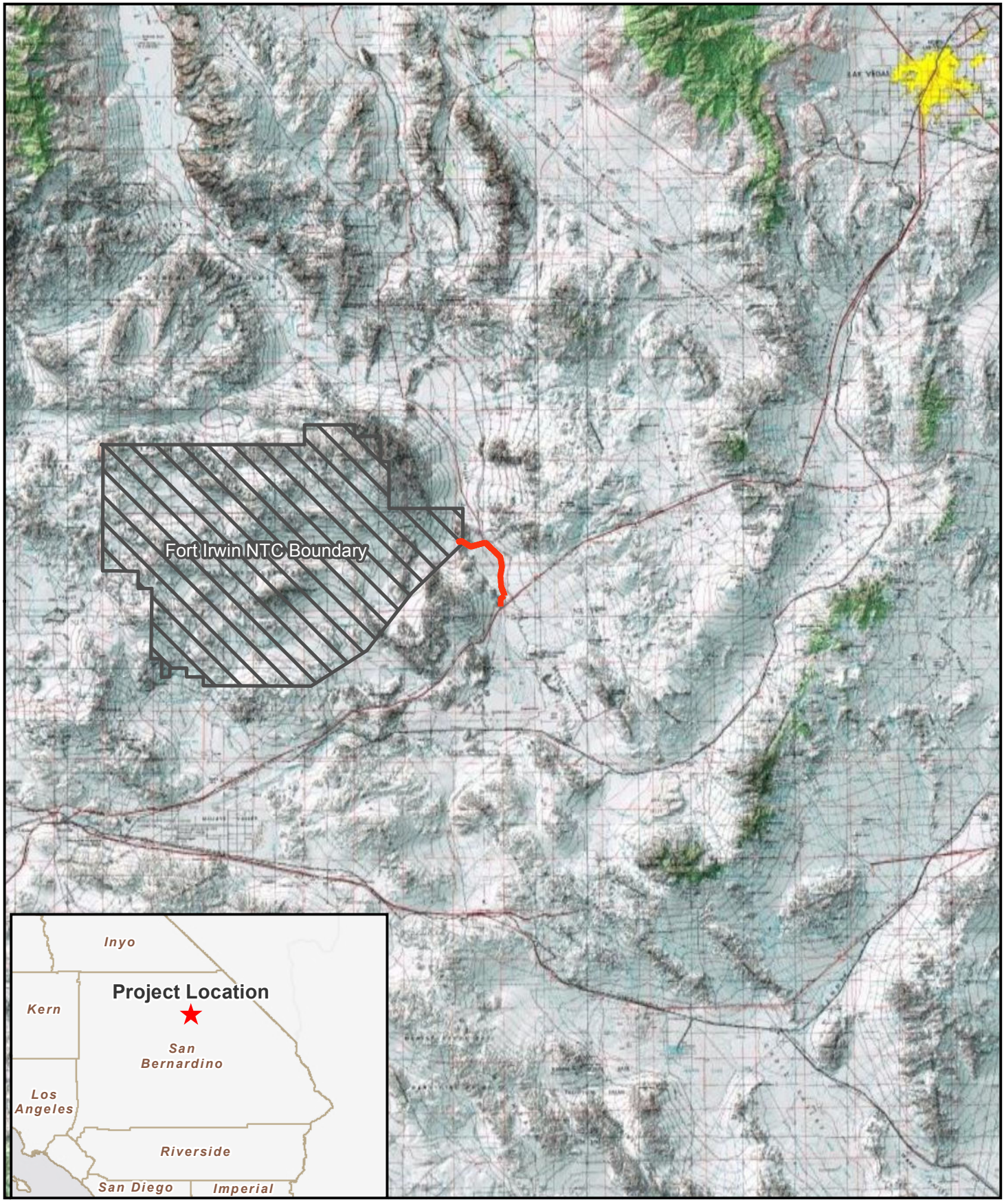

Figure 1-1
Highway 127 Baker to NTC Project
Regional Vicinity Map

Name: 20692 EA Fig 1-1 Reg Vicinity Map.Mxd
Print Date: 6/24/2014, Author: msimmons

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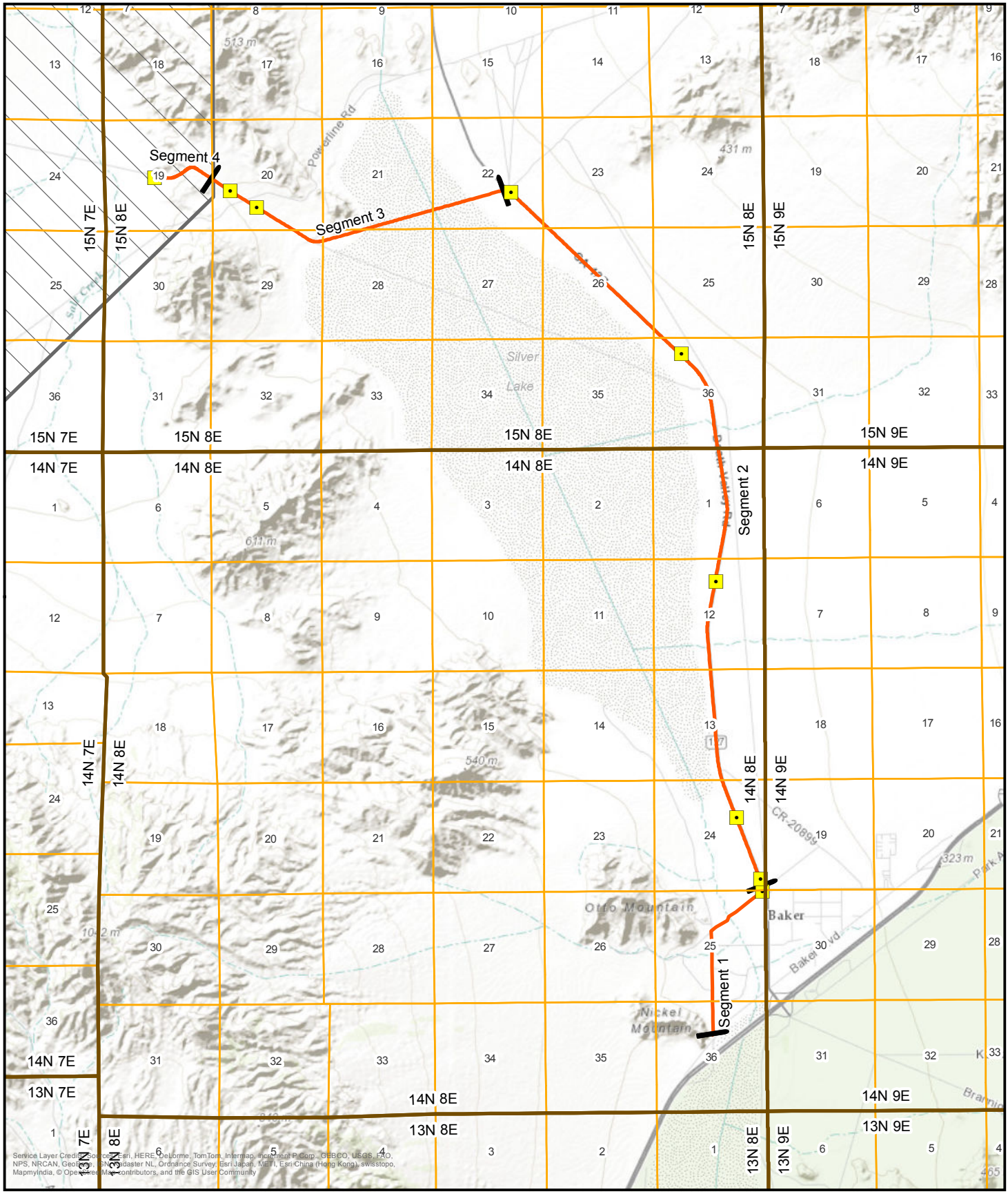

Legend

- Project Alignment
- Vaults
- Fort Irwin NTC Boundary
- Township/Range
- Section

N

0 0.5 1 2

Miles

Figure 1-2

Highway 127 Baker to NTC Project
Project Alignment

Name: 20692 EA Fig 1-2 Project Alignment.Mxd
Date Saved: 3/27/2015, Author: msimmons

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Specific to NEPA, the purpose of the Proposed Action is to grant a right-of-way (ROW) lease for installation of approximately 12.25 miles of fiber-optic cable, of which, 9.05 miles occurs on BLM lands.

Currently, the AT&T cellular network along SR-127 and the Shoshone district is interconnected by wireless microwave transmitters. The system has limited bandwidth and increasing maintenance requirements as it ages. Replacement and upgrade of the current system with additional microwave transmitters represents higher costs of equipment and maintenance and involvement of a greater amount of natural resources. The Proposed Action would add the needed bandwidth and reliability to the system at reduced operational cost and reduced involvement of natural resources.

The NTC's CTC-IS RCS provides tools to analyze training performance information and provide detailed and tailored performance feedback to the units undergoing training at Fort Irwin. Currently two lines of FOC connect Fort Irwin with NTC's cellular and data network; one line is operated by Verizon Wireless, and the other is operated by the China Lake Naval Air Weapons Station. Both lines lack needed bandwidth capability and connective reliability. The Proposed Action adds connective redundancy to the NTC's cellular and data network and needed bandwidth to meet present and future communication needs at the NTC.

1.4 JOINT NEPA/CEQA DOCUMENT

1.4.1 Relationship to NEPA Guidelines

Approximately 9.06 miles of the Project Route crosses land owned and/or managed by the BLM. AT&T is seeking a Right-of-Way Grant Amendment from BLM to facilitate the Proposed Action.

The Proposed Action is subject to NEPA because a portion of the Project Route crosses lands managed by BLM. This document has been prepared in compliance with NEPA and its implementing regulations issues by the Council of Environmental Quality (CEQ) (40 Code of Federal Regulations [CFR] § 1500). It also complies with the Federal Land Policy and Management Act (FLPMA), with planning guidance at 43 CFR § 1600 and in the BLM Planning Manual (1600 Series), the BLM Environmental Handbook (H-17900), the Clean Water Act (Sections 401 and 404), the National Historic Preservation Act (NHPA) (Section 106), the American Indian Religious Freedom Act, the Safe Drinking Water Act, the Wild and Scenic Rivers Act, the Wilderness Act, the Endangered Species Act (ESA) (Section 7), the Executive Order 13007 on Sacred Sites, the Executive Order 11988 on Floodplains, the Executive Order 1199-0 on Wetlands and Riparian Zones, the Executive Order 13045 on Protection of Children from Environmental Health and Safety Risks, and the Executive Order 12898 addressing Environmental Justice.

The preparation, review, and certification process under NEPA involves the following procedural steps:

Environmental Assessment

This document constitutes the EA and contains a description of the Proposed Action, description of the existing environment, identification of environmental consequences, and Applicant-Initiated Environmental Construction Measures (CMs).

Public Review

Prior to issuing a record of decision, BLM will prepare a public notice to notify the public about the Proposed Action and invite comments from the general public, agencies, organizations, and other interested parties. This joint document is part of that public review and is being circulated to applicable Federal, State, and local agencies in conformance with NEPA requirements. Public comment on this Draft EA will be accepted in written form at the BLM Barstow Field Office for 30 days.

Response to Comments/Final EA

Following the public review period, a Final EA will be prepared. BLM will prepare a response to written comments received during the public review period.

Adoption of the EA/Project Consideration

BLM will review and consider all information contained in the Draft and Final EA. If BLM finds that the Final EA is "adequate and complete," BLM will adopt the EA. The rule of adequacy generally holds that the EA can be adopted if: (1) it shows a good faith effort at full disclosure of environmental information; and (2) it provides sufficient analysis to allow decisions to be made regarding the Proposed Action in contemplation of its environmental consequences.

Upon review and consideration of the Final EA, the BLM may take action to approve, revise, or reject the Proposed Action. A decision to approve the Proposed Action would be accompanied by written findings in accordance with 40 CFR 1503.4.

Finding of No Significant Impact

The primary purpose of conducting an EA is to determine whether or not a proposed action will have a significant impact on the human environment and, therefore, will require the preparation of an environmental impact statement (EIS). As defined in 40 CFR 1508.13, the Finding of No Significant Impact (FONSI) is a document that briefly presents the reasons why an action will not have significant effect on the human environment. The regulations further define the term "significantly" in 40 CFR 1508.27 and require that the context and intensity of impacts be considered in analyzing significance. Significance of impacts to be considered in terms of context and intensity includes:

(a) Context. This means that the significance of an action must be analyzed in several contexts such as society as a whole (human, national), the affected region, the affected interests, and the locality. Significance varies with the setting of the proposed action. For instance, in the case of a site-specific action, significance would usually depend upon the effects in the locale rather than in the world as a whole. Both short-term and long-term effects are relevant. (40 CFR 1508.27(a)); and,

(b) Intensity. This refers to the severity of impact. Responsible officials must bear in mind that more than one agency may make decisions about partial aspects of a major action.

Land Use Plan Conformance

The Proposed Action is subject to and in conformance with the California Desert Conservation Area Plan of 1980 (as amended) and the West Mojave Plan in accordance with Title 43 CFR 1610.5-3. The plan's General Guidelines section providing laws and regulations governing the issuance of permits and/or authorizations for uses of the public lands can be found in Titles 30, 36, and 43 CFR, or determined at any BLM office.

Decisions

Decisions to be made at this phase of the project involve the following:

- BLM approval of a Right-of-Way Grant Amendment for the installation of approximately 9.06 miles of FOC on BLM land associated with the project.

1.4.2 Relationship to CEQA guidelines

The Proposed Project is also subject to the requirements of the California Environmental Quality Act (CEQA) because the project requires discretionary approval by the County of San Bernardino for a Right-of-Way encroachment permit. The County of San Bernardino (County) is the designated Lead Agency for CEQA review purposes. The Lead Agency also has authority to prepare and adopt a Mitigated Negative Declaration (MND) and mitigation monitoring program prepared in accordance with CEQA.

The preparation, review, and adoption process for the MND involves the following procedural steps:

Proposed Mitigated Negative Declaration

This document constitutes the MND for the Proposed Project and contains a description of the Proposed Project, description of the environmental setting, identification of Proposed Project impacts, and Applicant-Initiated Environmental CMs and Mitigation Measures to reduce potentially significant impacts to a less than significant level. This document also contains a completed Initial Study (IS) Checklist (Appendix A) as required by CEQA. For each question listed in the IS checklist, a determination of the level of significance of the impact is provided. The public notice and review period for this document is 30 days as authorized by Section 15205(d) of the CEQA Guidelines and Public Resources Code, Section 21091(e). Upon completion of the public notice and review period for this document, the County of San Bernardino will consider whether to adopt this MND after consideration of all comments received from the public and commenting agencies.

Public Notice/Public Review

The County has provided public notice of the availability of this Draft IS/MND for a 30-day public review and invited comment from the general public, agencies, organizations, and other interested parties.

Following this public review period, the County will consider the written comments received during the public review period and join with BLM in preparing a Final EA/MND. If the County finds on the basis of the whole record before it that there is no substantial evidence that the Proposed Project would have a significant effect on the environment, and that the IS/MND reflects the County of San Bernardino's independent judgment and analysis, the County shall then adopt the Final EA/MND.

Upon adoption of the Final EA/MND, the County of San Bernardino may take action to approve, revise, or reject the Proposed Project.

Incorporation by Reference

Pertinent documents related to this Joint EA/MND have been cited and incorporated by reference, in accordance with § 15150 of the CEQA Guidelines, as a means of reducing the redundancy and length of environmental reports.

The following documents are available for review at both the County Land Use Services Department - Planning Division and on the County web page at http://cms.sbcounty.gov/lus/Planning/Environmental/Desert.aspx and are hereby incorporated by reference into this Joint EA/MND:

Mitigation Monitoring

Pursuant to § 21081.6(a)(1) of the California Public Resources Code, the lead agency shall adopt a Mitigation Monitoring Program to monitor Applicant-Initiated Environmental CMs and Mitigation Measures, best management practices (BMPs), and conditions of approval outlined in this EA/MND. This program serves to document compliance with Applicant-Initiated Environmental CMs, BMPs, mitigation measures and conditions of approval required to minimize effects of the Proposed Project on the environment. A Mitigation Monitoring and Reporting Plan (MMRP), including CMs, for the Proposed Project is included as Appendix B.

1.4.3 Discretionary Actions and Regulatory Permit Requirements

The following permits are expected to be required for implementation of the Proposed Project:

Federal

- Bureau of Land Management
    - Right-of-Way Grant Amendment
- U.S. Army Corps of Engineers (USACE)
    - Section 404 of the Clean Water Act (Nationwide Permit 12)
- Section 106 consultation by BLM with the State Historic Preservation Office (SHPO) and Native American tribes
- Section 7 consultation by BLM with United States Fish and Wildlife Services (USFWS)

State

- Department of Fish and Wildlife
    - Streambed Alteration Agreements

- 2081 authorization in connection with the desert tortoise

- California Regional Water Quality Control Board, Lahontan Region
  - Section 401 Water Quality Certification
- State Water Resources Control Board
  - National Pollutant Discharge Elimination System (NPDES) General Permit For Storm Water Discharges Associated with Construction and Land Disturbing Activities
- California Department of Transportation (Caltrans)
- Native American Heritage Commission consultation

Local Agencies

- County of San Bernardino
  - County Right-of-Way encroachment permit
- Electric Utility
  - Right-of-Way encroachment

SECTION 2.0 – PROPOSED ALTERNATIVES

This Draft EA/IS includes analysis of the Proposed Action and the No Action Alternative. The alternatives considered, including the Proposed Action and No Action Alternative, are described below.

2.1 ALTERNATIVE A: PROPOSED ACTION

Under the Proposed Action, BLM would approve a ROW Grant to AT&T to facilitate FOC installation activities from the unincorporated community of Baker, California, along SR-127 to the Fort Irwin National Training Center. The Proposed Action (or Proposed Project) is to install approximately 12.25 miles of FOC from the unincorporated community of Baker to the U.S. Army NTC at Fort Irwin in California. The entire alignment falls within or near disturbed or moderately-disturbed roadways alignments. The majority of the Project Route (or Route) roughly parallels Highway 127, also known as SR-127 (see Section 2.1.2, Route Description). The new FOC is needed to support AT&T's Shoshone Central Office cellular network (Shoshone district) and the NTC's CTC-IS RCS.

Project activities within the Route consist of installing new conduits and direct-buried FOC along the Project Route. Of the total approximately 12.25-mile length of the Project, five conduits and one direct-buried FOC will be installed in approximately 2.44 miles; and two conduits and one direct-buried FOC will be installed in the remaining 10.69 miles. Underground cable "pull boxes" (vaults), marker poles, and buried marker ribbon would also be installed along the Route.

All installation activities would take place within existing roadways or disturbed roadway shoulders. Only existing access roads would be used to access the Route and for parking during Project activities. The existing access roads would not be blocked, and public or maintenance vehicles would not be prevented from passing through.

2.1.1 Project Location

The Project Route is located within the Mojave Desert and crosses through *Soda Lake North*, *Baker*, and *West of Baker* U.S. Geological Survey (USGS) 7.5-minute quadrangles (quad). The Route follows a path between the intersection of Mill Road and Baker Boulevard and ends at the NTC's Cell Tower Site 9, as shown in Figure 1-2. Elevations along the length of the Project Route range from approximately 900 to 1,020 feet above mean sea level (amsl).

2.1.2 Route Description

- The Project Route comprises four Segments totaling approximately 12.25 miles beginning at the intersection of Mill Road and Baker Boulevard and ending at the NTC's Cell Tower Site 9, as shown in Figure 1-2. Segment 1, approximately 1.58 miles, begins at the intersection of Mill Road and Baker Boulevard, runs north along Mill Road approximately 1.14 miles, then turns northeast and runs along Silver Lane for approximately 0.44 mile to SR-127 (Figure 2-1 and Figure 2-2).

- Segment 2, approximately 7.20 miles, begins at Silver Lane and runs north along the west side of SR-127 to Silver Lake Road (Figure 2-3 through Figure 2-8).

- Segment 3, approximately 2.87 miles, begins at SR-127 and runs west along Silver Lake Road to the Fort Irwin border (Figure 2-9 and Figure 2-10).

- Segment 4, approximately 0.6 mile, continues west from the border of Fort Irwin to Cell Tower Site 9 (Figure 2-11).

The Project Route crosses through land owned and/or managed by BLM, Fort Irwin, State Lands Commission, Caltrans, and private individuals and entities. Table 2-1: lists the miles of land owners/managers crossed per Project Route segment.

Table 2-1: Land Ownership or Management per Segment

Landowner	Length per Segment (miles)				Totals
	1	2	3	4	
BLM	0.46	5.88	2.70	0.01	9.05
Fort Irwin	0.00	0.00	0.00	0.59	0.59
State Lands Commission	0.00	1.16	0.00	0.00	1.16
Private	1.12	0.16	0.17	0.00	1.45
Total	**1.58**	**7.20**	**2.87**	**0.60**	**12.25**

Source: BLM California State Office, Mapping Sciences Sacramento, CA (Accessed March 24, 2014).

2.1.3 Construction Specifics

Fiber-Optic Cable

FOC resembles a traditional copper conductor telephone cable in outward appearance. Instead of copper conductors, however, it contains multiple glass fiber strands used to transmit pulses of highly concentrated light. The glass fibers are protected by various internal cable components, including buffer tubes, mylar tape, an inner polyethylene sheath, a steel shield, and a waterproof outer polyethylene sheath. The total outside diameter of the cable is approximately 0.7 inch.

Legend

- New Conduit
- Existing Conduit
- Vault

Road Type

- Dirt

Land Ownership

- Bureau of Land Management
- Mojave National Preserve
- Private or Non-Government

N

0 500 1,000

Feet

Figure 2-1

Highway 127 Baker to NTC Project
Segment 1 of Project Alignment

Approx. Vault Distance

Name: 20692 EA Fig 2 Segments.Mxd
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Legend

- New Conduit
- Existing Conduit
- Vault

Road Type

- Dirt
- Paved

Land Ownership

- Bureau of Land Management
- Private or Non-Government

N

0 500 1,000

Feet

Figure 2-2

Highway 127 Baker to NTC Project

Segments 1 & 2 of Project Alignment

Approx. Vault Distance #1 to #2 = 674 feet; #2 to #3 = 3,144 feet; #3 to #4 = 11,415 feet

Name: 20692 EA Fig 2 Segments.Mxd
Date Saved: 3/31/2015, Author: msimmons

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Legend

- New Conduit
- Existing Conduit
- Vault

Land Ownership

- Bureau of Land Management
- Private or Non-Government

Road Type

- Paved

N

0 500 1,000

Feet

Figure 2-3

Highway 127 Baker to NTC Project
Segment 2 of Project Alignment

Approx. Vault Distance #3 to #4 = 11,415 feet

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Date Saved: 3/31/2015, Author: msimmons

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Legend

- New Conduit
- Existing Conduit
- Vault

Land Ownership

- Bureau of Land Management
- Private or Non-Government

Road Type

- Paved

N

0 500 1,000

Feet

Figure 2-4

Highway 127 Baker to NTC Project

Segment 2 of Project Alignment

Approx. Vault Distance #3 to #4 = 11,415 feet; #4 to #5 = 11,423 feet

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Date Saved: 3/31/2015, Author: msimmons

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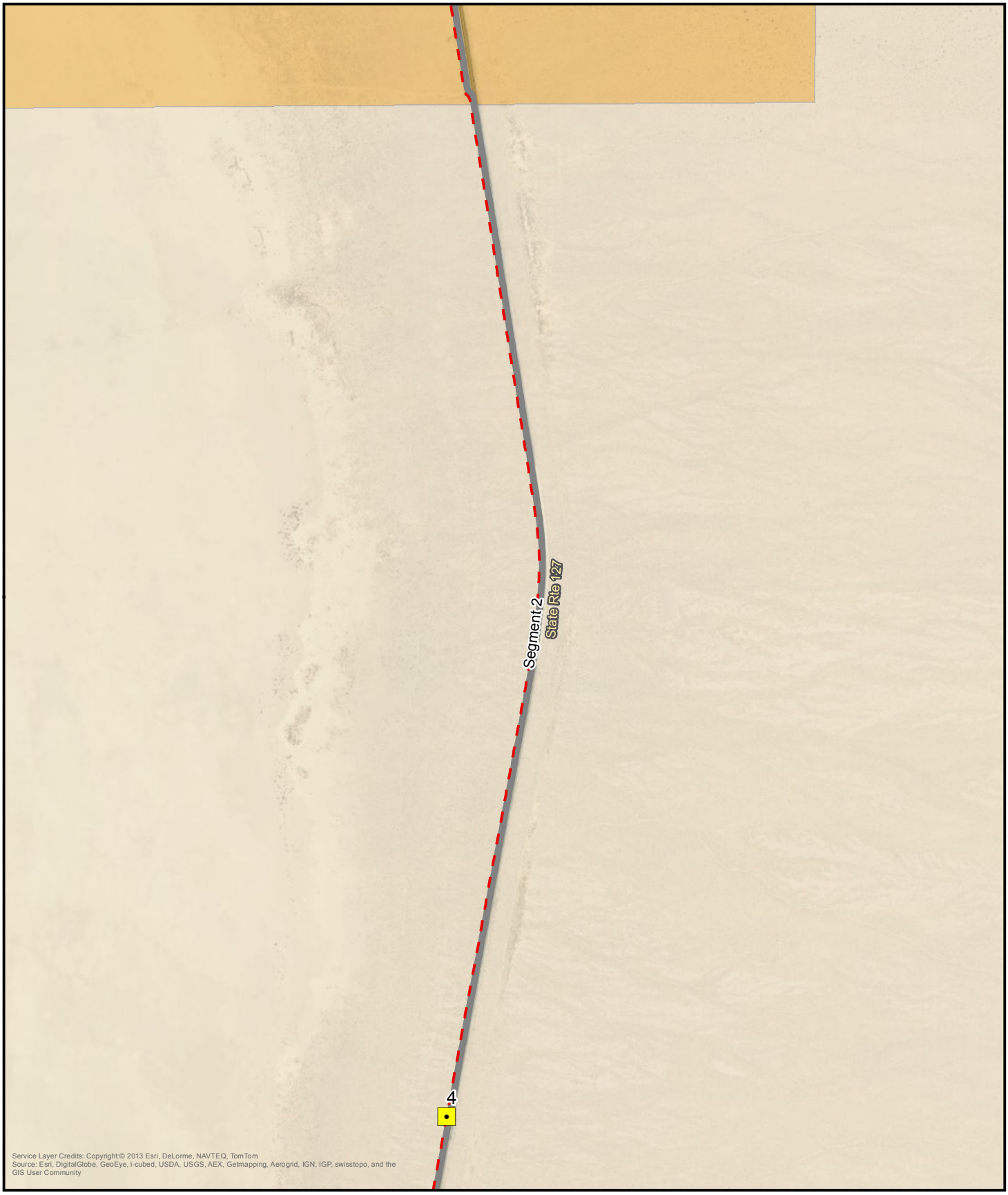

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Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Legend

- New Conduit
- Existing Conduit
- Vault

Land Ownership

- Bureau of Land Management
- State Lands

Road Type

- Paved

N

0 500 1,000
Feet

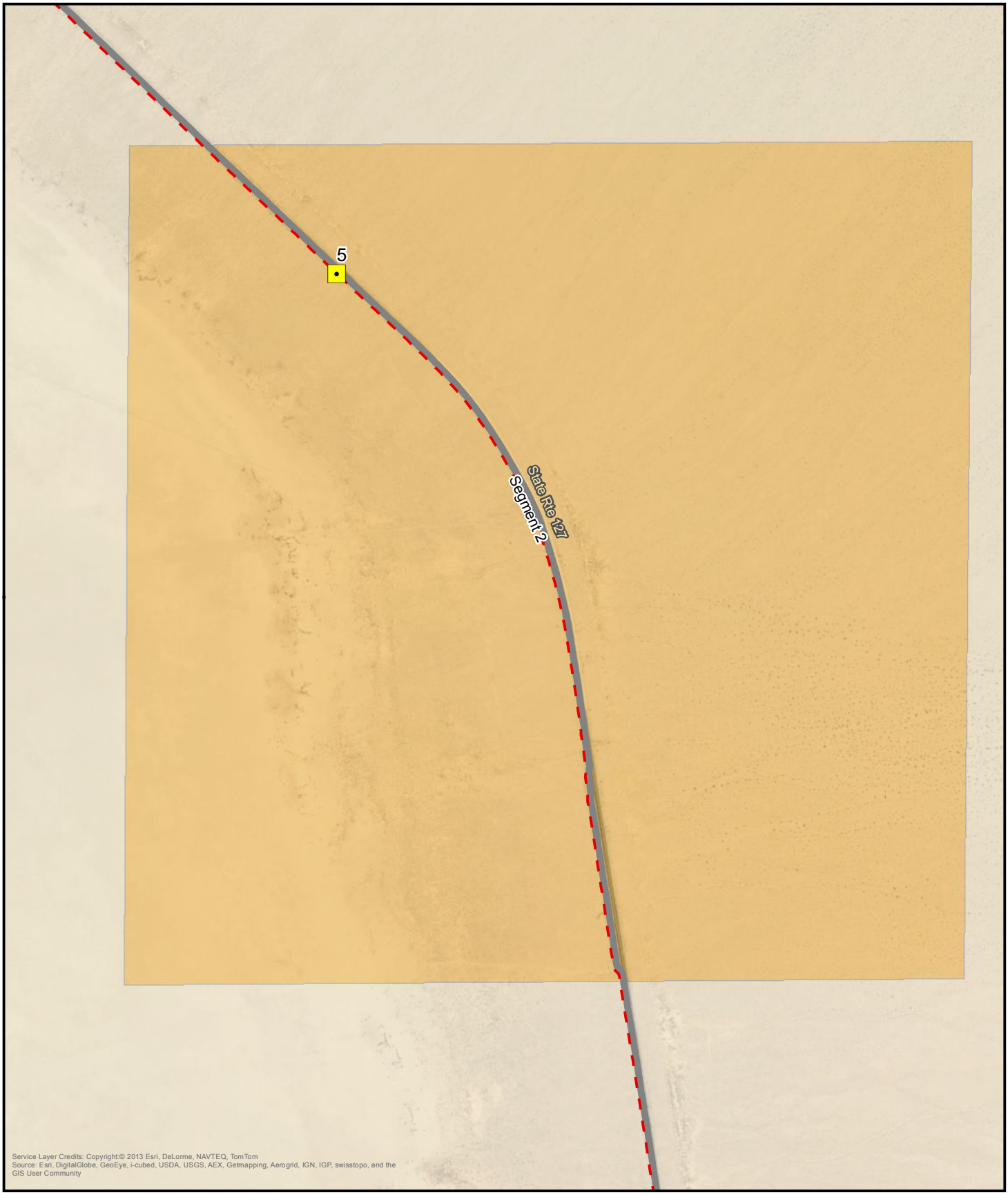
Figure 2-5

Highway 127 Baker to NTC Project
Segment 2 of Project Alignment

Approx. Vault Distance #4 to #5 = 11,423 feet

Name: 20692 EA Fig 2 Segments.Mxd
Date Saved: 3/31/2015, Author: msimmons

CHAMBERS GROUP



Legend

- New Conduit
- Existing Conduit
- Vault

Land Ownership

- Bureau of Land Management
- State Lands

Road Type

- Paved

N

0 500 1,000

Feet

Figure 2-6

Highway 127 Baker to NTC Project

Segment 2 of Project Alignment

Approx. Vault Distance #4 to #5 = 11,423' #5 to #6 = 11,230 feet

Name: 20692 EA Fig 2 Segments.Mxd
Date Saved: 3/31/2015, Author: msimmons

CHAMBERS GROUP

Legend

- New Conduit
- Existing Conduit
- Vault

Land Ownership

- Bureau of Land Management
- State Lands

Road Type

- Paved

N

0 500 1,000

Feet

Figure 2-7

Highway 127 Baker to NTC Project
Segment 2 of Project Alignment

Approx. Vault Distance #5 to #6 = 11,230 feet

Name: 20692 EA Fig 2 Segments.Mxd
Date Saved: 3/31/2015, Author: msimmons

CHAMBERS GROUP

Legend

- New Conduit
- Existing Conduit
- Vault

Road Type

- Dirt
- Paved

Land Ownership

- Bureau of Land Management
- Private or Non-Government

N

0 500 1,000

Feet

Figure 2-8

Highway 127 Baker to NTC Project
Segment 2 of Project Alignment

Approx. Vault Distance #5 to #6 = 11,230 feet; #6 to #8 = 12,993 feet

Name: 20692 EA Fig 2 Segments.Mxd
Date Saved: 3/31/2015, Author: msimmons

CHAMBERS GROUP

Legend

- New Conduit
- Existing Conduit
- Vault

Land Ownership

- Bureau of Land Management
- Private or Non-Government

Road Type

- Dirt

N

0 500 1,000

Feet

Figure 2-9

Highway 127 Baker to NTC Project
Segment 3 of Project Alignment

Approx. Vault Distance #6 to #8 = 12,993 feet

Name: 20692 EA Fig 2 Segments.Mxd
Date Saved: 3/31/2015, Author: msimmons

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Legend

- New Conduit
- Existing Conduit
- Vault

Land Ownership

- Bureau of Land Management

Road Type

- Dirt

N

0 500 1,000

Feet

Figure 2-10

Highway 127 Baker to NTC Project
Segment 3 of Project Alignment

Approx. Vault Distance #6 to #8 = 12,993 feet

Name: 20692 EA Fig 2 Segments.Mxd
Date Saved: 3/31/2015, Author: msimmons

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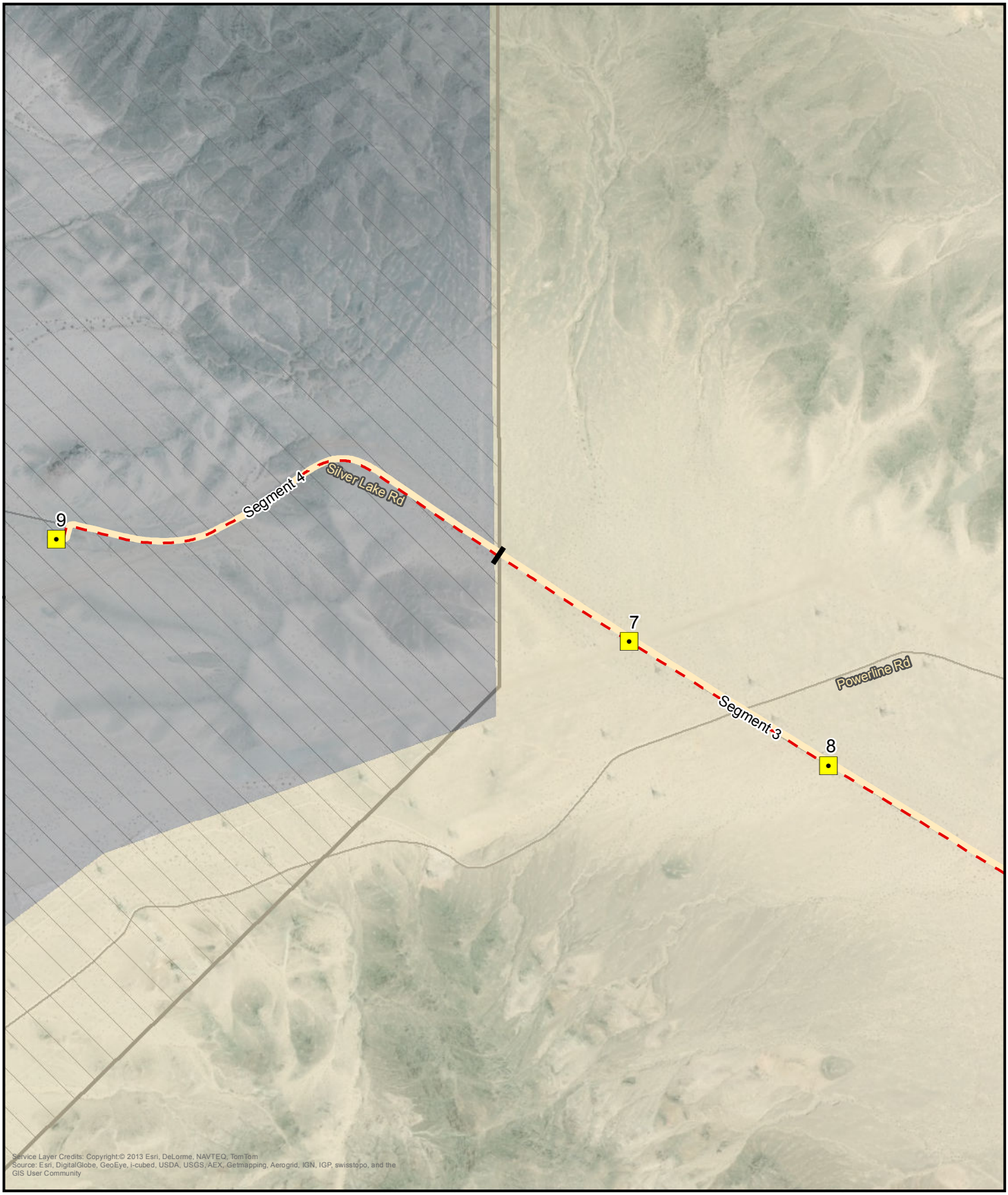

Legend

- New Conduit
- Existing Conduit
- Vault

Road Type

- Dirt

- Fort Irwin NTC Boundary

Land Ownership

- Bureau of Land Management
- Fort Irwin National Training Center

N

0 500 1,000

Feet

Figure 2-11

Highway 127 Baker to NTC Project

Segments 3 & 4 of Project Alignment

Approx. Vault Distance #6 to #8 = 12,993 feet; #8 to #7 = 1,475 feet; #7 to #9 = 4,089 feet

Name: 20692 EA Fig 2 Segments.Mxd
Date Saved: 3/31/2015, Author: msimmons

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Fiber-Optic Cable Conduit

The Project will consist of installing three new direct-buried 1.5–inch-diameter, high-density polyethylene (HDPE) ducts, or conduit, bundled together at a depth of approximately 4 feet. After the conduits are installed, FOC would be pulled through one of the empty conduits. There are no current plans for use of the other conduits; however, as with its other current-day cable projects, AT&T proposes to install an extra two conduits so that the Project area would not have to be disturbed again when need for a spare conduit arises in the future.

Access Vault/Manholes

Additional underground components include approximately 25 access vaults buried with 18 inches of coverage to ground surface. Vaults would be placed approximately every 3,000 feet to enable access to the underground conduits. The buried access vaults measure 3 feet by 5 feet by 3 feet and will not visible from the surface. The vaults will be installed and contained along the Route.

Subsurface Warning Tape

A continuous ribbon of Buried Cable Warning Tape would be placed 18 inches above, and parallel to, the installed conduit. The warning tape would be imprinted with a warning message at 2-foot intervals. This tape serves as a final warning to excavators that FOC is buried below. The high-density tape is a 6-inch wide, 6-ply co-polymer that is impervious to soil acid alkali and/or other natural soil agents.

Marker Posts

Above-ground warning marker posts will be installed along the entire Project Route at intervals of approximately 500 to 700 feet. Posts are installed to provide visible evidence of the presence of buried cable, identify the owner of the cable, and provide a telephone number for emergency notifications. Marker posts will be installed securely, to a minimum depth of 3 feet.

Distance from Other Utilities

Consistent with AT&T Plant Project Guidelines, placement of the New Conduit would not be any closer than 2 feet to any other existing underground utility line.

2.1.4 Construction and Cable Installation Methods

The proposed conduit would be placed using various construction techniques. Those techniques would be conducted as explained below and would be selected based on terrain conditions and any existing sensitive environmental constraints.

Cable Plowing

Cable plowing is a technique that can be used to install new cable conduits directly into the ground without excavation of a trench. Ground disturbance during plowing is typically limited to a relatively small furrow of earth (approximately 16 inches in width) pushed through by the plow shank. After the conduits are installed, the furrow is compacted back in place by the back end of the plow. This method is typically used in open areas with suitable terrain and no sensitive environmental constraints.

Trenching

Trenching, where necessary, will be implemented using either backhoes, trenching machines or excavators. Trenching consists of excavating linear ditches, installing fiber-optic cable conduit into the ditch, backfilling, and compacting. Trenching is expected to be limited during the course of construction, and no more trench than can be backfilled on one day will be allowed. The method of placement, as well as specific circumstances and construction plans, will determine if a trench is to remain open and sloped, or closed. The awarded contractor, with the approval from AT&T, will determine the status of the trench. The awarded contractor will be aware of the wildlife restrictions and will attend meetings to discuss any special requirements. Trenches will be temporarily sloped at the end of each workday to allow wildlife to escape. Trenches to be closed will be covered with steel plates on top for safety.

Trench backfilling will be accomplished with a rubber-tired backhoe/loader, motor graders, vibrator compactors, and small dozers. Backfill material will be compacted to prevent erosion and soil settlement. Backfill material consists of native soils or imported aggregate base. In most cases, the native material excavated during installation will be placed back in the trench as backfill and compacted to its preconstruction condition.

Directional Boring

The directional boring construction method consists of subsurface boring using a guided drill head and installation of fiber-optic cable conduit into the bore. Ground surface disturbance is minimized by use of this construction method. Directional boring uses a bentonite/water mixture that is pumped down the drill stem to run the drill head, lubricate the drill pipe, maintain the bore hole, and remove bore cuttings. Bentonite is a fine clay that, when mixed with water, provides the necessary lubricant and operating fluid for the drilling process. Directional bores, if necessary, would occur intermittently in conjunction with construction of various phases. The minimum depth of the bore will be 60 inches.

In the event that limited directional boring is required, AT&T will implement a Horizontal Directional Drilling Contingency and Resource Protection Plan.

Staging and Laydown Areas

During construction, staging areas for construction, equipment, materials, fuels, lubricants, and solvents will be established to allow efficient use and distribution of materials and equipment. Staging areas would be located in existing contractor yards; existing staging areas established by other utility companies; previously cleared, graded, or paved areas; or level areas where grading and vegetation clearing are not required. No grading to establish new staging areas will occur, and staging areas will not occur along the Project Route. No new access roads will be constructed as part of this Project. Parking would not take place within habitat.

Soil Compacting and Restoration

Disturbed portions of the Route would be restored to pre-Project contours and conditions. All trenches would be backfilled immediately after the conduits are installed. Any trenches that cannot be backfilled may remain open and sloped, or they may be closed and covered with steel plates or plywood sheets overnight. The method of placement will determine if a trench is to remain open and sloped, or closed. The awarded contractor, with the approval from AT&T, will determine the status of the trench.

Backfilling would be accomplished with a rubber-tired backhoe/loader, motor graders, vibrator compactors, and small dozers. Backfill material would be compacted to prevent erosion and soil settlement. Backfill material consists of native soil or imported aggregate base. In most cases, the native material excavated during installation would be placed back in the trench as backfill and compacted to its preconstruction condition.

2.1.5 Fiber-Optic Cable Installation Methods

Fiber-Optic Cable Conduit Proving

Installation of FOC through new conduit may be hampered by blockages, snags, or other problems. To remedy this problem, the conduit would be tested or "proved" as soon as the conduit installation is complete and the pull boxes/splice boxes have been set. Prior to installing the FOC, a mandrel (small piece of wood or metal) would be pulled through the conduit on a line to ensure clear passage.

General Installation of Fiber-Optic Cable

Traditionally, the most common method of installing communication cable into a conduit is through a method called "cable pulling." A limitation of this method is that the maximum force allowed on the cable (tensile strength) restricts the length of installation during a pull. To overcome these limitations, air-assisted installation or "cable blowing" methods have been developed for the installation of lightweight and lower tensile cable (i.e., FOC). The following sections provide a more detailed description of the general procedures, equipment, and personnel involved in a FOC pulling (traditional) and air-assisted cable blowing installation process.

Pulling Fiber-Optic Cable

The cable installation process is initiated by accessing the conduit system through opening existing buried vaults or manholes (approximately 2 per mile). Generally, a cable-pulling crew opens only the vaults or manholes needed to install a predetermined length of cable. These vaults or manholes are then closed or plated at the end of each day to ensure safety. Access to selected vaults or manholes may be required for approximately 1 to 3 days during the time required to pull each cable segment of approximately 16,000 feet.

The cable-pulling process begins by moving the cable reel and cable-placing equipment to an open access point for a section of conduit in which the cable is to be installed. The location of this access point along the section is selected based upon the crew's chosen placement technique. In the placement technique called "figure-eighting," the reel is brought to the first access point along the section of conduit to be pulled, and the pulling equipment is moved to the access point at the end of the first section. After threading or blowing the pull-line through the first section of conduit and attaching it to the cable, the total length of cable segment is then pulled through the first section. The excess cable is laid out neatly in a figure-eight pattern (approximately 20 feet in length) on the ground at the second vault. The pulling equipment is then moved to the access vault of the next section of conduit. The line is threaded or blown back through the conduit and re-attached to the cable. The figure-eight of cable is then pulled through this second section of conduit. This process is continued from access vault to access vault until the complete section of cable is installed.

Another placement method is called "bi-directional" pulling. Bi-directional pulling involves starting the cable installation process in the middle of the conduit section to be installed. The cable is then threaded or blown in both directions. During this placement method, the cable reel sits at an access vault in the middle of the conduit section, while pulling equipment is placed at each end of the section. This method reduces the length of cable that is pulled and figure-eighted through each access vault.

The placement technique that is selected for an FOC pulling operation is dependent upon site-specific variables relating to the section of conduit to be installed. Cable installation experts make the decision regarding which technique to use at the time of cable placement. Cable can typically be pulled at a speed of 75 to 200 feet per minute for a length of 1,500 to 3,500 feet. To aid in the speed and length that a cable can be pulled, lubricants are manually placed into the conduit during the threading of pull rope and applied to the cable itself during cable pulling. The quality used is dependent on how the operator feeds the lubrication. A cable-pulling operation typically requires 5 to 10 gallons of lubricant for one 16,000-foot reel of cable. Typical modern lubricants are composed of nontoxic, water-based polymer materials.

Blowing Fiber-Optic Cable

As with cable pulling, the cable blowing process is initiated by accessing the conduit system by opening existing buried vaults or manholes. Also like cable pulling, the installation crew begins the cable blowing process by moving the cable reel and all cable blowing equipment to an access point at either the beginning or middle of the section to be installed. Using either the figure-eighting or bi-directional placement technique, the cable is then blown through the conduit using a method such as the high air speed blowing (HASB) or the piston (push/pull) method.

In the HASB method, a large volume of air is blown through the conduit during installation. The air suspends the cable in the conduit, and a mechanical pusher advances the cable through the conduit. Air suspension of the cable in the conduit reduces friction during the installation process, thus reducing the need for lubrication.

The piston (push/pull) method attaches a piston/missile carrier to the front of the cable. The carrier is pushed through the conduit by air pressure force and pulls the cable along with it through the conduit, assisted by the mechanical drive unit. Because the conduit is partially blocked by this carrier, this method does not require as much airflow as the HASB method.

The placement technique and blowing method that is selected for an FOC blowing operation is dependent upon site-specific variables relating to the section of conduit to be installed. At the time of cable placement, cable installation experts decide which technique and method to use.

Cable can typically be blown at a speed of 200 to 350 feet per minute for a length of 3,000 to 8,000 feet. To aid in the speed and length that a cable can be blown, lubricants are applied to the insides of the conduit walls by blowing a lubricant-soaked sponge through the conduit. To coat the cable itself as it is blown, lubrication is also filled into blocks that are clamped around the cable-blowing machine. The typical quantity of lubricant used in a blowing operation is quite small, only about 12 ounces per reel of cable. As with cable pulling lubricants, modern lubricants for cable blowing are comprised of nontoxic, water-based polymer materials.

Equipment

Due to the variety of equipment that may be used to accomplish installation of the FOC and conduits associated with the Project, and the fact that each contractor has a slightly different equipment inventory, it is not feasible to provide a complete list of the exact type and quantity of engine-driven equipment that would actually be used. Based on the size of the job and AT&T's past experience, a list of equipment that would likely be used during the construction process is included in Table 2-2. All equipment will stay within the confines of the Project area.

Table 2-2: Fiber-Optic Cable Installation Typical Equipment List

Equipment by Construction Activity	Number	Crew Size
Conduit Installation		
D-9 Caterpillar	1	10-13
Backhoe	2	
10-wheeler truck	1	
Semi-trailer truck	1	
¾-ton pickup truck	5	
Excavator	1	
Trencher	1	
Dozer/Plow	1	
Loader	1	
Water Truck	1	
Cable Placing		
One-ton truck (tows cable trailer)	1	6-9
Cable reel trailer	1	
Cable reel	1	
¾-ton pickup truck (tows air compressor)	1	
Semi-trailer truck	1	
Air blower device	1	
Mechanical pusher/puller	1	
Pull line	1	
Backhoe	1	

2.1.6 Construction Timeline and Schedule

Timeline

AT&T estimates that the Project will take approximately six weeks to complete, with construction activities beginning July 2015 and ending August 2015. During this time, various aspects of construction will be occurring simultaneously, including the following: conduit plowing, trenching, directional drilling, cable pulling, splicing and testing, and final restoration of the disturbed areas.

Schedule

Construction crews would generally work a minimum 5-day workweek and an 8- to 10-hour workday. Unless required by specific restrictions, workdays typically begin at 6:00 a.m. and end at 4:00 p.m. (daylight to dusk), depending upon the time of year.

2.1.7 Restoration Activities

Final restoration is the last phase of the work and includes detailed grooming of the disturbed access road area to pre-project contours and conditions, removing construction debris, and repairing existing erosion control devices. The restored dirt road will meet AT&T's compaction standards.

2.1.8 Operation and Maintenance

Operation and maintenance activities will be implemented along the Project Route for the life of the Project. No new access roads will be constructed for operation and maintenance activities. Ground-disturbing activities associated with ongoing operation and maintenance procedures are normally minor. These activities will consist mainly of repair of erosion control devices or cable conduits in the event of storm damage, landslides, or other emergencies. In most emergency situations, review of damaged areas would be accessed via public roads and route access roads.

2.1.9 Compliance With All Laws

AT&T contractually requires its contractors to comply with all Federal, State, and local laws (including all statutes, ordinances, regulations, orders, and codes).

2.1.10 Applicant-Initiated Environmental Construction Measures

In order to minimize adverse impacts to the environment, AT&T would be required to comply with BLM standard operating procedures (SOP) for the use of public lands as required by law, regulation, and/or other BLM guidelines and County of San Bernardino guidance. The Applicant-Initiated Environmental Construction Measures (CM) included in Appendix C would be employed by AT&T and/or the construction superintendent.

2.2 NO ACTION ALTERNATIVE

Under the No Action Alternative, no new FOC would be installed, and BLM would not issue the ROW Grant Amendment approval to conduct installation activities for the FOC system. AT&T's cellular network in the Shoshone district would continue to operate under its existing system. The NTC's CTC-IS RCS could continue to function via the two existing FOC lines which connect Fort Irwin with NTC's cellular and data network, one operated by Verizon Wireless and the other operated by the China Lake Naval Air Weapons Station. However, both lines have limited capacity and reliability.

2.3 ALTERNATIVES CONSIDERED BUT ELIMINATED FROM DETAILED ANALYSIS

2.3.1 Alternative Route Alignment

The Alternative Route Alignment considered involved installing cable on the east-side shoulder of SR-127. Due to a conflict from the close proximity of existing Southern California Edison facilities within the alternative alignment, this alternative alignment is not considered feasible.

2.3.2 Wireless Connection Alternative

The Wireless Connection Alternative would consist of replacing and upgrading AT&T's current system at the Shoshone Central Office with additional microwave transmitters. Implementation of this alternative would result in higher costs of equipment and maintenance.

SECTION 3.0 – PUBLIC SCOPING AND ISSUE IDENTIFICATION

3.1 BLM SCOPING

In December, 2013, AT&T met with the BLM Barstow Field Office to discuss their proposed plan to install FOC along the Project Route from the community of Baker, California, to SR-127, including BLM land which started the informal internal scoping process. During the same time, the project applicant also conducted telephone conference calls or met with USFWS, CDFW, USACE, RWQCB, and other responsible agencies to discuss their proposed project. The issues and concerns discussed during internal scoping meetings with the BLM involved addressing the potential impacts to Cultural Resources and Native American Religious Values, Nonnative Species, Sensitive Species and Unique Plant Assemblages, Surface and Groundwater Quality, and Threatened and Endangered Species.

The following Federal legislation, regulations, and executive orders require government-to-government consultation between federally recognized Native American Indian Tribes and Federal agencies prior to taking action that might affect Native American tribes:

- American Indian Religious Freedom Act
- Religious Freedom Restoration Act
- Archaeological Resources Protection Act
- Section 106 of the National Historic Preservation Act, as amended (16 USC Section 470)
- Executive Orders 12898 and 13007

The purpose of the government-to-government consultation process is to discuss the issues and concerns of a project with local Native American tribes before a project is approved. Information gathered from the Native Americans is typically used to develop project alternatives and mitigation measures that would abate or reduce potential effects from a project.

For the Proposed Action in California, discretionary permit approvals are required from the following agencies: BLM (with Section 7 consultation with USFWS); NPS Special Use Permit; USACE Section 404 Nationwide Permit 12; CDFW Streambed Alteration Agreement and Section 2081 authorization; and RWQCB Section 404 Water Certification.

3.2 CRITICAL ELEMENTS OF THE HUMAN ENVIRONMENT

Based on internal scoping, it was determined that the following critical elements of the human environment were either not present or would not be affected by the Proposed Action or No Action Alternative:

- Population and Housing

3.3 RESOURCES PRESENT BUT NOT AFFECTED

In addition to the above-referenced critical elements, it was determined during scoping that the following resources would not be affected by the Proposed Action or No Action Alternative: based on

the limited scope of the Proposed Project (i.e., maintenance of an existing FOC line within existing roadway ROW)

- Hazardous Materials
- Wetlands

3.4 ISSUES AND RESOURCES PRESENT AND BROUGHT FORWARD FOR ANALYSIS

The following resources were determined to be potentially affected by the Proposed Action or the No Action Alternative and, therefore, have been analyzed in detail throughout Section 4.0 – Affected Environment and Environmental Consequences.

- Aesthetics and Visual Resources
- Air Quality
- Biological Resources including Vegetation and Wildlife
- Invasive Weeds
- Cultural Resources including Native American Religious Concerns
- Environmental Justice
- Geology and Soils
- Greenhouse Gas Emissions
- Health and Safety/Hazardous Materials
- Hydrology and Water Quality
- Land Use
- Noise
- Public Services and Utilities
- Transportation and Traffic

SECTION 4.0 – AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

Section 4.0 analyzes potential project effects in connection with the identified environmental subjects. For the purposes of CEQA, only discussions of potential effects by the Proposed Project are included. Environmental evaluations identified as "no impact" are listed in the CEQA IS Checklist (Appendix A). Also, the CEQA "significance criteria" used herein is drawn in part from the CEQA IS Checklist for each particular subject area. Complete checklist questions and answers are provided in the IS (Appendix A).

For the purposes of NEPA, the analysis of environmental effects of the Proposed Action in detail (40 CFR 1508.9(b)) are provided. NEPA requires consideration of both the context and the intensity of environmental consequences pursuant to Section 1508.27 of the CEQ Regulations. Context, meaning, "that the significance of an action must be analyzed in several contexts such as society as a whole (human, national), the affected region, the affected interests, and the locality. Intensity refers to the severity of an impact." Similar to CEQA, as part of the scoping and environmental analysis carried out for the project, the following environmental issues were considered for the purposes of NEPA, but no adverse impacts were identified.

As a result, this document contains no further discussion about these issues.

- **Coastal Zone** – The Project site is inland and is not located in an area covered by the California Coastal Zone Management Plan.
- **Wild and Scenic Rivers** – No wild or scenic rivers are located in the vicinity of the Project site.
- **Agricultural Wetlands** – The project area does not contain agricultural fields or agricultural wetlands.
- **Farmlands** – No farmland/agricultural lands are on or adjacent to the Project site.
- **Parking** – The project would not change the existing parking conditions or adversely affect parking.
- **Community Character and Cohesion** – The Proposed Project would not result in the destruction or disruption of community cohesion in the project area.
- **Relocations and Real Property Acquisitions** – The Proposed Project would not displace any person that requires relocation or property acquisition in the project area.
- **Growth** – The Proposed Project would not provide additional capacity and would not generate increases in traffic or promote more intensive uses of land or growth in the project area.
- **Parks and Recreational Facilities** – The Proposed Project would not include the use or need for recreational facilities and does not require the construction or expansion of recreational facilities.

4.1 AESTHETIC AND VISUAL RESOURCES

The visual resources to be analyzed include both natural and human-made features that make up the physical characteristics of the landscape. In general, natural resources include the landform, water, soil,

and vegetation; while human-made features include physical structures and roads. Since the quality of scenic resources is measured by humans, the most important visual resources are those within areas easily accessible to people.

By law, BLM is responsible for managing public lands for multiple uses. BLM is also responsible for ensuring that the scenic values of these public lands are considered before allowing uses that may have negative visual impacts. This is accomplished through the BLM's Visual Resource Management (VRM) system.

4.1.1 Applicable Regulations, Plans, and Standards

Federal Regulations

BLM Visual Resource Management (VRM)

BLM is entrusted with the care of public lands containing many outstanding scenic landscapes. BLM is responsible for ensuring that the scenic values of public lands are considered before allowing uses that may have negative visual impacts. BLM's VRM system provides a way to identify and evaluate scenic values to determine the appropriate levels of management. It also provides a way to analyze potential visual impacts and apply visual design techniques to ensure that surface-disturbing activities are in harmony with their surroundings. The BLM system identifies four VRM Classes (I through IV), ranging from the preservation of the existing character of the landscape to major modification of the landscape.

State Laws and Regulations

California Department of Transportation

The California Department of Transportation (Caltrans) manages the California Scenic Highway Program. The goal of the program is to preserve and protect scenic highway corridors from changes that would affect the aesthetic value of the land adjacent to the scenic corridor (Caltrans 2008). In general, a highway may be designated by Caltrans as scenic depending upon how much of the natural landscape can be seen by travelers, the scenic quality of the landscape, and the extent to which development intrudes upon the traveler's enjoyment of the view. When a city or county nominates an eligible local highway for official scenic highway designation, it must identify and define the scenic corridor of the highway. In general, a designated scenic corridor is the land generally adjacent to and visible from the highway using a motorist's line of vision. A reasonable boundary is selected when the view extends to the distant horizon (Caltrans 2014a).

Local Ordinances and Plans

County of San Bernardino General Plan

The Open Space Element of the County of San Bernardino General Plan states as a goal (Goal OS 5) that "The County will maintain and enhance the visual character of scenic routes in the County."

4.1.2 Affected Environment

Regional

San Bernardino County contains vast, undeveloped tracts of land that offer significant scenic vistas (County 2007b). This vast county consists of three distinct geographic regions – the Mountains, the Valley, and the Desert. These diverse geographies not only vary by terrain but also in visual character. The three areas combined encompass all of the unincorporated lands within the County (County 2007c).

The Desert Region, in which the Project Route is located, includes a significant portion of the Mojave Desert and contains about 93 percent (18,735 square miles) of the land area within San Bernardino County. The visual character of the Desert Region is defined by its arid landscape, consisting of sparsely vegetated mountain ranges and broad valleys with expansive bajadas and scattered dry lakes. The region provides a scope of extensive open space and expansive vistas (County 2007c).

Project Route and Surrounding Area Visual Characteristics

The Project Route predominately crosses landscapes which are commonly found within the Mojave Desert. Lands within the surrounding area have a Scenic Quality Class II designation (BLM 2008). This classification identifies those landscapes with features common to the physiographic region, as defined by guidelines in the BLM's Visual Resource Inventory Manual, which allow for a moderate level of change, with activities that may attract attention but should not dominate the view of the casual observer. Topographic features occurring within the surrounding area include: mountain ranges, alluvial fans, terraces, plains, playas, basins, and a dry lake bed.

A majority of the Project Route roughly parallels SR-127 and begins at the intersection of Mill Road and Baker Boulevard and ends at Cell Tower Site 9 at Fort Irwin. This area surrounding the Route is open desert, remote, and sparsely populated. In a few places near the community of Baker, residences are within a mile of the Route. Existing facilities surrounding the Project Route include electric power lines and towers, County access roads, and various maintained roads.

Scenic Highways

According to the California Scenic Highway Mapping System, SR-127 is considered an eligible State Scenic Highway (not officially designated) within the County of San Bernardino (Caltrans 2014b). The Open Space Element of the County of San Bernardino General Plan described a “scenic route” as a roadway that has scenic vistas and other scenic and aesthetic qualities that, over time, have been found to add beauty to the County. County of San Bernardino designated scenic routes are presented within this element. SR-127 from Interstate 15 at Baker northwest to the Inyo County line is a County designated scenic route (County 2007b).

4.1.3 Significance Criteria

Pursuant to CEQA, impacts to visual resources would be considered *significant* if the Proposed Project:

- Substantially affects the quality of a scenic vista;

- Substantially damages scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway;
- Substantially degrades the existing visual character or quality of the site and its surroundings; or
- Creates a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

Based on the BLM VRM, a significant visual impact would occur if the Proposed Action results in impacts beyond the intent of the objectives identified for the VRM Class III. The factors considered in determining impacts on visual resources included: (1) scenic quality of the project site and vicinity; (2) available visual access and visibility, frequency, and duration that the landscape is viewed; (3) viewing distance and degree to which project components would dominate the view of the observer; (4) resulting contrast of the proposed facilities or activities with existing landscape characteristics; (5) the extent to which project features or activities would block views of higher value landscape features; and (6) the level of public interest in the existing landscape characteristics and concern over potential changes.

4.1.4 Environmental Effects/Impacts

Proposed Action

Visual Resources

Implementation of the Proposed Action would not result in the permanent degradation of the existing visual character or quality of the Project Route and its surroundings, as the FOC and conduits proposed for installation would be located underground. Additionally, the Proposed Action would not introduce any structures that would block views. Construction activities and the presence of construction vehicles, equipment, materials, and work force along the Project Route would result in temporary impacts on visual resources.

The Project Route begins at the intersection of Mill Road and Baker Boulevard and ends at the National Training Center's Cell Tower Site 9, as shown in Figure 1-2. Construction activities consist of installing new conduits and direct-buried FOC along the Project Route. Within Segments 3 and 4, all activities will take place within roadways or disturbed roadway shoulders; therefore, no new ground disturbance will occur; and no ground-disturbing activities will take place within habitat areas. Approximately 9.7 acres of disturbance may occur within minimal use areas. An area of approximately 0.61 acre of disturbance is anticipated within proposed temporary disturbance areas. Proposed disturbance areas are areas which would be graded and cleared of vegetation for installation of the new cable. Areas of habitat that are graded would be transplanted with salvaged plants and re-seeded according to the approved Project Restoration Plan. No significant impacts would occur along the Project Route.

In addition, as described in Section 0, marker posts will be installed along the entire Project Route at intervals of approximately 500 to 700 feet. The marker posts would be consistent with the existing marker posts present along AT&T's FOC alignments in the area and would be installed securely to a minimum depth of 3 feet. Installation of the marker posts are not expected to significantly alter the area aesthetics. No significant impacts would occur.

All equipment staging and stockpiling for the Proposed Action would occur within existing contractor yards; existing staging areas established by other utility companies; previously cleared, graded, or paved areas; or level areas where grading and vegetation clearing are not required. Upon completion of installation activities, the Project Route would be returned to preconstruction design grade. Permanent aboveground structures are limited to placement of marker posts identifying the underground utility. No significant impacts are expected.

Vehicles, heavy equipment and materials, and workers would be visible during construction activities. Construction equipment and activities would be seen by travelers along SR-127 and local roads, and from some residences. The extent and availability of these views from roadways or residences vary depending on distance and intervening topography. View durations from these vantage points would vary from brief to extended, where the activities remain in the field of view of travelers for several minutes or miles, or are easily visible from residences; however, installation activities along the Project Route would be transient and of short duration as construction progresses along the Project Route. As a result, affected viewers would be aware of the temporary nature of project construction impacts, which would decrease their sensitivity to the impact. The resulting impacts to views would be less than significant (CEQA Checklist 3.1 [a, c]).

Overall, implementation of the Proposed Action would result in minimal, temporary changes to the existing character of the landscape and would therefore be consistent with the VRM Class III objective.

Scenic Highways

The Proposed Action would temporarily impact the existing visual character of a portion of the viewshed through the introduction of construction equipment and activities. As stated above, SR-127 is considered an eligible State Scenic Highway (Caltrans 2014b) and a County designated scenic route (County 2007b). Views of Segments 1, 3, and 4 of the Project Route from SR-127 would usually be brief and would be subordinate in nature to the surrounding topography. Since Segment 2 of the Project Route is parallel to SR-127, views of construction equipment and construction workers would exist during the duration of construction activities along Segment 2. The construction activities would be transient and of short duration. Impacts to scenic resources within a State scenic highway would be less than significant (CEQA Checklist 3.1 [b]).

Light/Glare

The Proposed Action would not involve the placement of any new permanent lighting or glare sources along the Project Route. No significant impacts would occur (CEQA Checklist 3.1 [d]).

No Action Alternative

The No Action Alternative would not result in impacts to visual resources.

4.1.5 Mitigation Measures

Proposed Action

The Proposed Action would not result in significant or substantial impacts to visual resources. No mitigation measures are proposed or required.

No Action Alternative

The No Action Alternative would not result in significant or substantial impacts to visual resources. No mitigation measures are proposed or required.

4.2 AIR QUALITY

4.2.1 Applicable Regulations, Plans, and Standards

Federal Regulations

Environmental Protection Agency (EPA)

EPA is the Federal agency responsible for overseeing State air programs as they relate to the Federal Clean Air Act (FCAA), approving State Implementation Plan (SIP), establishing National Ambient Air Quality Standards (NAAQS), and setting emission standards for mobile sources under Federal jurisdiction. The EPA has delegated the authority to implement many of the Federal programs to the states while retaining an oversight role to ensure that the programs continue to be implemented.

State Laws and Regulations

California Air Resources Board (CARB)

CARB is the State agency responsible for establishing California Ambient Air Quality Standards (CAAQS), adopting and enforcing emission standards for various sources including mobile sources (except where Federal law preempts their authority), fuels, consumer products, and toxic air contaminants (TAC). CARB is also responsible for providing technical support to California's 35 local air districts, which are organized at the county or regional level, overseeing local air district compliance with State and Federal law, approving local air plans and submitting the SIP to EPA. CARB also regulates mobile emission sources in California, such as construction equipment, trucks, and automobiles.

Local Ordinances and Plans

Mohave Desert Air Quality Management District (MDAQMD)

The MDAQMD shares responsibility with CARB for ensuring that all State and Federal ambient air quality standards are achieved and maintained within its jurisdiction. State law assigns to local air districts the primary responsibility for control of air pollution from stationary sources, while reserving an oversight role for CARB. Generally, the air districts must meet minimum State and EPA program requirements. The air districts are also responsible for inspecting stationary sources, monitoring ambient air quality, and planning activities such as modeling and maintenance of the emission inventory.

Criteria Air Pollutants

The Environmental Protection Agency (EPA) sets NAAQS, also known as Federal standards for six common air pollutants, called criteria air pollutants. The six Federal criteria pollutants are ozone, particulate matter (PM), nitrogen dioxide (NO_2), carbon monoxide (CO), lead, and sulfur dioxide. The NAAQS were set to protect public health, including that of sensitive individuals. CARB also administers CAAQS for the 10 air pollutants designated in the California Clean Air Act. The State air pollutants

include the six Federal criteria pollutants listed above plus visibility-reducing particles, hydrogen sulfide, sulfates, and vinyl chloride. Table 4-1 shows California and national air quality standards.

The criteria pollutants consist of ozone, nitrogen oxides (NO_x), CO, sulfur oxides, lead, and PM. These pollutants can harm your health and the environment, and cause property damage. The EPA calls these pollutants "criteria" air pollutants because it regulates them by developing human health-based and/or environmentally based criteria for setting permissible levels. The standards are presented in Table 4-1, and descriptions of each are provided in the text that follows.

Table 4-1: Ambient Air Quality Standards for Criteria Pollutants

Air Pollutant	Averaging Time	California Standards	National Standards
Ozone (O_3)	1 hour	0.09 ppm	--
	8 hours	0.07 ppm	0.075 ppm
Respirable Particulate Matter (PM_{10})	24 hours	50 µg/m^3	150 µg/m^3
	Annual*	20 µg/m^3	--
Fine Particulate Matter ($PM_{2.5}$)	24 hours	--	35 µg/m^3
	Annual	12 µg/m^3	12 µg/m^3
Carbon Monoxide (CO)	1 hour	20 ppm	35 ppm
	8 hours	9.0 ppm	9.0 ppm
Nitrogen Dioxide (NO_2)	1 hour	0.18 ppm	0.100 ppm
	Annual	0.03 ppm	0.053 ppm
Sulfur Dioxide (SO_2)	1 hour	0.25 ppm	0.075 ppm
	24 hours	0.04 ppm	--
Lead**	30-day	1.5 µg/m^3	--
	Rolling 3-month	--	0.15 µg/m^3
	Quarter	--	1.5 µg/m^3
Sulfates	20 hour	25 µg/m^3	**No Federal Standard**
Hydrogen sulfide	1 hour	0.03 ppm	
Vinyl chloride**	24 hour	0.01 ppm	
Visibility-reducing particles	8 hour	Extinction coefficient of 0.23 per kilometer, visibility of 10 miles or more due to particles when relative humidity is less than 70 percent.	

Abbreviations:
ppm = parts per million
µg/m^3 = micrograms per cubic meter
30-day = 30-day average
Quarter = Calendar quarter
*Annual = Annual Arithmetic Mean
** CARB has identified lead and vinyl chloride as "toxic air contaminants" with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.
Source: Ambient Air Quality Standards. California Air Quality Board. http://www.arb.ca.gov/research/aaqs/aaqs2.pdf.

Attainment Status

EPA has identified nonattainment and attainment areas for each criteria air pollutant. Under amendments to the FCAA, EPA has classified air basins or portions thereof as "attainment," "nonattainment," or "unclassifiable," based on whether or not the national standards have been achieved. The EPA uses two categories to designate areas with respect to $PM_{2.5}$ and NO_2, which include: (1) does not meet the standard (nonattainment) and (2) cannot be classified or better than national standards (unclassifiable/attainment). EPA uses four categories to designate for sulfur dioxide, but the only two that are applicable in the Project area are nonattainment or unclassifiable. EPA uses three categories to designate for ozone and PM_{10}: attainment, nonattainment, and unclassifiable. The FCAA uses the classification system to design clean-up requirements appropriate for the severity of the pollution and set realistic deadlines for reaching clean-up goals.

For determinations of Federal attainment status, air basins sometimes have subareas within the County/Basin that have specific air quality concerns. In order not to unduly burden the larger basin areas and focus air quality regulatory concerns where they would be most effective, some specific Planning Areas are designated. The portion of the Mojave Desert Air Basin (MDAB), where the Proposed Project is located, is designated Federal nonattainment for PM_{10}, which is classified as Moderate.

The California designation criteria specify four categories: nonattainment, nonattainment-transitional, attainment, and unclassified. A nonattainment designation indicates one or more violations of the State standard have occurred. A nonattainment-transitional designation is a subcategory of nonattainment that indicates improving air quality, with only occasional violations or exceedances of the State standard. In contrast, an attainment designation indicates no violations of the State standard have been documented. Finally, an unclassified designation indicates either no air quality data or an incomplete set of air quality data. The portion of the MDAB where the Proposed Project is located is designated State nonattainment for ozone and PM_{10}. The current attainment status for all criteria pollutants is shown in Table 4-2.

Table 4-2: Attainment Status for Project Site Location in Mojave Desert Air Basin

Pollutant	Federal Designation	State Designation
Ozone (O_3)	Unclassified/Attainment	Nonattainment
RespirableParticulate Matter (PM_{10})	Nonattainment	Non-attainment
Fine Particulate Matter ($PM_{2.5}$)	Unclassified/Attainment	Unclassified
Carbon Monoxide (CO)	Attainment	Attainment
Nitrogen Dioxide (NO_2)	Unclassified/Attainment	Attainment
Sulfur Dioxide (SO_2)	Unclassified/Attainment	Attainment

Source: http://www.arb.ca.gov/desig/adm/adm.htm

4.2.2 Affected Environment

The Project Area is located in San Bernardino County near the unincorporated community of Baker. The nearest ambient air quality monitoring station to the study area is the Barstow Monitoring Station, which monitors ambient concentrations of ozone, PM_{10}, carbon monoxide, and nitrogen dioxide. The nearest monitoring station, which monitors ambient concentrations of $PM_{2.5}$ and sulfur dioxide, is the Victorville-14306 Park Avenue Monitoring Station. The most recent available three years of maximum

ambient monitored concentrations from the Barstow and Victorville monitoring stations are provided in Table 4-3. It should be noted that due to the air monitoring stations' distances from the project site, recorded air pollution levels at the Barstow and Victorville stations reflect with varying degrees of accuracy local air quality conditions at the project site.

Table 4-3: Air Quality Monitoring Summary 2011-2013

Pollutant	Averaging Time	2011	2012	2013
Ozone (O_3)	1 hour 8 hours	0.093 ppm 0.083 ppm	0.090 ppm 0.083 ppm	0.099 ppm 0.092 ppm
Respirable Particulate Matter (PM_{10})	24 hours Annual Mean	98.0 µg/m^3 21.3 µg/m^3	42.0 µg/m^3 20.4 µg/m^3	87.1 µg/m^3 24.8 µg/m^3
Fine Particulate Matter ($PM_{2.5}$)	24 hours Annual Mean	15.0 µg/m^3 N/A	12.0 µg/m^3 N/A	13.1 µg/m^3 N/A
Carbon Monoxide (CO)	8 hours	1.35 ppm	0.66 ppm	N/A
Nitrogen Dioxide (NO_2)	1 hour Annual Mean	0.077 ppm 0.017 ppm	0.146 ppm 0.017 ppm	0.085 ppm N/A
Sulfur Dioxide (SO_2)	24 hours	0.007 ppm	0.003 ppm	0.002 ppm

* N/A = not available; ppm = parts per million; µg/m^3 = micrograms per cubic meter
Source: http://www.arb.ca.gov/adam/topfour/topfour1.php

Table 4-3 shows, by comparison with Table 4-1, that exceedances of the Federal and/or State ozone, PM_{10}, and nitrogen dioxide standards are occurring near the study area. It should be noted, however, that an exceedance may occur from exceptional events, such as high winds or other extreme meteorological events; and, in those cases, the exceedance does not result in a violation of the standard. Table 4-3 also shows that carbon monoxide and sulfur dioxide concentrations near the study area are well below both Federal and State standards, and the monitored data was not complete enough for $PM_{2.5}$ to be able to make a determination if a violation of a standard has occurred.

4.2.3 Significance Criteria

Pursuant to CEQA, a Proposed Project is deemed to have a potentially significant impact on air quality if it:

- Conflicts with or obstructs implementation of the applicable air quality plan;
- Violates any air quality standard or contributes to an existing or projected air quality violation;
- Results in cumulatively considerable net increase of any criteria pollutant for which the project region is in nonattainment under an applicable Federal or State ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors);
- Exposes the public (especially schools, day care centers, hospitals, retirement homes, convalescence facilities, and residences) to substantial pollutant concentrations; or
- Creates objectionable odors affecting a substantial number of people.

The MDAQMD CEQA Guidelines outlines significance determination thresholds. The significance criteria described in this section have been derived from this guidance document. The MDAQMD CEQA Guidelines states that any project is significant if it triggers or exceeds the most appropriate following evaluation criteria:

1. Generates total emissions (direct and indirect) in excess of the thresholds given in Table 4-2;
2. Generates a violation of any ambient air quality standard when added to the local background;
3. Does not conform with the applicable attainment or maintenance plan(s);
4. Exposes sensitive receptors to substantial pollutant concentrations, including those resulting in a cancer risk greater than or equal to 10 in a million and/or a Hazard Index (non-cancerous) greater than or equal to 1.

Table 4-4: MDAQMD Significant Emissions Thresholds

Criteria Pollutant	Annual (tons)	Daily (pounds)
Greenhouse Gases (CO_2e)	100,000.0	548,000
Carbon Monoxide (CO)	100.0	548
Oxides of Nitrogen (NO_X)	25.0	137
Volatile Organic Compounds (VOC)	25.0	137
Oxides of Sulfur (SO_X)	25.0	137
Particulate Matter (PM_{10})	15.0	82
Particulate Matter ($PM_{2.5}$)	15.0	82
Hydrogen Sulfide (H_2S)	10.0	54
Lead (Pd)	0.6	3

Notes: According to MDAQMD methodology, construction projects that are shorter than a year shall multiply the daily threshold by the number of days construction is anticipated to take and utilize the result as the threshold.
Source: http://www.mdaqmd.ca.gov/Modules/ShowDocument.aspx?documentid=2910

Pursuant to NEPA, consideration of significant impact on the human environment is conducted in accordance with Title 40 Code of Federal Regulations 1508.27 (Section 1.4.1). Following the public comment period, a finding regarding significant impact would be prepared in accordance with this provision.

4.2.4 Environmental Effects/Impacts

Proposed Action

The Proposed Action would consist of the installation of approximately 12.25 miles of three new direct-buried 1.5–inch-diameter HDPE ducts, or conduit, bundled together at a depth of approximately 4 feet, plus the installation of a fiber-optic cable into one of the three conduits. The operation of the Proposed Action would not include the operation of any stationary emissions sources; and no regularly scheduled

physical inspections of the conduit and cable would occur, since inspections of the fiber-optic cable would be performed via electronic monitoring devices. Operation and maintenance activities associated with the Proposed Action will be limited to repair of erosion control devices or cable conduits in the event of storm damage, landslides, or other emergencies that are not possible to predict for either rate of occurrence or amount of repairs required for each event. Therefore, air quality impacts from the Proposed Action that are detailed below have been limited to impacts created during construction activities.

Conflict with or obstruct implementation of the AQMP?

A project would be inconsistent with air quality plans if it would result in population and/or employment growth that exceeds the growth estimates included in the Attainment Plans or if it would require a local General Plan Amendment to increase population or employment growth. Construction activities associated with the proposed action would create work for up to 13 people for up to 6 weeks, but it would not create any new full-time positions of employment. Because no notable population or employment growth would be generated by construction activities, this component of the Proposed Action would not be inconsistent with the AQMP; and the Proposed Action would not conflict with or obstruct implementation of the AQMP.

Uncontrolled construction activity, however, would not be consistent with region-wide control strategies recommended by the MDAQMD in the AQMP. All construction activities conducted with the implementation of the Proposed Action would occur in conformance with MDAQMD rules, including Rule 402 that controls nuisance air contaminants and odors, Rules 403 and 403.2 that control fugitive dust emissions, and Rule 1160 that control emissions from off-road and stationary internal combustion engines. The Proposed Action does not include any activities that would not conform to the State Implementation Plan (SIP). Therefore, the Proposed Action would comply with the MDAQMP SIP (CEQA Checklist 3.3.2 [a]).

Violate any air quality standards or contribute to an existing or projected air quality violation?

The MDAQMD has developed recommended regional CEQA emissions significance criteria to evaluate a project's potential regional effects on air quality. These regional criteria are used to assess whether the project has the potential to violate or contribute to a violation of an air quality standard.

Activities associated with the installation of fiber-optic cable and conduit component of the Proposed Action would result in short-term emissions generated by: (1) installation of three conduits; (2) Installation of the fiber-optic cable; and (3) restoration activities that include grading of the access roads, removal of debris, and repair of existing erosion control devices.

The installation of the conduits and fiber-optic cable would require the operation of the equipment listed above in Table 2-2. All trucks were analyzed based on operating 40 miles per day, and all off-road and stationary equipment was based on operating 8 hours per day. The restoration activities were assumed to require the operation of two backhoes and one grader operating 8 hours per day.

Construction Emissions were estimated using the CalEEMod model in the Air Quality Greenhouse Gas Emissions Data (Appendix D) based on the equipment assumptions provided above. The CalEEMod model calculates vehicle and equipment emissions from the construction worker trips and movement of equipment and materials, earth-handling fugitive dust emissions, and dirt and paved road fugitive dust

emissions. Table 4-5 shows the estimated worst-case emissions that would be predicted during construction of each phase of the Proposed Action as well as the total emissions created from all construction activities.

As shown in Table 4-5, the Proposed Action's construction emissions would be below the significance thresholds for all criteria pollutants (CEQA Checklist 3.3.2 [b]).

Table 4-5: Worst Case Construction Emissions for Proposed Action

Activity	Pollutant Emissions in pounds					
	VOC	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Conduit Installation	199.2	2,279.8	1,384.4	1.8	1,940.8	346.2
Fiber-optic Cable Installation	47.4	406.6	266.4	0.4	501.0	72.2
Restoration Activities	34.5	404.2	263.7	0.3	160.2	45.5
Total Construction Emissions	281.1	3,090.6	1,914.5	2.5	2,602.0	463.9
MDAQMD Criteria Pollutant Thresholds[1]	5,754	5,754	23,016	5,754	3,444	3,444
Exceed Thresholds?	No	No	No	No	No	No

[1] MDAQMD thresholds determined by multiplying the daily thresholds in Table 4-2 by length of construction(42 days).
Source: CalEEMod Version 2013.2.2.

Result in a cumulatively considerable net increase of any criteria nonattainment pollutant?

As shown above in Table 4-5, construction of the Proposed Action would not result in emissions of criteria pollutants that exceed significance thresholds. Contribution of the Proposed Action to a cumulatively considerable net increase of any pollutants would not be substantial (CEQA Checklist 3.3.2 [c]).

Expose the public to substantial pollutant concentrations?

Some land uses are considered more sensitive to air pollution than others due to the types of population groups or activities involved. Sensitive population groups include children, the elderly, the acutely ill and the chronically ill, especially those with cardiorespiratory diseases.

The nearest sensitive receptors to the Proposed Action are multifamily homes, located approximately 680 feet southeast of Silver Lane. Table 4-5, above, shows the calculated worst case air emissions that would be anticipated to occur during construction of the Proposed Action. Table 4-5 shows that the construction-related air emissions are well below the MDAQMD thresholds of significance, which have been developed in order to minimize exposure of the public to substantial air pollutant concentrations. Therefore, the Proposed Action would not result in exposure of the public to substantial pollutant concentrations (CEQA Checklist 3.3.2 [d]).

Create objectionable odors affecting a substantial number of people?

Any odors (e.g., odors from diesel equipment emissions, application of solvents, etc.) that would be generated by activities associated with construction of the Proposed Action would be controlled in accordance with MDAQMD Rule 402 (Nuisance Emissions). No activities, other than normal construction activities, are anticipated to occur (CEQA Checklist 3.3.2 [e]).

No Action Alternative

Selection of the No Action Alternative, as described in Section 2.2, would not result in implementation of the Proposed Action; and impacts to air quality, as described above, would not occur.

4.2.5 Mitigation Measures

Proposed Action

The Proposed Action would not result in significant or substantial impacts to air quality. No mitigation measures are proposed or required.

No Action Alternative

The No Action Alternative would not result in significant or substantial impacts to air quality. No mitigation measures are proposed or required.

4.3 BIOLOGICAL RESOURCES – VEGETATION

4.3.1 Applicable Regulations, Plans, and Standards

Federal Regulations

Endangered Species Act

The Endangered Species Act (ESA) was passed in 1973 with the purpose to protect and recover imperiled species and the ecosystems they depend on. ESA is administered by USFWS and the Commerce Department's National Marine Fisheries Service (NMFS). USFWS is responsible for terrestrial and freshwater organisms, while NMFS is responsible for marine wildlife (USFWS 2013). Per the provisions of the ESA (16 United States Code [USC] Section 1531 et seq.), Federal agencies are directed to conserve threatened and endangered (T&E) species and the habitats in which these species are found. Federal agencies are to ensure that actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of a species that is endangered, threatened, or proposed threatened or endangered or critical habitat of such a species.

Executive Order 13112, Invasive Species

Executive Order 13112 requires each Federal agency whose actions may affect the status of invasive species to identify such actions; prevent the introduction of invasive species; detect and respond to and control populations of such species in a cost-effective and environmentally sound manner; monitor invasive species populations accurately and reliably; provide for restoration of native species and habitat conditions in ecosystems that have been invaded; and not authorize, fund, or carry out actions that it believes are likely to cause or promote the introduction or spread of invasive weed species.

State Laws and Regulations

California Native Plants Act

The California Native Plants Act, Division 80001-80006 of the California Food and Agriculture Code, is intended to "protect California desert native plants from unlawful harvesting on both public and privately owned lands." The Act regulates the harvesting, transport, and sale of specific species of native plants in California.

Local Ordinances and Plans

County of San Bernardino General Plan

The County of San Bernardino General Plan Conservation Element includes policies to attain the following goal, to "[p]reserve the unique environmental features and natural resources of the Desert Region, including native wildlife, vegetation, water and scenic vistas."

4.3.2 Affected Environment

Vegetation and Plant Communities

The following summarizes the principal characteristics of the vegetation communities observed within the Project Route during the biological reconnaissance survey. A summary of the predominant vegetation types within each of the four project segments is provided in Table 4-6 following these descriptions. A map of the vegetation communities within the Project ROW is provided in the Vegetation Survey Maps (Appendix E).

Creosote Bush-White Bursage Scrub Series 1

Creosote Bush-White Bursage Scrub typically consists of well-drained secondary soils with very low available water-holding capacity on slopes, fans, and valleys at elevations up to 3,300 feet amsl (Sawyer and Keeler-Wolf 1995). This community type is dominated by creosote bush (*Larrea tridentata*) and white bursage (*Ambrosia dumosa*), which are normally widely spaced with bare ground between them. Many species of ephemeral herbs may flower in late March and April if the winter rains are sufficient. Plant species observed adjacent to the Project ROW typical of this vegetation community include: creosote bush, white bursage, brittlebush (*Encelia farinosa*), desert holly (*Atriplex hymenelytra*), and spiny hopsage (*Grayia spinosa*).

Mixed Saltbush Series 1

Mixed Saltbush Series does not have a sole or dominant species. Saltbush species that may be present in this series include allscale (*Atriplex polycarpa*), big saltbush (*A. lentiformis*), brittlescale (*A. depressa*), four-wing saltbush (*A. canescens*), and/or shadscale (*A. confertifolia*). Ground layer is sparse, and the canopy is continuous to open. Mixed saltbush series occurs in habitats with carbonate-rich soils on flats, lower slopes, playas, and valleys at elevations between 250 feet below sea level to 3,300 feet amsl. Plant species found adjacent to the Project ROW typical of this vegetation community include allscale with scattered cheesebush and four-wing saltbush.

Nonvegetated Areas Observed

Disturbed/Developed

Disturbed areas are altered and maintained by humans to be devoid of vegetation (cleared or graded), such as dirt roads or heavily compacted areas. Developed areas are unvegetated areas that have been altered by humans and now display man-made structures such as houses, paved roads, buildings, parks, and other maintained areas. Disturbed/Developed areas exist within all segments of the Project ROW as either maintained dirt roads or shoulders or a paved road, as well as other small patches of human-caused disturbances resulting in the loss of native vegetation.

Dry Lakebed

Dry lake beds and playas are also known as alkali sinks (Lichvar and Dixon 2007). Soils within these features are high in alkalinity and have poorly drained soils. Low spots of lake beds and playas are occasionally resupplied with water by heavy winter rainfall, but standing water evaporates quickly. The driest areas of alkali sinks are the edges where vegetation communities are dominated by saltbush, mesquite, or alkali sink habitat (Lichvar and Dixon 2007).

Table 4-6: Vegetation Communities Observed per Segment

Segment Number	Vegetation Community
Segment 1	
	Mixed Saltbush Series 1: Within and adjacent to the Project ROW.
	Disturbed/Developed: Maintained dirt roads or shoulders and paved road.
Segment 2	
	Mixed Saltbush Series 1: Within and adjacent to the Project ROW.
	Disturbed/Developed: Maintained dirt roads or shoulders and paved road.
Segment 3	
	Mixed Saltbush Series 1: Not within, but adjacent to the Project ROW.
	Disturbed/Developed: Maintained dirt roads and shoulders.
	Dry Lake Bed: The Project crosses Silver Lake within a nonvegetated existing dirt road that runs east and west. The Project will remain within the ROW of the existing dirt road and will not occur within the surrounding dry lake bed.
Segment 4	**Creosote Bush-White Bursage Scrub**: Not within, but adjacent to the Project ROW.
	Disturbed/Developed: Maintained dirt roads or shoulders and paved road.

Sensitive Plant Species

A sensitive plant species was considered to potentially occur in the Project area if the general habitat or environmental conditions (e.g., soil type) required for the species are present, its known geographic range includes part of the Project area, and it is known to be present within the subject or adjacent USGS 7.5-minute quadrangles. The criteria for evaluating whether a species has potential for occurrence (PFO) on the Project site is presented in Table 4-7.

Table 4-7: Criteria for Evaluating Sensitive Plant Species Occurrences

PFO	CRITERIA
Absent:	Species was not observed during focused surveys conducted at an appropriate time for identification of the species, or species is restricted to habitats or environmental conditions that do not occur within the Project ROW.
Low:	Habitats or environmental conditions needed to support the species are of poor quality.
Moderate:	Either habitat requirements or environmental conditions associated with the species occur within the Project; or marginal habitat exists within the site, and an historical record exists of the species within the immediate vicinity of the Project site.
High:	Both the habitat requirements and environmental conditions associated with the species occur within the Project, and an historical record exists of the species within the Project ROW or its immediate vicinity.
Present:	Species was detected within the Project ROW at the time of the survey.

The following two species have a **low** potential to occur within Segments 1 and 2 of the Project ROW based on the presence of poor quality habitat for these species within the Project ROW.

White Bear Poppy

White bear poppy is a California Rare Plant Rank (CRPR) 2 species. This perennial herb flowers between April and May. This species can be found in rocky soils of chenopod scrub and Mojavean desert scrub at elevations between 1,607 and 5,905 feet amsl. White bear poppy is known from Inyo and San Bernardino counties. Threats to this species include mining and off-highway vehicles.

Death Valley Sandpaper Plant

Death Valley sandpaper plant is a BLM sensitive and CRPR 1B species endemic to California. This evergreen shrub flowers between May and September and is found in sandy washes, canyons, dunes, and slopes. Habitat includes desert dunes and Mojave desert scrub at elevations between 850 and 4,700 feet amsl. The known range of this species exists in Inyo and San Bernardino counties.

The following two species have a **moderate** potential to occur within Segment 1 of the Project ROW based on the presence of marginally suitable for these species to suitable habitat within the Project ROW.

White-Bracted Spineflower

White-bracted spineflower is a CRPR 1B.2 species. This annual herb flowers from April to June in sandy to gravelly soils of Mojavean desert scrub and pinyon and juniper woodlands at elevations between 1,000 and 4,000 feet amsl. Known ranges include: Los Angeles, Riverside, and San Bernardino counties.

Parish's Phacelia

Parish's phacelia is a CRPR 1B.1 species. This annual herb flowers between April and July and is found on flats, slopes, and dry lake margins in clay or alkaline soils. Habitat includes Mojave desert scrub and playas at elevations between 1,800 and 3,900 feet amsl. The known range of this species exists in San Bernardino County, Arizona, and Nevada. This species is threatened by military activities.

The following species has a **high** potential to occur within Segment 1 of the Project ROW based on the presence of suitable habitat for this species within Segment 1 of the Project ROW and because a historical occurrence has been reported within 5 miles of the Project Route.

Small-Flowered Androstephium

Small-flowered androstephium is a CRPR List 2 species. This perennial, bulbiferous herb flowers between March and April. This species occurs on bajadas in Mojavean desert scrub and desert dunes at elevations between 885 and 5,244 feet amsl. The known range for this species includes: Inyo, Riverside, and San Bernardino counties. This species is threatened by solar development.

Other Sensitive Plants

A small number of cactus species have been identified within proposed disturbance areas within Segments 1 and 2 of the Project Route within the mixed saltbush series, vegetation community.

4.3.3 Significance Criteria

Pursuant to CEQA, impacts to vegetation resources would be considered significant if the Proposed Project:

- Substantially affects, either directly or through habitat modifications, any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service;
- Substantially affects any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service;
- Substantially affects federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;
- Conflicts with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or

- Conflicts with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan.

4.3.4 Environmental Effects/Impacts

The assessment of potential impacts of the Proposed Action on vegetation and plant communities is provided in the Biological Technical Report (Appendix F). The assessment was based on a review of available databases, pertinent literature, resource agency coordination, and field surveys; details of the resources reviewed are provided in the Methods section of the Biological Technical Report (Appendix F).

Proposed Action

Vegetation Communities

Construction activities have the potential to impact habitat, including the topsoil and seed bank, within Segments 1 and 2. Construction activities within Segments 3 and 4 would either not result in uprooting vegetation and the topsoil and seed bank would remain intact or will be within the dirt road where the Project ROW overlaps Silver Lake Road. Avoidance and minimization measures are proposed below. A Vegetation Restoration Plan (Appendix G) is provided to address any impacts to vegetation communities by the Proposed Project. Although no invasive weeds were mapped within the Project ROW, within the Vegetation Restoration Plan are measures to avoid, minimize, and mitigate any potential Project impacts due to establishment of invasive weeds (CEQA Checklist 3.4.2 [b]).

Sensitive Plant Species

Species to be avoided and transplanted would be identified ahead of construction. Implementation of the agency-approved Vegetation Restoration Plan (Appendix G), which details the salvaging and transplanting methodology and future mitigation practices of these species, would minimize potential impacts to these species.

Chambers Group's qualified biologists conducted a survey in accordance with CDFW *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (CDFW 2009). To ensure the detection of rare plants, surveys were conducted in the spring (April 2014) during the blooming period, in order to optimally observe the 13 sensitive plant target species. The focused plant survey area included habitat within the Project ROW within Segment 1, as well as a 20-foot-wide buffer on either side of the Project ROW along Segment 1. Botanists walked parallel transects spaced approximately 10 to 15 feet apart within suitable habitat and visually surveyed for any signs of the target plant species. The transect widths were decreased in areas with a high potential to support small stature plants, or as needed.

No sensitive plant species were observed within the Project ROW during the focused plant survey. Rains that occurred in March 2014 may not have been enough for all plant species, including sensitive plant species, to germinate. Avoidance and minimization measures are proposed for sensitive plant species that may be present at a later date during construction activities are provided below (CEQA Checklist 3.4.2 [a]).

Wetlands

The Segment 3 crossing of Silver Lake was the only portion of the Project to cross a wetland feature. Silver Lake is identified as a lacustrine, littoral, unconsolidated shore wetland (L2USJ) (USFWS 2014). This portion of Silver Lake does not meet the three-parameter definition of a USACE jurisdictional wetland, as it was unvegetated; but it contained surface soil cracks and evidence of saturation and ponding. The presence of these wetland characteristics meet the one-parameter criteria of a CDFW wetland feature (CEQA Checklist 3.4.2 [c]).

Operation and Maintenance

Operations activities would require very little maintenance and would be limited to driving along the completed Project Route periodically to inspect the line and occasionally repair isolated problems that may result from unusual events (e.g., exposure of a small segment of the line caused by a 100-year water event). All repair activity in the operations-phase would abide by the same protective measures applicable to the Proposed Action. No removal of adjacent habitat during operations and maintenance activities is allowed. No impacts outside the existing roads are authorized by AT&T. After the end of its useful life, the cable would be abandoned in place in the utility ROW corridor, unless directed otherwise at the time by BLM (CEQA Checklist 3.4.2 [a] through [f]).

No Action Alternative

Under the No Action Alternative, no project activities would occur. Therefore, no impacts would occur to existing vegetation, and no additional exotic plant species would potentially become established.

4.3.5 Avoidance and Minimization and Mitigation Measures

Avoidance and Minimization Measures

The following measures will be implemented to avoid and minimize potential impacts.

- A qualified biologist will provide to all construction personnel an environmental awareness training (EAT) and information pamphlet that will include a description of sensitive resources within the Project area and describe the importance of staying within the Project boundaries.

- A qualified biological monitor will conduct a preconstruction survey for sensitive plant species with a potential to occur on the Project within minimal use and disturbance areas along Segments 1 and 2. The survey will be conducted ahead of construction within the Project ROW in suitable habitat. Depending on the timing of construction, plant species may not be detectable directly prior to construction; therefore, impacts to vegetation will be avoided to the greatest extent feasible.

- Within proposed disturbance areas where spoils from trenching need to be placed within vegetation, vegetation would be covered with plastic sheeting. Equipment buckets would then carefully backfill the soil into the trench. Plastic sheeting would remain in place for only one day. If plastic sheeting may be in place for more than one day, then a light-colored plastic will need to be utilized to prevent vegetation from overheating. If sensitive plant species are observed

within the Project ROW during the surveys, plants will be flagged and avoided to the greatest extent possible.

- A qualified biological monitor will be present on site during all construction activities and will monitor the avoidance areas for potential impacts to sensitive species.

Mitigation Measures

If potential impacts cannot be avoided, the following measures will be implemented to mitigate impacts.

- **MM-Vegetation-1**: Where impacts to native vegetation may not be avoided, the seed bank and topsoil will be left intact, allowing for seeds of sensitive plants to remain in place, if present, and therefore germinate in the future. The seed bank and topsoil will be left intact utilizing the following methods:
    - Within minimal use areas where equipment or vehicle tracks may make a single or few passes within vegetation, no grading will occur. Any ruts created by equipment passes will be swept to carefully smooth out the topsoil.
- **MM-Vegetation-2**: If sensitive plant species are observed within the Project ROW and impacts cannot be avoided, one of the following measures will be implemented at the discretion of the biologist onsite:
    - Healthy sensitive plant species suited for salvage and transplanting and young perennial woody shrubs will be salvaged and transplanted into suitable habitat outside the Project ROW. Salvaged plants will be kept in an onsite nursery under shade cloth and watered as needed, based on soil moisture levels, until translocation can occur.
    - Seeds from sensitive annual plant species or other individuals that cannot be salvaged will be collected and dispersed into the Project ROW after construction and when no further ground disturbance is expected.
    - If transplanting and seed collection are not possible, the contractor may bore under sensitive plant species populations within the Project ROW to avoid impacts to the greatest extent possible and assuming no other environmental constraints exist in the area.
    - If transplanting and seed collection are not possible, the contractor will salvage the top 4 inches of soil (topsoil), as described in the Project approved Vegetation Restoration Plan, from vegetated areas within the disturbance area. The topsoil will be replaced once construction is complete in that area.

4.4 BIOLOGICAL RESOURCES – WILDLIFE

4.4.1 Applicable Regulations, Plans, and Standards

Federal Regulations

Endangered Species Act

The ESA was passed in 1973 with the purpose to protect and recover imperiled species and the ecosystems they depend on. ESA is administered by USFWS and NMFS. USFWS is responsible for terrestrial and freshwater organisms, while NMFS is responsible for marine wildlife (USFWS 2013). Per the provisions of the ESA (16 USC Section 1531 et seq.), Federal agencies are directed to conserve T&E species and the habitats in which these species are found. Federal agencies are to ensure that actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of a species that is endangered, threatened, or proposed threatened or endangered or critical habitat of such a species.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) prohibits actions which result in pursuit, hunt, take, capture, or kill; attempt to take, capture, or kill; possess, offer to or sell, barter, purchase, deliver, or cause to be shipped, exported, imported, transported, carried, or received any migratory bird, part, nest, egg, or product, manufactured or not. The responsibilities of Federal agencies to protect migratory birds are set forth in Executive Order 13186. USFWS is the lead agency for migratory birds (USFWS 2014).

Bureau of Land Management Sensitive Species

BLM Sensitive Species are species that are not federally listed that occur on BLM public lands, where BLM "has the capability to significantly affect the conservation status of the species through management." BLM's policy is to "ensure that actions authorized, funded, or carried out do not contribute to the need to list any of these species as threatened or endangered." BLM offices maintain a list of special status plant and wildlife species specific to BLM management activities.

State Laws and Regulations

California Department of Fish and Wildlife

CDFW is responsible for conserving, protecting, and managing California's fish, wildlife, and native plant resources. Section 1602 of the Fish and Game Code requires any entity to notify CDFW of any proposed activity that may substantially modify a river, stream, or lake. (CDFW 2014b)

California Endangered Species Act

Section 2080 of the Fish and Game Code prohibits "take" of any species that the commission determines to be an endangered species or a threatened species. Take is defined in Section 86 of the Fish and Game Code as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." The California Endangered Species Act (CESA) allows for take incidental to otherwise lawful development projects. (CDFW 2014a)

4.4.2 Affected Environment

Four habitat types generally occur within the proposed project site, including Creosote Bush-White Bursage Scrub Series 1, Mixed Saltbush Series 1, Disturbed/Developed, and Dry Lake Bed. The wildlife species observed or detected during the reconnaissance surveys characteristic of the existing site conditions are included in Wildlife Species Observed/Detected On Site (Appendix H).

Reptiles

Seven reptile species were observed and/or detected on or adjacent to the Project ROW during biological surveys: chuckwalla (*Sauromalus obesus*), desert iguana (*Dipsosaurus dorsalis*), desert tortoise (*Gopherus agassizii*, burrows), common zebra-tailed lizard (*Callisaurus draconoides rhodostictus*), side-blotched lizard (*Uta stansburiana elegans*), Great Basin whiptail (*Aspidoscelis tigris tigris*), and Mohave desert sidewinder (*Crotalus cerastes cerastes*).

Birds

Seventeen bird species were observed and/or detected on or adjacent to the Project ROW. Species included: cinnamon teal (*Anas cyanoptera*), western sandpiper (*Calidris mauri*), turkey vulture (*Cathartes aura*), red-tailed hawk (*Buteo jamaicensis*), Swainson's hawk (*Buteo swainsoni*), American kestrel (*Falco sparverius*), burrowing owl (*Athene cunicularia*, pellet), white-throated swift (*Aeronautes saxatalis*), Cassin's kingbird (*Tyrannus vociferan*), horned lark (*Eremophila alpestris*), common raven (*Corvus corax*), great-tailed grackle (*Quiscalus mexicanus*), rock wren (*Salpinctes obsoletus*), black-throated sparrow (*Amphispiza bilineata*), house finch (*Carpodacus mexicanus*), loggerhead shrike (*Lanius ludovicianus*), and European starling (*Sturnus vulgaris*).

Mammals

Five mammal species were observed or detected on or adjacent to the Project ROW: black-tailed jackrabbit (*Lepus californicus*), white-tailed antelope ground squirrel (*Ammospermophilus leucurus*), desert kit fox (*Vulpes macrotis arsipus*), coyote (*Canis latrans*), and wild burro (*Equus asinus*).

Sensitive Wildlife Species

Eight wildlife species that resulted from the literature search as having habitat in the Proposed Project area or that have a potential to be present or were observed present are described in detail below.

American Badger

The American badger (*Taxidea taxus*) is a California Species of Special Concern (SSC). This carnivorous species ranges over most of the western U.S. and upper midwestern U.S. south into central Mexico. In California, the badger may occupy a variety of habitats, especially grasslands, savannas, sandy soils, and deserts. It prefers friable soils for burrowing and relatively open, uncultivated ground. Prey items include pocket gophers and ground squirrels (Jameson and Peeters 1988). The American badger is chiefly nocturnal, but it is often seen by day as well. It gives birth to one to four young from March to April (Jameson and Peeters 1988). Threats to this species include habitat loss due to agriculture, housing and other land conversions, and illegal hunting.

Habitat, including creosote bush-white bursage series and mixed saltbush series, is present for this species along the Project ROW within and adjacent to Segments 1 and 2 and adjacent to Segments 3 and 4. The American badger was not observed during Project surveys; however, American badger activity has potential to occur within the Project ROW. Badger activity includes potential burrows, foraging, and passing through Segments 1 and 2 as well as passing within Segments 3 and 4.

Burrowing Owl

The burrowing owl is a SSC. Insects form the bulk of its diet in the summer; and it feeds on small mammals, birds, and reptiles in the winter (Klute et al. 2003). It breeds in open plains from western Canada and throughout the western United States, Mexico through Central America, and into South America to Argentina (Klute et al. 2003) from March through August, with peak periods in May and July. This species inhabits dry, open, native or nonnative grasslands, deserts, and other arid environments with low-growing and low-density vegetation (Ehrlich and Wheye 1988). It may occupy golf courses, cemeteries, road ROW, airstrips, abandoned buildings, irrigation ditches, and vacant lots with holes or cracks suitable for use as burrows (TLMA 2006). It occupies mammal burrows, such as badger, prairie dog, and ground squirrel, for subterranean shelter and nesting (Trulio 1997). When burrows are scarce, the burrowing owl may use man-made structures such as openings beneath cement or asphalt pavement, pipes, culverts, and nest boxes (TLMA 2006). One burrow is typically selected for use as the nest; however, satellite burrows are usually found in the immediate vicinity of the nest burrow within the defended territory of the owl. Burrowing owls are active day and night, with peak times at dawn and dusk (Klute et al. 2003). Threats to burrowing owl populations include the loss of and destruction of habitat by agriculture and urban development, the destruction of burrows, and indirect poisoning via rodent eradication efforts (Klute et al. 2003).

Low quality habitat, including creosote bush-white bursage series and mixed saltbush series, is present for this species along the Project ROW within and adjacent to Segments 1 and 2 and adjacent to Segments 3 and 4. Small mammal activity was low, and few suitable-sized burrows were observed within the Project ROW and 60-foot buffer (survey area) of all Project segments. Recent historic records do not report that burrowing owls have occurred within the vicinity of the Project Route (i.e., within 5 miles of the Project Route).

No burrowing owls were observed within the survey area for burrowing owl, but burrowing owl sign was observed outside the 60-foot buffer during desert tortoise perimeter survey transects. A burrowing owl pellet was observed on the 600-meter desert tortoise perimeter survey transect on April 16, 2014, in a depression of an old fox den and appeared to be old. Due to the presence of habitat, burrowing owl has the potential to be present during Proposed Project activities within or adjacent to Segments 1 and 2 and adjacent to Segments 3 and 4.

Desert Tortoise

The desert tortoise is a federally and State listed threatened species. The desert tortoise ranges from central Nevada and extreme southwestern Utah south through southeastern California and southwestern Arizona into northern Mexico (Berry et al. 2002). In California, the historical range of this species includes northeastern Los Angeles, eastern Kern, eastern San Diego, and southeastern Inyo counties, as well as most of San Bernardino, Riverside, and Imperial counties. The desert tortoise inhabits river washes, rocky hillsides, slopes, and flat deserts with sandy or gravelly soils. Soil conditions must be friable for burrow and nest construction. Creosote bush, white bursage, saltbush, Joshua tree,

Mojave yucca, and cacti are often present in the habitat along with other shrubs, grasses, and wildflowers. The desert tortoise is entirely herbivorous and forages on a variety of plants, including cactus species and annual vegetation. Desert tortoise populations are declining due to habitat destruction/loss, predation, illegal collecting, grazing, and OHV use (Berry 1997).

Low-quality habitat (disturbed with sparse vegetation and low annual growth), creosote bush-white bursage series and mixed saltbush series, is present for this species along the Project ROW within and adjacent to Segments 1 and 2 and adjacent to Segments 3 and 4. No recent historical records report that desert tortoises have occurred within the vicinity of the Project ROW.

No desert tortoises were observed within the desert tortoise survey area. Surveys resulted in potential desert tortoise burrows; however, only one burrow kept its half-moon shape inside, and the remaining burrows did not keep their half-moon shape inside or did not have a half-moon shape at all. Little desert tortoise sign was observed on the 600-meter transect. In addition, no other desert tortoise sign, including scat or tracks, were observed during the survey effort; therefore, it is most likely that the burrows are being utilized by small mammals. Due to the lack of sign observed during desert tortoise presence/absence survey, it unlikely that desert tortoise would be affected by the Project.

Desert Kit Fox

The desert kit fox is a State protected species. This species occurs primarily in deserts and grasslands throughout western North America. Specifically, this species is known to occur from southern California to western Colorado and down into parts of western Texas. The San Joaquin kit fox (*Vulpes mactrotis mutica*), a subspecies of the kit fox, is a federally listed endangered and a State listed threatened species which is known to occur only in the Central Valley of California near Bakersfield. This species is found primarily in arid areas consisting of desert scrub, chaparral, or grasslands from 1,300 to 6,200 feet in elevation and appears to prefer areas with loose soil for dens (List and Cypher 2012). Desert kit foxes feed on small mammals and insects, foraging mostly during the night or late evening/early morning. This species breeds from December to January; and pups are born from February to mid-March, with litter sizes ranging from one to seven pups. Desert kit foxes usually use their dens year-round, and it is thought they often will have multiple dens throughout their home range (List and Cypher 2012). Primary threats to this species include poisoning from agricultural fields, predation by coyotes, and mortality from vehicles.

Habitat, including creosote bush-white bursage series and mixed saltbush series, is present for this species along the Project ROW within and adjacent to Segments 1 and 2 and adjacent to Segments 3 and 4. Fox dens were observed in the Project buffer during the biological reconnaissance survey and desert tortoise survey; therefore, desert kit foxes have a potential to be active within or adjacent to the Project. Activity includes potential burrows, foraging, and passing within Segments 1 and 2 as well as passing within Segments 3 and 4.

Mojave Fringe-Toed Lizard

The Mojave fringe-toed lizard (*Uma scoparia*) is a SSC and BLM sensitive species. Its range is restricted to the Mojave Desert, occurring from southern Death Valley south to the Colorado River near Blyth, California, and extreme western Arizona (Calherps 2012). This species requires areas of creosote scrub containing both large and small dunes consisting of fine, wind-blown sand. It will create burrows in areas of loose sand usually found in margins of drainages, hillsides of dunes, or hummocks at the base of

creosote bushes (Hollingsworth and Beaman 2012). It feeds on small invertebrates, seeds, and occasionally some flower blossoms. Breeding occurs from April to July. Eggs are typically laid in hummocks at the base of creosote bushes or in sandy areas in the hillsides of dunes, and hatchlings emerge during September. Primary threats to this species include mortality from off-road vehicles and habitat loss due to the placement of wind exclusion fences and development.

Mojave fringe-toed lizard habitat was not present within the Project ROW or immediate buffer, and Mojave fringe-toed lizards were not observed during any survey efforts for the Project; therefore, this species is considered absent from all Project segments.

Nelson's Bighorn Sheep

The Nelson's bighorn sheep is a State protected species and a BLM sensitive species. This species occurs throughout the deserts of eastern California, Nevada, northwestern Arizona, and southern Utah (Wehausen 2012). A subspecies of the Nelson's bighorn sheep, the peninsular bighorn sheep (*Ovis canadensis nelsoni,* DPS) is federally listed endangered, State listed threatened, a California fully protected species, and a BLM sensitive species. This subspecies of bighorn sheep is known to occur only in Riverside, San Diego, and Imperial counties. The Nelson's bighorn sheep is found primarily on or near steep and rocky mountainous terrain above the desert floor but is also found in washes and canyons from 400 to 4,000 feet in elevation (Jameson and Peters 1988). Threats to Nelson's bighorn sheep include diseases such as pneumonia spread by domestic sheep and cattle, predation by mountain lions (*Felis concolor*), insufficient lamb recruitment as a result of predation, habitat fragmentation, and decreasing access to surface water due to human activity (Wehausen 2012).

Habitat for Nelson's bighorn sheep occurs near Segment 4 of the Project within the Avawatz Mountains, located west of the northern portion of the Project. Nelson's bighorn sheep were not observed during surveys; however, occurrences exist for the species in the Avawatz Mountains and were recorded in 2002 (Fort Irwin 2005); therefore, this species has a moderate potential to occur near the Project but a low potential to be present on the Project during proposed activities. Impacts to this species would be indirect and due to the presence of construction vehicles and equipment for short periods of time (approximately 5 to 7 work days and not all consecutive). Noise levels and vibrations due to proposed activities are not anticipated to have an impact on this species, since this portion of the Project is being located within a truck haul route.

Swainson's Hawk

The Swainson's hawk (nesting) is State listed as a threatened species. This species breeds from southwest Canada through the western United States into northern Mexico, with isolated breeding populations also observed in northern Illinois and the Sacramento and San Joaquin valleys of California. This species winters to South America. The Swainson's hawk forages in open stands of grass-dominated vegetation, sparse shrublands, and small, open woodlands. It typically nests in scattered trees within these grassland, shrubland, or agricultural landscapes. The Swainson's hawk feeds largely on insects, and thus is affected by pesticide use, particularly dichlorodiphenyltrichloroethane (DDT) and organophosphate pesticides currently used in South America (England et al. 1997).

One Swainson's hawk was observed soaring over the Project area during the burrowing owl and desert tortoise survey effort. Foraging habitat is present for this species along the Route. No Swainson's or other large raptor nests were observed during surveys.

Townsend's Big-Eared Bat

The Townsend's big-eared bat (*Corynorhinus townsendii*) is a State candidate for listing, an SSC, and a BLM sensitive species. This species is found throughout California in alpine and subalpine habitats, preferably mesic habitats. Roosts occur in caves, buildings, tunnels, mines, and other human-made structures. This species hibernates singly or in groups from October to April (CDFW 2000). Females form maternity colonies, but males are solitary in the spring and summer (CDFW 2000). Mating occurs from November to February, and the females store the sperm during hibernation months until ovulation takes place in the spring (CDFW 2000). Births of one young to each litter take place in May and June; the young are independent after six weeks. Moths are its main food source, but beetles and insects are consumed as well (CDFW 2000). This species has high site fidelity; but it is extremely sensitive to disturbance of roosting sites, with one visit to a roosting site having the potential to cause abandonment (CDFW 2000). This species is also sensitive to wing injuries due to banding (CDFW 2000).

Roosting habitat for the Townsend's big-eared bat was not identified within the Project ROW. Foraging habitat is present for this species along the Route. This species has a moderate potential to forage within the Project ROW but is not expected to be found roosting within the Project ROW.

4.4.3 Significance Criteria

Pursuant to CEQA, impacts to wildlife resources would be considered significant if the Proposed Project:

- Substantially disturbed critical wildlife habitat
- Caused the loss of a species or habitat afforded protection under either the ESA or State law; or designated as having special status (Species of Concern, Sensitive Species, etc.) by an overseeing agency
- Caused the loss of a bird protected by the Migratory Bird Treaty Act

4.4.4 Environmental Effects/Impacts

A Biological Technical Report (Appendix F) was prepared to assess the existing environment along the Project Route and potential impacts of the Proposed Action.

Proposed Action

The assessment of potential impacts of the Proposed Action on wildlife is provided in the Biological Technical Report (Appendix F). The assessment was based on a review of available databases, pertinent literature, resource agency coordination, and field surveys; details of the resources reviewed are provided in the Methods section of the Biological Technical Report (Appendix F).

Proposed Action

Seven wildlife species are considered present or have a potential to occur in the Project area and required additional survey efforts and/or require avoidance and minimization measures during construction. These seven species and the recommended efforts are summarized below.

American Badger

Suitable habitat for American badger is present on the Project ROW within and adjacent to Segments 1 and 2 and adjacent to Segments 3 and 4. American badgers were not observed during Project surveys; however, American badger sign (potential dens) were observed; therefore, a potential exists for American badger activity to occur within the ROW. Because American badgers are nocturnal and project construction would not occur at night, no direct impacts to American badger would be expected. Potential impacts to American badger may include loss of foraging habitat or impacts to burrows. With implementation of the proposed avoidance and minimization measures for this species during the construction phase, provided below, impacts to American badger would be less than significant.

Burrowing Owl

Suitable habitat for the burrowing owl occurs on the Project ROW within and adjacent to Segments 1 and 2 and adjacent to Segments 3 and 4. Chambers Group, Inc. (Chambers Group) conducted a focused survey in April 2014. No owls were observed within the Wildlife Survey Area; however, burrowing owl sign, including one pellet, was observed on the 600-meter desert tortoise perimeter transect; therefore, this species has a potential to occur on the Project ROW. Potential impacts to burrowing owl may include loss of foraging habitat or impacts to burrows. Project construction may indirectly affect burrowing owl through increased human disturbance, noise, localized ground vibration, and dust in the immediate vicinity of roads and road shoulders; however, activities would occur during a limited time frame and impacts would be temporary. With the implementation of proposed avoidance and minimization measures for this species during the construction phase, provided below, impacts to burrowing owl would be less than significant.

Desert Tortoise

Chambers Group conducted desert tortoise presence/absence surveys in April 2014. Low-quality habitat (disturbed with sparse vegetation and low annual growth), creosote bush-white bursage series and mixed saltbush series, along the Project ROW within and adjacent to Segments 1 and 2 and adjacent to Segments 3 and 4. No tortoises were observed within the Wildlife Survey Area/Action Area; however, one desert tortoise burrow was observed on the 200-meter desert tortoise perimeter transect, and nine potential desert tortoise burrows were observed either within the ROW, near the ROW, or on a 200-, 400-, or 600-meter transect. Of the burrows observed, only one burrow kept its half-moon shape inside, and the remaining burrows did not keep their half-moon shape inside or did not have a half-moon shape at all. In addition, no other desert tortoise sign, including scat or tracks, were observed during the survey effort; therefore, it is most likely that the burrows are being utilized by small mammals. No recent historical records report that desert tortoises have occurred within the vicinity of the Project ROW. Due to the lack of sign observed during focused desert tortoise survey, it is unlikely that desert tortoise would be affected by the Project.

Desert Kit Fox

Habitat for desert kit fox is present on the Project ROW within and adjacent to Segments 1 and 2 and adjacent to Segments 3 and 4. Desert kit fox were not observed during Project surveys; however, kit fox sign (dens and scat) were observed; therefore, a potential exists for desert kit fox activity to occur within the Project ROW. Potential impacts to desert kit fox may include loss of foraging habitat or impacts to dens. Project construction may indirectly affect desert kit fox through increased human disturbance,

noise, localized ground vibration, and dust in the immediate vicinity of roads and road shoulders; however, activities would occur during a limited time frame and impacts would be temporary. With implementation of the proposed avoidance and minimization measures for this species during the construction phase, provided below, impacts to desert kit fox would be less than significant.

Nelson's Bighorn Sheep

Habitat for Nelson's bighorn sheep occurs near Segment 4 of the Project within the Avawatz Mountains, located west of the northern portion of the Project. Nelson's bighorn sheep were not observed during surveys, and this species has a low potential to occur within 5 miles of the Project. Migration is not expected to occur during construction activities; and, therefore, no impacts will occur to this species as a result of the Project activities. Because the Project will not impact this species, avoidance and minimizations are not required.

Swainson's Hawk

The Swainson's hawk (nesting) is State listed as a threatened species. One Swainson's hawk was observed soaring over the Project area. Foraging habitat is present for this species along the Route. No Swainson's or other large raptor nests were observed during surveys. Potential indirect impacts would include temporary disturbance while foraging; however, hawks foraging in the area would be expected to temporarily avoid the area and forage nearby until the disturbance has passed. Impacts to Swainson's hawk would be less than significant. With implementation of the proposed avoidance and minimization measures for raptors during the construction phase, provided below, impacts to Swainson's hawk would remain less than significant.

Townsend's Big-Eared Bat

Townsend's big-eared bat was not observed or detected during biological surveys. In addition, roosting habitat for this species was not identified within the Project ROW. Foraging habitat is present for this species along the Route. This species has a moderate potential to occur foraging within the Project ROW but is not expected to be found roosting within the Project ROW. Project construction may indirectly affect Townsend's big-eared bat through increased human disturbance, noise, localized ground vibration, and dust in the immediate vicinity of roads and road shoulders; however, activities would occur during a limited time frame, and impacts would be temporary. With the implementation of general minimization measures, impacts would remain less than significant (CEQA Checklist 3.4.2 [a]).

No Action Alternative

The No Action Alternative would not result in significant or substantial impacts to biological resources. No mitigation measures are proposed or required.

4.4.5 Mitigation Measures

Avoidance and Minimization Measures

The following measures will be implemented, as required under CEQA and NEPA unless specified, in order to avoid and minimize potential impacts.

General Avoidance and Minimization Measures

- Pets and firearms are prohibited.
- BMPs are to be incorporated to prevent the soil from becoming airborne or being washed away as sediment.
- The method of placement will determine if a trench is to remain open and sloped, or closed. The awarded contractor, with the approval from AT&T, will determine the status of the trench. The awarded contractor will be aware of the wildlife restrictions and will attend meetings to discuss any special requirements. Trenches that are selected to be open at the end of the workday will be sloped to allow wildlife to escape. All trenches are to be inspected for desert tortoise occupancy before work begins the following day.
- Staging areas are prohibited in sensitive biological areas. Staging areas will be reviewed and approved by the Project biologist. If necessary, changes in location will be incorporated into the construction contract. Equipment fueling will not occur adjacent to or in drainages.
- Off-road travel and staging areas outside the approved staging areas or construction zones are prohibited. Within the authorized surface use areas, areas devoid of vegetation, disturbances such as temporary staging areas or parking areas for equipment are to be confined to the smallest practical location, considering topography, placement of facilities, location of burrows, and public health and safety. Such areas will be marked to minimize surface disturbance associated with off-road travel or unauthorized use. Special habitat features, such as burrows (a minimum of 50 feet away), identified by the authorized biologist are to be avoided.

American Badger and Desert Kit Fox

As required by CEQA, the following measures will be implemented for American badger and kit fox.

- A qualified biologist will provide to all construction personnel an environmental awareness training (EAT) and information pamphlet that will include a description of sensitive resources within the Project area and describe the importance of staying within the Project boundaries.
- A qualified biological monitor will be present during all construction activities for the Project.
- Desert kit fox and American badger dens will be inspected as part of the desert tortoise clearance survey, which will be conducted within the Project ROW and buffer within a maximum of 48 hours prior to ground-disturbing work and/or directly ahead of construction along the entire Project Route.
- Desert kit fox and American badger dens observed outside the Project ROW and within the survey buffer will be flagged for avoidance.
- Unoccupied dens located in the Project ROW that cannot be avoided will be excavated and backfilled by hand. Dens that appear to be active will be further investigated for activity using flour, sticks and/or motion cameras.

- During the nonbreeding season (July 2 to January 15) one-way doors will be utilized to prevent activity, and dens will be hand-excavated once unoccupied.

- A 500-foot no-disturbance buffer shall be maintained around all active dens during the breeding season (January 16 to July 1).The active den will be avoided until it is determined by a qualified biologist that the occupied den does not contain pups or until after the breeding season. Active dens and dens within the buffer of the clearance survey shall be marked so that the equipment operators can identify and avoid such dens. These locations shall be flagged prior to initiation of the maintenance/replacement activities in the area.

- A desert kit fox or American badger encountered during construction activities will be allowed to move out on its own. Construction will cease until the fox or badger is a safe distance away, as determined by the onsite biological monitor.

Burrowing Owl, Raptors, Nesting Birds

As required by CEQA, the following measures will be implemented for burrowing owl, raptors, and nesting birds.

- A biologist will provide all maintenance personnel with an orientation and information pamphlet that includes: distribution of the burrowing owl, behavior and ecology of the burrowing owl, sensitivities to human activities, legal protection, penalties of violation of State and Federal laws, reporting requirements, and Project protective mitigation measures. The training will also include details of the Migratory Bird Treaty Act and legal protection of nesting birds.

- A preconstruction burrowing owl survey will be required within 30 days prior to construction on the Project Route (CDFW 2012).

    - In the event that a burrowing owl is found present within or near the Project ROW during the burrowing owl breeding season (February 1 to August 31), active burrows will be flagged in all directions; and no construction activity will take place within the flagged area until the nest becomes inactive, the young have fledged, the young are no longer being fed by the parents, the young have left the area, and the young will no longer be impacted by the project. Buffers will be flagged according to the latest burrowing owl mitigation guidelines (CDFW 2012) and may be adjusted at the discretion of the biologist, depending on the nesting behaviors observed.

    - In the event that a burrowing owl is found present within or near the Project ROW during the burrowing owl nonbreeding season (September 1 to January 31), active burrows will be flagged in all directions and no construction activity will take place within the flagged area to the greatest extent possible. Buffers will be flagged according to the latest burrowing owl mitigation guidelines (CDFW 2012) and may be adjusted at the discretion of the biologist, depending on the behaviors observed.

- If construction activities take place during the nesting bird season (March 15 to September 15), nesting bird surveys for raptors and all other birds covered under the MBTA will be conducted within a 500-foot minimum avoidance buffer for raptors and a 300-foot minimum buffer for passerine birds within three days prior to the start of work.

- The breeding habitat/nest site shall be fenced and/or flagged in all directions. The nest site area shall not be disturbed until the nest becomes inactive, the young have fledged, the young are no longer being fed by the parents, the young have left the area, and the young will no longer be impacted by the project.

- A biological monitor will be present if work activities occur near a burrowing owl winter buffer or any active nest buffer in order to monitor burrowing owl and/or nest behaviors that may be impacted by construction activities. Buffers may be enlarged or decreased in size, at the discretion of the biologist, depending on the nesting behaviors observed.

Desert Tortoise

- All trash should be regularly removed to reduce the attractiveness of the areas to ravens and other desert tortoise predators.

- Workers are to inspect for desert tortoises resting in the shade under vehicles and equipment prior to moving. If a desert tortoise is present but not under the vehicle, the worker(s) should carefully move the vehicle only when necessary and authorized by the onsite biologist. If a tortoise is under a vehicle, the vehicle will not be moved until the tortoise has left the area or the authorized biologist has carefully moved the tortoise using previously approved methods.

- A short translocation plan for desert tortoise will be provided to CDFW in case a desert tortoise needs to be handled.

- The biologists will provide all maintenance personnel with an orientation and information pamphlet that includes: distribution of the desert tortoise, behavior and ecology of the tortoise, sensitivities to human activities, legal protection, penalties of violation of State and Federal laws, reporting requirements, and project protective avoidance and minimization measures.

- As required under CEQA, a desert tortoise clearance survey will be conducted along the Project Route and buffer within a maximum of 48 hours prior to ground-disturbing work in areas of high desert tortoise density and directly ahead of construction along the entire Project Route.

- All desert tortoise burrows/pallets that may be encountered within the proposed Project ROW and buffer are to be marked so that the equipment operators can identify and avoid such burrows. These locations, if present, will be flagged prior to initiation of the Proposed Project.

- As required under CEQA, heavy equipment operators are to be accompanied by a qualified biologist when working in desert tortoise habitat during construction activities. The biological monitor will walk in front of the equipment during its operation and has the responsibility and authority to halt all project activity should danger to a desert tortoise arise. Work should proceed only after hazards to the desert tortoise are removed, the desert tortoise is no longer at risk, or the desert tortoise has been moved from harm's way by an authorized biologist. A desert tortoise could be found above ground during both its active and inactive seasons; therefore, a construction monitor will be present to ensure compliance with construction Best Management Practices (BMPs) and to be present in the event a tortoise is found within the project area.

- The authorized biologist will remove any desert tortoise that may be threatened by Project construction activities to a nearby location in accordance with protocol (USFWS 2009). Monthly reports will be submitted to CDFW. AT&T will submit a post-project report to BLM, CDFW, and USFWS identifying all activities affecting the desert tortoise, as applicable.

- Encounters with desert tortoise are to be reported to an authorized or qualified biologist. A record will be maintained of all desert tortoises handled by the biologists. Information collected on live tortoises will include:

    - The location(s) (narrative and maps) and dates of observations

    - General condition and health, including injuries and state of healing and whether animals voided their bladders

    - Location moved to and from, if handled

    - Diagnostic markings (identification numbers or marked lateral scutes)

    - Photographs of each desert tortoise

Mitigation Measures

If potential impacts cannot be avoided, the following measures will be implemented to mitigate impacts.

Burrowing Owl

As required by CEQA, the following measures will be implemented for burrowing owl.

- **MM-Wildlife-1**: In the event that a burrowing owl is found present within or near the Project ROW during the burrowing owl nonbreeding season (September 1 to January 31) and if avoidance is not possible, a Burrowing Owl Mitigation and Monitoring Plan shall be submitted to CDFW for review and approval prior to relocation of owls. The Burrowing Owl Mitigation and Monitoring Plan shall describe proposed relocation and monitoring plans. The plan shall include the number and location of occupied burrow sites and details on adjacent or nearby suitable habitat available to owls for relocation.

    - If no suitable habitat is available nearby for relocation, details regarding the creation of artificial burrows (numbers, location, and type of burrows) shall also be included in the plan. The Plan shall also describe proposed offsite areas to preserve to compensate for impacts to burrowing owls/occupied burrows on the Project.

    - As compensation for the direct loss of burrowing owl nesting and foraging habitat, the Applicant shall mitigate by acquiring and permanently protecting 6.5 acres calculated on a 10-meter foraging radius of known burrowing owl nesting and foraging habitat for every pair or unpaired burrowing owl impacted by the project (those owls that required relocation because their burrows were directly impacted). The Applicant shall set-up a nonwasting endowment account for the long-term management of the preservation site for burrowing owls. The site shall be managed for the benefit of burrowing owls. The preservation site, site management, and endowment shall be approved by CDFW.

Desert Tortoise

- **MM-Wildlife-2**: If an injury or death of a listed species should occur due to Project activities, the biologist shall notify BLM immediately and no later than 24 hours following the incident, including:
    - The date and time of the finding or incident (if known)
    - Location of the carcass or injured animal
    - A photograph, cause of death, if known, and any other pertinent information
- **MM-Wildlife-3:** Upon locating a desert tortoise dead or injured as a result of project activities, the biologist shall notify BLM, CDFW, and USFWS in writing within five days of the finding. If a tortoise is killed by project activities, it shall be salvaged according to *Salvaging Injured, Recently Dead, Ill, And Dying Wild, Free-Roaming Desert Tortoise (Gopherus agassizii)* prepared by Kristin Berry, June 2001. The permittee shall pay to have these tortoises necropsied. The information provided will include:
    - The date and time of the finding or incident (if known)
    - Location of the carcass or injured animal
    - General circumstances under which it was found
    - A photograph, cause of death, if known, and any other pertinent information
- **MM-Wildlife-4:** Listed animals injured by project activities shall be transported by the authorized biologist to the nearest qualified veterinarian for treatment. Costs incurred for treatment will be paid for by AT&T. If the animal recovers, CDFW and USFWS will be contacted for final disposition of the animal.

4.5 CULTURAL RESOURCES

4.5.1 Applicable Regulations, Plans, and Standards

Federal Regulations

Section 106 of the National Historic Preservation Act

Section 106 of the National Historic Preservation Act of 1966, as amended, as required by the Advisory Council on Historic Preservation (ACHP), and with regulations contained in 36 Code of Federal Regulations (CFR) Part 800, requires that Federal agencies consider the effects of proposed projects on historic properties as part of the environmental assessment process.

Section 106 of the NHPA defines “historic properties” as:

> Any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places maintained by the

> Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization and that meet the National Register criteria (36 CFR Part 800 Protection of Historic Properties, Section 800.16 Definitions [l] [1]).

According to 36 CFR 60.4, a resource may be considered *historically significant* if it retains integrity and meets at least one of the following criteria. A property may be eligible for the National Register of Historic Places (NRHP) if the resource:

A. is associated with events that have made a significant contribution to the broad patterns of our history; or

B. is associated with the lives of persons significant in our past; or

C. embodies the distinctive characteristics of a type, period, or method of construction; or represents the work of a master; or possesses high artistic values, or represents a significant and distinguishable entity whose components may lack individual distinction; or

D. has yielded, or may be likely to yield, information important in prehistory or history.

Native American Graves and Repatriation Act

The NAGPRA established a means for Native Americans, including Indian Tribes, to request the return of human remains and other sensitive cultural items held by Federal agencies or federally assisted museums or institutions. NAGPRA also contains provisions regarding the intentional excavation and removal of, inadvertent discovery of, and illegal trafficking in Native American human remains and sensitive cultural items.

American Indian Religious Freedom Act

The AIRFA established Federal policy for protecting and preserving the inherent right of individual Native Americans to believe, express, and exercise their traditional religions including, but not limited to, access to sites, use and possession of sacred objects, and the freedom to worship through ceremonials and traditional rites.

Executive Order 13007

Executive Order 13007 requires Federal agencies to the extent practicable, permitted by law, and not clearly inconsistent with essential agency functions to: (1) accommodate access to and ceremonial use of Indian sacred sites by Indian religious practitioners and (2) avoid adversely affecting the physical integrity of such sacred sites. It also requires agencies to develop procedures for reasonable notification of proposed actions or land management policies that may restrict access to or ceremonial use of, or adversely affect, sacred sites. Sacred sites are defined in the executive order as “any specific, discrete, narrowly delineated location on Federal land that is identified by an Indian tribe, or Indian individual determined to be an appropriately authoritative representative of an Indian religion, as sacred by virtue of its established religious significance to, or ceremonial use by, an Indian religion; provided that the tribe or appropriately authoritative representative of an Indian religion has informed the agency of the

existence of such a site." It should be noted that a sacred site may not meet the NRHP criteria for a historic property; and, conversely, a historic property may not meet the criteria for a sacred site.

Religious Freedom Restoration Act

The RFRA is a 1993 U.S. Federal law aimed at preventing laws that substantially burden a person's free exercise of their religion.

Indian Trust Assets

Indian Trust Assets (ITAs) are legal interests in property held in trust by the U.S. for Indian Tribes or Indian individuals. The Secretary of the Interior, acting as the trustee, holds many assets in trust. Examples of objects that may be trust assets are lands, minerals, hunting and fishing rights, and water rights. While most ITAs are on reservations, they also may be found off reservations. The U.S. has an Indian trust responsibility to protect and maintain rights reserved by or granted to Indian Tribes or Indian individuals by treaties, statutes, and Executive Orders (EOs). These sources of trust responsibility are sometimes further interpreted through court decisions and regulations. Management of ITAs is based on, but not limited to, the following EOs and memorandums:

Executive Order 13175

EO 13175, Consultation and Coordination with Indian Tribal Governments, 63 F.R. 96 (November 6, 2000). EO 13175 was issued to establish regular and meaningful consultation and collaboration with tribal officials in the development of Federal policies that have tribal implications. When implementing such policies, agencies shall consult with tribal officials as to the need for Federal standards and any alternatives that limit their scope or otherwise preserve the prerogatives and authority of Indian tribes.

Government-to-Government Relations

Government-to-Government Relations with Native American Tribal Governments is a memorandum signed by President Clinton on April 29, 1994. The Memorandum directs Federal agencies to consult, to the greatest extent practicable and to the extent permitted by law, with tribal governments prior to taking actions that affect federally recognized tribal governments. Federal agencies must assess the impact of Federal government plans, projects, programs, and activities on tribal trust resources and assure that tribal government rights and concerns are considered during such development.

State Laws and Regulations

California Environmental Quality Act (CEQA)

The Proposed Action is subject to the provisions of CEQA, including the CEQA Statutes (Public Resources Code [PRC] §§ 21083.2 and 21084.1), the CEQA Guidelines (Title 14 California Code of Regulations [CCR], § 15064.5), and PRC § 5024.1 (Title 14 CCR § 4850 et seq.). These statutes and regulations, as amended, are summarized in an annually updated handbook (Association of Environmental Professionals 2012). Properties expected to be directly or indirectly affected by a proposed project must be evaluated for California Register of Historical Resources (CRHR) eligibility (PRC § 5024.1). The purpose of the CRHR is to maintain listings of the State's historical resources and to indicate which properties are to be

protected, to the extent prudent and feasible, from material impairment and substantial adverse change.

The term "historical resources" includes a resource listed in, or determined to be eligible for listing in, the CRHR; a resource included in a local register of historical resources; and any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant (CCR § 15064.5[a]). The criteria for listing properties in the CRHR were expressly developed in accordance with previously established criteria developed for listing in the NRHP.

The California Office of Historic Preservation (OHP 1995:2) regards "any physical evidence of human activities over 45 years old" as meriting recordation and evaluation. According to PRC § 5024.1(c) (1–4), a resource may be considered historically significant if it retains integrity and meets at least one of the following criteria. A property may be listed in the CRHR if the resource:

1. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;

2. Is associated with the lives of persons important in our past;

3. Embodies the distinctive characteristics of a type, period, region, or method of installation, or represents the work of an important creative individual, or possesses high artistic values; or

4. Has yielded, or may be likely to yield, information important in prehistory or history.

Under CEQA, if an archeological site is not a historical resource but meets the definition of a "unique archeological resource" as defined in PRC § 21083.2, then it should be treated in accordance with the provisions of that section. A unique archaeological resource is defined as follows:

An archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, it has a high probability of meeting any of the following criteria:

- Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information;

- Has a special and particular quality, such as being the oldest of its type or the best available example of its type; or

- Is directly associated with a scientifically recognized important prehistoric or historic event or person.

Resources that neither meet any of these criteria for listing in the CRHR nor qualify as a "unique archaeological resource" under CEQA PRC § 21083.2 are viewed as not significant. Under CEQA, "A non-unique archaeological resource need be given no further consideration, other than the simple recording of its existence by the lead agency if it so elects" (PRC § 21083.2[h]).

Impacts that adversely alter the significance of a resource listed in or eligible for listing in the CRHR are considered a significant effect on the environment. Impacts to historical resources from a proposed

project are thus considered significant if the project (1) physically destroys or damages all or part of a resource; (2) changes the character of the use of the resource or physical feature within the setting of the resource, which contribute to its significance; or (3) introduces visual, atmospheric, or audible elements that diminish the integrity of significant features of the resource.

County of San Bernardino General Plan

The County of San Bernardino General Plan Conservation Element includes the following policies regarding the protection and preservation of cultural and paleontological resources:

- Identify and protect important archaeological and historic cultural resources in areas of the County that have been determined to have known cultural resource sensitivity.
- Identify and protect important archaeological and historic cultural resources in all lands that involve disturbance of previously undisturbed ground.
- Establish programs to preserve the information and heritage value of cultural and historical resources.
- The County will comply with Government Code Section 65352.2 (SB 18) by consulting with tribes as identified by the California Native American Heritage Commission on all General Plan and specific plan actions.
- Ensure that important cultural resources are avoided or minimized to protect Native American beliefs and traditions.

Paleontological Resources

California Desert Conservation Area Plan of 1980

The California Desert Conservation Area (CDCA) Plan defines multiple-use classes for BLM-managed lands in the CDCA. The CDCA Plan aims to maintain the availability of mineral resources on public lands for exploration and development. As part of the plan, cultural and paleontological resources were addressed as to adverse impacts caused by burros, livestock, motorized vehicle use, mining, and utilities.

Department of Interior-Fossils on Federal and Indian Lands

In 2000, the Secretary of the Interior submitted a report to Congress entitled “Assessment of Fossil Management on Federal and Indian Land.” This report was prepared with the assistance of eight Federal agencies including the Bureau of Indian Affairs, BLM, the Bureau of Reclamations, the United States Fish and Wildlife Service, the United States Forest Service, the National Park Service, the United States Geological Survey, and the Smithsonian Institution. The consulting agencies concluded that administrative and congressional actions with respect to fossils should be governed by these seven principles:

1. Fossils on Federal land are a part of America’s Heritage.
2. Most vertebrate fossils are rare.

3. Some invertebrate and plant fossils are rare.

4. Penalties for fossil theft should be strengthened.

5. Effective stewardship required accurate information.

6. Federal fossil collections should be preserved and available for research and public education.

7. Federal fossil management should emphasize opportunities for public involvement.

BLM Potential Fossil Yield Classification (PFYC) System

BLM established the PFYC System to quantify the occurrence of and risk of impact to paleontological resources on public lands. Geologic units are assigned a classification between one (lowest) and five (highest). The PFYC System is used by BLM to assess impacts to paleontological resources and suggest appropriate mitigation measures. During the assessment of impacts upon paleontological resources, the affected geologic formations are classified based on the relative abundance of vertebrate fossils and significant nonvertebrate fossils using the BLM's PFYC. Under the PYFC, a higher classification indicates a higher potential fossil yield rating.

- **Class 1-Very Low:** Geologic units rated with a very low yield potential are those that are, for the most part, not likely to contain fossil remains, such as igneous rocks (rocks cooled by magma), and metamorphic rocks (rocks changed by heat and pressure), as well as sedimentary rocks that are older than 542 million years (Precambrian in age).

- **Class 2-Low:** Geologic units with low yield potential are those that are not likely to contain vertebrate fossils or scientifically significant nonvertebrate fossils, such as units that are generally younger than 10,000 years, recent eolian deposits, and sediments that have undergone significant physical and chemical changes.

- **Class 3-Moderate or Unknown:** Geologic units with moderate or unknown yield potential are sedimentary deposits in which fossil discoveries vary in significance, abundance, and predictable occurrence (moderate), or sedimentary units of unproven or unknown fossil potential.

- **Class 4-High:** Geologic units with high yield potential are those that contain a high occurrence of significant fossils that have been documented, but which may vary in occurrence and predictability.

- **Class 5-Very High:** Geologic units with very high yield potential are those that consistently and predictably produce vertebrate or scientifically significant non-vertebrate fossils.

Omnibus Public Land management Act Paleontological Resources Preservation

The Public Land Management Act Paleontological Resources Preservation (OPLMA-PRP) calls on the Secretary of the Interior to provide protection for vertebrate paleontological resources on Federal lands by limiting the collection of vertebrate fossils and scientifically important fossils to permitted and qualified researchers.

4.5.2 Affected Environment

Cultural Setting

Prehistoric Overview

California's southern desert region has a long history of human occupation, with dates of the earliest evidence of settlement appearing during the early Holocene, circa (ca.) 8,000 years B.C. (Moratto 1984:96–97; Sutton et al. 2007:233–237), and is still home to several tribes — each with its own language and customs. This now arid desert region includes the Colorado and Mojave deserts, located east of the Sierra Nevada, Peninsular, and Transverse ranges. Prehistoric material culture in this region has been categorized according to periods or patterns that define technological, economic, social, and ideological elements. Within these periods, archaeologists have defined cultural patterns or complexes specific to prehistory within the desert region, including the project area.

Table 4-8 illustrates the chronological framework developed for the Mojave Desert (after Sutton et al. 2007: 236). This framework is divided into four major periods: Pleistocene period (ca. 10,000 to 8000 B.C.), Early Holocene period (8000 B.C. to 6000 B.C), Middle Holocene period (7000 B.C. to 3000 B.C.), and Late Holocene period (2000 B.C. to Historic Contact). Within these broad temporal periods are variations in the timing and nomenclature of cultural complexes for the desert region. The timescales referenced in the following discussion are presented as calendar dates (years B.C. /A.D.), as well as geologic era.

Table 4-8: Cultural Chronology for the Mojave Desert

Period	Cultural Complex	Years (B.C.–A.D.)
Pleistocene	Paleoindian	10,000 – 8000 B.C.
Early Holocene	Lake Mojave and Pinto complex	8000 – 6000 B.C.
Middle Holocene	Pinto complex	7000 – 3000 B.C.
Late Holocene	Gypsum, Rose Springs, and Late Prehistoric complex	2000 B.C. – Historic Contact

Details regarding the prehistory of the region are presented in the Cultural Resources Report (Appendix I).

Ethnographic Overview

The tribal groups with ancestral claims to the land where the Project is located include: Mohave, Serrano, and Southern Paiute/Chemehuevi. The Mohave occupied adjoining portions of California, Arizona, and Nevada along the Colorado River (Kroeber 1925:726). Most Mohave people lived in settlements generally located on the east side of the Colorado River. The largest settlement was located near Needles (Baksh and Hilliard 2006:34). The Serrano occupied an area in and around the San Bernardino Mountains between approximately 450 and 3,350 meters (1,500 to 11,000 feet) amsl. Their territory extended west into the Cajon Pass, east past Twentynine Palms, north past Victorville, and south to Yucaipa Valley. Year-round habitation tended to be located on the desert floor, at the base of the mountains, and up into the foothills, with all habitation areas requiring year-round water sources

(Bean and Smith 1978; Kroeber 1908b). The Chemehuevi occupied an area extending south from Needles to the town of Blythe and from a region east of Twentynine Palms to the Colorado River, where their principal settlements were concentrated (Baksh and Hilliard 2005:11). The Chemehuevi language belongs to the Southern Numic subbranch of the Uto-Aztecan family and is thus closely related to the Southern Paiute and Ute languages (Mithun 2006:539, 543).

Historic Overview

Over the last 200 years, land use of the Eastern Mojave Desert by Europeans has consisted of three major patterns: transportation, mining, and sparse settlement. Spanish and early American exploration between 1776 and the 1850s represents an area of transience in which the desert was utilized primarily as an avenue of communication and/or commerce. One of the earliest routes used was the Old Spanish Trail.

Within the project area, a local branch of the Old Spanish Trail known as the Armijo route was established by Antonio Armijo circa 1829 and 1830 when the territory was controlled by Mexico. Armijo was the first trader to make use of the trail, establishing a line of communication and textile trade business between the Spanish outposts of New Mexico and Alta California(Old Spanish Trail Association). Unlike the main route of the Old Spanish Trail, which breaks away from the Mojave River near Afton Canyon (Earle 2005), the Armijo route continues eastward until roughly the modern boundaries of the Mojave National Preserve. From here, the Armijo route turns north through the Silurian Valley before rejoining the main route near the southern edge of Death Valley (The Old Spanish Trail Association 2014b; National Park Service 2010; Hayes 2005:15).

In the local history, no railroad was more influential than the Tidewater and Tonopah (T&T) Shortline Railroad. Construction of the line began in 1905 out of Ludlow, California, heading north toward the bustling town of Silver Lake. The railroad continued further north across the dry lake bed of Silver Lake itself; tracks across the lake were completed in March 1906 (Myrick 1991:548). By the time the railroad was completed in October 1907, the regional mining boom was in mid-collapse. This led to minimal funding for further branch lines of the railroad, which had been planned. Despite the regional depression, the T&T Railroad operated succesfully as both a freight and passenger line. In partnership with the Atchinson, Topeka and Santa Fe Railroad, the T&T railroad offered the shortest and fastest service between the Eastern Mojave region and Los Angeles (Myrick 1991:556). During World War II the T&T Railroad was requisitioned by the United States War Department. Both rails and ties were removed between 1942 and 1943; many if not all of the iron rails were used to support the war effort, while many ties were used in building construction throughout San Bernardino County (Hayes 2005a; Myrick 1991:593). Despite the dismantling of the railroad, the T&T Railroad did not completely abandon the line until 1946 (Myrick 1991:593). Present-day SR- 127, also a historic route, parallels the former T&T Railroad.

Both the towns of Silver Lake and Baker were directly impacted by the T&T Shortline Railroad. Silver Lake received a large population growth due to increased passenger traffic on the railway (Myrick 1991:549-550, 556). A post office was established at Silver Lake in 1907 and operated as the central mail center for both the Silver Lake and Crackerjack mining districts. Early development of the town and local mining efforts was also aided by the Rose-Heath-Fisk Company store, which supplied general merchandise, lumber, and feed. An auto-stage from Silver Lake to Crackerjack also operated from the store (Hensher 1985, Myrick 1991,Vredenburgh 1994).In 1916 the town was moved to higher ground alongside the rerouted roadbed of the T&T Railroad (Hensher 1985:9). By 1926, the postal service

established a Contract Air Mail route through the local airspace; an emergency airfield was constructed on Silver Lake and was contracted to Western Air Express (Hayes 2005a, 2005b:167).

During the 1930s, Baker became a service stop for many workers traveling between Los Angeles and the Hoover Dam. The main service stations along the corner of Baker Boulevard and Death Valley Road, operated by Fairbanks and Failings, respectively, remained open 24 hours a day. Failing's café purportedly had a fully functioning bar despite Prohibition and became a popular stop for locals, travelers, and Hoover Dam construction workers. The Edison Company Boulder Dam-San Bernardino transmission line (CA-SBR-10315H), completed in 1931 to aid in the construction of Hoover Dam, ran directly through Baker. Following the completion of the dam, the Boulder Dam-Los Angeles transmission line (CA-SBR-7694) was constructed north of Baker; it became energized in 1936 (Hayes 2005a). Worker camps associated with the construction of both lines are also known to exist in the area surrounding Baker. Baker saw an increase in activity during World War II as the military used the town to house trainees of the Civil Air Patrol program at Silver Lake (Engen 1997:3-5). Following World War II, Baker continued to operate as a popular service and attraction stop for travellers between Los Angeles and Las Vegas.

Paleontological Setting

The Proposed Project lies mostly within the Mojave Desert geomorphic province (Jahns 1954; Hewitt 1954; Norris and Webb 1990), which is located primarily in California but extends eastward into Nevada, where it merges with the Basin and Range province (the Great Basin).

A geomorphic province is a naturally defined geologic region with distinct and unique landforms that have developed due to a specific combination of geologic units, faults and fault zones, and climate.

The Great Basin province is characterized by interior drainage with lakes and playas (dry lake basins) and a typical mountain and valley structure including subparallel, fault-bounded ranges separated by down-dropped basins. Extensional tectonics (a pulling apart of the earth's crust) is predominant in the Basin and Range province, although some northwest-trending right-lateral strike-slip (mostly horizontal side-to-side motion) faulting is present.

The Mojave Desert geomorphic province is a broad interior region of isolated mountain ranges separated by expanses of desert plains. It has an interior enclosed drainage, with playas being common. Fault trends largely control the Mojave Desert topography. Mountain ranges in the Mojave Desert geomorphic province are composed of complexly faulted and folded basement rocks that range from pre-Cambrian (greater than 570 million years before present [mybp]) to Mesozoic (66 to 240 mybp). Volcanic and sedimentary rocks deposited in the Cenozoic (less than 66 mybp to present) are common as well within the Mojave Desert geomorphic province. Younger faulting in the eastern half of the Mojave Desert geomorphic province is characterized by generally north- to northwest-trending normal faults associated with regional extension (pulling apart) in the Basin and Range province. In the Mojave Desert geomorphic province, normal faulting is one of the most common types, exhibiting movement along a generally nonvertical plane such that the upper part moves downward along the plane causing an offsetting of the geologic unit(s).

The geologic units exposed in the Proposed Project area occur as three types:

- Alluvium: sedimentary deposits derived from the physical and chemical breakdown and transport in the flatter valley portions of the desert plains and along the slopes of alluvial fans
    - Alluvial stream deposits associated with the Mojave River and other minor drainages
    - Lake or playa deposits associated with the Silver Lake basin
- Alluvial fans: cone-shaped accumulations of alluvial material along the bases of mountains, and hills that prograde into the Silver Lake Basin
- Bedrock: igneous, metamorphic, and sedimentary rocks exposed in the mountain areas, typically surrounded by alluvium and alluvial fans

In the Mojave Desert, Quaternary stream and valley alluvium, alluvial fan deposits (both younger and older), and lake and playa deposits are exposed along slopes and low-lying flats and valleys. These deposits generally overlie and/or are marginal to bedrock units.

Alluvial fan deposits have been mapped mostly as generalized units, with some detailed segregation of younger and older active to inactive units. Quaternary young alluvial fan deposits (Qyf) is a poorly sorted mixture of sand and gravel, typically uncemented, unconsolidated, and easily eroded by water or wind. The surface appears as an undulating topography with little erosional cutting by stream channels. The alluvial fan deposits associated with this unit are characterized by surfaces and stream channels actively receiving sediments within the last few years or decades from ephemeral streams. These deposits may be prone to flooding in some areas. Lake and playa deposits from larger basins such as Silver Lake are identified as Quaternary lacustrine, playa, and estuarine deposits (Ql). Older lake deposits of Late Pleistocene Lake Mojave (Qol) are present above the northwestern area of current Silver Lake playa. Quaternary old alluvial fan deposit (Qof) are present on Fort Irwin and are characteristically elevated above the adjacent topography and eroded. They are Early to Middle Pleistocene in age and consist of poorly sorted silt, sand, and gravel.

Most of the Highway 127 Proposed Project is within the Silver Lake basin. The current Silver Lake playa contains lake sediments that consist of a pale gray to tan, fine-grained, silt-rich clay with minor interbedded fine sand. Although these dry lake or playa sediments are very young, Late Holocene at the surface (Bedrossian 2012), they increase in age with depth.

At various times during the late Pleistocene and early Holocene, because of increased flow of the Mojave River, cooler temperatures, and lower evaporation rates, a larger and deeper body of water called Lake Mojave occupied the current Silver and Soda lake basins (Brown et al. 1990). At different times, at least six different large lakes occupied this area between 8,700 and 23,000 years Before Present (B.P.) (Brown et al. 1990; Wells et al. 1990). The highest-stand of Pleistocene Silver Lake (the northern portion of Pleistocene Lake Mojave) may have left lacustrine deposits up to an elevation of 950 feet, amsl (Reynolds 2014). Pluvial Lake Mojave had two major high stands between 16,000 to 18,000 years (Lake Mojave I) and 11,400 to 13,700 years (Lake Mojave II) B.P., with high stand shorelines at elevations of 944.6 and 936.4 feet (Brown et al. 1990). The complex history of lake fluctuations is recorded in shoreline features including beach ridges and subsurface deposits at various elevations above the current Silver Lake playa. A number of fossil sites are known from the Silver Lake portion of the basin (Reynolds 2014). The San Bernardino County Museum (SBCM) has eight previously recorded paleontological sites near northern end of the Silver Lake. All of these sites were found during either

paleontological resource surveys or paleontological resource monitoring of construction projects in this area (Reynolds 2014).

Previous research and construction excavations near or within the utility corridors at the north end of Silver Lake recovered a diverse assemblage of significant Late Pleistocene vertebrate fossils and invertebrate fossils that describe the environment and habitat of the Lake Mojave between 23,000 and 10,000 years ago. The same fauna is expected to have been present, and to be preserved as fossils in variable concentrations, along all margins of Late Pleistocene Mojave in the Silver Lake basin. During the paleontological resource survey, one paleontological site(MAR0414-2014-1) was discovered just off the Project ROW in an abandoned gravel quarry.

Below the high stand elevation of 950 feet for Late Pleistocene Lake Mojave, significant paleontological resources would be expected to be recovered during paleontological resource monitoring of trenching for installation of the Highway 127 AT&T fiber-optic line.

4.5.3 Significance Criteria

The Advisory Council on Historic Preservation (the body charged with implementing the National Historic Preservation Act of 1966 [as amended]) defines historic properties as any "…prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places maintained by the Secretary of the Interior" Title 36 Code of Federal Regulations (36 CFR) §800.16(1).

Sites are evaluated against four criteria to determine eligibility for inclusion in NRHP (36 CFR 60.4a-d). The quality of significance in American history, architecture, archeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity, design, setting, materials, workmanship, feeling, association and:

- That are associated with events that have made a significant contributions to the broad patterns of our history;
- That are associated with the lives of persons significant in our past;
- That embody the distinctive 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; or
- That yielded, or may be likely to yield, information important in prehistory or history.

An impact to a sacred site is considered significant if the Proposed Project:

- Restricts access to such sites
- Impedes the exercise of ceremonies at such sites
- Affects the physical integrity of such sites
- Impacts a distinct Native American cultural practice

An impact to a historic/archaeological resource is considered significant if the Proposed Project:

- Adversely affects historic/archaeological resource values listed on or eligible for listing on the NRHP

Pursuant to CEQA, impacts to cultural resources would be considered *significant* if the Proposed Project:

- Impacts a distinct Native American cultural practice
- Causes a substantial adverse change in the significance of a historical resource as defined in §15064.5
- Causes a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5
- Directly or indirectly destroys a unique paleontological resource or site or unique geologic feature
- Disturbs any human remains, including those interred outside formal cemeteries

4.5.4 Environmental Effects/Impacts

The San Bernardino Archaeological Information Center (SBAIC), located at the San Bernardino County Museum, houses records of the California Historical Resources Information System (CHRIS) for San Bernardino County. Chambers Group requested a CHRIS cultural resource records search for the Proposed Project area in December 2013. The records search included a 1.6-kilometer (km, 1-mile) radius around the project area and was conducted by SBAIC staff.

The records searches identified 48 prior technical cultural resources technical studies within 1.6-km (1 mile) of the project area and 22 academic overview studies. Twenty-six of the cultural resources technical studies consist of block and linear surveys that crossed the current project area as early as 1977 and as recently as 2012. The remaining 22 cultural resources technical studies were located to the south, southeast, southwest, north, northeast, and northwest of the project area; and are all within 1.6 km (1 mile) of the Proposed Project boundaries. The academic overview studies are a testament to the archaeological sensitivity of region, including the project area. The prior studies and the records search results summary letter from SBAIC is presented in the Cultural Resources Report (Appendix I).

The records searches identified 97 previously recorded cultural resources within 1.6 km (1 mile) of the Proposed Project area. The previously recorded resources include 23 isolates, 44 historic sites, 22 prehistoric sites, 3 multicomponent sites, and 5 sites listed as unknown. These five sites consist of rock features and could either be prehistoric or historic in origin. Of the 97 cultural resources, 14 were identified within the project area.

On May 15, 2014, Chambers Group requested that the Native American Heritage Commission (NAHC) conduct a search of its Sacred Lands File to determine if cultural resources important to Native Americans have been recorded in the Project area. On May 21, 2014, Chambers Group received a response from NAHC stating that the search of its Sacred Lands File did not indicate the presence of Native American cultural resources within 1.6 km (1 mile) of the Project area.

The NAHC also provided a list of 11 Native American contacts that may have knowledge of cultural resources near the Project area. Chambers Group prepared and mailed a letter to each of the NAHC-listed contacts in June 2014, requesting information related to any Native American cultural resources within or immediately adjacent to the Project area. Documentation related to Native American consultation is found in the Cultural Resources Report (Appendix I).

To date, Chambers Group has received no responses to the letters that were sent to NAHC-listed contacts; however, the San Manuel Band of Mission Indians has expressed interest in the project and has accompanied representatives of the BLM on field visits to the project area.

Proposed Action

Cultural Resources

Chambers Group archeologists recorded or updated 78 archaeological resources in the SR-127 survey area in the Cultural Resources Report (Appendix I). No ethnographic resources were encountered. The recorded resources include 32 isolates, 29 historic sites, 16 multicomponent sites, and 1 prehistoric site. Of the 78 cultural resources, 68 were newly identified, and 10 were previously recorded archaeological sites. The findings for the Proposed Project survey area are presented separately below. The resource descriptions and accompanying tables include NRHP eligibility recommendations for each newly identified or relocated resource.

A total of 38 newly identified archaeological sites were recorded in the cultural resources survey for the Proposed Project (Table 4-9). Of these, 21 are historic sites, 16 are multicomponent sites, and one is a prehistoric site. Site descriptions and eligibility recommendations are provided in the Cultural Resources Report (Appendix I).

Six of the 38 newly identified archaeological sites required testing to determine if the properties are eligible for the NRHP under Criterion D of Section 106.

Table 4-9: Newly Recorded Archaeological Sites

Primary Number	Trinomial	Field Designation	Resource Description	NRHP/CRHR Eligibility Recommendation	Date Recorded
-	-	Site-01	Multicomponent: lithic and refuse scatter	Not Eligible	April 2014
-	-	Site-02	Historic: lithic scatter and refuse scatter	Not Eligible	April 2014
-	-	Site-03	Historic: refuse scatter	Not Eligible	April 2014
-	-	Site-04	Historic: refuse scatter	Not Eligible	April 2014
-	-	Site-05	Historic: refuse scatter	Not Eligible	April 2014
-	-	Site-06	Historic: refuse scatter	Not Eligible	April 2014
-	-	Site-07	Prehistoric: lithic scatter	Not Eligible	April 2014

Table 4-9: Newly Recorded Archaeological Sites

Primary Number	Trinomial	Field Designation	Resource Description	NRHP/CRHR Eligibility Recommendation	Date Recorded
-	-	Site-08	Multicomponent: refuse scatter and rock alignments	Not Eligible	April 2014
-	-	Site-12	Multicomponent: refuse and lithic scatter	Not Eligible	April 2014
-	-	Site-14	Historic: refuse scatter	Not Eligible	April 2014
-	-	Site-15	Multicomponent: refuse and lithic scatter	Not Eligible	April 2014
-	-	Site-16	Multicomponent: refuse and lithic scatter; rock cairn	Not Eligible	April 2014
-	-	Site-18	Multicomponent: lithic scatter and historic refuse	Not Eligible	April 2014
-	-	Site-22	Historic: refuse scatter	Not Eligible	April 2014
-	-	Site-25	Historic: refuse scatter	Not Eligible	April 2014
-	-	Site-26	Historic: refuse scatter	Not Eligible	April 2014
-	-	Site-27	Historic: Silver Lake Airfield	Eligible	May 2014
-	-	Site-29	Historic: refuse scatter	Not Eligible	April 2014
-	-	Site-31	Historic: refuse scatter	Not Eligible	April 2014
-	-	Site-33	Historic: refuse scatter	Not Eligible	April 2014
-	-	Site-35	Historic: refuse scatter	Not Eligible	April 2014
-	-	Site-37	Historic: refuse scatter	Not Eligible	April 2014
-	-	Site-39	Historic: refuse scatter	Not Eligible	April 2014
-	-	Site-41	Historic: refuse scatter	Not Eligible	April 2014
-	-	Site-44	Multicomponent: refuse and rock cairns	Not Eligible	March 2014
-	-	Site-45	Historic: road	Not Eligible	March 2014
-	-	Site-46	Historic: road	Not Eligible	March 2014
-	-	Site-47	Multicomponent: lithic scatter and historic refuse	Not Eligible	March 2014
-	-	Site-48	Multicomponent: lithic scatter and historic refuse	Not Eligible	March 2014
-	-	Site-49	Multicomponent: refuse and lithic scatter	Not Eligible	April 2014

Table 4-9: Newly Recorded Archaeological Sites

Primary Number	Trinomial	Field Designation	Resource Description	NRHP/CRHR Eligibility Recommendation	Date Recorded
-	-	Site-50	Historic: refuse scatter	Not Eligible	March 2014
-	-	Site-55	Multicomponent: refuse and lithic scatter	Not Eligible	April 2014
-	-	Site-56	Multicomponent: lithic and shell scatter, refuse scatter	Not Eligible	March 2014
-	-	Site-57	Historic: refuse scatter	Not Eligible	April 2014
-	-	Site-59	Multicomponent: refuse, lithic, and pottery scatter	Not Eligible	March 2014
-	-	Site-61	Multicomponent: refuse and lithic scatter; groundstone	Not Eligible	April 2014
-	-	Site-62	Multicomponent: pottery scatter and historic refuse scatter	Not Eligible	April 2014
-	-	Site-65	Multicomponent: lithic scatter and railroad berm	Not Eligible	June 2014

The literature review indicates that 77 archaeological sites have been previously recorded within a 1-mile radius of the project area (Table 4-10), including 44 historic, 22 prehistoric, 3 multicomponent sites, and 5 sites that may be either prehistoric or historic. Eight of these sites are located within the Proposed Project area. Updates of these eight sites are provided below. One of the eight previously recorded sites identified in the literature search (CA-SBR-7964) were found to be eligible for the NRHP. The remaining seven sites were found to be not eligible for the NRHP (CEQA Checklist 3.5.2 [b]).

Table 4-10: Updates to Previously Recorded Sites

Primary Number	Trinomial	Resource Description	NRHP/CRHR Eligibility	Recorder and Year	Date Updated
36-002340	CA-SBR-2340H	Historic: Tonopah & Tidewater Railroad grade	Not Eligible	Winslow 2013	April 2014
36-002955	CA-SBR-2955H	Historic: Silver Lake Townsite	Not Eligible	Apple 1991	April 2014
36-007964	CA-SBR-7964	Historic: Boulder Dam – Los Angeles 287.5 kV Transmission Line	Eligible	Jones 2011	April 2014
36-024535	CA-SBR-15576H	Multicomponent: lithic scatter and refuse scatter	Not Eligible	SRI 2011	April 2014
36-024536	CA-SBR-15577H	Historic: refuse scatter	Not Eligible	SRI 2011	April 2014
36-024537	CA-SBR-15578H	Historic: refuse scatter	Not Eligible	SRI 2011	April 2014
36-024538	CA-SBR-15579H	Historic: can scatter	Not Eligible	SRI 2011	April 2014
36-024539	CA-SBR-15580H	Historic: can scatter	Not Eligible	SRI 2011	April 2014

Prehistoric Sites

Data gathered from the 2014 field season provided a wealth of information on past human activities within the project area. The findings included evidence of tool stone production and maintenance, grinding with metates and manos, and the use of ceramic vessels. Furthermore, cross dating of several artifacts (ceramics and the Rose Spring Corner Notched projectile point) indicate that the project area was occupied as early as the late prehistoric period.

During this time the region had become slightly cooler and population sizes throughout the desert appear to have increased, as evidenced by a higher frequency of archaeological sites. As a result of this changing climate, it is highly likely that the dry lakebeds of Silver Lake filled with water for several decades before evaporating. The short-lived marsh-like environment would have undoubtedly attracted human populations that would be ready to exploit readily available resources such as waterfowl, freshwater clams, small game animals and a variety of usable plants. The presence of late-stage reduction flakes (debitage), ceramics, and ground stone suggest food-processing activities occurred in this place that is dry and desolate today.

All data considered, the material culture identified within the project might represent the remains of a specialized economy that was designed to exploit resources along a lakeshore environment dating back to the Mojave Desert's late prehistoric period.

And while all of this information is important to address important research questions pertaining to a specialized economy, the types of sites within the project area are not unusual. Many of these sites lie within a highly disturbed area and lack sufficient integrity to nominate the sites for listing on the NRHP. Therefore, it is Chambers Group professional opinion that the project will not have an adverse effect on eligible properties (CEQA Checklist 3.5.2 [b]).

Historic Sites

This region is as rich in history as the prehistoric period. The data gathered from the cultural survey indicates that the following structures are in the area: Edison Company's Boulder Dam's San Bernardino and Los Angeles Transmission Lines, the Silver Lake town site, Tonopah and Tidewater Railroad, and the Silver Lake Airfield, which was in highest use during World War II, when it was used to train U.S. Army and Navy pilots. Several well-known Southern California pilots, including Evelyn "Pinky" (Kilgore) Brier, were instructors here during the war. Many of the sites associated with these historic places and structures consist of roadside trash and domestic refuse.

Chambers Group recommends one of the historic sites, the Silver Lake Airfield (Site-027) as eligible for the NRHP. However, Site-027 (Silver Lake Airfield) is slightly outside of the project area and will not be adversely affected by project-related activities. Site CA-SBR-7964, the Boulder Dam – Los Angeles 287.5 kV Transmission Line, has already been nominated to the NRHP. The remaining 42 historic sites and site components appear to have very little data potential beyond what has been recorded in the course of this survey, having limited artifact assemblages in terms of diversity and total artifact count.

Earth-moving activities, off-road vehicle use, unauthorized artifact collection, and disturbances associated with project-related activities have the potential to significantly affect prehistoric and historic resources within the project area. Although this investigation presumes that the project will not

significantly have an adverse effect on eligible properties, Mitigation Measure MM-Cultural-1 is provided below to reduce potentially significant impacts (CEQA Checklist 3.5.2 [a]).

Discovery of Human Remains

All discovered human remains shall be treated with respect and dignity. California state law (California Health & Safety Code 7050.5) and federal law and regulations ([Archaeological Resources Protection Act (ARPA) 16 USC 470 & 43 CFR 7], [Native American Graves Protection & Repatriation Act (NAGPRA) 25 USC 3001 & 43 CFR 10] and [Public Lands, Interior 43 CFR 8365.1-7]) require a defined protocol if human remains are discovered in the state of California regardless if the remains are modern or archaeological.

Upon discovery of human remains in California, all work in the area must cease immediately, nothing disturbed and the area is to be secured. The County Coroner's Office of the county where the remains were located must be called. The Coroner has two working days to examine the remains after notification. The appropriate land manager/owner or the site shall also be called and informed of the discovery. If the remains are located on federal lands, federal land managers/federal law enforcement/federal archaeologist are to be informed as well because of complementary jurisdiction issues. It is very important that the suspected remains and the area around them remain undisturbed and the proper authorities called to the scene as soon as possible as it could be a crime scene. Disturbing human remains is against federal and state laws and there are criminal/civil penalties including fines and/or time in jail up to several years. In addition, all vehicles and equipment used in the commission of the crime may be forfeited. The Coroner will determine if the bones are historic/archaeological or a modern legal case (CEQA Checklist 3.5.2 [d]).

Paleontological Resources

Trenching for the installation of the fiber optic line in surficial geologic units consisting of Quaternary young alluvial fan deposits (Qyf), Quaternary lacustrine and playa deposits (Ql) and Quaternary old lacustrine and playa deposits (pluvial Lake Mojave) (Qol) rated as high and very high in sensitivity may impact buried paleontological resources. To minimize the potential impacts to these resources, mitigation measure MM-Cultural-2 is provided below to reduce potentially significant impacts (CEQA Checklist 3.5.2 [c]).

No Action Alternative

The No Action Alternative would not result in potential effects to cultural and paleontological resources.

4.5.5 Mitigation Measures

Proposed Action

MM-Cultural-1: Due to the presence of several archaeological sites within and in the immediate vicinity of the project area a qualified archaeological monitor and a trained Native American cultural monitor shall be present during all ground disturbing activities related to the project.

MM-Cultural-2: To minimize the potential impacts to these resources, a paleontological monitor should be present in these areas to monitor ground-disturbing activities.

No Action Alternative

The No Action Alternative would not result in significant or substantial impacts to cultural resources. No mitigation measures are proposed or required.

4.6 ENVIRONMENTAL JUSTICE

4.6.1 Applicable Regulations, Plans, and Standards

Federal Regulations

Executive Order 12898 (Environmental Justice) requires Federal agencies to identify and address disproportionately high and adverse human health or environmental effects on minority and low-income communities, while Executive Order 13045 (Protection of Children from Environmental Health Risks and Safety Risks) requires that Federal agencies identify and address the environmental health risks and safety risks that may disproportionately affect children.

State Laws and Regulations

CSLC has developed and adopted an Environmental Justice Policy to ensure equity and fairness in its own processes and procedures. CSLC adopted an amended Environmental Justice Policy on October 1, 2002, to ensure that "Environmental Justice is an essential consideration in the Commission's processes, decisions and programs and that all people who live in California have a meaningful way to participate in these activities." (CSLC 2014) The policy stresses equitable treatment of all members of the public and commits to consider environmental justice in its processes, decision-making, and regulatory affairs which is implemented, in part, through identification of, and communication with, relevant populations that could be adversely and disproportionately impacted by CSLC projects or programs, and by ensuring that a range of reasonable alternatives is identified that would minimize or eliminate environmental impacts affecting such populations.

4.6.2 Affected Environment

The Proposed Action is located within the sparsely populated northeastern portion of San Bernardino County where residents have a lower than average income level when measured against the San Bernardino County averages (County 2007b). The Proposed Action is primarily located in remote areas. In a few places near the community of Baker, residences are within a mile of the Route. A group of residential homes is located at least 0.11 mile from the Route near the northwestern corner of the intersection of Death Valley Road and Schoolhouse Lane.

4.6.3 Significance Criteria

Pursuant to the NEPA, consideration of significant impact on the human environment is conducted in accordance with Title 40 Code of Federal Regulations 1508.27 (Section 1.4.1). Under NEPA, an impact associated with environmental justice is considered significant if the Proposed Action:

- Impacts a minority and/or low-income population
- Impacts distinct Native American cultural practices

- Has a disproportionately high or adverse human health or environmental effects on minority communities

Under the CSLC Environmental Justice Policy, environmental justice impacts are significant if:

- The project causes adverse and significant public health or environmental impacts on the public; and
- The adverse project impacts would disproportionately affect minority or low-income populations.

4.6.4 Environmental Effects

Proposed Action

The Proposed Action consists of installing approximately 12.25 miles of FOC within previously disturbed areas along the Project Route. The Proposed Action would not affect low-income or minority populations as defined in Executive Order 12898 as no low-income or minority populations reside within the immediate vicinity of the Project Route.

Short-term environmental effects, including construction noise and air quality emissions from construction equipment, would affect the area's population equally, without regard to race, ethnicity, or income. A disproportionate impact, either negative or positive, would not occur to any low-income minority.

No Action Alternative

The No Action Alternative would not result in potential effect.

4.6.5 Mitigation Measures

Proposed Action

Implementation of the Proposed Action would not result in substantial impacts associated with environmental justice. No mitigation measures are proposed or required.

No Action Alternative

The No Action Alternative would not result in significant or substantial impacts associated with environmental justice. No mitigation measures are proposed or required.

4.7 GEOLOGY AND SOILS

4.7.1 Applicable Regulations, Plans and Standards

State Laws and Regulations

Alquist-Priolo Earthquake Fault Zoning Act; California Public Resources Code Division 2, Chapter 7.5

The Alquist-Priolo Earthquake Fault Zoning Act provides a means for reducing loss from surface fault rupture. The Act ensures public safety by prohibiting the siting of most human occupancy structures across traces of active faults that constitute a potential hazard to structures from surface faulting or fault creep. The Office of the State Geologist has delineated Special Study Zones in accordance with the Act which encompass potentially and recently active traces of four major faults including: Calaveras, Hayward, San Andreas, and San Jacinto.

Local Ordinances and Plans

County of San Bernardino General Plan

The Safety Element of the County of San Bernardino General Plan (County 2007b) contains goals and policies to minimize the risks associated with natural and man-made hazards including seismic/geological hazards. Goal S7 states that the County would minimize exposure to hazards and structural damage from geologic and seismic conditions.

County of San Bernardino Development Code

The County of San Bernardino Development Code (County 2007a) Chapter 82.15, Geologic Hazard Overlay was created to provide greater public safety by establishing investigation requirements for areas that are subject to potential geologic problems including active faulting, landsliding, debris flow/mud flow, rockfall, liquefaction, seiche, and adverse soil conditions.

4.7.2 Affected Environment

Soils

No digital data of soils within the Project area is available according to review of the USDA NRCS Web Soil Survey (USDA 2012), and the SSURGO GIS database indicates that the Project is within unmapped areas (USDA 2014).Soil types observed along the Route during the biological reconnaissance survey included sandy loam within upland vegetation and clay soils within the dry lakebed.

Geology

San Bernardino County is subject to many geological hazards including seismic activities such as fault rupture, ground shaking, liquefaction, seismically generated subsidence, seiche, and dam inundation (County 2007b). The Project Route is located within the Mojave Desert. The Mojave Desert is a wedge-shaped region located southeast of the Sierra Nevada and southwest of the Basin and Range Physiographic Province. The region is bounded by the Garlock Fault on the north and northwest, by the San Andreas Fault on the southwest, and the San Bernardino Mountains on the south. The Mojave

Desert has no definite eastern boundary, although this boundary is arbitrarily regarded to be the Nevada border and the lower Colorado River.

Faulting

The Project Route is not located within an Alquist-Priolo Special Study Area (CDC 2014). According to the USGS Quaternary Faults, the Project Route does not cross any fault lines (see Figure 4-1). No landslides or liquefaction susceptibility has been identified, and no rock fall and/or debris-flow hazard areas are located within the general vicinity of the Proposed Action. (County 2007b, Geology Map No. CIDIC).

Liquefaction

Liquefaction is the loss of soil strength or stiffness of cohesionless soil caused by the buildup of pore-water pressure during severe ground shaking. Liquefaction is associated primarily with loose (low density), saturated, fine- to medium-grained, cohesionless soils. Liquefaction occurs when water-saturated sediments, mainly sand and silt, become suspended and flow due to vibratory motions such as those induced by earthquakes. The Project Route does not lie within a mapped liquefaction zone (CDC 2014).

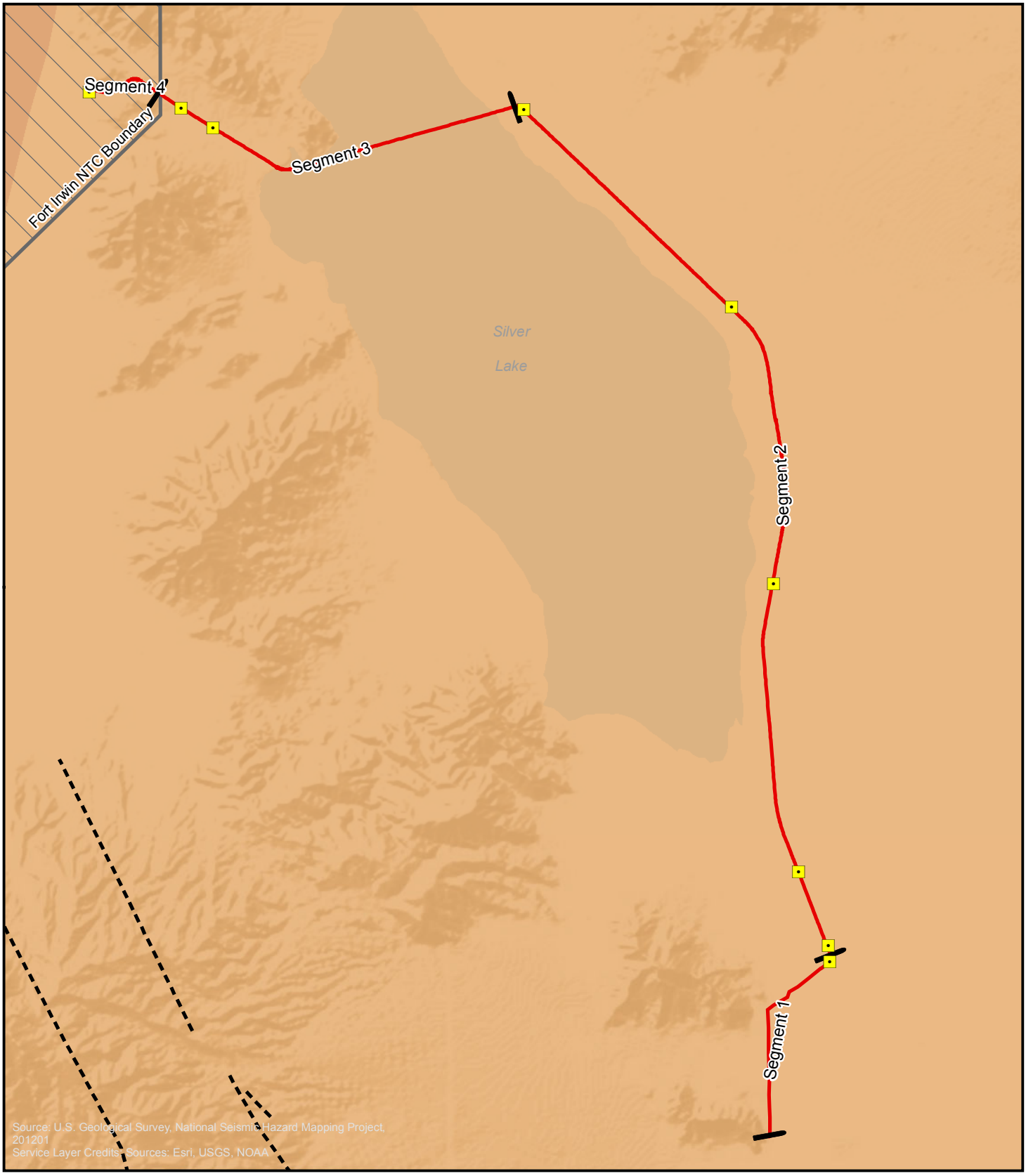
Landslides

Landslides are the downslope movement of geologic materials. The stability of slopes is related to a variety of factors, including the slope's steepness; the strength of geologic materials; and characteristics of bedding planes, joints, faults, vegetation, surface water, and groundwater conditions. The Project Route is located on relatively flat terrain, and landslides do not appear to be an issue. Additionally, the Project Route does not lie within a mapped landslide zone (CDC 2014).

4.7.3 Significance Criteria

Pursuant to CEQA, an impact to soils and geologic resources would be considered significant if the Proposed Project:

- Exposed people or structures to major geologic hazards including rupture of a known earthquake fault, strong seismic ground shaking, seismic-related ground failure, including liquefaction, and landslides
- Results in substantial soil erosion or the loss of topsoil
- Results in on- or offsite landslide, lateral spreading, subsidence, liquefaction or collapse
- Is located on expansive soil
- Has soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of wastewater



Legend

- New Conduit
- Existing Conduit
- Vaults
- USGS Quaternary Faults

Percent g

- 10 - 15
- 15 - 20

This map layer shows peak horizontal ground acceleration (the fastest measured change in speed, for a particle at ground level that is moving horizontally due to an earthquake) with a 10% probability of exceedance in 50 years. Values are given in %g, where g is acceleration due to gravity, or 9.8 meters/second^2

Figure 4-1

Highway 127 Baker to NTC Project
Geological Hazards

N

0 0.5 1 2

Miles

Name: 20692 EA Fig 4-1 Geological Hazards.Mxd
Date Saved: 3/27/2015, Author: msimmons

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4.7.4 Environmental Effects/Impacts

Potential impacts related to geologic, soils, and seismic conditions were evaluated and developed through review of existing published reports and mapping.

Proposed Action

Under the Proposed Action, the conduit would be placed using various construction techniques including cable plowing, trenching, and directional boring, based on terrain conditions and any existing sensitive environmental constraints. None of these methods would cause substantial ground disturbance. All installation activities would take place within roadways or disturbed roadway shoulders.

The Proposed Project activities include installing three new direct buried 1.5–inch-diameter HDPE ducts and twenty-five 3-foot-by-5-foot-by-3-foot direct-buried cable splice vaults spaced approximately 3,000 feet apart. Installation of conduit along approximately 12.25 miles of the Project Route would result in approximately 26.7 acres total of ground disturbance activities due to installation activities. Ground disturbance during plowing is typically limited to a relatively small furrow of earth (approximately 16 inches in width) pushed through by the plow shank. Overall, installation activities would grade (approximately 10-foot width) approximately 9.7 acres along the length of the Project Route.

The Proposed Action would not result in substantial erosion or loss of topsoil. Ground disturbance activities would be temporary and confined to a narrow trench in the areas discussed above. The areas that are graded would be transplanted with salvaged plants and reseeded. The portions of the Project ROW on County or utility corridor dirt roads would be restored to their pre-project condition. The installation of cable within a narrow band of previously disturbed areas would not cause soils to become unstable because of the small amount of area affected and because trenches would be filled in and restored to their original condition when the conduit has been installed. The potential for erosion during construction would be minimized by implementation of Applicant-Initiated Environmental Construction Measures described in Section 2.1.10as part of the Proposed Action. No unique geologic features would be altered by the Proposed Action. Implementation of the Proposed Action would result in minimal and *less than significant* impacts as a result of erosion or loss of topsoil (CEQA Checklist 3.6.2 [b], [c], [d]).

Review of the current Alquist-Priolo Earthquake Fault Zone maps indicates that no segments are located within any State of California Alquist-Priolo Earthquake Fault Zone. Although the routes passes through a seismically active area, it would not expose people or structures to substantial adverse effects (including rupture of a known earthquake fault, strong seismic ground shaking, seismic-related ground failure and/or landslides) from seismic events beyond that which already exist in the Proposed Action area. The Proposed Action consists of the installation of approximately 12.25 miles of FOC. In the event of a severe seismic event, cable or node structures might be damaged; but the breakage of cable would not harm persons or other buildings. AT&T service could be temporarily interrupted. Damage to FOC as a result of seismic activity would not pose a threat to humans or other buildings. Implementation of the Proposed Action would not result in structural damage caused by seismic loading from an earthquake (CEQA Checklist 3.6.2 [a]).

The Project Route does not lie within an area designated as susceptible to liquefaction. Additionally, the Project Route is not located on expansive soil. Since the terrain surrounding the Project Route is relatively flat, the potential for landslide or mudslide appears to be low. The Proposed Action would be constructed within roadways or disturbed roadway shoulders. The plowed/trenched segments would be

returned to preconstruction conditions immediately upon completion of installation of the FOC. Potential impacts associated with lateral spreading and subsidence would be similar to that which already exists in the Proposed Action area. These impacts are considered to be minimal and less than significant (CEQA Checklist 3.6.2 [c]).

The Proposed Action would not result in new or increased demand for the use of septic tanks or alternative wastewater disposal systems (CEQA Checklist 3.6.3 [e]).

No Action Alternative

The No Action Alternative would not result in impacts to soil and geological resources.

4.7.5 Mitigation Measures

Proposed Action

With the implementation of Applicant-Initiated Environmental Construction Measures described in Section 2.1.10, the Proposed Action would not result in significant or substantial impacts to soils or geological resources, and no additional mitigation measures are proposed or required.

No Action Alternative

The No Action Alternative would not result in significant or substantial impacts to soils or geological resources. No mitigation measures are proposed or required.

4.8 GREENHOUSE GAS EMISSIONS

Greenhouse gases (GHGs) are gases that trap heat in the Earth's atmosphere, analogous to the way a greenhouse retains heat. GHGs play a critical role in the Earth's radiation budget by trapping infrared radiation emitted from the Earth's surface which would otherwise have escaped into space. Prominent GHGs contributing to this process include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), and chlorofluorocarbons (CFCs). Without the natural heat-trapping effect of GHG, the earth's surface would be about 34 °F cooler. This is a natural phenomenon, known as the "Greenhouse Effect," which is responsible for maintaining a habitable climate; however, anthropogenic emissions of these GHGs in excess of natural ambient concentrations are responsible for the enhancement of the "Greenhouse Effect" and have led to a trend of unnatural warming of the Earth's natural climate known as global warming or climate change, or more accurately Global Climate Disruption. Emissions of these gases that induce global climate disruption are attributable to human activities associated with industrial/manufacturing, utilities, transportation, residential, and agricultural sectors.

The global warming potential (GWP) is the potential of a gas or aerosol to trap heat in the atmosphere. Individual GHG compounds have varying GWP and atmospheric lifetimes. The reference gas for the GWP is CO_2; CO_2 has a GWP of one. The calculation of the CO_2 equivalent (CO_2e) is a consistent methodology for comparing GHG emissions since it normalizes various GHG emissions to a consistent metric. Methane's warming potential of 21 indicates that methane has a 21 times greater warming affect than CO_2 on a molecule per molecule basis. A CO_2e is the mass emissions of an individual GHG multiplied by its GWP. GHGs are often presented in units called tonnes (t) (i.e., metric tons) of CO_2e (tCO_2e).

4.8.1 Applicable Regulations, Plans, and Standards

Federal Regulations

The Federal Government is taking a number of common-sense steps to address the challenge of climate change. EPA collects various types of GHG emissions data. This data helps policy makers, businesses, and EPA track GHG emissions trends and identify opportunities for reducing emissions and increasing efficiency. EPA has been collecting a national inventory of GHG emissions since 1990 and in 2009 established mandatory reporting of GHG emissions from large GHG emissions sources.

EPA is also promoting GHG reductions through partnerships and initiatives; evaluating policy options, costs, and benefits; advancing the science; partnering internationally and with states, localities, and tribes; and helping communities adapt.

State Laws and Regulations

Executive Order S 3-05

On June 1, 2005, the Governor issued Executive Order (EO) S 3-05 which set the following GHG emission reduction targets:

- By 2010, reduce GHG emissions to 2000 levels
- By 2020, reduce GHG emissions to 1990 levels
- By 2050, reduce GHG emissions to 80 percent below 1990 levels

To meet these targets, the Climate Action Team prepared a report to the Governor in 2006 that contains recommendations and strategies to help ensure the targets in EO S-3-05 are met. The GHG emissions for this year would be estimated in 2011 to demonstrate if the first target was reached.

Assembly Bill 32 (AB 32)

In 2006, the California State Legislature enacted the California Global Warming Solutions Act of 2006, also known as AB 32. AB 32 focuses on reducing GHG emissions in California. GHGs, as defined under AB 32, include CO_2, CH_4, N_2O, HFCs, Perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). AB 32 requires that GHGs emitted in California be reduced to 1990 levels by the year 2020. The California Air Resources Board (CARB) is the State agency charged with monitoring and regulating sources of emissions of GHGs that cause global warming in order to reduce emissions of GHGs. AB 32 also requires that by January 1, 2008, CARB must determine what the statewide GHG emissions level was in 1990, and it must approve a statewide GHG emissions limit so it may be applied to the 2020 benchmark. CARB approved a 1990 GHG emissions level of 427 $MtCO_2e$, on December 6, 2007, in its Staff Report. Therefore, in 2020, emissions in California are required to be at or below 427 $MtCO_2e$.

Under the current "business as usual" scenario, statewide emissions are increasing at a rate of approximately 1 percent per year as noted below. Also shown are the average reductions needed from all statewide sources (including all existing sources) to reduce GHG emissions back to 1990 levels.

- 1990: 427 MtCO2e
- 2004: 480 MtCO2e (an average 11-percent reduction needed to achieve 1990 base)
- 2008: 495 MtCO2e (an average 14-percent reduction needed to achieve 1990 base)
- 2020: 596 MtCO2e "Business As Usual" (an average 28-percent reduction needed to achieve 1990 base)

Local Ordinances and Plans

MDAQMD CEQA Guidelines

The MDAQMD shares responsibility with CARB for ensuring that all State and Federal GHG standards are achieved and maintained within its jurisdiction. The most current MDAQMD CEQA Guidelines that were published on August 2011 provides a project-level significance threshold of 100,000 tons of CO_2e per year, or a daily threshold of 548,000 pounds. These thresholds have been detailed above in Table 4-2.The MDAQMD developed this threshold in order to comply with greenhouse gas emission reductions required by AB 32.

San Bernardo County Greenhouse Gas Reduction Plan

In September 2011, the County of San Bernardino recognized that the County and the community it represents are uniquely capable of addressing emissions associated with sources under the County's jurisdiction. The Greenhouse Gas Reduction Plan (GHG Plan) presents a comprehensive set of actions to reduce the County's internal and external GHG emissions to 15 percent below current levels by 2020, consistent with the AB 32 Scoping Plan. The County commits to amend the County's General Plan to include a policy and programs addressing the County's intent to reduce GHG emissions that are reasonably attributable to (1) the County's internal activities, services and facilities; and (2) private industry and development that is located within the area subject to the County's land use and building permit authority. The goals, objectives, and reduction strategies described in the GHG Plan are consistent with the goals, policies, and programs contained in the General Plan.

4.8.2 Affected Environment

There is increasing evidence that GHGs and the Greenhouse Effect are leading to global warming and climate change (EPA 2007). "The potential adverse impacts of global warming include the exacerbation of air quality problems, a reduction in the quality and supply of water to the State from the Sierra snowpack, a rise in sea levels resulting in the displacement of thousands of coastal businesses and residences, damage to marine ecosystems and the natural environment, and an increase in the incidences of infectious diseases, asthma, and other human health-related problems" (California Health & Safety Code, Division 25.5, Part 1). The primary source of GHGs in the United States is related to energy use, primarily including activities involving fuel combustion.

4.8.3 Significance Criteria

Pursuant to CEQA, a Proposed Project would have potentially significant GHG emissions impact if it:

- Generated greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment

- Conflicted with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases

As detailed above the MDAQMD CEQA Guidelines outlines significance determination thresholds for GHG emissions of 100,000 tons of CO_2e per year or a daily threshold of 548,000 pounds. According to MDAQMD methodology, construction projects that are shorter than a year shall multiply the daily threshold by the number of days construction is anticipated to take and utilize the result as the threshold. Since construction of the Proposed Action is anticipated to take six weeks, or 42 days, this would result in a threshold of 23,016,000 pounds of CO_2e or 11,508 tons of CO_2e.

As detailed above the County has adopted a GHG Plan (County 2011) to reduce the County's GHG emissions. The GHG plan developed a screening threshold of 3,000 metric tons of CO_2e per year, which is based on capturing 90 percent of the projects in the County. Projects that exceed the 3,000 metric tons of CO_2e per year screening threshold, the project is required to implement 100 points of predefined mitigation measures or develop other mitigation and demonstrate that the mitigation would reduce the GHG emissions by 15 percent below current levels by 2020.

Pursuant to NEPA, consideration of significant impact on the human environment is conducted in accordance with Title 40 Code of Federal Regulations 1508.27 (Section 1.4.1). Following the public comment period, a finding regarding significant impact would be prepared in accordance with this provision.

4.8.4 Environmental Effects/Impacts

Proposed Action

GHG emissions from the Proposed Action's construction have been calculated through use of the CalEEMod model in the Air Quality and Greenhouse Gas Emissions Data (Appendix D) and the same construction parameters as detailed above in Section 4.2 Air Quality. Table 4-11 shows the calculated CO_2e emissions for the Proposed Action.

Table 4-11: Proposed Action Greenhouse Gas Emissions

Activity	CO_2e (metric tons)
Conduit Installation	87.6
Fiber-optic Cable Installation	17.7
Restoration Activities	15.2
Total GHG Emissions for Proposed Action	**120.5**
MDAQMD Significance Criteria	11,508
San Bernardino County Significance Criteria	3,000

[1] MDAQMD thresholds determined by multiplying the daily thresholds by length of construction (42 days).
Source: CalEEMod Version 2013.2.2.

Table 4-11 shows that GHG emissions from the Proposed Action would be below both the MDAQMD and County of San Bernardino GHG emissions significance threshold (CEQA Checklist 3.7.2 [a]).

The site for the Proposed Action is located within the MDAQMD and County of San Bernardino jurisdictions. The MDAQMD provides a threshold of 11,508 tons of CO_2e for a construction project that lasts six weeks (MDAQMD 2011). MDAQMD developed this threshold in order to comply with greenhouse gas emission reductions required by AB 32. According to the CO_2e calculations shown above in Table 4-11 the Proposed Action would be below the MDAQMD CO_2e emissions significance threshold.

The County of San Bernardino has adopted a GHG Plan to reduce the County's GHG emissions. The GHG plan developed a screening threshold of 3,000 metric tons of CO_2e per year, which is based on capturing 90 percent of the projects in the County. If a project exceeds the 3,000 metric tons of CO_2e per year screening threshold, the project is required to implement 100 points of predefined mitigation measures or develop other mitigation and demonstrate that the mitigation would reduce the GHG emissions by 15 percent below current levels by 2020.According to the CO_2e calculations shown above in Table 4-11 the Proposed Action would be below the County of San Bernardino's CO_2e emissions screening threshold.

Other thresholds include the EPA Rule 40 CFR Part 98, Mandatory Reporting of Greenhouse Gases that requires the mandatory reporting of GHG emissions for facilities that emit more than 25,000 metric tons of CO_2e emissions per year. EPA Rule 40 CFR Part 52, Prevention of Significant Deterioration (PSD) requirements, is applicable for all facilities whose stationary source CO_2 emissions exceed 75,000 tons per year (EPA 2009). Since the Proposed Action would not include any stationary source of CO_2e emissions, it would not trigger GHG reporting or PSD permitting under Federal regulations. Therefore, the Proposed Action would not conflict with any plan, policy, or regulation (CEQA Checklist 3.7.2 [b]).

No Action Alternative

The No Action Alternative would not result in potential greenhouse gas emissions.

4.8.5 Mitigation Measures

The Proposed Action would not result in significant or substantial impacts to GHG emissions. No mitigation measures are proposed or required.

No Action Alternative

The No Action Alternative would not result in significant or substantial impacts to greenhouse gas emissions. No mitigation measures are proposed or required.

4.9 HEALTH AND SAFETY/HAZARDOUS MATERIALS

Section 4.9 assesses public health and safety (Title 40 CFR 1508.27 (b) (2)) relating to installation activities, operation, and maintenance of the Proposed Action. This section also assesses potential health and safety issues associated with water pipeline failure, high-pressure natural gas pipeline explosion, electromagnetic radiation, airports, and wildland fires. In addition, this section identifies if potential hazardous materials have ever been present on site.

4.9.1 Applicable Regulations, Plans, and Standards

Federal Regulations

Resource Conservation and Recovery Act, 42 USC 6901 et seq.

The Resource Conservation and Recovery Act (RCRA) grants EPA the authority to control hazardous waste generation, transportation, treatment, storage, and disposal. The RCRA also sets forth a framework for the management of nonhazardous solid wastes. The 1986 amendments to the RCRA made it possible for EPA to address environmental problems that could result from underground tanks storing petroleum and other hazardous substances (EPA 2014a).

Occupational Safety and Health Act, 29 U.S.C. §651 et seq.

The Occupational Safety and Health Act was passed by Congress in 1970 to ensure worker and workplace safety. Congress's goal was to make sure that employers provided their workers with a place of employment without recognized hazards to safety and health. These hazards include exposure to toxic chemicals, excessive noise levels, mechanical dangers, heat or cold stress, or unsanitary conditions (EPA 2014b).

State Laws and Regulations

Under the California Environmental Protection Agency (CAL/EPA), the Department of Toxic Substance Control (DTSC) is the responsible governing agency that regulates the permitting for the generation, handling, treatment, and disposal of hazardous waste in the State of California. DTSC and the State Water Resources Control Board (SWRCB; per the Porter-Cologne Water Quality Control Act of 1969) regulate the cleanup activities of hazardous waste sites in California that have caused contamination in soil and groundwater.

Title 22 of the California Code of Regulations (CCR)

Title 22, Division 4.5 contains the State of California hazardous waste regulations that are enforced by DTSC.

California Occupational Safety and Health Administration (CAL/OSHA)

Federal and State occupational safety and health laws contain requirements regarding the handling of hazardous waste concerning worker safety, training, and right-to-know. Authority to enforce Federal Occupational Safety and Health Administration (OSHA) requirements has been delegated to CAL/OSHA, which has developed provisions that are at least as stringent as those enforced at the Federal level. CAL/OSHA regulates and enforces occupational and public safety laws protecting the public and workers from any safety hazards.

Local Ordinances and Plans

County of San Bernardino General Plan

The Safety Element of the County of San Bernardino General Plan contains goals and policies to minimize the risks associated with natural and man-made hazards including hazardous waste. Goal S2

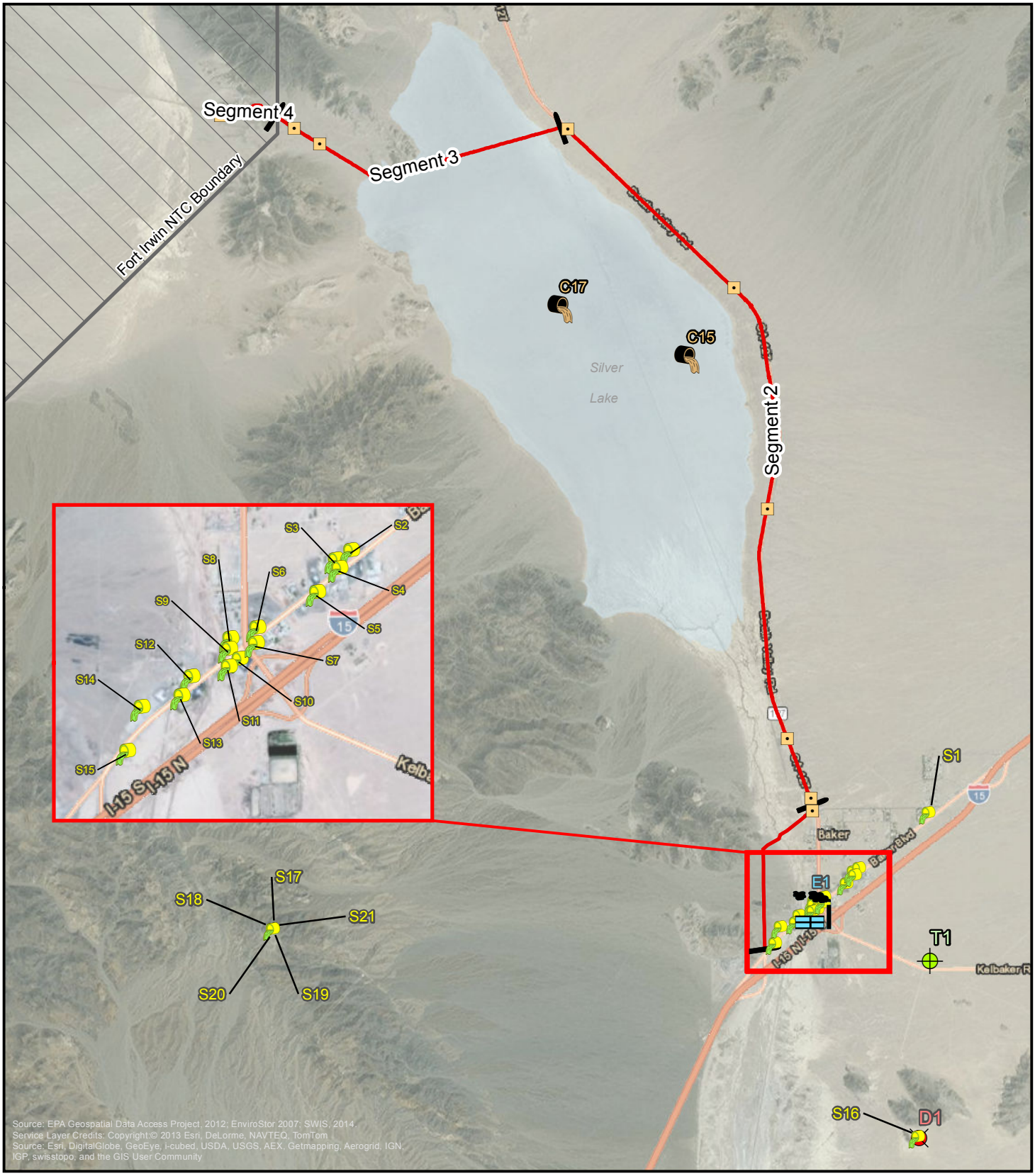
states that the County will minimize the generation of hazardous waste in the County and reduce the risk posed by storage, handling, transportation, and disposal of hazardous wastes.

4.9.2 Affected Environmental

A review of Federal and State standard and supplemental databases (DTSC 2014; SWRCB 2014) indicated no hazardous or solid waste sites pursuant to Government Code Section 65962.5 are known to exist within the Proposed Action footprint (Figure 4-2).

Table 4-12: Hazardous Materials Sites Within Proximity to Project Route

Map Label	Hazardous Material Site/Project Name	Project Route Segment	Distance from Project Route (miles)
D1	Baker Refuse Disposal Site	1	2.20
S16	Baker Class III Landfill	1	2.19
T1	Baker Medium Volume Transfer Processing	1	1.53
E1	Chevron 99879	1	0.44
S1	Ken's Towing Service	1	1.05
S2	John Cagigas Property	1	0.70
S3	Former DJ's Market	1	0.69
S4	Caltrans Baker Maintenance	1	0.72
S5	Former Xcel Station	1	0.74
S6	Former Texaco Station	1	0.55
S7	Unocal Station	1	0.54
S8	Bronco Station (Former)	1	0.45
S9	ARCO #5010	1	0.45
S10	Arco Station 5951	1	0.48
S11	Chevron #9-9879	1	0.45
S12	Gale Pike Property	1	0.32
S13	Pikes Mobil	1	0.28
S14	Baker General Store	1	0.14
S15	International Motor Hotels Inc.	1	0.09
S17	AT&T Radio Relay Station	1	4.16
S18	Dunn Siding Site	1	4.16
S19	Afton Road Towing	1	4.16
S20	Baker Transportation	1	4.16
C15	Silver Lake Airfield	2	0.74
C17	Silver Lake Text Annex	3	1.27



Legend

FOC Line Construction Activities

- Existing Conduit
- New Conduit
- Vaults
- Access Route

- EPA Regulated Facilities
- EnviroStor Cleanup Sites
- CA Water Resource Control Board Cleanup Sites
- CalRecyle Active Transfer/Processing Site
- CalRecyle Closed Disposal Site

Figure 4-2

Highway 127 Baker to NTC Project
Hazardous Sites

N

0 0.5 1 2

Miles

Name: 20692 EA Fig 4-2 Hazardous Sites.Mxd
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CHAMBERS GROUP

Approximately 44 public and private airports operate throughout San Bernardino County (County 2007b). Baker Airport, an emergency air field (County 2014) is located less than 1 mile from the Project Route off SR-127 (Google Earth 2014). Additionally, the Project Route does not cross any high to very high fire hazard severity zones (Cal Fire 2007).

Hazardous materials that may be on site during construction activities associated with the Proposed Action include those usually associated with the operation and maintenance of vehicles and machinery and include: diesel fuel, gasoline, hydraulic fluid, brake fluid, antifreeze, and lubricants. Other materials considered hazardous are chemicals used in portable toilets and the associated human waste. Buried hazardous or toxic materials also may possibly be encountered during construction operations.

Proposed Action construction activities would occur only within existing roadways or disturbed roadway shoulders along the Project Route. No health and safety risks are known to occur within the Proposed Action footprint; however, potential risks to health and safety associated with worker safety and traffic diversions during the construction period may occur.

4.9.3 Significance Criteria

Pursuant to CEQA, an impact associated with health and safety is considered significant if the Proposed Project:

- Created a significant hazard to the public or the environment by routine transport, use, or disposal of hazardous materials or from a foreseeable upset and accident conditions
- Would be located within 0.25 mile of an existing or proposed project generating emissions and/or handling hazardous or acutely hazardous materials, substances, or waste
- Would be located on a site listed to have handled hazardous materials pursuant to Government Code § 65962.5
- Would be located within 2 miles from a public airport or private airstrip or situated in an airport land use plan
- Impaired/interfered with adopted emergency response plans or an emergency evacuation plan
- Exposed people to hazards associated with a wildland fire

Pursuant to NEPA, consideration of significant impact on the human environment is conducted in accordance with Title 40 Code of Federal Regulations 1508.27 (Section 1.4.1). Following the public comment period, a finding regarding significant impact would be prepared in accordance with this provision.

4.9.4 Environmental Effects/Impacts

A records search was conducted for potential hazardous soil or groundwater conditions on the properties along the Project Route, including a review of Federal and State standard and supplemental databases (DTSC 2014; SWRCB 2014).

No known health issues are associated with a distribution system for FOC. FOC does not give off electromagnetic fields, and collocated fiber-optic lines do not interfere with each other. FOCs do not interfere with other utility transmission lines such as telephone, cable, or electric distribution.

It is expected that all workers installing the cable would adhere to construction safety procedures and that appropriate traffic and roadside safety practices would be implemented. Safety standards and procedures mandated by OSHA and the California Department of Transportation would be applied to this work. These standards include mandatory incident reporting, tailgate meetings, and monthly safety meetings with the contractor to discuss potential health and safety issues.

Proposed Action

The Proposed Action may involve the potential risk of releasing hazardous substances such as gasoline, oil, solvents, paints, and other hazardous chemical agents. The Spill Prevention and Contingency Plan (Appendix J) would be implemented, which outlines the storage and use of hazardous materials, the prevention of spill incidents, and emergency response procedures. The plan also describes the various chemicals to be stored and/or used on the Project Route (i.e., fertilizers, cable lubricants). Procedures and methods to transport, store, and clean up a spill involving hazardous materials in compliance with State and County regulations and ordinances are established in the plan as well. In addition, the plan outlines construction measures and operational procedures to follow in the event of an emergency. Vehicles and equipment used for construction would contain or require the temporary, short-term use of potentially hazardous substances such as fuels, lubricating oils, hydraulic fluid, solvents, paints, and other hazardous chemical agents. Additionally, standard OSHA safety precautions and measures would be employed during FOC installation activities (CEQA Checklist 3.8.2 [a], [c]).

AT&T would implement the Horizontal Directional Drilling (HDD) Contingency and Resource Protection Plan (Appendix K) for portions of the Project alignment that will be installed using HDD. The bentonite water mix would be prepared and circulated in tanks and/or tanker trucks. No boring fluid pits would be allowed, and all bentonite would be properly disposed offsite. Standard OSHA safety precautions and measures would be employed during installation activities, as included in the AT&T Safety Plan, included herein as Appendix L. With the implementation of Applicant-Initiated Environmental Construction Measures, the Proposed Action's potential effects associated with health and safety/hazardous materials would be minimal and less than significant (CEQA Checklist 3.8.2 [b]).

As noted above, a review of Federal and State standards and supplemental databases (See Figure 4-2 and Table 4-12) indicated no hazardous or solid waste sites pursuant to Government Code Section 65962.5 are known to exist within the Proposed Project footprint (DTSC 2014; SWRCB 2014). Implementation of the Proposed Action would not create a significant hazard to the public or environment (CEQA Checklist 3.8.2 [d]).

Implementation of the Proposed Action would not introduce structures that could disrupt air traffic patterns or construct housing, commercial businesses, offices, or other structures that could place people at risk in the event of an aircraft mishap. Workers would be in the vicinity of the airports temporarily and only during installation activities. The Proposed Action would not result in a safety hazard for people residing or working in the project area. Impacts would be minimal and less than significant (CEQA Checklist 3.8.2 [e], [f]).

The Proposed Action would not involve blocking or restricting any access routes. No staging areas will be adjacent to the Project Route. Equipment will be removed from the job site daily and be taken off site at an approved location after the workday. The existing access roads would remain open to the public and maintenance vehicles during installation activities. The Proposed Action would not interfere with emergency response plans for operations near the Project Route (CEQA Checklist 3.8.2 [g]).

The Project Route is not susceptible to wildland fires, as the Project Route does not cross any high to very high fire hazard severity zones (Cal Fire 2007). Additionally, no residences are being built as part of the Proposed Action, and construction crews would be in the area only temporarily. All installation and operation activities would be conducted in compliance with standard safety protocols, which would minimize the potential release of flammable materials (including fuel, lubricants, paint, and solvents) (CEQA Checklist 3.8.2 [h]).

Operational activities associated with implementation of the Proposed Action would not involve the potential risk of releasing hazardous substances.

No Action Alternative

The No Action Alternative would not result in impacts from hazardous materials.

4.9.5 Mitigation Measures

Proposed Action

With implementation of the Applicant-Initiated Environmental Construction Measures, impacts associated with safety and hazardous materials would be minimal and less than significant. No additional mitigation measures are proposed or required.

No Action Alternative

The No Action Alternative would not result in significant or substantial impacts associated with safety and hazardous materials. No mitigation measures are proposed or required.

4.10 HYDROLOGY AND WATER QUALITY

4.10.1 Applicable Regulations, Plans, and Standards

Federal Regulations

Clean Water Act

The Clean Water Act (CWA) (33 U.S. Code § 1251 et seq.), formerly the Federal Water Pollution Control Act of 1972, was enacted with the intent of restoring and maintaining the chemical, physical, and biological integrity of the waters of the United States. The CWA requires states to set standards to protect, maintain, and restore water quality through the regulation of point source and certain non-point source discharges into surface water. Those discharges are regulated by the National Pollutant Discharge Elimination System (NPDES) permit process (CWA Section 402). The Proposed Project is under the jurisdiction of the Lahontan Regional Water Quality Control Board.

State Laws and Regulations

Department of Fish and Game Code

California Department of Fish and Game Code Sections 1600–1616 require a Streambed Alteration Agreement for any project that may obstruct the natural flow of a river, stream, or lake; substantially change or use any material from the bed, channel, or bank of a river, stream, or lake; or deposit debris where it may pass into a river, stream, or lake.

California Porter Cologne Water Quality Control Act

The Porter Cologne Water Quality Control Act of 1967, Water Code Section 13000 et seq., requires the SWRCB and the nine RWQCBs to adopt water quality criteria to protect waters of the State. These criteria include the identification of beneficial uses, narrative and numerical water quality standards, and implementation procedures. Applicable constraints in the water quality control plans relate primarily to the avoidance of altering the sediment discharge rate of surface waters and the avoidance of introducing toxic pollutants to the water resource. A primary focus of water quality control plans is to protect designated beneficial uses of waters, which range from drinking water quality to recreation and wildlife habitat. In addition, anyone proposing to discharge waste that could affect the quality of the waters of the State must make a report of the waste discharge to the Regional Water Board or State Water Board as appropriate, in compliance with Porter-Cologne.

National Pollutant Discharge Elimination System – Construction Stormwater Permits

NPDES was authorized by the Clean Water Act and is administered in California by the SWRCB through the nine RWQCBs. The purpose of NPDES is to control the discharge of pollutants from point sources into waters of the United States. SWRCB has issued a Construction General Permit under NPDES that applies to most construction activities in California. Coverage under the Construction General Permit is necessary for projects that disturb 1 acre or greater of soil. The project applicant must submit a Notice of Intent and an SWPPP that complies with the Construction General Permit requirements to SWRCB before starting construction activities. The project applicant must implement the SWPPP during construction, including requirements for inspections and monitoring, and must revise the SWPPP and implement revisions as needed to protect storm water quality.

The SWPPP describes:

- The project location, site features, and the identification of materials and activities that may result in pollutant discharges
- BMPs selected to control erosion, discharge of sediments, and other potential impacts associated with construction activities, to be implemented during construction
- An inspection and maintenance program for BMPs

Local Ordinances and Plans

County of San Bernardino General Plan

The Circulation and Infrastructure Element of the County of San Bernardino General Plan contains goals and policies for water quality. Goal CI11 states that the County would coordinate and cooperate with governmental agencies at all levels to ensure prevention of surface and groundwater pollution.

The Conservation Element of the County of San Bernardino General Plan contains goals and policies to protect water resources. Goal CO5 states that the County would minimize exposure to hazards and structural damage from geologic and seismic conditions and protect and preserve water resources for the maintenance, enhancement, and restoration of environmental resources.

4.10.2 Affected Environment

The Proposed Project is located primarily in the Mojave Subbasin Hydrologic Unit, and the northern part of the Proposed Project is partially in the Death Valley-Lower Amargosa Subbasin Hydrologic Unit (USDA 2014). The Proposed Project is located primarily within the Mojave Watershed, with approximately 1,950 feet of Segment 4 located in the Death Valley-Lower Amargosa Watershed, located within San Bernardino County, California. The Mojave Watershed is bound on the south by the San Gabriel and San Bernardino mountains and to the north and east by multiple smaller mountain ranges, including the Granite, Bristol, and Providence mountains (DWR 2009). A number of dry lake beds occur in the Mojave Watershed including Silver Lake, Soda Lake, West Cronise, and East Cronise (DWR 2009). The Mojave River and Deep Creek are the major water sources for the Mojave Watershed. The headwaters of the Mojave River are located in the San Bernardino Mountains, and snowmelt provides most of the water for the river. It is estimated that 65,000 acre feet (af) of water from the Mojave River recharges the Mojave Groundwater Basin annually (DWR 2009). The Mojave River is dammed and impounded at the Mojave River Forks Reservoir (approximately 125 river miles (RM) upstream from the southernmost portion of the Route); and the reservoir is used for water supply, flood management, recreation, and water conservation. Downstream of the dam, the riverbed is dry for much of the year, except at the Narrows near Victorville and at Afton Canyon southwest of Cronise Lake, where groundwater is forced to the surface by geological structures (DWR 2009). Deep Creek also originates in the San Bernardino Mountains; it flows most of the year and joins the Mojave River at Mojave Forks Reservoir. The Route does not cross Deep Creek. Figure 4-3 provides the location of the 100-year flood zones identified by the Federal Emergency Management Agency (FEMA).

Water flow in the vicinity of the Proposed Project generally occurs immediately after rainfall events; and only a small fraction of the total precipitation results in surface runoff due to evapotranspiration and infiltration. In addition to drainages, one dry lake bed, Silver Lake, is crossed by the Route.

Water flow along Segment 1 generally flows south/southeast to north/northwest; along Segment 2 water flow is generally east to west; and along Segment 3 and Segment 4 water flow is northwest to southeast.

Legend

Route Alignment
FEMA 100-year Flood Zone
Vault

Figure 4-3
AT&T Highway 127 Project
FEMA 100-Year Flood Zones Map

N

0 0.5 1 2
Miles

Name: 20692 EA Fig 4-3 FEMA Map.Mxd
Date Saved: 3/30/2015, Author: msimmons

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Dry lake beds and playas are also known as alkali sinks (Lichvar and Dixon 2007). Soils within these features are high in alkalinity and have poorly drained soils. Low spots of lake beds and playas are occasionally resupplied with water by heavy winter rainfall, but standing water evaporates quickly. The driest areas of alkali sinks are the edges where vegetation communities are dominated by saltbush, mesquite, or alkali sink habitat (Lichvar and Dixon 2007).

The water pathway for each segment is described below.

A majority of the water features crossed by the Route are dry washes typical of the Mojave Desert and which generally have little to no plant cover due to frequent disturbances from storm discharge events, lack of developed soils, and well-drained soils that lack moisture. Dry washes may be either ephemeral or intermittent drainages or streams. The Route crosses ephemeral drainages.

The Route is located on the currently maintained shoulders of SR-127 and maintained dirt roads (i.e., Mill Road, Silver Lane, and Silver Lake Road). Current maintenance activities of the highway shoulder and dirt roads conducted by CalTrans cause an artificial dirt berm along most of the Route, preventing continuous flow of drainages during low flow rain events and causing disruption of natural bed and bank measurements. In addition, some of these drainages are traversed by off-highway vehicles (OHVs), also making a clear OHWM mark difficult to discern.

Segment 1: Waters along this segment of the Route originate from Otto Mountain and Soda Mountain. Generally, flow moves from south/southeast to north/northwest and terminates in Silver Lake.

Segment 2: Waters in this segment originate from the mountains of Solomon's Knob and the Hollow Hills Wilderness Area to the east of the Proposed Project and generally flow from east to west and terminate in Silver Lake. Upon reaching the eastern side of the maintained shoulders of SR-127, water flow that is contained in identifiable channels ceases and turns to sheetflow across the eastern shoulder, the paved portion of SR-127, and the western maintained shoulder and begins to channelize again outside the western maintained shoulder.

Segment 3: This segment occurs within a dry lake bed.

Segment 4: No waters occur in Segment 4.

A majority of the water features crossed by the Route are dry washes typical of the Mojave Desert, which generally have little to no plant cover due to frequent disturbances from storm discharge events, lack of developed soils, and well drained soils that lack moisture. Dry washes may either be ephemeral or intermittent drainages or streams. The Route crosses ephemeral drainages.

The Route is located on the currently maintained shoulders of SR-127 and maintained dirt roads (i.e., Mill Road, Silver Lane, and Silver Lake Road). Current maintenance activities of the highway shoulder and dirt roads conducted by CalTrans cause an artificial dirt berm along most of the Route, preventing continuous flow of drainages during low flow rain events and causing disruption of natural bed and bank measurements. In addition, some of these drainages are traversed by off-highway vehicles (OHVs), also making a clear OHWM mark difficult to discern.

A summary of the drainages crossed by the Proposed Project in each segment are described below.

Segment 1: Segment 1 included only ephemeral drainages. The Route crosses 17 ephemeral drainages in this segment, each draining east to a tributary eventually discharging into Silver Lake.

Segment 2: Due to the maintenance of the shoulders of SR-127, no definable, continuous drainages that crossed the Project were observed. A total of 54 ephemeral drainages discharge onto SR-127 from the east, and 93 ephemeral drainages collect and channel water to the west from SR-127.

Segment 3: Segment 3 crosses the bed of Silver Lake via Silver Lake Road. No other drainages were observed crossing this segment of the Route. Silver Lake is identified as a lacustrine, littoral, unconsolidated shore wetland (L2USJ) (USFWS 2014). This portion of Silver Lake does not meet the three-parameter definition of a USACE jurisdictional wetland, as it was unvegetated; but it contained surface soil cracks and evidence of saturation and ponding. The presence of these wetland characteristics meet the one-parameter criteria of a CDFW wetland feature.

Segment 4: No drainages were observed crossing the Route in all of Segment 4.

Groundwater

The Project Route lies within the South Lahontan Hydrologic Region. The South Lahontan Hydrologic Region is subdivided into 76 groundwater basins that cover approximately 18,100 square miles. The Project Route crosses three groundwater basins, each of which is described briefly below.

The Riggs Valley Groundwater Basin has a surface area of 87,700 acres. Quaternary alluvium forms the principal water-bearing unit within the basin. Recharge to the basin is derived primarily from the percolation of runoff from the surrounding mountains and subsurface inflow from adjoining Silver Lake Valley Groundwater Basin to the east. The character of the groundwater in the Riggs Valley Groundwater Basin is unknown; however, the chemical character of groundwater in adjacent groundwater basins is sodium chloride. Because this basin has no wells, the groundwater quality is unknown (DWR 2004a).

The Silver Lake Valley Groundwater Basin has a surface area of 35,300 acres. Quaternary alluvium forms the major water-bearing material within the basin. Recharge to the basin is derived from the percolation of runoff through alluvial fan deposits along the base of the Soda Mountains and from the infiltration of precipitation that falls to the valley floor. The character of the groundwater in the Silver Lake Valley Groundwater Basin consists of two types: sodium chloride and sodium bicarbonate-chloride. Total dissolved solids (TDS) content ranges from 1,100 to 1,810 milligrams per liter (mg/L) (DWR 2004b).

The Soda lake Valley Groundwater Basin has a surface area of 381,000 acres. Quaternary alluvium forms the major water-bearing unit within the basin and includes unconsolidated younger alluvial deposits and underlying unconsolidated to poorly consolidated older alluvial deposits. Recharge to the basin is derived primarily from the percolation of flow in the Mojave River and the percolation of runoff through alluvial fan deposits at the base of the surrounding mountains. Groundwater character in the Soda Lake Valley Groundwater Basin is typically sodium chloride or sodium bicarbonate, often in combination with sulfate. TDS content ranges from 1,000 mg/L to 8,300 mg/L (highest concentrations found in groundwater near Soda Lake) (DWR 2004c).

4.10.3 Significance Criteria

Pursuant to CEQA, impacts related to floodplains and groundwater would be considered significant if the Proposed Project:

- Violates any water quality standards or waste discharge requirements
- Substantially depletes groundwater supplies or interferes substantially with groundwater recharge such that a net deficit in aquifer volume or a lowering of the local groundwater table level would occur (i.e., the production rate of preexisting nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)
- Substantially alters the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on or off site
- Substantially alters the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increases the rate or amount of surface runoff in a manner which would result in flooding on or off site
- Creates or contributes runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provides substantial additional sources of polluted runoff
- Substantially degrades water quality
- Places housing within a 100-year floodplain, as mapped on a Federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map

The following hydrology and water quality analysis is based on a Jurisdictional Delineation (JD) Report (Appendix M) prepared for the Proposed Action. A summary of the identified hydrological features and regulatory jurisdictions within proximity to the Project Route is provided below.

4.10.4 Environmental Effects/Impacts

Proposed Action

Soil that is impacted by the plow blade or trenching equipment/bucket would be replaced to preconstruction conditions, as practicable. Project-related impacts from plowing or trenching may include 16 inches of soil disturbance. Impacts were identified separately for each agency, as described below. Because no waters occur in Segment 4, no further analysis for this segment is included.

Temporary impacts were considered as the area temporarily impacted by Proposed Project construction activities (e.g., trucks driving over dry drainages) within the entire 20-foot Project ROW minus the permanent impact area. The actual temporary impact area would be less than this calculation since project construction activities typically are not expected to require the entire 20-foot width of Project ROW. Table 4-13 shows the jurisdictional acreage for permanent impacts per segment per agency, and Table 4-14 shows the jurisdictional acreage for temporary impacts by segment by agency.

Table 4-13 Jurisdictional Acreage – Potential Permanent Impacts Per Segment (acres)

Agency	Wetland	Riparian	Perennial/ Intermittent Waters	Ephemeral Waters	Total Permanent Impacts
Segment 1					
USACE	0.000	0.000	0.000	0.000	0.000
RWQCB	0.000	0.000	0.000	0.01	0.01
CDFW	0.000	0.000	0.000	0.04	0.04
Segment 2					
USACE	0.000	0.000	0.000	0.00	0.00
RWQCB	0.000	0.000	0.000	0.00	0.00
CDFW	0.000	0.000	0.000	0.00	0.00
Segment 3					
USACE	0.000	0.000	0.000	0.00	0.00
RWQCB	0.000	0.000	0.000	0.00	0.00
CDFW	0.000	0.000	0.000	0.53	0.53

Table 4-14: Jurisdictional Acreage – Potential Temporary Impacts Per Segment (acres)

Agency	Wetland	Riparian	Perennial/ Intermittent Waters	Ephemeral Waters	Total Temporary Impacts
Segment 1					
USACE	0.000	0.000	0.000	0.04	0.04
RWQCB	0.000	0.000	0.000	0.04	0.04
CDFW	0.000	0.000	0.000	0.09	0.09
Segment 2					
USACE	0.000	0.000	0.000	0.00	0.00
RWQCB	0.000	0.000	0.000	0.00	0.00
CDFW	0.000	0.000	0.000	0.00	0.00
Segment 3					
USACE	0.000	0.000	0.000	0.00	0.00
RWQCB	0.000	0.000	0.000	1.60	1.60
CDFW	0.000	0.000	0.000	1.03	1.03

To avoid violating water quality standards, degrading water quality and/or impairing beneficial uses, maintenance/replacement activities would comply with all requirements of the Regional Water Quality Control Board, Lahontan Region. The Proposed Action would not violate water quality standards or waste discharge requirements. Maintenance/replacement activities associated with the Proposed Action would result in a soil disturbance. If soil is not contained and is directly exposed to rain, soil erosion and sediment could flow into the storm drain system, resulting in the potential degradation of water quality; however, maintenance/replacement activities would comply with all County ordinances and grading permit requirements that relate to erosion control and water quality. Spill plans would be reviewed and kept up-to-date. Water used during construction for dust suppression and other construction needs would come from municipal or private land owner sources. No water would be drawn from local streams or lakes.

An SWPPP would be implemented for the Proposed Action using established BMPs as required to ensure no degradation of surface water quality would occur during the maintenance/replacement activities. The Proposed Action would not affect water quality during operations. With implementation of Applicant-Initiated Environmental Construction Measures, the Proposed Action would avoid violating water quality standards, degrading water quality and/or impairing beneficial uses (CEQA Checklist 3.9.2 [a], [f]).

The Proposed Action would not deplete groundwater supplies, as the Proposed Action would not require use of a groundwater well or affect potential groundwater recharge. Water used during maintenance/replacement for dust suppression and other construction needs would come from municipal or private land owner sources. Should maintenance/replacement activities encounter high groundwater, established BMPs would be implemented to ensure that no degradation of groundwater water quality would occur. The Proposed Action would not affect groundwater quality during operations (CEQA Checklist 3.9.2 [b]).

With implementation of the Proposed Action, site drainage would not be substantially altered from existing conditions. Maintenance/replacement activities would conform to regulatory requirements and would not result in a change in drainage patterns or substantial erosion or siltation on or off site. Additionally, with implementation of Applicant-Initiated Environmental Construction Measures as part of the Proposed Action, impacts associated with changes in drainage patterns along the Project Route would be minimal and less than significant (CEQA Checklist 3.9.2 [c]).

The rate and amount of surface runoff is determined by multiple factors, including the amount and intensity of precipitation; the amount of other imported water that enters a watershed; and the amount of precipitation and imported water that infiltrates to the groundwater. Maintenance/replacement activities associated with the Proposed Action would not alter any precipitation amounts or intensities, nor would they require any additional water to be imported into the Project Route aside from water for dust suppression and other construction needs. Implementation of the Proposed Action would involve ground disturbance and grading activities. These activities would not result in a significant change in drainage patterns or the amount of surface runoff in a manner which would result in flooding on or off site or otherwise create or contribute to runoff water which would exceed the capacity of existing or planned stormwater drainage systems. Disturbed area would be restored to pre-project contours and conditions. Additionally, existing erosion control devices will be repaired. and all temporary disturbance areas would be revegetated. Impacts would be minimal and less than significant (CEQA Checklist 3.9.2 [d], [e]).

The Proposed Action does not involve the construction of housing or structures. Therefore, no housing or structures would be constructed or placed within a 100-year flood hazard area that would impede or redirect flood flows under the Proposed Action. Additionally, portions of the Project Route are located within a dam inundation hazard zone; however, implementation of the Proposed Action would not expose people or structures to a significant risk of loss, injury, or death as a result of flooding or the failure of a levee or dam. The Project Route does not have the potential to be impacted by a tsunami or a seiche. Additionally, the Proposed Action would not create any risk for a mudflow due to the Project Route's relatively flat topography (CEQA Checklist 3.9.2 [g] through [j]).

No Action Alternative

The No Action Alternative would not result in impacts to surface and groundwater.

4.10.5 Mitigation Measures

Implementation of the Applicant-Initiated Environmental Construction Measures would ensure that potential impacts to non-wetland water and hydrology would be minimal and less than significant. No additional mitigation measures are proposed or required.

No Action Alternative

The No Action Alternative would not result in significant or substantial impacts to surface and groundwater. No mitigation measures are proposed or required.

4.11 LAND USE AND PLANNING

4.11.1 Affected Environment

The majority of San Bernardino County (55.98 percent) is in the land use zoning district Resource Conservation (RC). Most of the land within this zoning district is publicly owned (Federal and State) and includes national parks, military bases, conservation areas, and lands owned by other Federal and State agencies. Land use zoning districts Agriculture (AG) cover 41,793 acres (2.32 percent) and Floodway (FW) cover 20,281 acres (1.13 percent). Commercial land use zoning districts including, but not limited to, Rural Commercial (CR) and Highway Commercial (CH), cover a total of 12,177 acres, or 0.68 percent of the total unincorporated area. Approximately 8,567.51 acres (0.48 percent) are in the zoning district Institutional (IN), 587,535 acres (32.76 percent of total unincorporated area) are in the zoning district Rural Living (RL), and 67,691 acres are in the zoning district Single Residential (RS). Industrial land use designations including, but not limited to Regional Industrial (IR), occupy 21,834 acres or 1.21 percent of the total unincorporated area (County 2013b).

The Proposed Project is primarily located in remote, undeveloped areas. None of the Project Route was surveyed as part of the Farmland Mapping and Monitoring Program (FMMP).

4.11.2 Significance Criteria

Pursuant to CEQA, impacts related to land use and planning would be considered significant if the Proposed Project:

- Would physically divide an established community
- Would conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect
- Would conflict with any applicable habitat conservation plan or natural community conservation plan

Pursuant to CEQA, impacts related to agriculture and forestry would be considered significant if the Proposed Project:

- Would Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use

- Would conflict with existing zoning for agricultural use or a Williamson Act contract

- Would conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))

- Would result in the loss of forest land or conversion of forest land to nonforest use

- Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to nonagricultural use or the conversion of forest land to nonforest use

4.11.3 Environmental Effects/Impacts

Proposed Action

A majority of the land uses along the Project Route include Resource Conservation (RC) and Rural Living. The Proposed Route would be located on lands under the jurisdiction of BLM and the County. As previously noted, BLM and the County are the Lead Agencies for the NEPA and CEQA review, respectively, of the Proposed Project and have authority for project approval. Prior to approval, BLM and the County will ensure that the Proposed Project would comply with applicable State and Federal regulations and would require AT&T's compliance with local regulations to the extent feasible.

The Proposed Project would consist of installation activities along an approximately 12.25-mile Project Route. The Proposed Project would not displace any existing structures, close any existing roadways, or alter existing roadway access. Therefore, implementation of the Proposed Project would not physically divide an established community (CEQA Checklist 3.10.2 [a]).

Transmission lines are allowed uses in the zoning districts crossed by the Proposed Project (County 2013a). The Proposed Project would conform to all governing agency standards. The project would be designed, operated, and constructed in accordance to the County General Plan's guiding policies for the orderly and efficient expansion of public utilities to meet projected needs (County 2007b, Section III). The Proposed Project would not involve any changes to or conflict with any land use or zoning designations (CEQA Checklist 3.10.2 [b], [c]).

The majority of the Project Route is located within an area zoned for RC and would not conflict with existing zoning for agricultural use or a Williamson Act contract. The Proposed Project is located in a desert environment and is not surrounded by any forest land. Consequently, no land surrounding the Proposed Project is zoned for forest uses. Therefore, implementation of the Proposed Project would not conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production (CEQA Checklist 3.2.2 [a] through [e]).

No Action Alternative

The No Action Alternative would not result in impacts to land use and planning.

4.11.4 Mitigation Measures

Proposed Action

With implementation of the Applicant-Initiated Environmental Construction Measures, impacts associated with land use and planning would be minimal and less than significant. No additional mitigation measures are proposed or required.

No Action Alternative

The No Action Alternative would not result in significant or substantial impacts associated with land use and planning. No mitigation measures are proposed or required.

4.12 NOISE

Sound is mechanical energy transmitted by pressure waves in a compressible medium such as air. Noise is generally defined as unwanted sound. Sound is characterized by various parameters which describe the rate of oscillation of sound waves, the distance between successive troughs or crests, the speed of propagation, and the pressure level or energy content of a given sound wave. In particular, the sound pressure level has become the most common descriptor used to characterize the loudness of an ambient sound level.

The unit of sound pressure ratio to the faintest sound detectable by a keen human ear is called a decibel (dB). Because sound or noise can vary in intensity by over one million times within the range of human hearing, a logarithmic loudness scale similar to the Richter Scale used for earthquake intensity is used to keep sound intensity numbers at a convenient and manageable level. Since the human ear is not equally sensitive to all sound frequencies within the entire spectrum, noise levels at maximum human sensitivity are factored more heavily into sound descriptions in a process called “A-weighting” written as dB(A). Further reference to decibels written as “dB” should be understood to be A-weighted.

4.12.1 Applicable Regulations, Plans and Standards

The Project Route is located primarily in remote areas. Baker Junior High School is located approximately 1,000 feet from the Route where the Project Route is adjacent to the Community of Baker. The closest potential noise-sensitive receptors along the Project Route would be located approximately 1000 feet from the Project Route within Segment 1. Baker Airport is an emergency airfield is located less than 1 mile from Project Route.

Federal Regulations

Noise Control Act of 1972, 42 USC & 4901 et seq.; 40 CFR Parts 201-211

The Noise Control Act administered by EPA sets performance standards for noise emissions from “major sources.” The Act sets noise standards for products distributed in commerce and also contains provisions for national noise standards for trains and motor carriers used in intra-state commerce. The

Act required EPA to develop and publish information concerning noise levels that jeopardize human health and welfare. Funding for the EPA Office of Noise Abatement and Control (ONAC) was discontinued in 1981, and noise control programs were shifted to state agencies. The Noise Control Act and its regulations are still in effect but are without any agency enforcement.

Occupational Safety and Health Act of 1970, (29 CFR & 1910 et seq.)

Onsite noise levels are regulated through the Occupational Health and Safety Act of 1970. The administering agency for this regulation is the Federal OSHA. The noise exposure level of workers is regulated at 90 dB(A) over an 8-hour work shift to protect hearing (29 CFR 1910.95). Areas above 85 dB(A) would be posted as high noise level areas, and hearing protection would be required. Employee exposure to levels exceeding 85 dB(A) requires that employers develop a hearing conservation program. Such programs include adequate warning, the provision of hearing protection devices, and periodic employee testing for hearing loss.

State Laws and Regulations

California does not promulgate a statewide uniform standard but requires that each county include within its General Plan a Noise Element for control of environmental noise. Additionally, requirements for occupational noise exposure are set forth in Title 8 of the California Code of Regulations.

California Health & Safety Code Sections 46000 et seq.

The California Health and Safety Code was expanded in 1973 to incorporate the California Noise Control Act (CNCA) of 1973, establishing the California Office of Noise Control (ONC) in mirroring the ONAC. The Act required the ONC to develop guidelines for the preparation and content of noise elements in local general plans, as required by Section 65302 of the Government Code. These guidelines were released in 1976. As with the Federal ONAC, the State ONC became dormant after noise control responsibilities were relegated to incorporated and county jurisdictions. Therefore no administering agency exists for the CNCA of 1973.

Cal-OSHA Occupational Noise Exposure Regulations (8 CCR, General Industrial Safety Orders, Article 105, Control of Noise Exposure, & 5095 et seq.)

Cal-OSHA regulations are the same as the Federal OSHA criteria described above. The criteria are based on a worker's noise level exposure over a specific time period. Maximum permissible worker noise exposure levels have been established to protect against damage to the worker's hearing. Compliance with these levels must be achieved through either engineering controls or hearing protection and warning signs. The administering agency for the above authority is Cal-OSHA.

Local Ordinances and Plans

County of San Bernardino Development Code

"Compatible" noise level is up to 60 dB CNEL consistent with San Bernardino County Development Code Section 83.01.080 – Noise. This section establishes standards concerning acceptable noise levels for both noise-sensitive land uses and for noise-generating land uses. Noise from mobile sources may affect adjacent properties adversely. When it does, the noise shall be mitigated for any new development to a

level that shall not exceed an exterior exposure of 60 dB CNEL, which allows a desirable interior level of 45 dB CNEL to be attained with no other noise control measure other than closing windows and doors for residential, single- and multi-family, duplex, and mobile homes.

Section 83.01.080(c) of the County's Development Code sets forth performance standards for stationary noise sources, during daytime (7 a.m. to 10 p.m.) and nighttime (10 p.m. to 7 a.m.) periods. Exemptions from these standards include motor vehicles not under the control of the industrial use, emergency equipment, vehicles and devices, and temporary construction and repair or demolition activities taking place between the hours of 7 a.m. and 7 p.m., Monday through Saturday, excluding Federal holidays.

Section 83.01.090(a) of the County's Development Code prohibits ground vibration "that can be felt without the aid of instruments at or beyond the lot line, nor shall any vibration be allowed which produces a particle velocity greater than or equal to two-tenths (0.2) inches per second measured at or beyond the lot line." However, section 83.01.090(c) of the County's Development Code exempts motor vehicles not under the control of the subject use and temporary construction, maintenance, repair, or demolition activities between 7:00 a.m. and 7:00 p.m., except Sundays and Federal holidays.

County of San Bernardino General Plan

The County of San Bernardino General Plan Noise Element outlines noise criteria and standards for evaluating auditory impacts and places the level of significance standard for residential noise at 60 community noise equivalent level (CNEL) and institutional noise at 65 CNEL. The San Bernardino County Sheriff's Department is responsible for enforcing regulations to control excessive noise.

4.12.2 Affected Environment

Evaluation of potential noise impacts associated with the implementation of the Proposed Action included review of relevant federal, state, county, and city noise standards; characterization of the existing noise environment; analysis of potential noise impacts associated with maintenance/ replacement activities and operation of the Proposed Action; and recommendation of measures to reduce impacts.

Construction noise impacts to the nearby sensitive receptors have been calculated through use of the primary equation described in the CA/T Construction Noise Control Specification 721.560 for the construction noise calculations using a point-source noise prediction model. The FHWA Roadway Construction Noise Model (RCNM) enables the prediction of construction noise levels for a variety of construction operations. The essential model input data for these performance equations include the source levels of each type of equipment; relative source-to-receiver horizontal and vertical separations; the amount of time the equipment is operating in a given day, also referred to as the duty-cycle; and any transmission loss from topography or barriers. To determine the worst-case noise levels for the grading operations, no topographic attenuation or barrier reductions were utilized. The noise levels used in this analysis for maintenance/replacement activities were based on the anticipated list of equipment proved by the Applicant.

Vibration analysis was calculated using the following equation $L_v(D)=L_v(25\ ft) - 30\log(D/25)$ following FTA vibration analysis guidelines (FTA 2006).

4.12.3 Significance Criteria

Pursuant to CEQA, impacts from noise would be considered significant if the Proposed Project:

- Exposes people to or generates noise levels in excess of standards established in the local general plan or noise ordinance or applicable standards of other agencies
- Exposes people to or generates excessive groundborne vibration or groundborne noise levels
- Substantially increases ambient noise levels in the project vicinity above levels existing without the project (permanently, temporarily, or periodically)
- Exposes people residing or working within an airport land use plan or within 2 miles of a public or private airport to excessive noise levels.

Pursuant to the NEPA, consideration of significant impact on the human environment is conducted in accordance with Title 40 Code of Federal Regulations 1508.27 (Section 1.4). Following the public comment period, a finding regarding significant impact would be prepared in accordance with this provision.

4.12.4 Environmental Effects/Impacts

Proposed Action

Noise generated by the Proposed Action would be limited to maintenance/replacement activities. Implementation of the Proposed Action would generate short-term noise associated with construction equipment activities. Typical noise levels associated with construction equipment that would be used during maintenance/replacement activities associated with the Proposed Action are shown in Table 4-15. Note that the typical noise levels shown on Table 4-15 are reference noise levels at a distance of 50 feet from the noise source. The closest potential noise-sensitive receptors along the Project Route would be located approximately 1,000 feet away from the Project Route within Segment 1 in Baker. The predicted noise level at the noise-sensitive receptors during maintenance/replacement activities is presented in Table 4-16. The duration of activities adjacent to an existing residence is estimated at two to three hours for the installation of the replacement cable. AT&T contractors would utilize standard construction equipment that complies with established noise standards and San Bernardino County Municipal Code Section 83.01.080(g)(3) timing requirements. No permanent noise is associated with operation of the Proposed Action (CEQA Checklist 3.12.2 [a], [c]).

With implementation of Applicant-Initiated Environmental CMs, any potential effects associated with maintenance/replacement activity noise would be reduced to less than significant levels (CEQA Checklist 3.12.2 [c], [d]).

Table 4-15: Equipment Noise

Construction Activity	Number	Crew Size	Reference Noise Level (dBA) at 50 feet from Source
Conduit Installation			
D-9 Caterpillar	1	10-13	82

Backhoe	2		78
10-wheeler truck	1		76 (dump truck)
Semi-trailer truck	1		84 (tractor)
¾ Ton pickup truck	5		75
Excavator	1		81
Trencher	1		82 (dozer)
Dozer/Plow	1		82
Loader	1		79
Water Truck	1		76 (dump truck)
Cable Placing			
One-ton truck (tows cable trailer)	1	6-9	78
Cable reel trailer	1		No Engine
Cable reel	1		No Engine
¾ Ton pickup truck (tows air compressor)	1		75
Semi-trailer truck	1		84
Air blower device	1		N/A
Mechanical pusher/puller	1		N/A
Pull line	1		No Engine
Backhoe	1		78

Source: Federal Highway Administration, "FHWA Roadway Construction Noise Model User's Guide," January, 2006.

Table 4-16: Construction Noise Levels

Receptor Description	Distance to Receptor (feet)	Construction Noise Levels (dBA Leq)	
		Conduit Installations	Cable Placing
Baker Junior High School	1000	40	40

Groundborne vibration is an oscillatory motion that is often described by the average amplitude of its velocity in inches per second or more specifically, peak particle velocity. The background vibration velocity level in residential areas is usually 50 VdB or lower, well below the threshold of perception for humans which is around 65 VdB. Although the perceptibility threshold is about 65 VdB, human response to vibration is not usually significant unless the vibration exceeds 70 VdB (FTA 2006). Human responses to vibration are highly subjective, and even levels below the threshold may cause minor annoyances such as rattling of dishes or doors. Typical human responses to vibration are provided in Table 4-17.

Table 4-17: Human Response to Different Levels of Ground-Borne Vibration

Vibration Velocity Level	Human Response
65 VdB	Approximate threshold of perception for many humans. Low-frequency sound usually inaudible, mid-frequency sound excessive for quiet sleeping areas.
75 VdB	Approximate dividing line between barely perceptible and distinctly perceptible. Many people find transit vibration at this level annoying. Low-frequency noise acceptable for sleeping areas, mid-frequency noise annoying in most quiet occupied areas.
85 VdB	Vibration acceptable only if there are an infrequent number of events per day. Low-frequency noise annoying for sleeping areas, mid-frequency noise annoying even for infrequent events with institutional land uses such as schools and churches.

Source: Federal Transit Administration, "Transit Noise and Vibration Impact Assessment," May, 2006.

Table 4-18 shows the peak particle velocities of some common construction equipment. The most vibration-causing piece of equipment that may be used during construction would be a small bulldozer during the grading phase.

Table 4-18: Typical Construction Equipment Vibration Emissions

Equipment	Peak Particle Velocity in inches per second at 25 feet	Vibration Level (L_v) at 25 feet
Pile Driver (impact)	0.644	104
Pile Driver (sonic)	0.170	93
Clam Shovel Drop	0.202	94
Hydromill		
- in soil	0.008	66
- in rock	0.017	75
Vibratory Roller	0.210	94
Hoe Ram	0.089	87
Large Bulldozer	0.089	87
Caisson Drill	0.089	87
Loaded truck (off road)	0.076	86
Jackhammer	0.035	79
Small Bulldozer	0.003	58

Source: Federal Transit Administration 2006.

As shown in Table 4-18, a small bulldozer would create a vibration level of 0.003 inches per second at 25 feet. The nearest residential structures are located approximately 5000 feet away from possible bulldozer operations along the Project Route within Segment 1. Using the following equation $L_v(D)=L_v(25\ ft) - 30\log(D/25)$ (FTA 2006), the vibration level at the nearest residence, would be substantially less than the perceptibility threshold (65 VdB). Therefore, a minimal and *less than significant* vibration

impact would occur during maintenance/replacement activities associated with the Proposed Action (CEQA Checklist 3.12.2 [b]).

As stated above, noise generated by the Proposed Action would be limited to maintenance/replacement activities. Implementation of the Proposed Action would generate short-term noise associated with construction equipment during maintenance/ replacement activities. No permanent noise is associated with operation of the Proposed Action. AT&T contractors would utilize standard construction equipment that complies with established noise standards and San Bernardino County Municipal Code Section 83.01.080(g)(3), timing requirements between 7:00 a.m. and 7:00 p.m., except for Sundays and federal holidays. With implementation of Applicant-Initiated Environmental CMs, CM-9.1 a less-than significant impact would occur (CEQA Checklist 3.12.2 [d]).

The Proposed Action would consist of maintenance/replacement activities along an approximately 88-mile portion of an existing FOC route. Workers would be in the vicinity of the airports temporarily and only during maintenance/replacement activities. The Proposed Action would not expose people residing or working in the surrounding area to excessive levels of airport-generated noise (CEQA Checklist 3.12.2 [e], [f]).

No Action Alternative

The No Action Alternative would not result in implementation of the Proposed Action; and potential effects associated with noise, as described above, would not occur

4.12.5 Mitigation Measures

Neither the Proposed Action nor the No Action Alternative would result in significant or substantial impacts associated with noise. No mitigation measures are proposed or required.

4.13 PUBLIC SERVICES AND UTILITIES

4.13.1 Affected Environment

The Proposed Route is located in a primarily rural area within San Bernardino County. Fire protection services are provided by the San Bernardino County Fire Department. Police services are provided by the San Bernardino County Sheriff's Department. No schools or parks are adjacent to the Project Route.

Nearby utilities consist of Southern California Edison (SCE) power lines running on the east side of SR-127, across the road from the Proposed Route.

4.13.2 Significance Criteria

Pursuant to CEQA, impacts to public services or utilities would be considered significant if the Proposed Project:

- Would result in substantial adverse physical impacts associated with the provision of or need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: Fire Protection, Police Protection, Schools, Parks, or other public facilities

- Would not have sufficient water supplies available to serve the project (including large-scale developments as defined by Public Resources Code Section 21151.9 and described in Question No. 20 of the Environmental Information Form) from existing entitlements and resources
- Would not result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments
- Would be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs
- Would not comply with Federal, State, and local statutes and regulations related to solid waste

4.13.3 Environmental Effects/Impacts

Proposed Action

The Proposed Action would consist of installation activities along an approximately 12.25-mile route. The Proposed Project would not physically impact any public facilities or increase the demand for fire and police protection, schools, parks or other public facilities. Further, the Proposed Action would not induce population growth requiring the extension of existing services or creation of new services (CEQA Checklist 3.14.1 [a] through [e]).

The Proposed Action would not generate and/or discharge wastewater. Therefore, the Proposed Action would not create an additional need for wastewater treatment subject to Regional Water Quality Control Board requirements (CEQA Checklist 3.17.1 [a]).

The Proposed Action does not generate a demand for water services, nor does the Proposed Project generate a demand for wastewater facilities and services. Therefore, the Proposed Action would not require or result in the construction of new water or wastewater treatment facilities or the expansion of existing facilities (CEQA Checklist 3.17.1 [b], [c], [e]).

The Proposed Action requires minimal water use for dust control during installation activities. Water used during construction for dust suppression and other construction needs would come from municipal or private land owner sources. No water is required for the operation of the fiber-optic cable (CEQA Checklist 3.17.1 [d]).

The Proposed Action would utilize local landfills to dispose of minor volumes of solid waste generated during construction, if any. The solid waste generated by the project would be temporary and would cease upon completion of construction (CEQA Checklist 3.17.1 [f], [g]).

No Action Alternative

The No Action Alternative would not result in potential effects associated with public services and utilities.

4.13.4 Mitigation Measures

Proposed Action

The Proposed Action would not result in significant or substantial impacts associated with public services and utilities. No mitigation measures are proposed or required.

No Action Alternative

The No Action Alternative would not result in significant or substantial impacts associated with public services and utilities. No mitigation measures are proposed or required.

4.14 TRANSPORTATION AND TRAFFIC

4.14.1 Affected Environment

The Project Route generally follows SR-127 but also includes various County roads at the beginning of the route.

4.14.2 Significance Criteria

Pursuant to CEQA, impacts to transportation and traffic would be considered significant if the Proposed Project would:

- Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and nonmotorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit
- Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways
- Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks
- Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)
- Result in inadequate emergency access
- Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities supporting alternative transportation (e.g., bus turnouts, bicycle racks).

4.14.3 Environmental Effects/Impacts

Proposed Action

Implementation of the Proposed Action would not result in a substantial increase in traffic that would have an adverse effect on roadways, affect roadway capacity or level of service, or contribute to a cumulative effect. Traffic-generating installation activities include a minor amount of construction and delivery vehicles traveling to the Project Route. During installation activities, these vehicles would be staged within staging areas located in existing contractor yards; existing staging areas established by other utility companies; previously cleared, graded, or paved areas; or level areas where grading and vegetation clearing are not required. A temporary increase in traffic would occur during the construction phase due to materials being moved on and off the site. Once the Proposed Action is completed, operation and maintenance activities would consist mainly of repair of erosion control devices or cable conduits in the event of storm damage, landslides, or other emergencies. The increase in traffic would result in a *less than significant* impact because the traffic increase would be minor and short-term. Additionally, no significant increases in traffic site volumes, if any, are anticipated to occur (CEQA Checklist 3.16.1 [a], [b], [d], [e], [f]).

Two airports are located near the Proposed Action: Zzyzx Airstrip, a private airstrip, is located over 7 miles from Project Route; and Baker Airport, an emergency airfield, is located less than 1 mile from the Project Route. The Proposed Action is limited to installation activities along an approximately 12.25-mile portion of the route. It would not introduce structures that could disrupt air traffic patterns or construct housing that could increase travel demand at any of the surrounding airports (CEQA Checklist 3.16.1 [c]).

4.14.4 Mitigation Measures

Proposed Action

The Proposed Action would not result in significant or substantial impacts associated with transportation and traffic. No mitigation measures are proposed or required.

No Action Alternative

The No Action Alternative would not result in significant or substantial impacts associated with transportation and traffic. No mitigation measures are proposed or required.

SECTION 5.0 – CUMULATIVE IMPACTS AND FINDINGS

The CEQ regulations implementing NEPA require that the cumulative impacts of a Proposed Action be assessed (40 CFR Parts 1500-1508). A cumulative impact is an "impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions" (40 CFR § 1508.7). Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time (40 CFR § 1508.7).

Cumulative impacts are defined by CEQA as "two or more individual effects which, when considered together, are considerable or…compound or increase other environmental impacts." (CEQA Guidelines, § 15355.) Such impacts may be relatively minor and incremental yet still be significant because of the existing environmental background, particularly when one considers other closely related past, present, and reasonably foreseeable future projects.

The area from which potential cumulative projects were drawn includes BLM land in the vicinity of the Proposed Project. The reasonably foreseeable time frame for this cumulative analysis is approximately 15 years. The majority of the effects from the Proposed Project would be limited to installation activities, which would last approximately 4 to 5 months, while other effects would occur throughout operation of the FOC.

5.1 PAST, CURRENT, AND REASONABLY FORESEEABLE FUTURE PROJECTS

Review of the BLM, San Bernardino County, Los Angeles Department of Water and Power, and the California Department of Transportation websites was conducted to identify current and planned future projects within the cumulative impact area in the vicinity of the Proposed Action. Past projects include the installation and maintenance of other underground utility lines located within the Project Route (Calnev Pipeline Expansion Project). No foreseeable major future projects are known in the vicinity of the Proposed Action area.

A list of proposed renewable energy projects within San Bernardino County, although not necessarily within the same location or schedule as the Proposed Project, is provided below:

- Soda Mountain Solar
- Silurian Solar Facility
- Abengoa Mojave Solar Power
- Alamo Solar
- Cal SPV II, LLC
- Clean Focus – Apple Valley East Solar
- Sun Edison – Duncan Road Solar Project
- Sun Edison – White Road Solar Project
- Sunlight Partners – (Helendale) 7.5 MW Solar Facility
- Stateline Solar Farm Project (Ivanpah)
- Adelanto Solar Power Project

5.2 PROPOSED ACTION

The following analyzed resources and human communities of concern are not approaching conditions where additional stresses associated with the Proposed Action would have consequential cumulative effects.

5.2.1 Aesthetic and Visual Resources

Cumulative impacts to visual resources could occur if cumulative projects are located within close proximity and at the same time. This could increase the potential for substantial scenic view blockage. In addition, sequential construction activity in the same approximate area may give the impression that the activities are less transitory in nature.

Implementation of the Proposed Action would result in short-term impacts on visual resources within the Project Route area from the presence and visual intrusion of construction vehicles, equipment, materials, and workforce along the AT&T ROW. Since these activities would not occur in one location for a substantial length of time, they are not likely to combine with another project to create substantial sequential activity. Installation impacts on visual resources would also result from the temporary alteration of landforms and vegetation along the AT&T ROW; however, after installation activities, changes to the Proposed Project area would be minimal, if not indistinguishable, to the viewers. Overall, implementation of the Proposed Action would result in minimal, temporary changes to the existing character of the landscape and would be consistent with the VRM Class III objective. Therefore, due to the short-term nature of any visual impacts associated with the Proposed Action, cumulative impacts would be less than significant.

5.2.2 Air Quality

A new source of pollution may contribute to violations of criteria pollutant standards because of the existing background sources or foreseeable future projects. Additionally, cumulative impacts to air quality could occur if construction activities associated with cumulative projects occur simultaneously within close proximity. This could cause a violation of Federal or State criteria pollutant standards.

The Proposed Action area is nonattainment for ozone, PM_{10}, and $PM_{2.5}$. The Proposed Action's emissions of particulate matter are attributable to temporary installation activities, which would cease upon construction completion. Implementation of the Proposed Action may generate short-term fugitive dust from the use of construction equipment; however, fugitive dust would be controlled by adherence to the MDAQMD fugitive dust rules. Additionally, operation of the Proposed Action would not introduce a new source of pollution that would increase long-term operational emissions. Through implementation of fugitive dust controls, the incremental effect of the Proposed Action's air emissions is not cumulatively considerable when viewed in connection with the air emissions that may be caused by cumulative projects. Therefore, due to the short-term nature of installation activities associated with the Proposed Action, cumulative impacts would be less than significant.

5.2.3 Biological Resources - Vegetation

Cumulative impacts to vegetative biological resources could occur if cumulative projects permanently impacted vegetation. This could reduce the area of sensitive vegetation communities. The Proposed Project may temporarily disturb vegetation through minimal use along the Project Route. Minimal use

areas would not be graded or cleared during maintenance/replacement activities but would be used for construction vehicles and equipment to pass maintenance/replacement activities. Temporary disturbances would occur in the portions of the Project ROW that would be graded and cleared of vegetation for installation of the new cable. Upon completion of the maintenance/replacement activities, the graded areas would be treated in accordance with the Vegetation Restoration Plan (Appendix G). The Proposed Action would contribute incrementally, but temporarily, to overall impacts to vegetation communities within the Proposed Project area. Maintenance/replacement activities associated with the Proposed Action would implement mitigation measures to avoid and/or minimize impacts to potential sensitive vegetation. With the implementation of these measures, in addition to implementation of Applicant-Initiated Environmental CMs, the Proposed Action would not incrementally affect cumulative impacts to sensitive vegetation. Due to the minor and temporary impacts to vegetation associated with the Proposed Action, cumulative impacts would be less than significant.

5.2.4 Biological Resources - Wildlife

Cumulative impacts to wildlife biological resources could occur if cumulative projects impact significant numbers of sensitive species. This could significantly reduce the populations of sensitive species of concern.

Although the maintenance/replacement activities associated with the Proposed Action would occur only within the Project ROW, the biological resources within the general Project Route have been affected by past actions not associated with the Proposed Action. These actions include the installation and maintenance of other underground utility lines located within the Project Route (Calnev Pipeline Expansion Project). Past projects in the area may have resulted in injury, harassment, and/or death of wildlife from vehicles and/or equipment traveling along and performing maintenance within the roadway ROW.

Maintenance/replacement activities associated with the Proposed Action would implement mitigation measures to avoid and/or minimize impacts to sensitive biological resources. With the implementation of these measures, in addition to implementation of Applicant-Initiated Environmental CMs, the Proposed Action would not incrementally affect cumulative impacts to sensitive wildlife species. The Proposed Action's cumulative impacts to wildlife biological resources would be less than significant.

5.2.5 Cultural Resources

Cumulative impacts to cultural resources could occur if cumulative projects impact significant numbers of archaeological, historical, and paleontological resources. This could significantly reduce the number of cultural resources.

Earth-moving activities, off-road vehicle use, unauthorized artifact collection, and disturbances associated with project-related activities have the potential to significantly affect prehistoric and historic resources within the project area. Although this investigation presumes that the project will not significantly have an adverse effect on eligible properties. With implementation of Mitigation Measures MM-Cultural-1 and MM-Cultural-2, the Proposed Action would not incrementally affect cumulative impacts to cultural resources. The Proposed Action's cumulative impacts to cultural resources would be less than significant.

5.2.6 Environmental Justice

Cumulative environmental justice impacts would occur if cumulative projects occurred simultaneously within a low-income or minority community. This could result in disproportionate impacts in a low-income or minority community.

No anticipated adverse environmental justice impacts are associated with the implementation of the Proposed Action. The short-term environmental effects associated with the Proposed Action would affect the area's population equally, without regard to nationality or income level. The incremental effect of the Proposed Action's impacts on environmental justice is not cumulatively considerable when viewed in connection with cumulative projects. The Proposed Action would not have cumulative impacts on environmental justice.

5.2.7 Geology and Soils

Cumulative impacts to geological resources would occur if cumulative projects with substantial ground disturbance activities occur simultaneously in an area with geological hazards. This could result in a geological accident.

The Proposed Action would potentially disturb approximately 29.7 acres (minimal use and temporary disturbance) along the Project Route due to installation activities; however, installation activities associated with the Proposed Action would not occur in an area which could trigger a significant geological hazard, such as liquefaction or a landslide. Upon completion of the installation activities, the disturbed areas would be returned to preconstruction contours. With implementation of Applicant-Initiated Environmental CMs, the incremental effect of the temporary impacts from the Proposed Action would not be cumulatively considerable when viewed in connection with any permanent alterations to soils and geology that may be caused by cumulative projects. Due to the short-term nature of the installation activities associated with the Proposed Action, cumulative impacts would be less than significant.

5.2.8 Greenhouse Gas Emissions

Cumulative impacts to greenhouse gas emissions could occur if construction activities associated with cumulative projects occur simultaneously within close proximity. This could cause a violation of a policy or regulation adopted for the purpose of reducing emissions of greenhouse gases.

Implementation of the Proposed Action may generate a nominal amount of greenhouse gas emissions from the use of construction equipment. Additionally, operation of the Proposed Action would not introduce a new source of pollution that would increase long-term operational emissions. In consideration that only nominal amounts of greenhouse gases would be temporarily emitted during the construction phase of the Proposed Action, the incremental effect of the Proposed Action's greenhouse gas emissions is not cumulatively considerable when viewed in connection with the greenhouse gas emissions that may be caused by cumulative projects. Therefore, due to the short-term nature of installation activities associated with the Proposed Action, cumulative impacts would be less than significant.

5.2.9 Health and Safety/Hazardous Materials

Cumulative impacts to health and safety could occur if cumulative projects involving the transport, use, or disposal of hazardous materials occurred within close proximity to each other and within a similar time span. This could result in the transportation, use or disposal of a large amount of hazardous materials in one area.

Installation activities associated with implementation of the Proposed Action would involve the potential risk of releasing hazardous substances such as gasoline, oil, solvents, paints, and other hazardous chemical agents. These impacts would be minimized, however, with the implementation of Applicant-Initiated Environmental CMs. Additionally, hazardous materials utilized during installation activities would be in limited quantities and would be in use or transported only during the construction period. Proper handling, storage, and disposal of all hazardous materials in accordance with applicable regulations would reduce any impacts. The incremental effect of the Proposed Action's impacts associated with health and safety and hazardous materials are not cumulatively considerable when viewed in connection with the same impacts that may be caused by cumulative projects. The Proposed Action's cumulative impacts to health and safety and hazardous materials would be less than significant

5.2.10 Hydrology and Water Quality

Cumulative impacts to hydrology and water quality could occur if a substantial number of cumulative projects permanently impacted waters of the United States or waters of the State. This could change the hydrology of the area. Additionally, cumulative impacts to hydrology and water quality could occur if cumulative projects resulted in violation to water quality standards.

Implementation of the Proposed Action would result in approximately 0.04 acre of impacts to USACE jurisdictional waters, 1.60 acres of impacts to RWQCB jurisdictional waters, and approximately 1.12 acres of CDFW jurisdictional waters. Once the construction phase of the Proposed Action is complete, these aquatic features would return to their pre-project condition, resulting in only temporary impacts. Maintenance/replacement activities associated with the Proposed Action would comply with all water quality standards or waste discharge requirements. Additionally, with implementation of Applicant-Initiated Environmental CMs, the Proposed Action would avoid violating water quality standards, degrading water quality, and/or impairing beneficial uses. The incremental effect of the Proposed Action's impacts on surface and groundwater resources is not cumulatively considerable when viewed in connection with the same impacts that may be caused by cumulative projects. The Proposed Action's cumulative impacts to hydrology and water quality would be less than significant.

5.2.11 Noise

Cumulative noise impact could occur if construction activities associated with cumulative projects are carried out within the same area simultaneously, resulting in an exceedance in construction noise thresholds. This could result in significant impacts to sensitive receptors.

The Proposed Action would generate short-term construction noise only, and would not exceed County noise ordinance requirements. Additionally, construction noise associated with the Proposed Action is not anticipated to occur concurrently with construction noise from cumulative projects. Additionally, with implementation of Applicant-Initiated Environmental CMs the incremental effect of the Proposed

Action's construction noise would not be cumulatively considerable when viewed in connection with any noise that may be caused by cumulative projects. Due to the short-term nature of the maintenance/replacement activities associated with the Proposed Action, cumulative impacts would be less than significant.

5.2.12 Public Services and Utilities

Cumulative impacts to public services and utilities could occur if existing government facilities were being physically impacted by the Proposed Action or if the Proposed Action would cause the need for new or expanded facilities. This could result in significant impacts due to the construction or expansion of existing facilities.

No anticipated adverse public services or utilities impacts are associated with the implementation of the Proposed Action. The short-term environmental effects associated with the Proposed Action would not affect public services or utilities facilities. The incremental effect of the Proposed Action's impacts on public services and utilities is not cumulatively considerable when viewed in connection with cumulative projects. The Proposed Action would not have cumulative impacts on public services and utilities.

5.2.13 Transportation and Traffic

Cumulative impacts to transportation and traffic could occur if access, traffic, and congestion on roadways were being impacted by the Proposed Action. This could result in conflicts with the applicable congestion management plan or could affect travel and access on the roadways adjacent to the Proposed Action. Cumulative impacts could also occur if alternative transportation was obstructed or negatively impacted by the Proposed Action.

Implementation of the Proposed Action would result in short-term impacts on transportation and traffic within the Project Route area from the presence of construction vehicles, equipment, materials, and workforce along the Project Route. Since these activities would not occur in one location for a substantial length of time, they are not likely to combine with another project to create substantial sequential activity. Overall, implementation of the Proposed Action would result in minimal, temporary impacts to traffic and transportation along the Project Route. Therefore, due to the short-term nature of any transportation and traffic impacts associated with the Proposed Action, cumulative impacts would be less than significant.

5.3 OTHER CEQA AND NEPA CONSIDERATIONS

5.3.1 Relationship of Short-Term Uses and Long-Term Productivity

CEQA requires evaluation of adverse impacts which could not be avoided should the proposed project be implemented. Implementation of the Proposed Project would result in the installation of approximately 12.25 miles of AT&T fiber-optic cable located between the Baker and the NTC at Fort Irwin. Construction impacts would be short-term. Public lands currently used for open space uses would continue to be available to the public upon project completion. Mitigation measures in addition to Applicant-Initiated Environmental CMs and BMPs identified in Section 2.1 would be implemented.

5.3.2 Irreversible and Irretrievable Commitments of Resources

The Proposed Project involves the consumption of resources, including the energy required for construction operations. Energy will be expanded in the form of diesel fuel, gasoline, lubricants for equipment and vehicles, and electricity for power. The commitment of materials during construction operations also includes water for dust control.

5.3.3 Growth Inducement

CEQA requires that any growth-inducing effects of a proposed project be identified. CEQA Guidelines §15126.2(d) explains growth-inducing impacts as development that would directly or indirectly foster population growth or construction of additional housing in the surrounding environment. The Proposed Project is the installation of fiber-optic cable and conduits that are part of a nationwide and global system of communication links. The Proposed Project is intended to accommodate existing growth and would not directly or indirectly induce growth within adjacent communities or the surrounding area. No population growth is expected to be induced in any particular area as a result of the Proposed Project. No impact would occur.

SECTION 6.0 – REFERENCES

Bedrossian, T.L.

2012 *Geologic Compilation of Quaternary Surficial Deposits in Southern California, Soda Mountains 30' by 60' Quadrangle*. California Geological Survey Special Report 217, Plate 21. Scale 1:100,000.

Brown, W.J., S.G. Wells, Y. Enzel, R.Y. Anderson, and B. McFadden.

1990 The late Quaternary history of pluvial Lake Mojave-Silver Lake and Soda Lake basins, California. In *At the End of the Mojave: Quaternary Studies in the East Mojave Desert*, edited by R.E. Reynolds, Mojave Desert Quaternary Research Center Special Publication, San Bernardino County Museum Associated, Redlands, California, pp. 55-72.

Bureau of Land Management (BLM)

2012 Visual Resource Management. Available online at: http://www.blm.gov/wo/st/en/prog/Recreation/recreation_national/RMS.html. Accessed March 2014.

California Department of Conservation (CDC)

2014 Search for Regulatory Maps. Available online at: http://www.quake.ca.gov/gmaps/WH/regulatorymaps.htm. Accessed March 2014

California Department of Fish and Wildlife (CDFW)

2009 Protocols for Surveying and Evaluating Impacts to Special Status Plant Populations and Natural Communities. California Natural Resources Agency. California.

2014a California Endangered Species Act. Available online at: http://www.dfg.ca.gov/habcon/cesa/incidental/cesa_policy_law.html. Accessed March 2014.

2014b Lake and Streambed Alteration Program. Available online at: http://www.dfg.ca.gov/habcon/1600/. Accessed March 2014.

California Department of Forestry and Fire Protection (Cal Fire)

2007 Fire and Resource Assessment Program. Draft Fire Hazard Severity Zones in Local Responsibility Areas. Available online at: http://www.fire.ca.gov/fire_prevention/fhsz_maps_sanbernardinone.php. Accessed March 2014.

California Department of Transportation (Caltrans)

2008 Scenic Highway Guidelines. October 2008.

2014 The California Scenic Highway program. Available online at: http://www.dot.ca.gov/dist3/departments/mtce/scenic.htm. Accessed March 2014.

2014b California Scenic Highway Mapping System. Available online at: http://www.dot.ca.gov/hq/LandArch/scenic_highways/index.htm. Accessed March 2014.

California Department of Water Resources (DWR)

2004a South Lahontan Hydrologic Region. Riggs Valley Groundwater Basin. Available online at: http://www.water.ca.gov/pubs/groundwater/bulletin_118/basindescriptions/6-23.pdf. Accessed March 2014

2004b South Lahontan Hydrologic Region. Silver Lake Valley Groundwater Basin. Available online at: http://www.water.ca.gov/pubs/groundwater/bulletin_118/basindescriptions/6-34.pdf. Accessed March 2014.

2004c South Lahontan Hydrologic Region. Soda Lake Valley Groundwater Basin. Available online at: http://www.water.ca.gov/pubs/groundwater/bulletin_118/basindescriptions/6-33.pdf. Accessed March 2014.

California State Lands Commission (CSLC)

2014 Environmental Justice Policy. Available online at: http://www.slc.ca.gov/Policy_Statements/Environmental_Justice_Home_Page.html. Accessed February 2014

County of San Bernardino (County)

2007a County of San Bernardino Development Code. Adopted March 13, 2007. Amended July 25, 2013.

2007b County of San Bernardino General Plan. Adopted March 13, 2007. Amended July 18, 2013.

2007c County of San Bernardino 2006 General Plan Program Final Environmental Impact Report. February 2007.

2011 Greenhouse Gas Emissions Development Review Processes County of San Bernardino, California. August 2011.

2014 Department of Airports. Baker Airport. Available online: http://cms.sbcounty.gov/airports/Airports/Baker.aspx. Accessed: March 2014

Department of Toxic Substances Control (DTSC)

2014 EnviroStor Database. Available online at: http://www.envirostor.dtsc.ca.gov/public/. Accessed March 2014.

Federal Transit Administration (FTA)

2006 Transit Noise and Vibration Impact Assessment. May 2006.

Google Earth

2014 Google Earth 7.1.2.2041.

Hewett, R.G.
1954 General Geology of the Mojave Desert region, California. *California Division of Mines and Geology Bulletin 170,* Chapter II, pp. 5-20. San Francisco.

Mojave Desert Air Quality Management District (MDAQMD)
1995 Final Mojave Desert Planning Area Federal Particulate Matter (PM_{10}) Attainment Plan. July 1995.

2004 MDAQMD 2004 Ozone Attainment Plan (State and Federal). April 2004.

2011 California Environmental Quality Act (CEQA) and Federal Conformity Guidelines. August 2011.

Norris, W. E. and R.W. Webb
1990 Geology of California. John Wiley and Sons, Inc., New York.

Reynolds, R.E.

2014 AT&T Silver Lake Records and Literature Search on file at Chambers Group, Inc.

State Water Resources Control Board (SWRCB)
2014 GeoTracker. Available online at: http://geotracker.waterboards.ca.gov/default.asp. Accessed March 2014.

United States Environmental Protection Agency (EPA)
2014a Summary of the Resource Conservation and Recovery Act. Available online at: http://www2.epa.gov/laws-regulations/summary-resource-conservation-and-recovery-act. Accessed March 2014.

2014b Summary of Occupational Safety and Health Act. Available online at: http://www2.epa.gov/laws-regulations/summary-occupational-safety-and-health-act. Accessed March 2014.

2014c Summary of Executive Order 12898 – Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations. Available online at: http://www2.epa.gov/laws-regulations/summary-executive-order-12898-Federal-actions-address-environmental-justice. Accessed March 2014.

United States Fish and Wildlife Service (USFWS)
2013 ESA Basics More Than 40 Years of Conserving Endangered Species. Available online at: http://www.fws.gov/endangered/esa-library/pdf/ESA_basics.pdf. Accessed March2014.

2014 Migratory Bird Treaty Act of 1918. Available online at: http://www.fws.gov/laws/lawsdigest/migtrea.html. Accessed March 2014.

Wells, S.G., Anderson, R.Y., Enzel, Y, and W.J. Brown

1990 An Overview of Floods and Lakes within the Mojave River Drainage Basin: Implications for latest Quaternary Paleoenvironments in Southern California in Reynolds, R.E., et al., editors, At the end of the Mojave:Quaternary studies in the eastern Mojave Desert. 1990 Mojave Desert Quaternary Research Symposium, Special Publication of the San Bernardino County Museum Association, p. 31-37.

SECTION 7.0 – CONSULTATION AND COORDINATION

The following agencies and organizations having jurisdiction and/or specific interest within the Project Area were contacted to discuss the Proposed Project, existing environmental data, permitting requirements, and potential future projects.

7.1 AGENCIES, ORGANIZATIONS, AND PERSONS CONSULTED

Federal Agencies

Bureau of Land Management (BLM) – Barstow Field Office

National Park Service

US Army Corps of Engineers

US Fish and Wildlife Service

State Agencies

California Department of Fish and Wildlife

Lahontan Regional Water Quality Control Board

California Department of Transportation

CA Native American Heritage Commission

Local Agencies and Other Entities

County of San Bernardino

Native American Tribes Contacted

Tribe Contacted	Person Contacted	Type of Contact	Response/Comments
Ramona Band of Cahuilla Indians	Joseph Hamilton	Letter	Pending response/comments
San Manuel Band of Mission Indians	Lynn Valbuena; Daniel McCarthy	Letter	Pending response/comments
Chemehuevi Reservation	Edward Smith	Letter	Pending response/comments
Fort Mojave Indian Tribe	Timothy Williams	Letter	Pending response/comments
San Fernando Band of Mission Indians	John Valenzuela	Letter	Pending response/comments
AhaMaKav Cultural Society, Fort Mojave Indians	Linda Otero	Letter	Pending response/comments
Morongo Band of Mission Indians	William Madrigal; Ernest H. Silva	Letter	Pending response/comments
Serrano Nation of Mission Indians	Goldie Walker	Letter	Pending response/comments
Pahrump Paiute Tribe	Richard Arnold	Letter	Pending response/comments

SECTION 8.0 – LIST OF PREPARERS

8.1.1 Technical Consultants/Preparers

Name	Responsibility
Chambers Group, Inc.	
John Gifford	Project Manager, Noise
Meghan Directo	Aesthetic and Visual Resources, Environmental Justice, Geology and Soils, Health and Hazardous Materials, Land Use and Planning, Public Services and Utilities, Transportation and Traffic
Saraiah Skidmore	Biological Resources - Wildlife, Hydrology and Water Quality
Ana Davis	Biological Resources - Wildlife
Heather Clayton	Biological Resources - Vegetation
Rebecca Alvidrez	Biological Resources - Vegetation
Heather Franklin	Hydrology and Water Quality
Lisa Louie	NEPA/CEQA Project Manager, Hydrology and Water Quality
Charles Cisneros	Cultural Resources
Ryan Glenn	Cultural Resources
Kate Crosmer	Cultural Resources
Mark Roeder	Paleontology
Michael Simmons	Hydrology and Water Quality, GIS
Linda St. John	Technical Editing
Vista Environmental	
Greg Tonkovich	Air Quality, Greenhouse Gas
AT&T Corp.	
BLM	
Mickey Quillman	Resource Area Manager
Rich Rotte	Project Manager
Jim Shearer	Project Archaeologist
Lorenzo Encinas	Project Biologist
County of San Bernardino	