

APPENDIX D2

Jurisdictional Delineation Report

**JURISDICTIONAL DELINEATION REPORT
FOR THE PATH 46 TRANSMISSION LINE CLEARANCES PROJECT
IN SAN BERNARDINO COUNTY, CALIFORNIA**



PREPARED FOR

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September 2016, revised January 2017

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EXECUTIVE SUMMARY

The purpose of this report is to provide baseline data concerning the type and extent of potential jurisdictional water resources for the Path 46 Transmission Line Clearances Project (hereinafter referred to as the "Project"). The Project consists of eight segments, seven of which are located in the Mojave Desert in San Bernardino County, California and one located in Clark County, Nevada. Only Segments 1 through 7 in California are discussed in this report.

Jurisdictional water resources considered for this report include "waters of the U.S." regulated by the U.S. Army Corps of Engineers (USACE); "waters of the State" regulated by the Regional Water Quality Control Board (RWQCB); and the bed, bank, and channel of all lakes, rivers, and/or streams (and associated riparian vegetation), as regulated by the California Department of Fish and Wildlife (CDFW).

The jurisdictional delineation field work was performed by Psomas in September 2016. The limits of non-wetland "waters of the U.S." and "waters of the State" were identified by the presence of an ordinary high water mark (OHWM). Potential wetland "waters of the U.S." were assessed using a two-parameter approach (presence of wetland-associated plants and presence or evidence of hydrology). The limits of CDFW jurisdictional waters were identified as the top of bank or the outer drip line of riparian vegetation.

Based on the results of the field work, it was determined that the total jurisdictional water resources in the survey area are as follows:

- **USACE Jurisdiction:** 31.130 acres.
- **RWQCB Jurisdiction:** 57.733 acres (31.130 acres of "waters of the U.S." and 26.603 acres of isolated waters).
- **CDFW Jurisdiction:** 63.529 acres.

Based on the results of the data analysis, it was determined that the total impacts on jurisdictional water resources in the survey area are as follows:

- **USACE Jurisdiction:** 0.397 acre (0.337 acre grading and 0.060 acre road demolition).
- **RWQCB Jurisdiction:** 0.987 acre (0.794 acre grading and 0.193 acre road demolition).
- **CDFW Jurisdiction:** 1.018 acre (0.825 acre grading and 0.193 acre road demolition).

1.0 INTRODUCTION

This Jurisdictional Delineation Report (report) was prepared for the Los Angeles Department of Water and Power (LADWP) to provide baseline data concerning the type and extent of resources potentially subject to the jurisdiction of the U.S. Army Corps of Engineers (USACE), the Regional Water Quality Control Board (RWQCB), and the California Department of Fish and Wildlife (CDFW) for the Path 46 Transmission Line Clearances Project (hereinafter referred to as “Project”).

1.1 PROJECT LOCATION AND ENVIRONMENTAL SETTING

The Project area is located in the Mojave Desert and extends from the vicinity of Victorville, California, northeast to Boulder City, Nevada (Attachment A, Exhibit 1). It is generally located along Interstate (I) 15. The Project area is divided into Segments 1 through 8; Segment 8, which occurs in Nevada, is not discussed in this report. The seven California segments are located in unincorporated San Bernardino County. The Project is located on land administered by the U.S. Bureau of Land Management (BLM), with a BLM right-of-way grant issued to the LADWP.

The Project extends across the Mojave Desert from the Stoddard Valley in the southwest, through the Mojave Valley, and into the Shadow Valley and Clark Mountain Range in the northeast. The Mojave Desert is a wedge-shaped basin that experiences precipitation primarily in the winter, with occasional summer thunderstorms.

At the southwestern end of the Project area (i.e., Victorville), the average annual precipitation is 6.15 inches with the temperature averaging 78.8 degrees Fahrenheit (°F) in the summer and 46.7°F in the winter (Arguez et al. 2010).¹ Precipitation is slightly lower and temperatures are slightly higher in the Barstow and Baker areas. Average annual precipitation is 5.30 inches and 4.48 inches, average summer temperatures are 83.1°F and 91.3°F, and average winter temperatures are 47.8°F and 50.1°F, respectively. Precipitation increases and temperature decreases at the northeastern end of the Project area (i.e., Mountain Pass 1 SE); average annual precipitation is 9.94 inches and average summer and winter temperatures are 76.7°F and 39.6°F, respectively.

The predominant vegetation communities in the Project area include creosote bush scrub and Joshua tree woodland (in the northeast). The surrounding land use is primarily open space crossed by the existing transmission line alignment and associated access roads; these areas are also used for off-highway vehicle (OHV) recreational uses. Agricultural land uses occur in the immediate vicinity of Segment 3, the Fort Irwin Military Reservation is located northwest of Segments 4 and 5, and the Mojave National Preserve and the Ivanpah Solar Electric Generating System are located south and southeast of Segment 7, respectively.

1.2 PROJECT PURPOSE AND DESCRIPTION

The following Project purpose and description come from the *Biological Resources Survey Report* for the Project (ESA 2016). The Project’s objective is to restore the North American Electric Reliability Corporation (NERC) code clearances from the ground to the transmission conductors. The existing McCullough-Victorville Lines 1 and 2 (MCV1 and MCV2) and the Mead-Victorville Line 1 (MVL1) were installed in the 1930s to transmit power from Hoover Dam to Los Angeles. Since then, the transmission lines have sagged past code clearances. The LADWP has identified a total of 72 locations that do not currently meet NERC code requirements in California and

¹ Seasons are climatological; winter is considered to be December, January, and February and summer is considered to be June, July, and August.

intends to comply with the code clearances by grading the ground surface of the area underneath the transmission lines to achieve the required height consistency. In situations where grading has been determined to be infeasible due to topography, the LADWP proposes to raise existing transmission line towers to achieve height consistency. Project activities are discussed in further detail below.

Access to the proposed work areas will be limited to the existing main Powerline Road and associated spur roads, to the extent feasible. Where access to the proposed work areas is not possible via the existing roads, overland travel shall be limited to those areas designated by a qualified biologist as “non-sensitive”. Access routes designated by a qualified biologist will follow the path of least resistance and avoid all sensitive biological resources, to the extent feasible.

1.2.1 Grading Process

Grading activities will be carried out within the LADWP’s right-of-way in order to achieve height consistency and will include the staking of grading limits, grading, and site restoration. Prior to the start of grading, each site will have cut and fill stakes and construction perimeter stakes set. Construction equipment to be used for grading will include water trucks, backhoe loaders, wheel loaders, dump trucks, jack hammers, and various small utility vehicles. The construction equipment will be staged within the confines of existing roadways and turnouts.

Temporary storage of spoils will occur within the Project limits in previously disturbed areas identified in coordination with the LADWP and their biological and cultural resources specialists. Spoils accumulated during grading activities will then be spread within the existing access road for the MVL1 and MCV2 lines, known as Powerline Road, within 500 feet to either side of the work area to repair ruts and potholes consistent with activities associated with routine road maintenance. For the MCV1 lines, which are not located adjacent to Powerline Road, the spoils will be spread within the unnamed spur roads, within 500 feet to either side of the work area. Equipment and spoils spreading will be limited to within the confines of the existing road and are not anticipated to encroach upon adjacent habitat.

Certain portions of existing spur roads that directly conflict with clearance requirements will be decommissioned. This work will involve either scarifying the road surface or constructing compacted soil barricades (or other similar barrier system) to prevent vehicle access to that section of road. The spur road will be realigned around the demolished section to restore continuous access between towers. The portions of the road that are decommissioned will be restored and revegetated.

1.2.2 Tower Raising Process

Tower raising will be carried out at MCV1 125-5 and MCV1 125-6, where grading is infeasible due to topographic limitations. In order to achieve the required conductor-to-ground clearances, the existing free-standing lattice steel towers will be reinstalled in a manner that increases clearance distances. Tower raising will be accomplished by repositioning towers onto new footings that are necessary to accommodate the tower extension. Four new tower footings will be installed at each tower raising site. Standard footings are 4 feet in diameter and 30 feet in depth. Towers and tower footings would be installed on, or slightly offset from, the existing footprint of the tower prior to tower raising activities and will be on the centerline of the existing conductors. Tower raising activities will also include the preparation of pads for construction equipment, conductor offset adjustments, and site cleanup and restoration. The preparation of graded and compacted pads will be carried out as necessary to accommodate the cranes, forklifts, and man lifts required to raise the towers. The equipment to be used for tower raising activities will include backhoe loaders, rubber tire loaders, water trucks, large and small cranes, all terrain forklifts, man lifts, and various small utility vehicles.

The tower raising will begin with the removal of conductors and ground wires, followed by the lifting of the tower body which will be held in place by a large crane while a vertical extension is inserted within the tower body. After the tower has been raised, conductor offset adjustments may be required and would entail small adjustments to the conductor lengths, which would be carried out by technicians in large man lifts.

Cleanup would include the chipping of the old concrete footings one foot below the topsoil and the cutting of stub angles using a cutting torch. Approximately 3.7 acres will experience ground disturbance as a result of tower raising activities at the 2 work areas.

1.3 REGULATORY AUTHORITY

This section summarizes the federal and State agencies' regulatory jurisdiction over activities that have a potential to impact jurisdictional resources. A detailed explanation of each agency's regulatory authority is provided in Attachment B.

1.3.1 U.S. Army Corps of Engineers

The USACE Regulatory Branch regulates activities that discharge dredged or fill materials into "waters of the U.S." under Section 404 of the Federal Clean Water Act (CWA) and Section 10 of the Rivers and Harbors Act. Its authority applies to all "waters of the U.S." where the material (1) replaces any portion of a "water of the U.S." with dry land or (2) changes the bottom elevation of any portion of any "waters of the U.S.". Activities that result in fill or dredge of "waters of the U.S." require a permit from the USACE.

1.3.2 Regional Water Quality Control Board

The State Water Resources Control Board (SWRCB), in conjunction with the nine RWQCBs, is the primary agency responsible for protecting water quality in California through the regulation of discharges to surface waters under the CWA and the California Porter-Cologne Water Quality Control Act (Porter-Cologne Act). The SWRCB's and RWQCBs' jurisdictions extend to all "waters of the State" and to all "waters of the U.S.", including wetlands (isolated and non-isolated).

1.3.3 California Department of Fish and Wildlife

The CDFW regulates activities that may affect rivers, streams, and lakes pursuant to the *California Fish and Game Code* (§§1600–1616). According to Section 1602 of the *California Fish and Game Code*, the CDFW has jurisdictional authority over any work that will (1) substantially divert or obstruct the natural flow of any river, stream, or lake; (2) substantially change or use any material from the bed, channel, or bank of any river, stream, or lake; or (3) deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake.

2.0 **METHODS**

The survey area for the Project consists of 72 proposed work areas (i.e., grading areas and the existing access roads where grading spoils will be redistributed), plus a 100-foot buffer (Attachment A, Exhibit 2). Note that the survey area does not include all existing roads that may be accessed for Project activities; these areas are actively used by the public utilities and the public and would not be expanded to accommodate construction traffic.

2.1 **LITERATURE**

Prior to conducting the delineation and during the course of preparing this report, the following documents were reviewed to identify areas that may fall under USACE, RWQCB, and/or CDFW jurisdiction: the U.S. Geological Survey's (USGS') 7.5-minute topographic quadrangle maps; color aerial photography provided by National Agriculture Imagery Program (NAIP) (2014) and Google Earth (various dates); the National Hydric Soils List (USDA NRCS 2015); soil data provided by the U.S. Department of Agriculture's Natural Resources Conservation Service (USDA NRCS); and the National Wetlands Inventory's (NWI) Wetlands Mapper (USFWS 2014).

USGS Topographic Quadrangle. USGS quadrangle maps show geological formations and their characteristics and describe the physical settings of an area through topographic contour lines and other major surface features. These features include lakes, streams, rivers, buildings, roadways, landmarks, and other features that may fall under the jurisdiction of one or more regulatory agencies. In addition, the USGS maps provide topographic information that is useful in determining elevations, latitude and longitude, and Universal Transverse Mercator Grid coordinates for a project site.

Color Aerial Photography. Color aerial photographs were reviewed prior to conducting the field delineation to identify the extent of any drainages and riparian vegetation occurring in the survey area.

U.S. Department of Agriculture, Natural Resources Conservation Service. The presence of hydric soils is one of the chief indicators of jurisdictional wetlands. Psomas reviewed U.S. Department of Agriculture (USDA) soil data for the survey area.

U.S. Fish and Wildlife Service, National Wetlands Inventory: The Wetlands Mapper shows wetland resources available from the Wetlands Spatial Data Layer of the National Spatial Data Infrastructure (USFWS 2014). This resource provides the classification of known wetlands following the *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin et al. 1979). This classification system is arranged in a hierarchy of (1) Systems that share the influence of similar hydrologic, geomorphologic, chemical, or biological factors (i.e., Marine, Estuarine, Riverine, Lacustrine, and Palustrine); (2) Subsystems (i.e., Subtidal and Intertidal; Tidal, Lower Perennial, Upper Perennial, and Intermittent; or Littoral and Limnetic); (3) Classes, which are based on substrate material and flooding regime or on vegetative life forms; (4) Subclasses; and (5) Dominance Types, which are named for the dominant plant or wildlife forms. In addition, there are modifying terms applied to Classes or Subclasses.

2.2 **JURISDICTIONAL DELINEATION**

The analysis contained in this report uses the results of field surveys conducted by Psomas Senior Biologist Allison Rudalevige; by Psomas Biologists Ian Cain and Christine Renfrew; and by MBC Applied Environmental Sciences Biologist Charleen Conlogue. Surveys were performed in teams of two on September 7, 8, 9, 19, 20, 21, 22, and 26, 2016. Jurisdictional features were delineated on aerial photographs of the survey area. The initial mapping scale was 1 inch equals 200 feet

(1" = 200'); however, based on the field work conducted for Segments 1, 2, 3, and 4, the scale was changed to 1" = 100' for Segments 5, 6, and 7. This change was made due to the high number of drainages mapped in Segments 1 through 4; this allowed the field maps for Segments 5, 6, and 7 to be less cluttered with notations. In order to enhance navigation and the accuracy of the field delineation during the field survey, Apple iPads with Avenza PDF Maps Global Positioning System (GPS) software were loaded with the aerial maps. Jurisdictional water resources were either delineated as a drainage centerline with corresponding width measurements or, for wide and/or braided drainages clearly visible on aerial imagery, as a polygon. Each water resource was identified according to the number of the map sheet on which it occurred. Vegetation and hydrologic data were summarized for each jurisdictional feature. Incidental observations of special status biological resources (e.g., federally and/or State-listed species) were also noted during the field surveys.

Non-wetland "waters of the U.S." are delineated based on the limits of the OHWM, which can be determined by a number of factors, including the presence of a clear, natural line impressed on the bank, shelving, changes in the character of the soil, destruction of terrestrial vegetation, and the presence of litter and debris. The OHWM limits (i.e., active floodplain) occurring in the survey area were further verified using methods contained in *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States, A Delineation Manual* (Lichvar and McColley 2008) and the *Updated Datasheet for the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States* (Curtis and Lichvar 2010).

A two-parameter approach, in conjunction with a review of aerial and site photographs, topographic maps, and field data, was employed to make an initial assessment of the presence of wetlands. Areas containing hydrophytic vegetation and one or more indicators of wetland hydrology were considered to be potential wetlands. In the case of a potential wetland, a soil test pit would be dug in order to identify the presence/absence of hydric soil and to determine whether or not wetlands are present.

It should be noted that the RWQCB shares USACE jurisdiction unless isolated conditions are present. Water resources lacking connectivity to a Traditional Navigable Water² (TNW), whether by definition or through a significant nexus analysis, are considered isolated. If isolated waters are present, the RWQCB takes jurisdiction using the USACE's definition of the OHWM and/or the three-parameter wetlands method pursuant to the 1987 Wetlands Manual. Isolated conditions were assessed following the field delineation using aerial imagery from Google Earth and the National Hydrography Dataset (USGS 2016). Note that the USACE does not require continuous surface connectivity in order to establish jurisdiction; waters are considered a tributary even if there is a natural or constructed break along the connection to a TNW. Therefore, drainage channels disrupted by the graded access roads in the survey area may still be considered under the jurisdiction of the USACE and/or the RWQCB. Swales and erosional features are not considered jurisdictional (USACE 2007).

The CDFW's jurisdiction is defined as the top of the bank to the top of the bank of the stream, channel, or basin or to the outer limit of riparian vegetation located within or immediately adjacent to the river, stream, creek, pond, lake, or other impoundment.

² Traditional Navigable Waters are all waters that are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide.

2.2.1 Wetland Analysis

Vegetation

Hydrophytic vegetation (or hydrophytes) is defined as any macrophytic plant that “grows in water or on a substrate that is at least periodically deficient in oxygen as a result of excessive water content; plants typically found in wet habitats” (Environmental Laboratory 1987). Specifically, these plant species have specialized morphological, physiological, or other adaptations for surviving in permanently saturated to periodically saturated soils where oxygen levels are very low or the soils are anaerobic. Lichvar and Gillrich (2011) provide the following technical definitions of wetland plant indicator status categories:

- **Obligate Wetland (OBL):** These wetland-dependent plants (herbaceous or woody) require standing water or seasonally saturated soils (14 or more consecutive days) near the surface to assure adequate growth, development, and reproduction and to maintain healthy populations. These plants consist of four types:
 - *submerged*: plants that conduct virtually all of their growth and reproductive activity under water.
 - *floating*: plants that grow with leaves and most often their vegetative and reproductive organs floating on the water surface.
 - *floating-leaved*: plants that are rooted in sediment but also have leaves that float on the water surface.
 - *emergent*: herbaceous and woody plants that grow with their bases submerged and rooted in inundated sediment or seasonally saturated soil and their upper portions, including most of the vegetative and reproductive organs, growing above the water level.
- **Facultative Wetlands (FACW):** These plants depend on and predominantly occur with hydric soils, standing water, or seasonally high water tables in wet habitats for assuring optimal growth, development, and reproduction and for maintaining healthy populations. These plants often grow in geomorphic locations where water saturates soils or floods the soil surface at least seasonally.
- **Facultative (FAC):** These plants can occur in wetlands or non-wetlands. They can grow in hydric, mesic, or xeric habitats. The occurrence of these plants in different habitats represents responses to a variety of environmental variables other than just hydrology (e.g., shade tolerance, soil hydrogen potential [pH], and elevation) and they have a wide tolerance of soil moisture conditions.
- **Facultative Upland (FACU):** These plants are not wetland dependent. They can grow on hydric and seasonally saturated soils, but they develop optimal growth and healthy populations on predominantly drier or more mesic sites. Unlike FAC plants, these plants are non-wetland plants by habitat preference.
- **Obligate Upland (UPL):** These plants occupy mesic to xeric non-wetland habitats. They almost never occur in standing water or saturated soils. Typical growth forms include herbaceous, shrubs, woody vines, and trees.

The USACE—as part of an interagency effort with the U.S. Environmental Protection Agency (USEPA), the U.S. Fish and Wildlife Service (USFWS), and the U.S. Department of Agriculture’s Natural Resources Conservation Service (USDA NRCS)—has approved a National Wetland

Plant List (NWPL) that provides the current indicator status for plant species. The NWPL is used to determine whether the hydrophytic vegetation parameter is met when conducting wetland determinations under the CWA and the Wetland Conservation Provisions of the Food Security Act. The NWPL is also intended to be used for wetland restoration, establishment, and enhancement projects. This report utilized the indicator statuses for the Arid West Supplement portion of the NWPL.

The following are three procedures for determining whether the hydrophytic vegetation criterion is met: Indicator 1, “Dominance Test”, using the “50/20 Rule”; Indicator 2, “Prevalence Index”; or Indicator 3, “Morphological Adaptation”, as identified in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (USACE 2008). The hydrophytic vegetation criterion is met if any indicator is satisfied. If none of the indicators are satisfied, then hydrophytic vegetation is absent unless (1) indicators of hydric soil and wetland hydrology are present and (2) the site meets the requirements for a problematic wetland situation.

- **Dominance Test:** Vegetative cover is estimated and is ranked according to its dominance. Dominant species are the most abundant species for each stratum of the community (i.e., tree, sapling/shrub, herb, or woody vine) that individually or collectively amount to 50 percent of the total coverage of vegetation plus any other species that, by itself, accounts for 20 percent of the total vegetation cover (also known as the “50/20 Rule”). These species are recorded on the “Wetland Determination Data Form – Arid West Region”. The wetlands indicator status of each species is also recorded on the data forms based on the NWPL (Lichvar and Kartesz 2009). If greater than 50 percent of the dominant species across all strata are OBL, FACW or FAC species, the criterion for wetland vegetation is considered to be met.
- **Prevalence Index:** The prevalence index considers all plant species in a community, not just the dominant ones. The prevalence index is the average of the wetland indicator status of all plant species in a sampling plot. Each indicator status category is given a numeric code (OBL = 1, FACW = 2, FAC = 3, FACU = 4, and UPL = 5) and is weighted by the species’ abundance (percent cover). Hydrophytic vegetation is present if the prevalence index is 3.0 or less.
- **Morphological Adaptation:** Morphological adaptations, such as adventitious roots (i.e., roots that take advantage of the wet conditions) and shallow root systems, must be observed on more than 50 percent of the individuals of a FACU species for the hydrophytic vegetation wetland criterion to be met.

Hydrology

Wetland hydrology indicators provide evidence that a site has a continuing wetland hydrologic regime. Wetlands hydrology is represented by either (1) all of the hydrological elements or characteristics of areas permanently or periodically inundated or (2) areas containing soils that are saturated for a sufficient duration of time to create hydric soils suitable for the establishment of plant species that are typically adapted to anaerobic soil conditions. The presence of wetland hydrology is evaluated at each intersect by recording the extent of observed surface flows; the depth of inundation; the depth to saturated soils; and the depth to free water in soil test pits. In instances where stream flow is divided into multiple channels with intervening sandbars, the entire area between the channels is considered to be within the “Active Floodplain” and within the OHWM. Therefore, an area containing these features would meet the indicator requirements for wetland hydrology.

Soils

The National Technical Committee for Hydric Soils (NTCHS) defines a hydric soil as a soil that is formed under conditions of saturation, flooding, or ponding that occurs long enough during the growing season to develop anaerobic conditions (or conditions of limited oxygen) at or near the soil surface and that favor the establishment of hydrophytic vegetation (USDA NRCS 2008). It should be noted that hydric soils created under artificial conditions of flooding and inundation sufficient for the establishment of hydrophytic vegetation would also meet this hydric soils indicator.

Soil conditions are verified by digging test pits to a depth of at least 20 inches (except where a restrictive layer occurs in areas containing hard pan, cobble, or solid rock). Soil extracted from each soil test pit is then examined for texture and color using the standard plates on the Munsell Soil Color Chart (1994), and indicators of hydric soil were noted. If indicators of hydrophytic vegetation and wetland hydrology were not observed in the survey area, soil test pits were not dug and the water resource was considered to be a non-wetland water.

3.0 **RESULTS**

A total of 219 jurisdictional water resources were mapped in the survey area, totaling approximately 85,994 linear feet. Attachment C provides an overview of the various jurisdictional water resources, including their geographic setting and physical characteristics. Attachment D provides datasheets that summarize the overall condition of the individual drainages/waterbodies and indicators of OHWM. Representative photographs of individual drainages are provided in Attachment E.

3.1 **LITERATURE REVIEW**

USGS Topographic Quadrangle. The Project alignment is on the USGS' Alvord Mountain East, Bitter Spring, Clarke Mountain, Cronese Lakes, Daggett, Dunn, East of Kingstone Spring, Harvard Hills, Kingstone Spring, Minneola, North of Baker, Turquoise Mountain, Turtle Valley, Red Pass Lake, Stoddard Well, and West of Baker 7.5-minute quadrangle maps (Attachment A, Exhibit 3).

Topography across the Project area consists of relatively flat valleys and alluvial fans bound by sloping hills and mountains. Elevations in Segments 1 through 5 fluctuate across the Project area, ranging from approximately 870 feet above mean sea level (msl) to 3,675 feet above msl. Overall elevation in Segment 6 is slightly higher with elevations between 2,985 feet above msl and 3,775 feet above msl. Segment 7 is at the highest elevations of between 3,710 feet above msl and 4,925 feet above msl.

Blueline streams, as mapped on the USGS 7.5-minute topographic quadrangle maps, occur throughout the survey area. The identified blueline streams were used to provide guidance on planning the field surveys. The most prominent water features occurring in the vicinity of the survey area are the Mojave River and Amargosa River; however, many other named and unnamed blueline streams are also observed. In addition dry lake beds are shown on the topographic quadrangle maps.

The Project area is primarily located in the 4,580-square-mile Mojave Watershed (Cataloging Unit 18090208) and the 5,330-square-mile Death Valley–Lower Amargosa Watershed (Cataloging Unit 18090203). These areas are in closed desert basins that discharge into South Central California. Segment 7 is located in the 2,830-square-mile Ivanpah–Pahrump Valleys Watershed (Cataloging Unit 16060015), which discharges into South Central Nevada.

Color Aerial Photography. Throughout the survey area, numerous potential drainage features were evident from the aerial imagery. Most of them appear to flow through upland vegetation (e.g., desert scrub). The larger drainage features appear to have defined bed and banks. Many of the smaller features appear braided. Surface water was not observed on the aerial images. Dry lake beds are visible in the Project vicinity.

U.S. Department of Agriculture, Natural Resources Conservation Service. The survey area occurs in the following soil survey areas: San Bernardino County, California, Mojave River Area; Mojave Desert Area, California; and Mojave Desert Area, Northeast Part, California. Within these survey areas, the USDA NRCS has delineated the boundaries of 'soil map units', which often contain components of multiple soil types that may be classified as hydric or non-hydric. The National Hydric Soils List (USDA NRCS 2015) identifies a soil map unit as "hydric" if it contains either a major or minor component that is at least in part hydric. In the survey area, the following map units are listed as hydric on the National List: Yermo-Kimberlina, cool, association, sloping and Nebona-Cuddeback Complex, 2 to 9 percent slopes. All soil map units occurring within the survey area are shown in Attachment A (see Exhibit 4).

U.S. Fish and Wildlife Service, National Wetlands Inventory: Mapped wetlands, as defined by the NWI, occur throughout the survey area and are shown in Attachment A (see Exhibit 5). Wetlands overlapping the survey area were mapped as the Riverine System, Intermittent Subsystem, and Streambed Class with an intermittently flooded water regime (R4SBJ).

These streams and waterbodies were used to provide additional guidance on planning the field surveys. Given that wetland features mapped for the NWI may or not exist at present because of changing conditions and development, this resource provides preliminary data and historic data, but must be ground-truthed for each wetland feature.

3.2 U.S. ARMY CORPS OF ENGINEERS JURISDICTIONAL DETERMINATION

3.2.1 “Waters of the U.S.” Determination (Non-Wetland)

Connectivity to a Traditional Navigable Water

The drainage features mapped in the survey area are typically ephemeral washes that contain surface water only immediately following storm events. Some of these drainage features (generally in Segments 4, 5, and 7) dissipate into uplands as sheet flow or drain into a dry lake bed outside the survey area. These drainages do not have connectivity to a TNW and so are not considered under the USACE’s jurisdiction.

Some drainage features in the western end of the Project area exhibit a connection to the Mojave River while some drainages in the eastern end exhibit a connection to the Amargosa River. The Mojave River is navigable “in-fact” and is, therefore, subject to USACE jurisdiction. As an interstate water, the Amargosa River is, by definition, a “water of the U.S.”. Therefore, connectivity to “waters of the U.S.” is established, but these drainages have ephemeral flow and are, therefore, not considered “relatively permanent”. For non-relatively permanent waters, a significant nexus is required in order for the USACE to assert jurisdiction. These drainages in the survey area have the capacity to carry nutrients into the Mojave River. Therefore, they would be under the jurisdiction of the USACE.

Limits of “Waters of the U.S.”

Evidence of a OHWM was observed for all mapped water resources, though some features exhibited more pronounced indicators. The primary indicators of OHWM observed throughout the survey area were a change in sediment texture, a change in vegetation cover, and the presence of bed and bank. Surface soil cracks, drift deposits, and surface relief were observed in some areas. Arid West Ephemeral and Intermittent Streams OHWM Datasheets were completed for areas showing evidence of an OHWM (see Attachment D).

Results

Based on the field observations and data collected, approximately 31.130 acres of “waters of the U.S.” occur in the survey area (Attachment A, Exhibit 6; Attachment C).

3.2.2 Preliminary Wetlands Determination

During the field delineation, each water resource in the survey area was assessed for evidence of wetland hydrology and hydrophytic vegetation. While various indicators of wetland hydrology (e.g., drainage patterns, drift deposits, surface soil cracks) were observed in drainage features throughout the survey area, vegetation consisted of upland plant species. Therefore, soil test pits were not dug and no wetland “waters of the U.S.” were considered to be present in the survey area.

3.3 REGIONAL WATER QUALITY CONTROL BOARD DETERMINATION

The survey area falls within the jurisdiction of the Lahontan RWQCB. Some drainage features in the survey area exhibit an OHWM for a portion of their length, but dissipate into uplands through sheet flow or drain into a dry lake bed. Therefore, these features do not maintain a continuous surface connection with a TNW and are considered isolated “waters of the State” under the jurisdiction of the RWQCB. Drainages exhibiting a connection to a TNW (i.e., the Mojave River) are considered non-isolated and under the jurisdictions of both the USACE and the RWQCB.

Approximately 57.733 acres of “waters of the State” under the jurisdiction of the RWQCB (31.130 acres of “waters of the U.S.” and 26.603 acres of isolated waters) occur in the survey area (Attachment A, Exhibit 6; Attachment C).

3.4 CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE DETERMINATION

The drainage features in the survey area were mapped using the top of the stream bank. In some cases, CDFW jurisdiction extended across braided channels.

Approximately 63.529 acres of waters under the jurisdiction of the CDFW occur in the survey area (Attachment A, Exhibit 6; Attachment C).

3.5 INCIDENTAL OBSERVATIONS

During the jurisdictional delineation surveys, incidental observations were made of special status wildlife species in the vicinity of the survey area. The locations of these biological resources are shown in Attachment A (see Exhibit 2). These observations will be reported to the CDFW’s California Natural Diversity Database (Attachment F).

One adult desert tortoise (*Gopherus agassizii*) was observed in Segment 2 near tower MCV1-129-2. A desert tortoise burrow was observed in the side of a bank in Segment 3 between towers MCV1-120-1 and MCV1-120-2. Desert tortoise is a federally and State-listed Threatened species. This species typically occurs in creosote bush scrub, Joshua tree woodland, Mojave–saltbush–allscale scrub, blackbrush, and/or juniper woodland communities and may occur throughout the Project area.

One desert bighorn sheep (*Ovis canadensis nelsoni*) carcass was observed along an access road east of Segment 7. Desert bighorn sheep is a CDFW Fully Protected species. This species occurs in open terrain of dry, desert mountains typically at elevations up to 4,000 feet above msl (Ingles 1965). Therefore, it would only be expected to occur in the vicinity of Segment 7.

4.0 IMPACT ANALYSIS

The limits of Project impacts for the purposes of this analysis are considered to be the grading boundaries and road demolition boundaries shown in Attachment A (see Exhibit 7). It is assumed that soil storage and spreading will occur in within existing roads and will avoid impacts on jurisdictional water resources.

Based on the current Project limits of disturbance, a total of 0.397 acre of non-wetland “waters of the U.S.”; 0.987 acre of “waters of the State”; and 1.018 acres of waters under the regulatory authority of the CDFW would be impacted by the Project (Table 1; Attachment A, Exhibit 7). Project impacts on individual drainage features are provided in Attachment G.

**TABLE 1
SUMMARY OF IMPACTS ON JURISDICTIONAL RESOURCES IN THE SURVEY AREA**

Jurisdiction	Existing Resources (Acres)	Project Impact (Acres)		
		Grading	Road Demolition	Total
Total USACE “waters of the U.S.”	31.130	0.337	0.060	0.397
Total RWQCB “waters of the State”*	57.733	0.794	0.193	0.987
Total CDFW Jurisdictional Resources	63.529	0.825	0.193	1.018

USACE: U.S. Army Corps of Engineers; RWQCB: Regional Water Quality Control Board; CDFW: California Department of Fish and Wildlife.

* RWQCB jurisdictional boundaries are defined as those determined for the USACE under “waters of the U.S.”; however, the RWQCB also takes jurisdiction over isolated waters.

5.0 REGULATORY APPROVAL PROCESS

5.1 REGULATORY PERMIT REQUIREMENTS

This section summarizes the various permits, agreements, and certifications that are expected to be required prior to initiation of Project activities that involve impacts to jurisdictional waters.

- USACE Section 404 Permit
- RWQCB Section 401 Water Quality Certification
- CDFW Section 1602 Notification of Lake or Streambed Alteration

It should be noted that all regulatory permit applications can be processed concurrently. The USACE permit would be issued subject to the receipt of the RWQCB's Section 401 Water Quality Certification.

5.1.1 U.S. Army Corps of Engineers

Prior to construction in "waters of the U.S.", a Section 404 permit from the USACE is required. Regulatory authorization in the form of a Nationwide Permit (NWP) or regional permit is provided for certain categories of activities. If the NWP conditions cannot be met, an Individual Permit (IP) will be required.

The proposed project would likely fall under NWP 12 (Utility Line Activities), which authorizes activities required for the construction, maintenance, repair, and removal of utility lines and associated facilities in "waters of the U.S.", provided the activity does not result in the loss of greater than ½ acre of "waters of the U.S.". A preconstruction notification is required for project activities under certain conditions. A description of NWP 12 is included as Attachment H.

It should be noted that the current NWPs will expire on March 18, 2017. The USACE is in the process of reissuing the NWPs, including two new proposed NWPs. Activities authorized by the 2012 NWPs remain authorized by those NWPs until March 18, 2017. An activity completed under the authorization provided by a 2012 NWP continues to be authorized by that NWP. Activities authorized by the 2012 NWPs that have commenced or are under contract to commence by March 18, 2017, will have one year (i.e., until March 18, 2018) to complete those activities under the terms and conditions of the 2012 NWPs. Activities previously authorized by the 2012 NWPs that have not commenced or are not under contract to commence by March 18, 2017, will require reauthorization under the 2017 NWPs. If those activities no longer qualify for NWP authorization because they do not meet the terms and conditions of the 2017 NWPs, the project proponent will need to obtain an IP, or seek authorization under a regional general permit, if such a general permit is available

Issuance of the USACE Section 404 permit would be contingent upon the approval of a Section 401 Water Quality Certification from the Lahontan RWQCB. The RWQCB requires certification of the project's California Environmental Quality Act (CEQA) documentation before it will approve the Section 401 Water Quality Certification or Report of Waste Discharge (ROWD). The RWQCB, as a responsible agency, will use the project's CEQA document to satisfy its own CEQA-compliance requirements.

5.1.2 Regional Water Quality Control Board

The RWQCB normally has regulatory jurisdiction over "waters of the U.S." equal to the jurisdiction of the USACE under the federal CWA; in these cases, the RWQCB issues a Water Quality Certification under Section 401 of the federal CWA. Without USACE jurisdiction, and if the

drainage in question is isolated, the RWQCB has jurisdiction under the State's Porter-Cologne Water Quality Control Act. In the case of discharges into isolated waters, RWQCB authorization would be in the form of a ROWD. Since both isolated and non-isolated waters are present in the survey area, the RWQCB authorization would likely be in the form of a CWA Section 401 Water Quality Certification.

The RWQCB requires that the Applicant address urban storm water runoff during and after construction in the form of Best Management Practices (BMPs). These BMPs are intended to address the treatment of pollutants carried by storm water runoff and are required in all complete applications. The notification/application for a CWA Section 401 Water Quality Certification must also address compliance with the Basin Plan. Please note that the application would also require the payment of an application fee, which would be based on project impacts.

5.1.3 California Department of Fish and Wildlife

Prior to construction, a Notification of Lake or Streambed Alteration (LSA) must be submitted to the CDFW that describes any proposed streambed alteration contemplated by the Proposed Project. If an LSA Agreement is required, the CDFW may want to conduct an on-site inspection.

In addition to the formal application materials and the fee, a copy of the appropriate environmental document (e.g., Mitigated Negative Declaration) should be included in the submittal, consistent with CEQA requirements. The CDFW will not deem the application to be complete until the application fees have been paid and the agency is provided with a certified CEQA document and a signed copy of the receipt of County Clerk filing fees for the Notice of Determination (NOD).

5.2 RECOMMENDATIONS

Based on the conclusions of this Jurisdictional Delineation Report, the following recommendations are identified:

1. A pre-application meeting should be scheduled with USACE, USFWS, RWQCB, and CDFW staff to discuss site conditions; the Project; biological and jurisdictional resources and impacts to these resources resulting from the Project; proposed minimization measures and the mitigation program to offset these impacts; and the regulatory permit process, including the decision to prepare and submit an Approved Jurisdictional Determination or a Preliminary Jurisdictional Determination. The USACE is expected to approve a Preliminary Jurisdictional Determination as the appropriate jurisdictional determination given the extent of Project impacts and the length of Project construction.
2. The following should be prepared and processed: a USACE Section 404 Permit; an RWQCB Section 401 Water Quality Certification; a CDFW Section 1602 Notification of LSA; and the appropriate jurisdictional determination form approved by the USACE.
3. The Project Applicant should consider mitigating jurisdictional impacts resulting from Project implementation on site through the preparation of a Habitat Mitigation Monitoring Plan (HMMP). The preparation of an HMMP early in the process can help to accelerate and shorten the regulatory permitting process. Mitigation ratios for impacts to USACE jurisdictional resources would be based on the USACE's *Standard Operating Procedure for Determination of Mitigation Ratios* (USACE 2012).

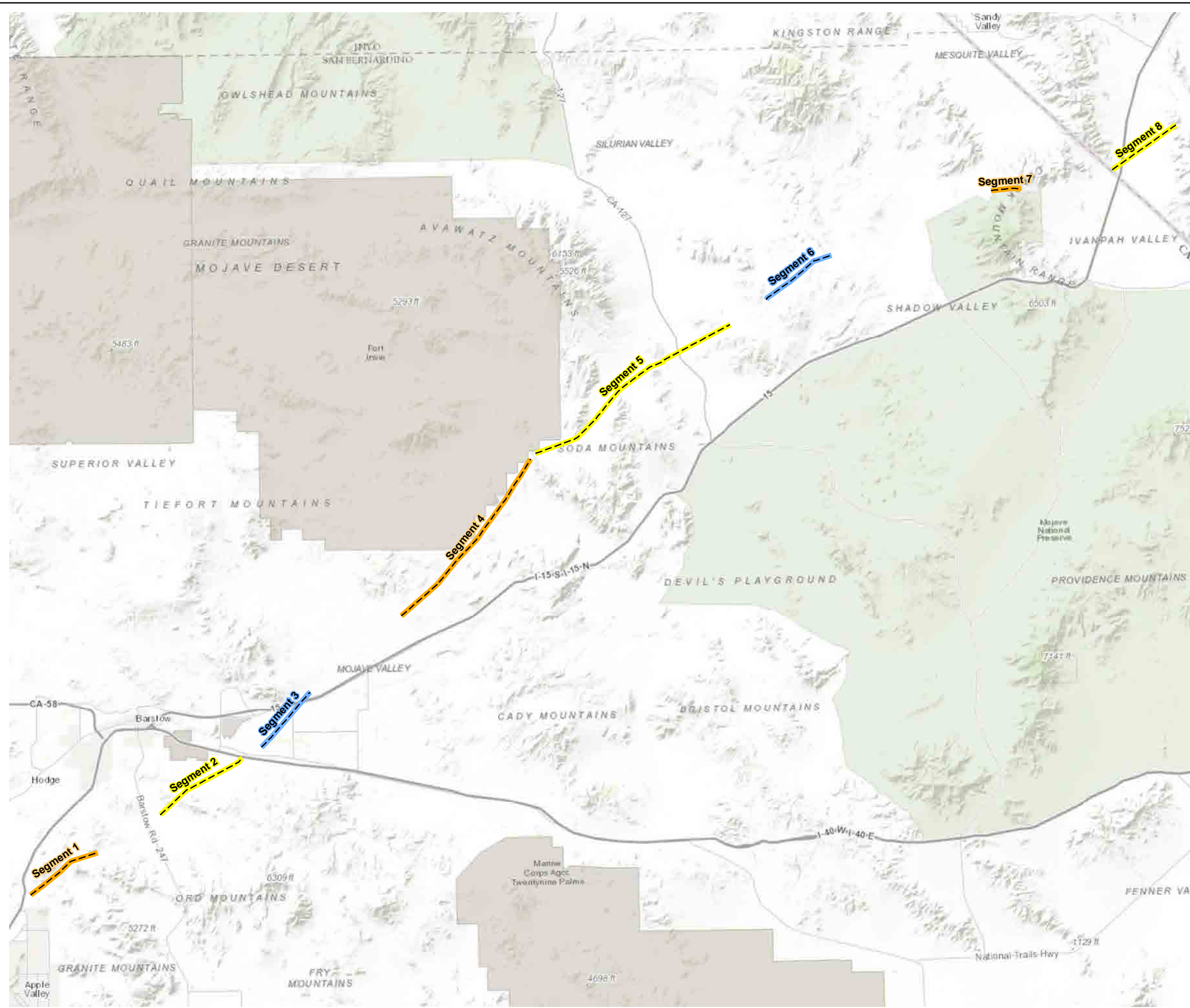
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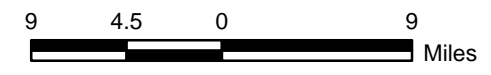
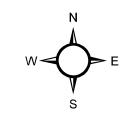
ATTACHMENT A

EXHIBITS



Project Segment

- 1 (Orange dashed line)
- 2 (Yellow dashed line)
- 3 (Blue dashed line)
- 4 (Orange dashed line)
- 5 (Yellow dashed line)
- 6 (Blue dashed line)
- 7 (Orange dashed line)
- 8 (Yellow dashed line)



PSOMAS

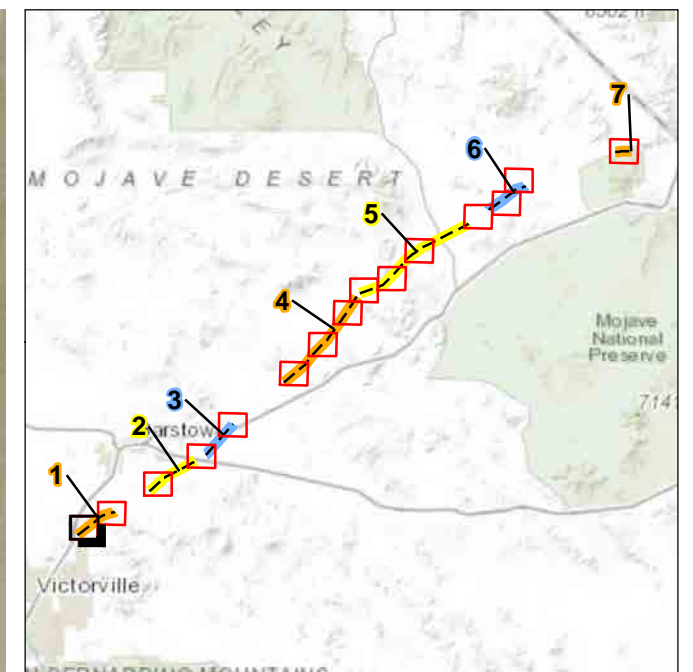
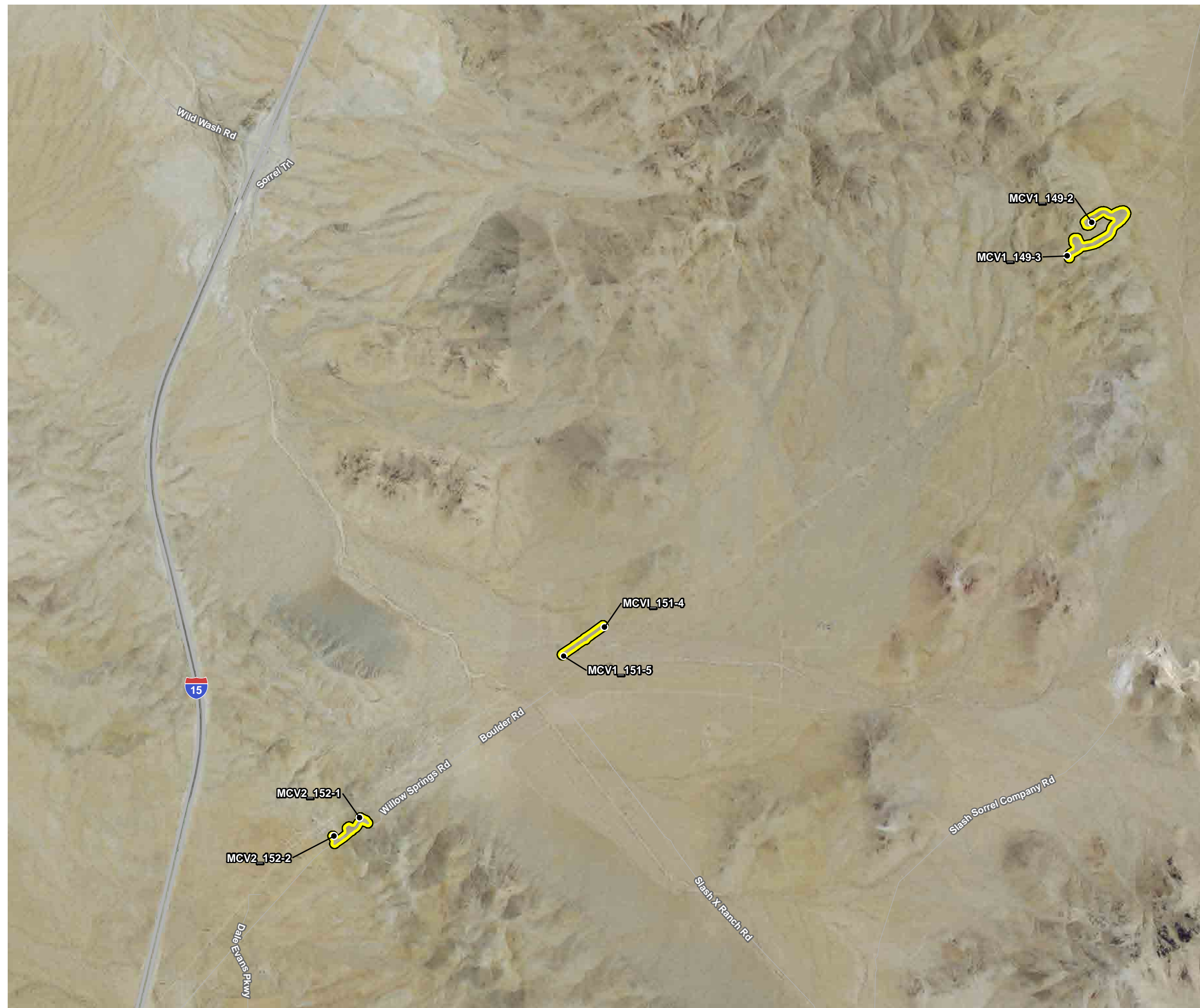
Exhibit 1
Project Location

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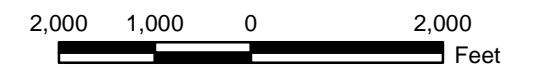
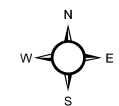
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- Tower Location
- ▭ Survey Area



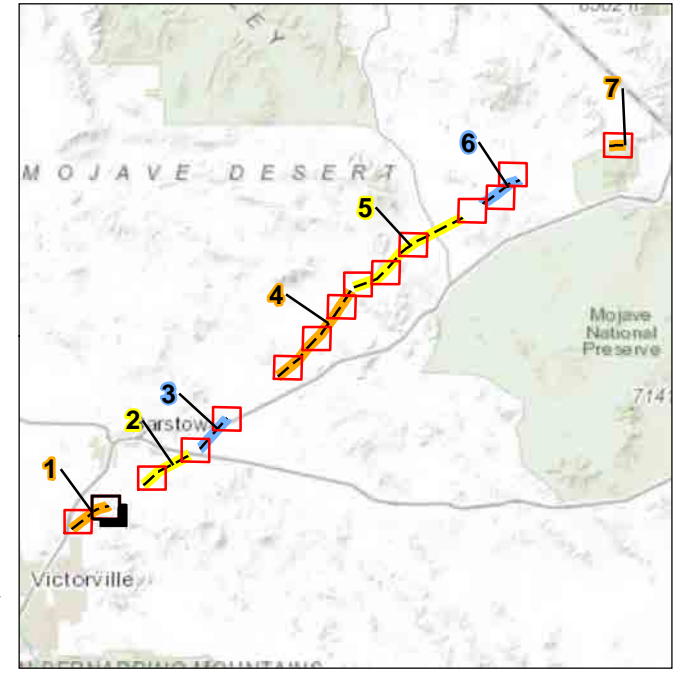
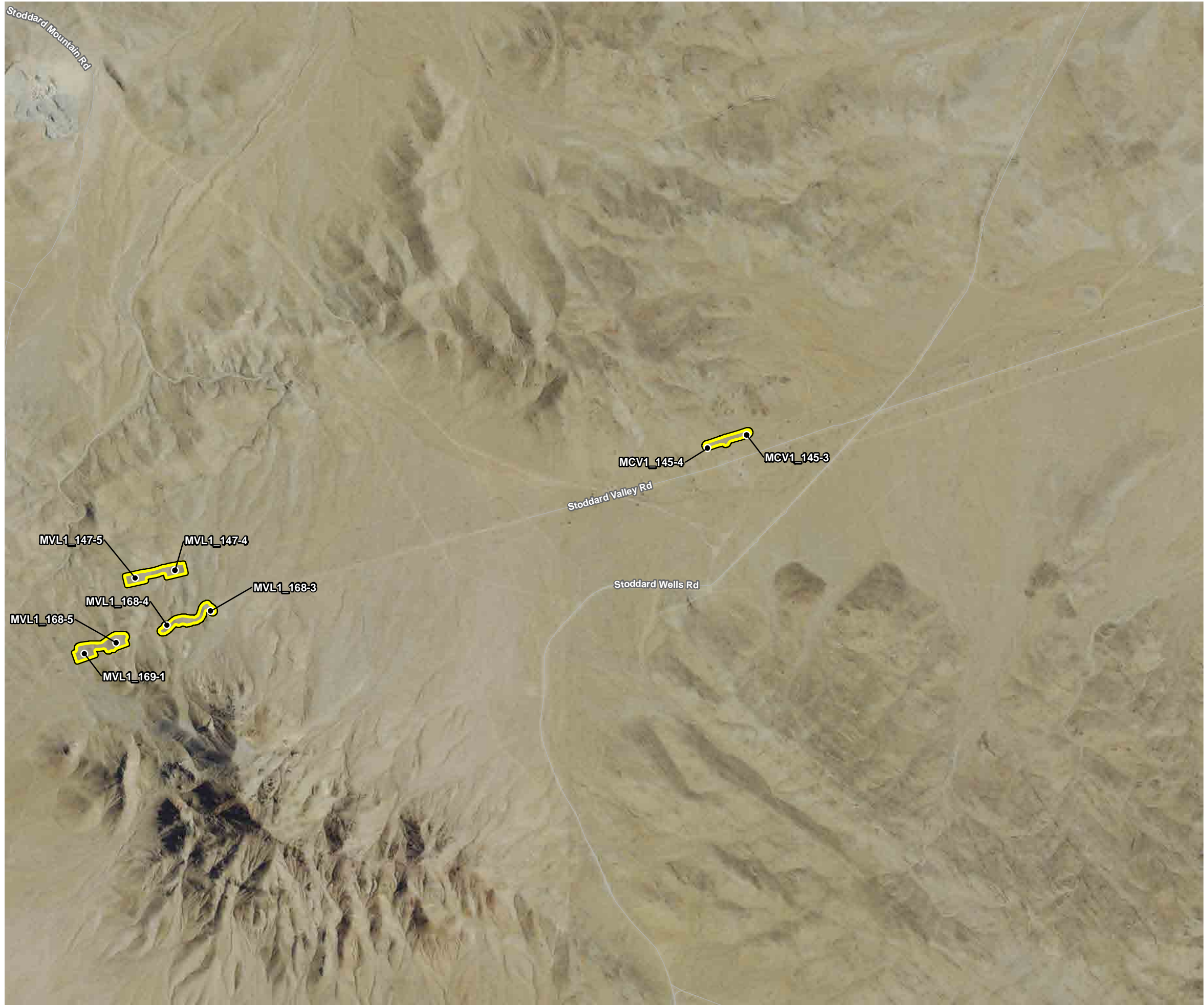
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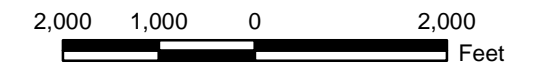
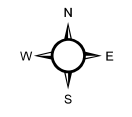
Exhibit 2a Survey Area

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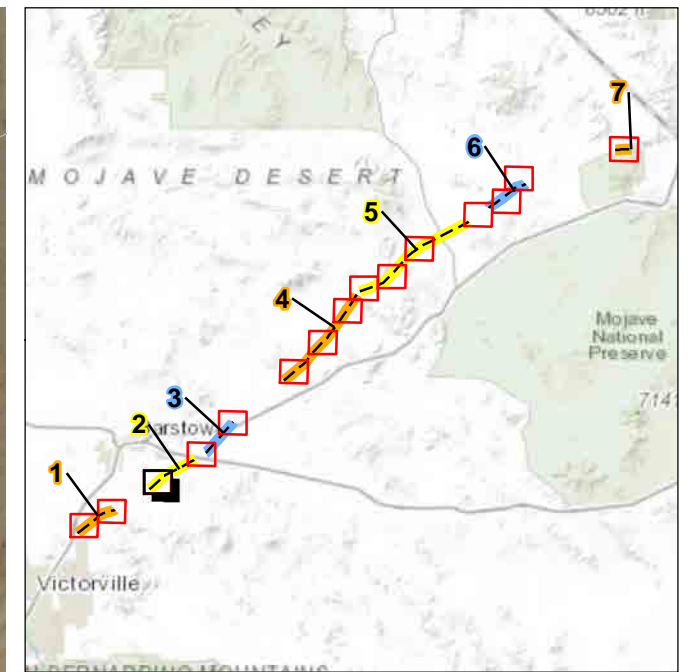
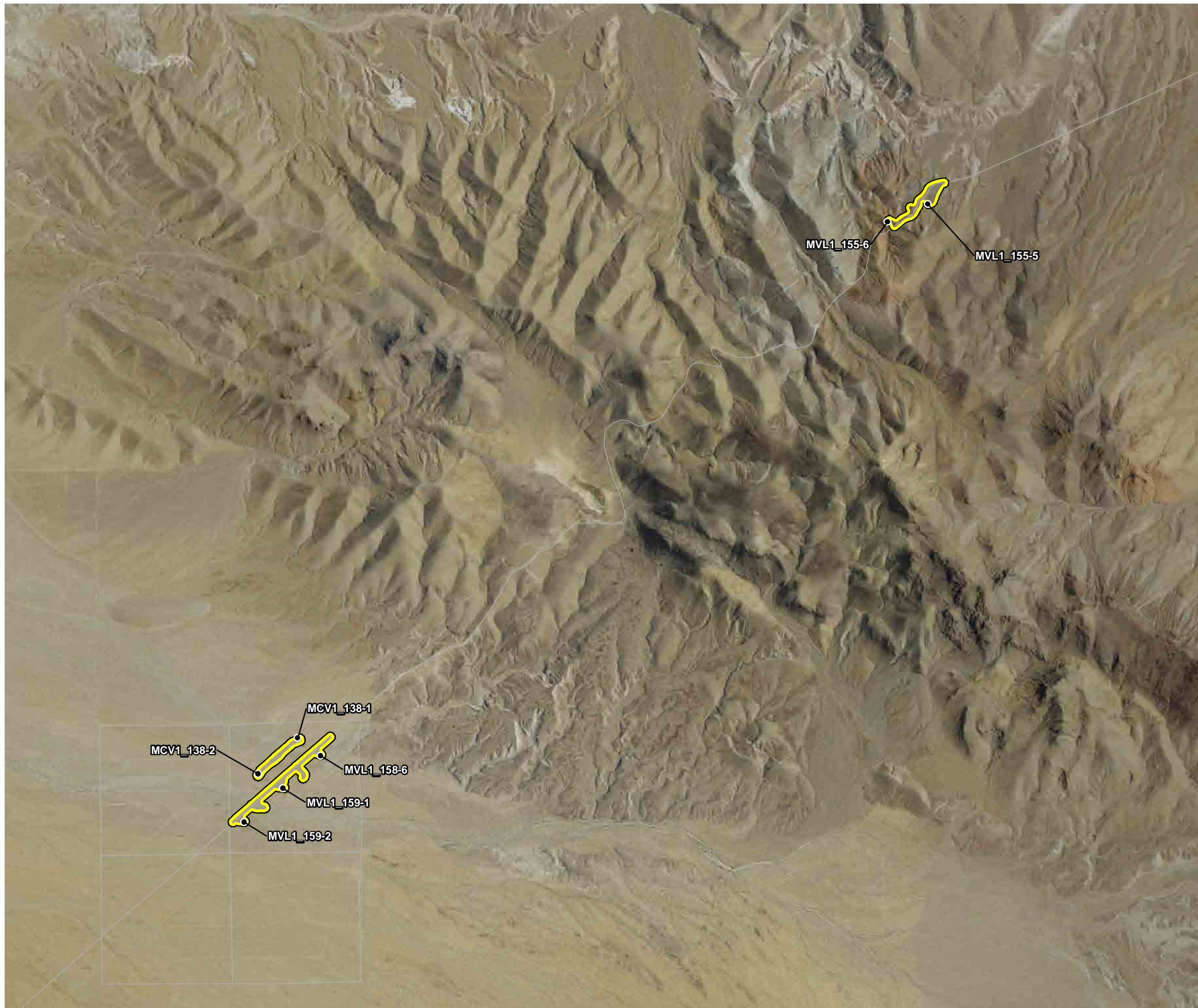
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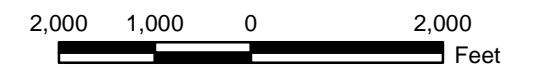
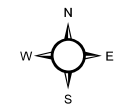
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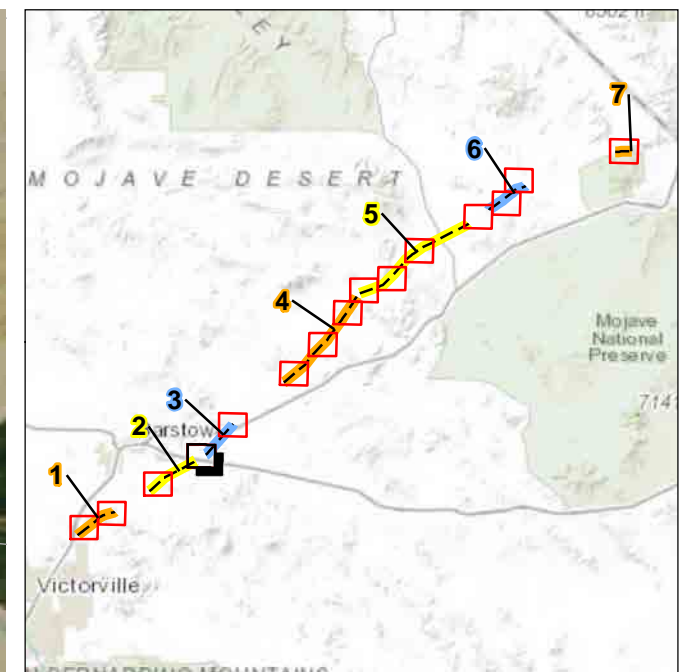
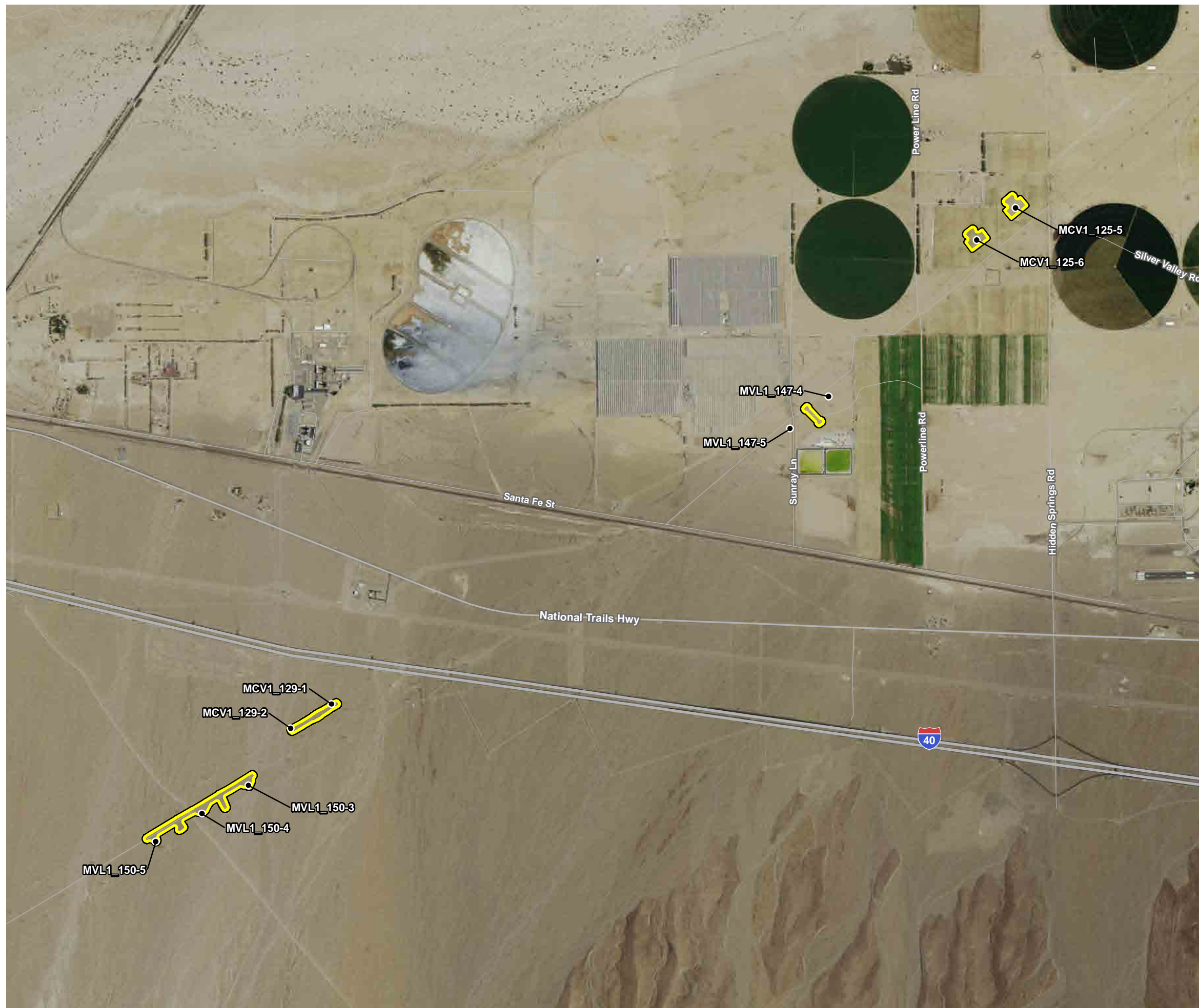
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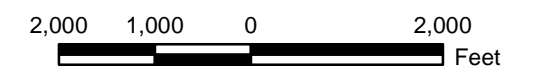
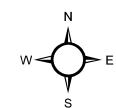
Exhibit 2c Survey Area

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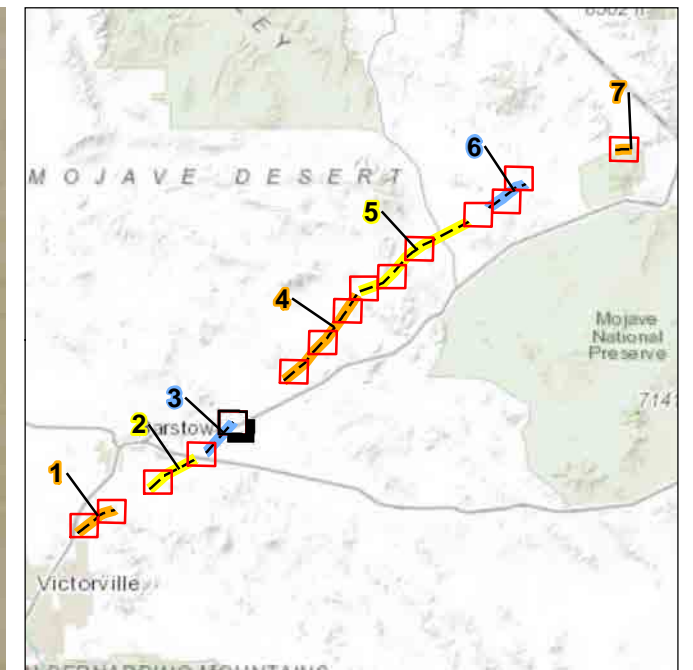
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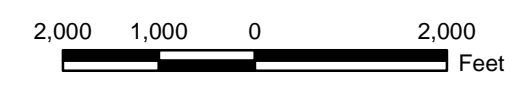
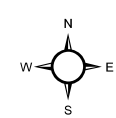
Exhibit 2d Survey Area

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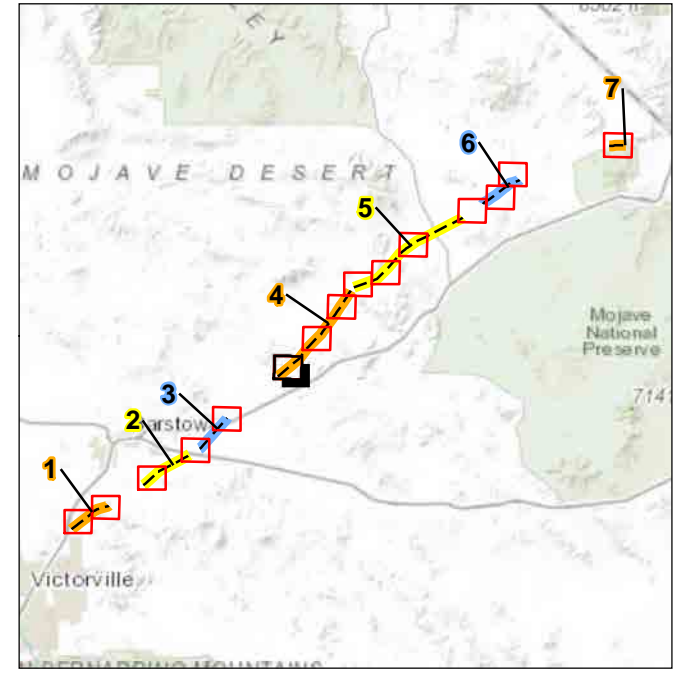
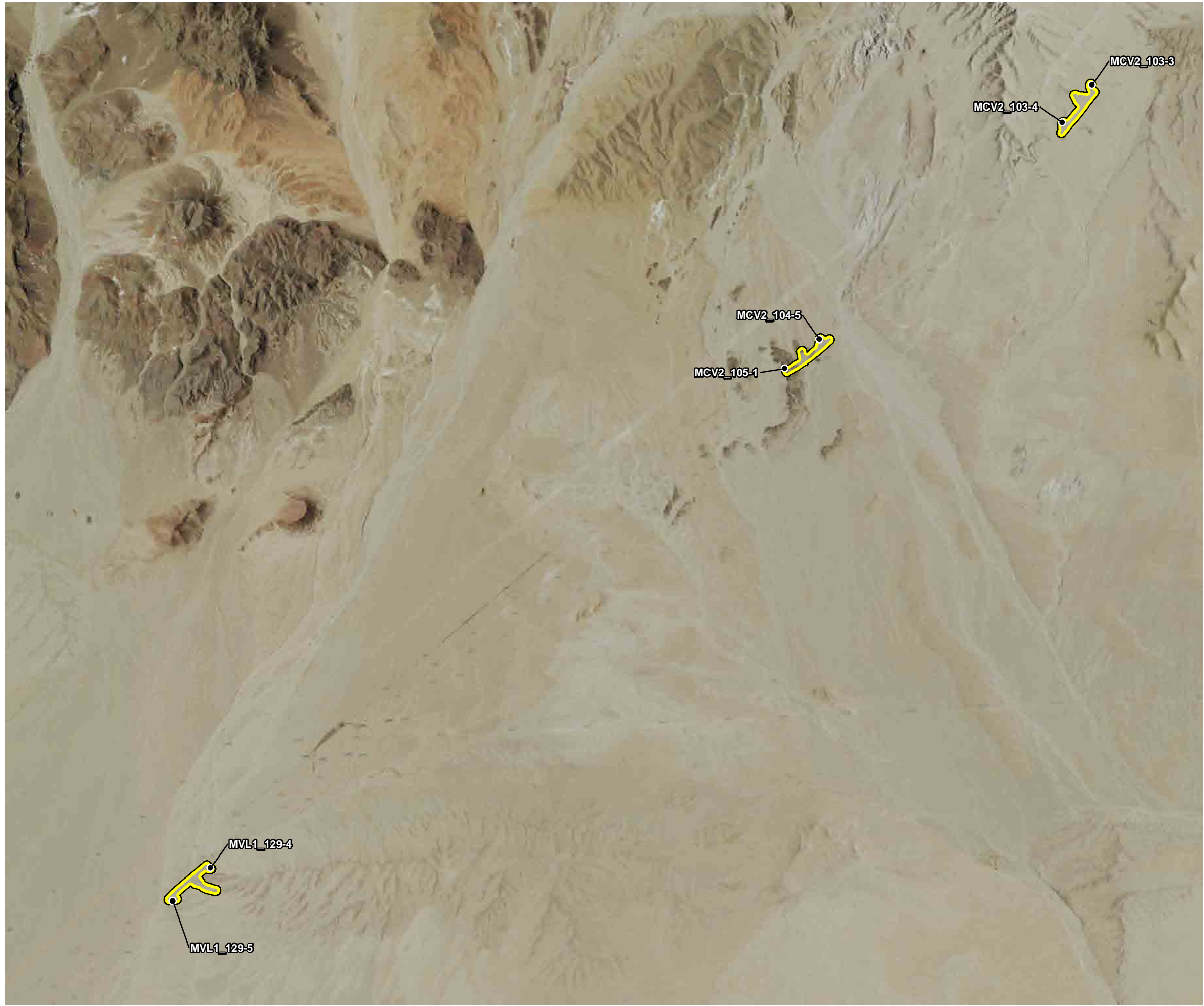
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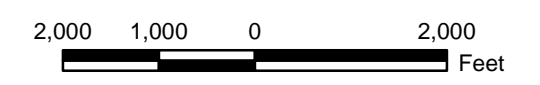
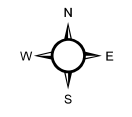
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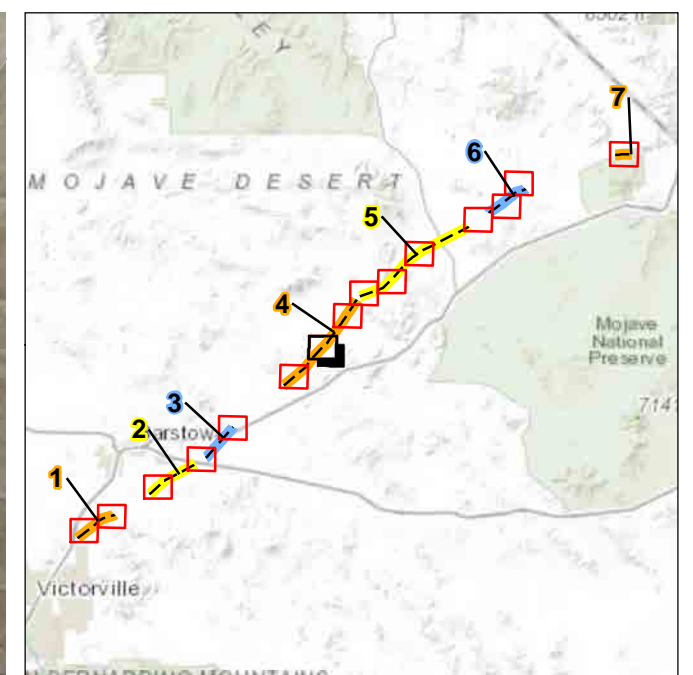
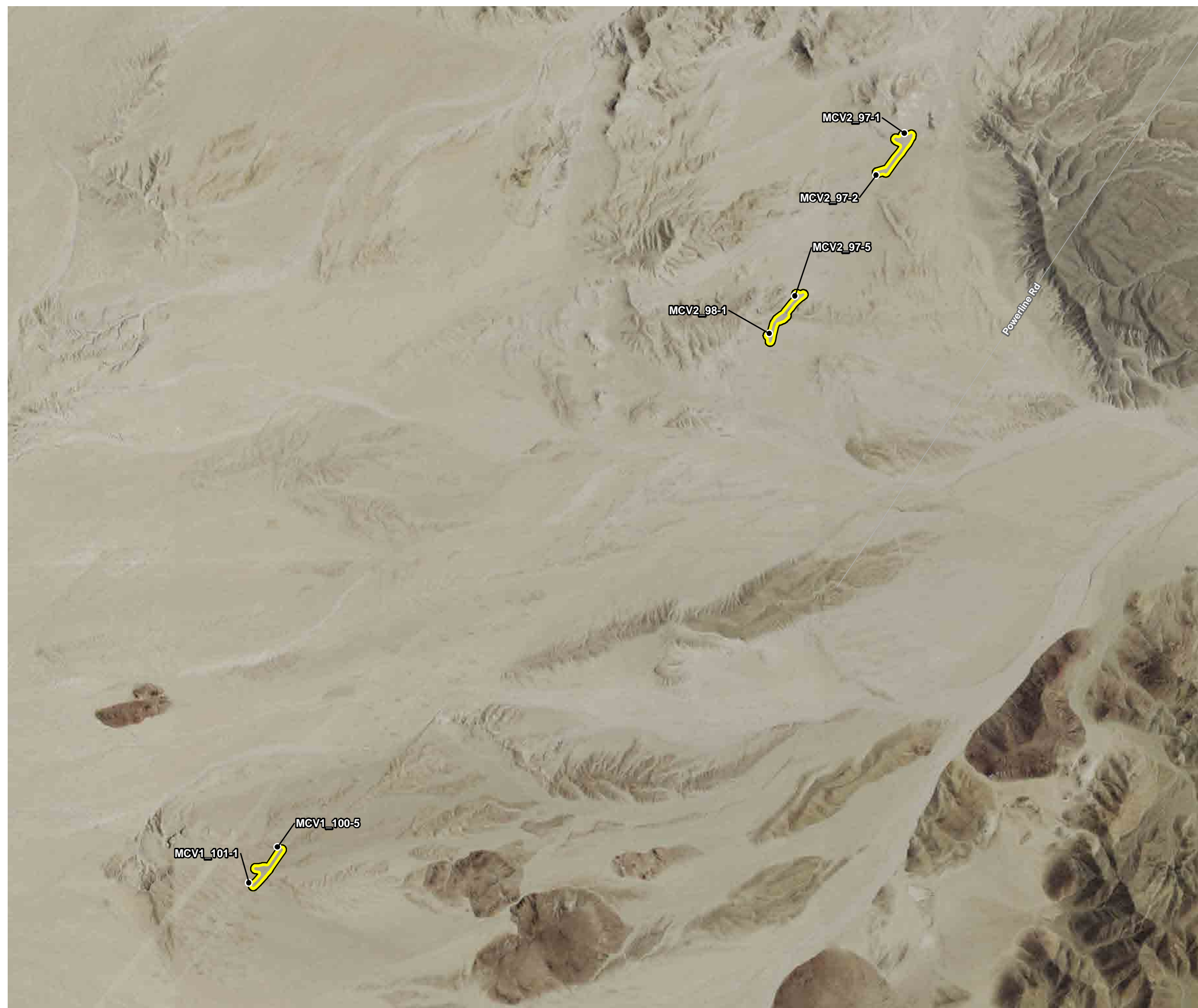
**Exhibit 2f
Survey Area**

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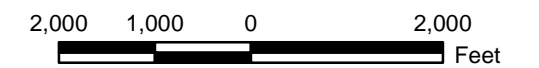
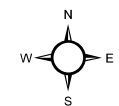
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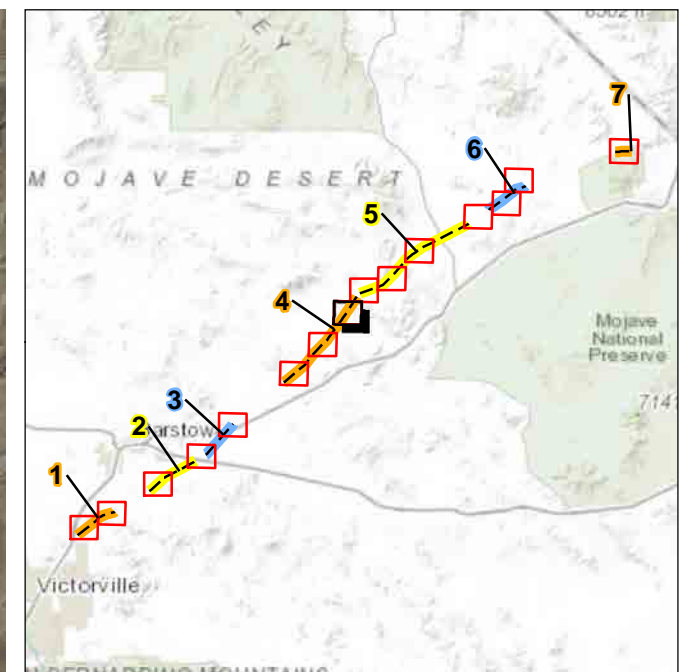
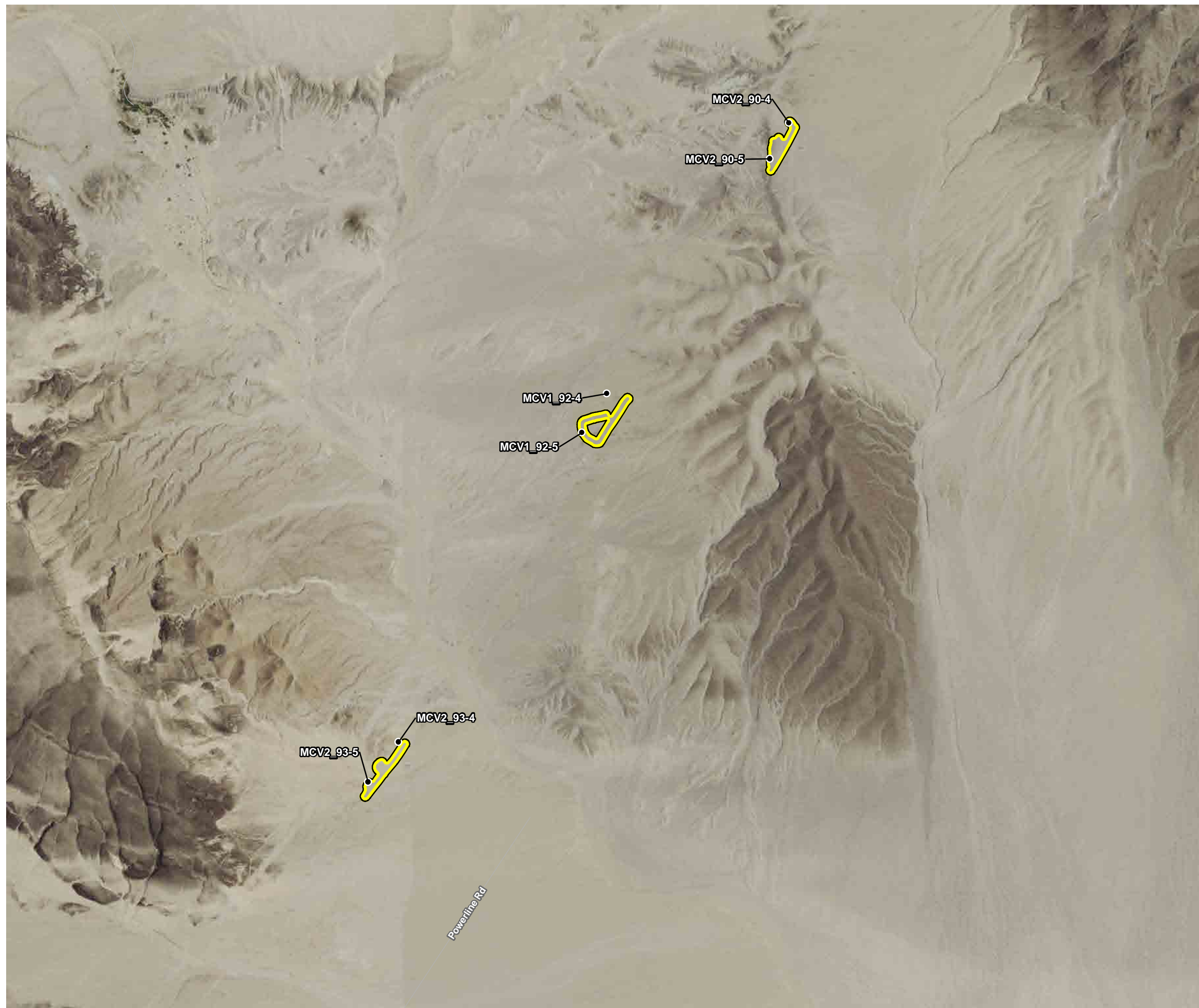


Exhibit 2g Survey Area

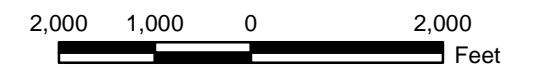
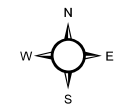
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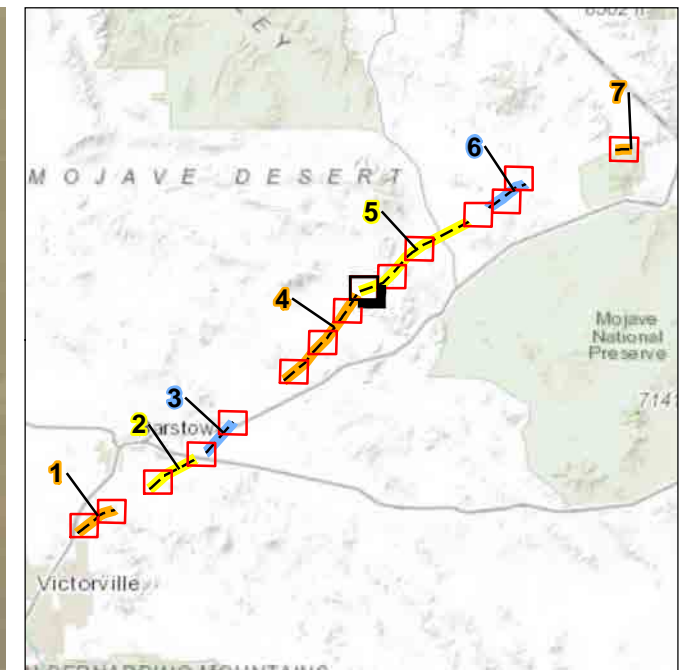
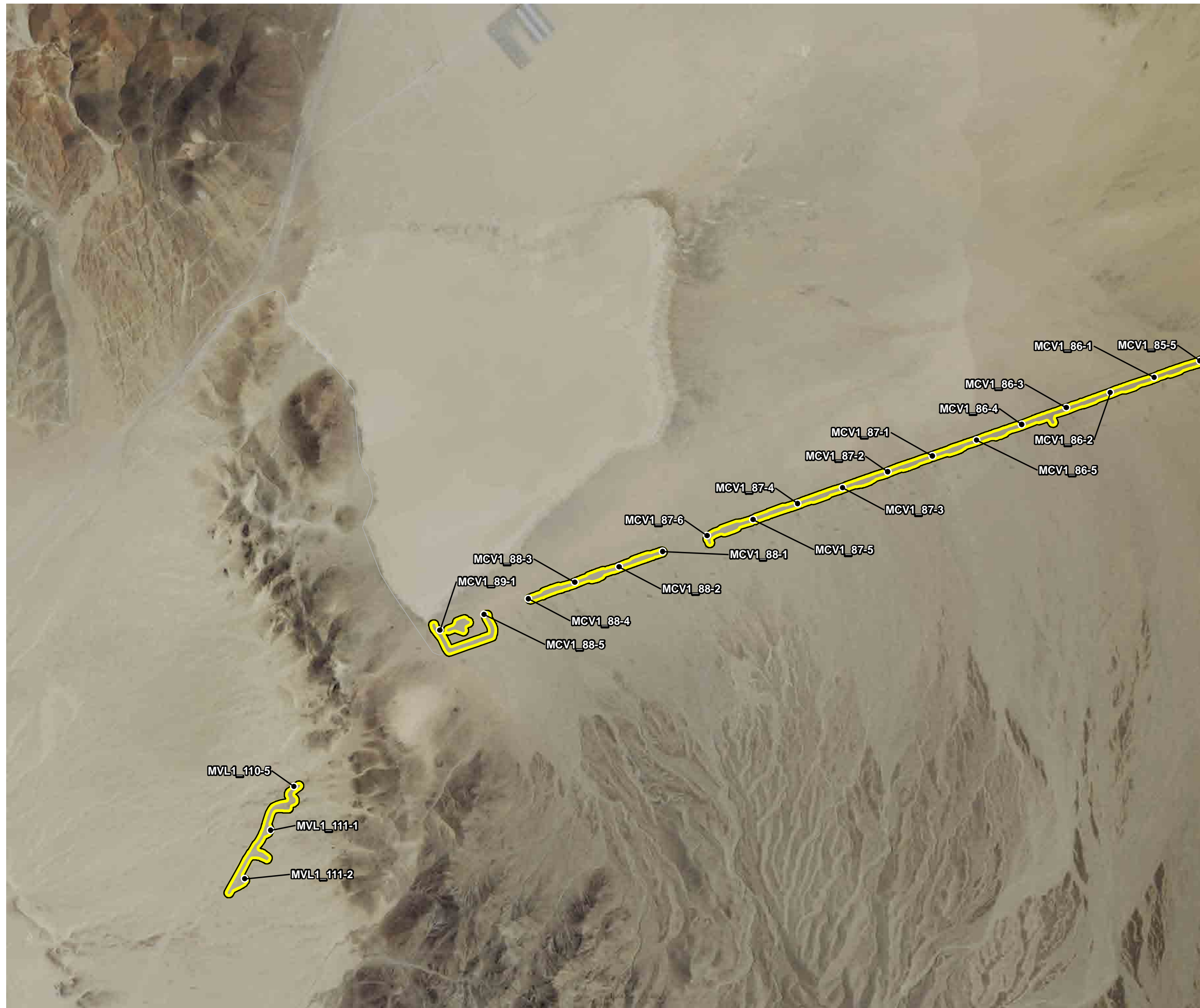


Exhibit 2h Survey Area

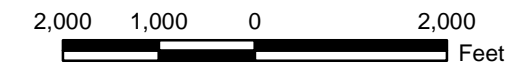
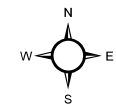
Path 46 Transmission Line Clearances Project

(Rev: 09/29/2016 LEW) R:\Projects\MBC\0001\00\Graphics\JDI\Ex2_Survey_Area_20160929.pdf

D:\Projects\3MBC\0001\MXD\JDI\Ex_Survey_Area_20160929.mxd



- Tower Location
- ▭ Survey Area



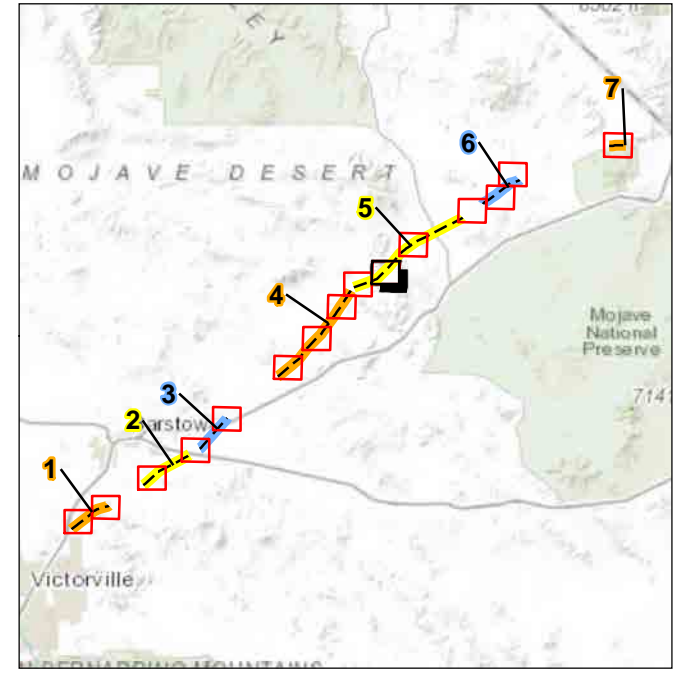
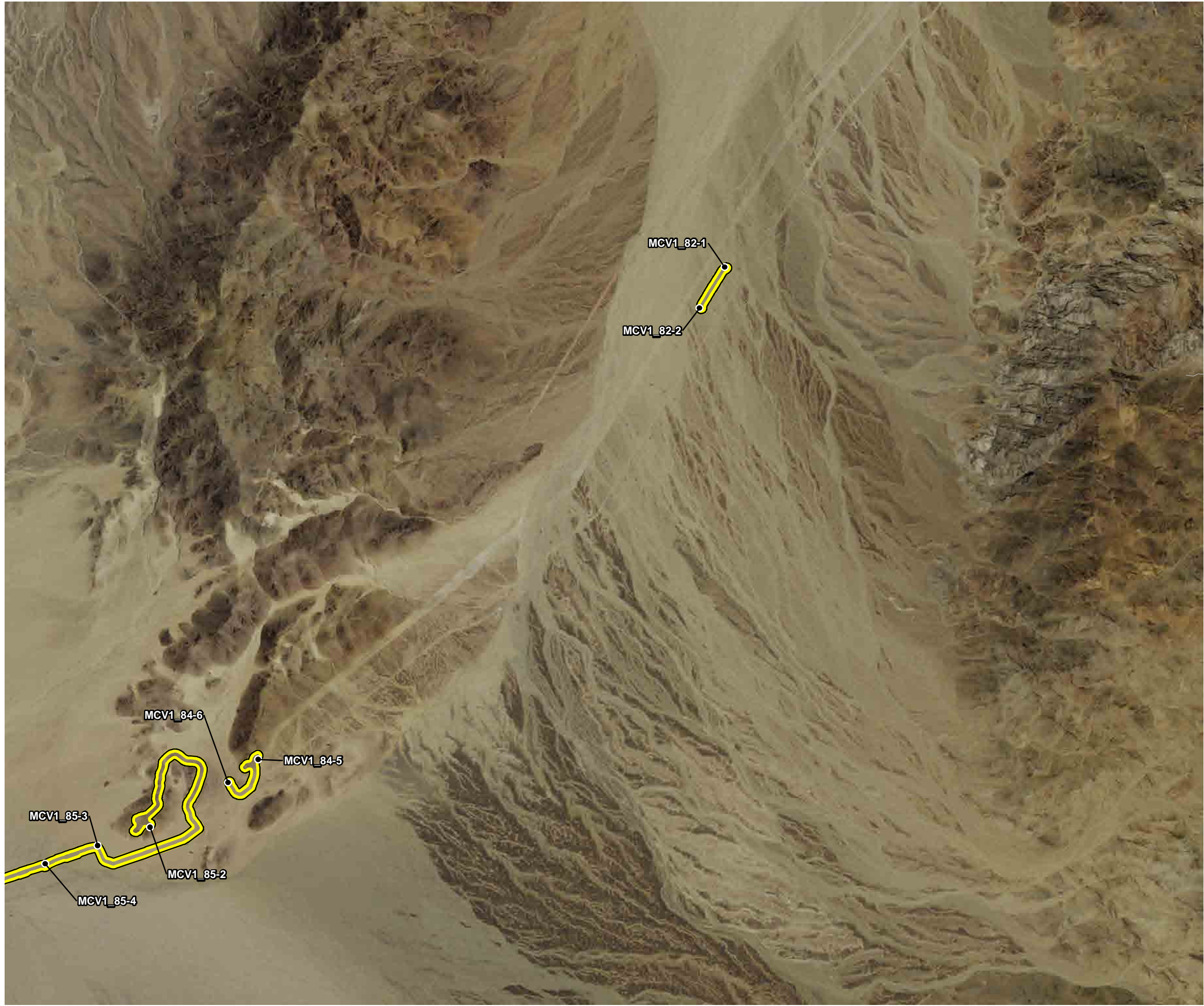
Aerial Source: ESRI, NAIP 2014

Exhibit 2i
Survey Area

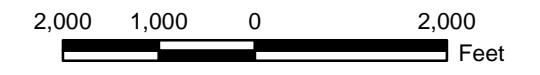
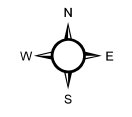
Path 46 Transmission Line Clearances Project

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- Tower Location
- ▭ Survey Area



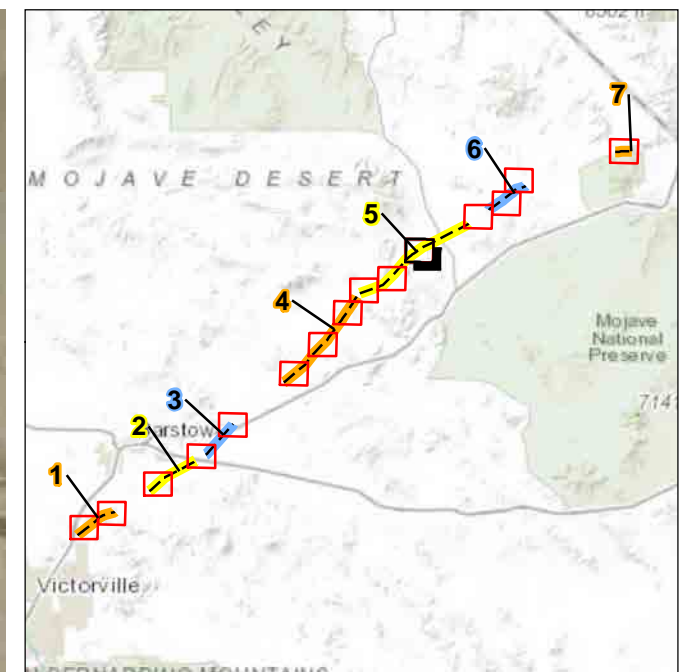
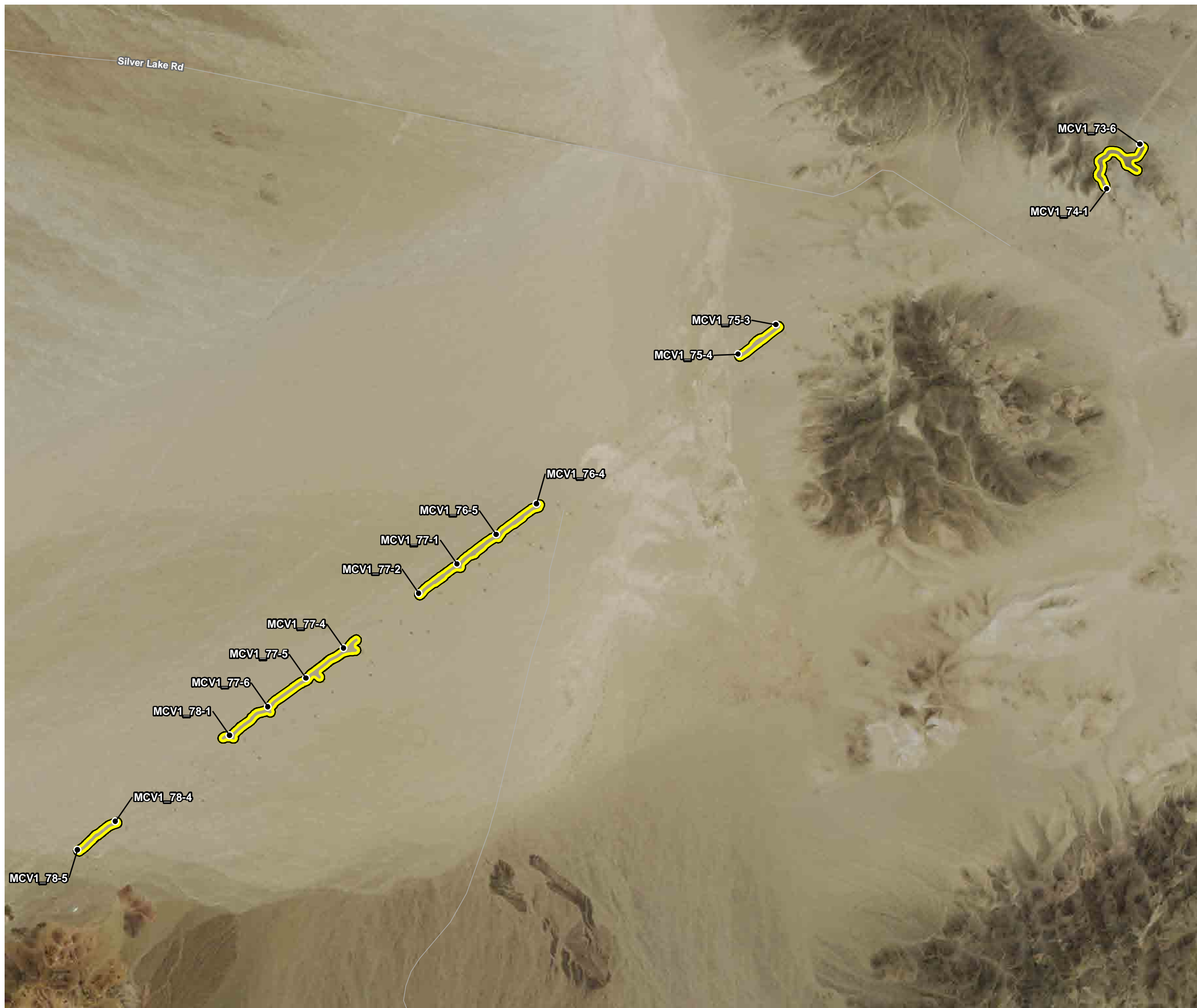
Aerial Source: ESRI, NAIP 2014



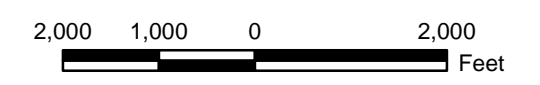
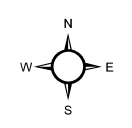
Exhibit 2j
Survey Area

Path 46 Transmission Line Clearances Project

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- Tower Location
- ▭ Survey Area



Aerial Source: ESRI, NAIP 2014

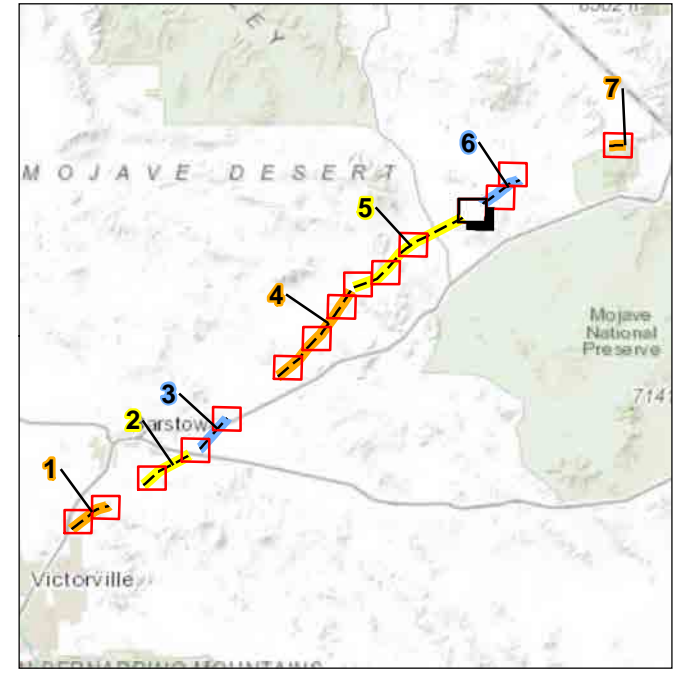
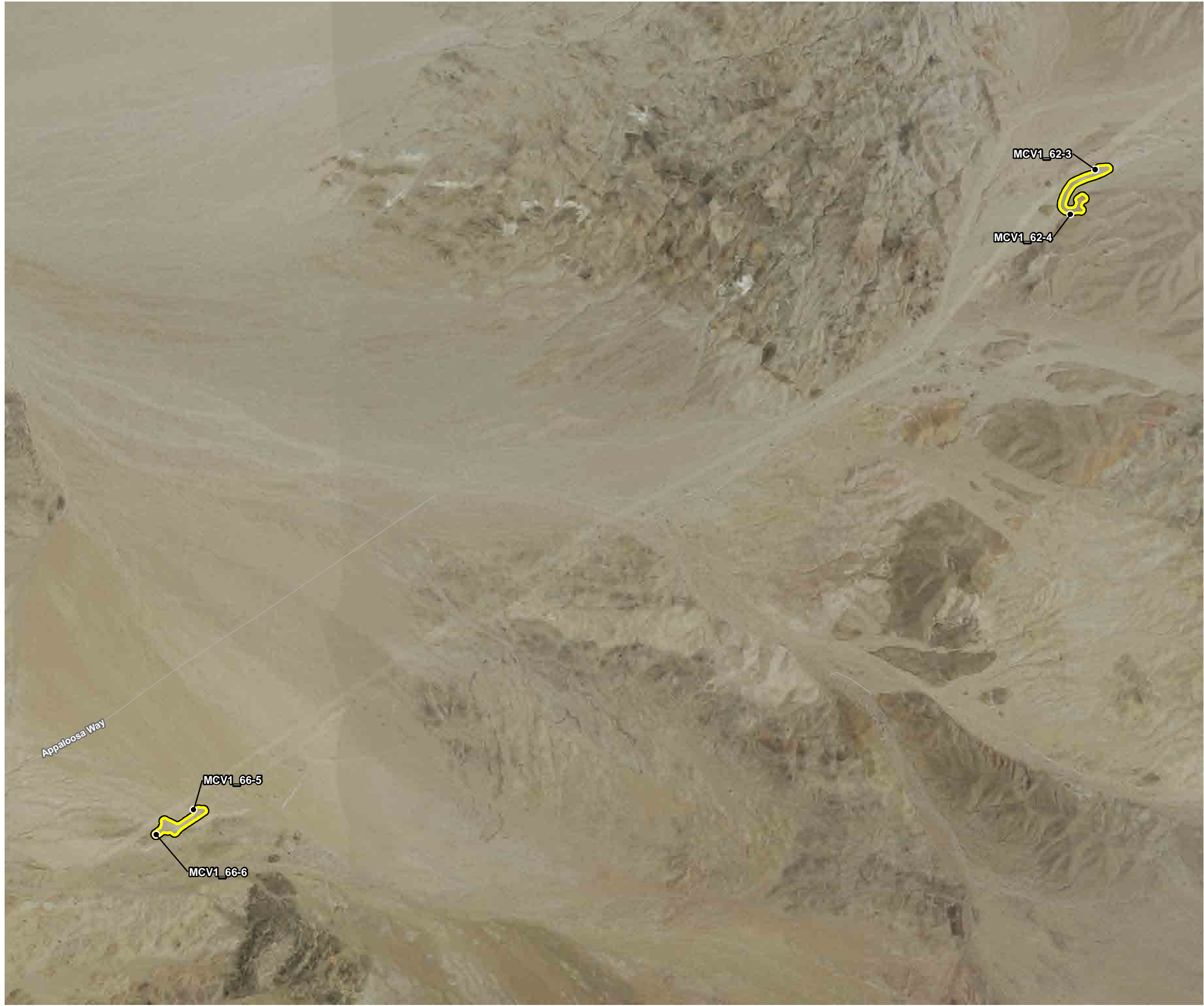
Exhibit 2k
Survey Area

Path 46 Transmission Line Clearances Project

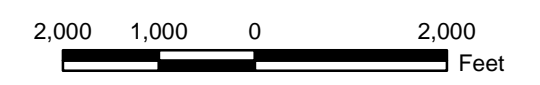
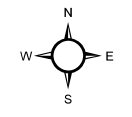
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- Tower Location
- ▭ Survey Area



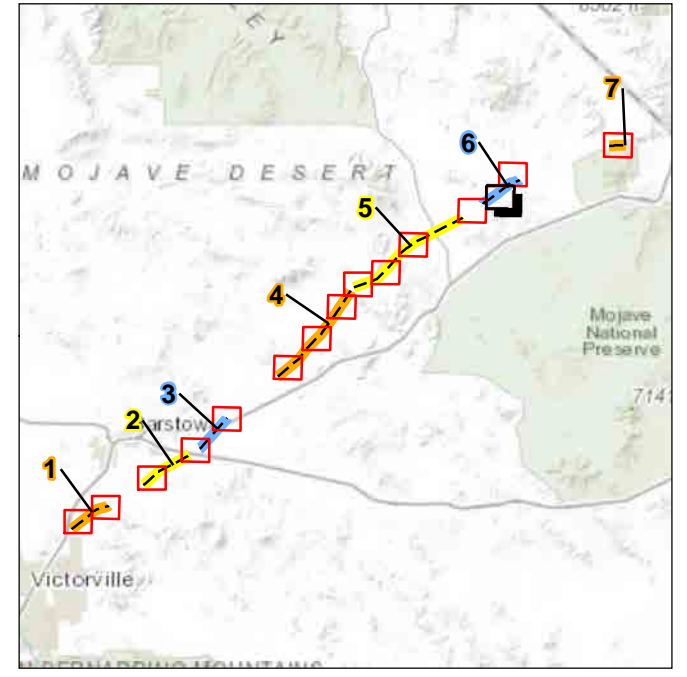
Aerial Source: ESRI, NAIP 2014



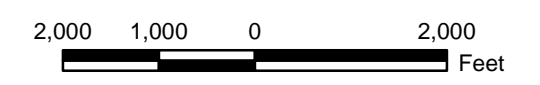
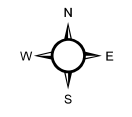
Exhibit 2I Survey Area

Path 46 Transmission Line Clearances Project

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- Tower Location
- ▭ Survey Area



Aerial Source: ESRI, NAIP 2014



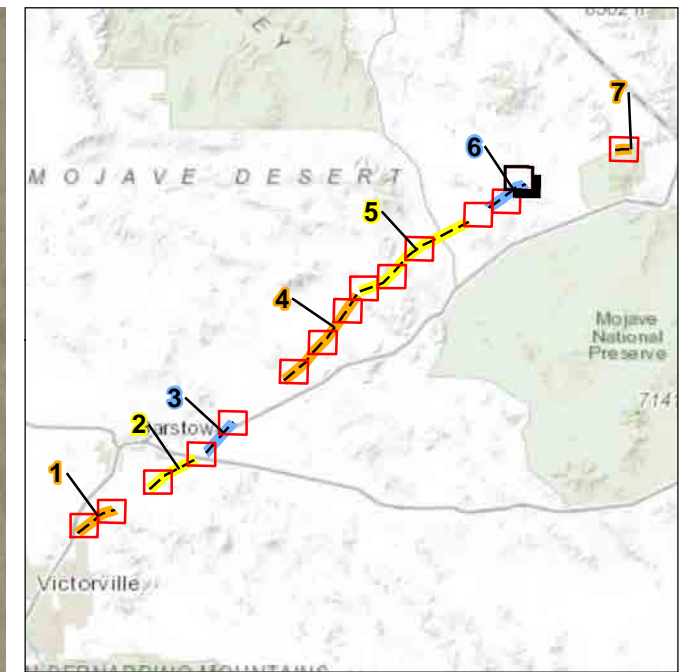
**Exhibit 2m
Survey Area**

Path 46 Transmission Line Clearances Project

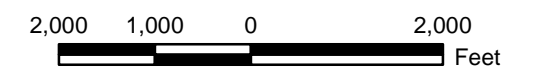
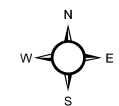
(Rev: 09/29/2016 LEW) R:\Projects\MBC\3MBC000100\Graphics\JDI\Ex2_Survey_Area_20160929.pdf

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- Tower Location
- ▭ Survey Area



Aerial Source: ESRI, NAIP 2014

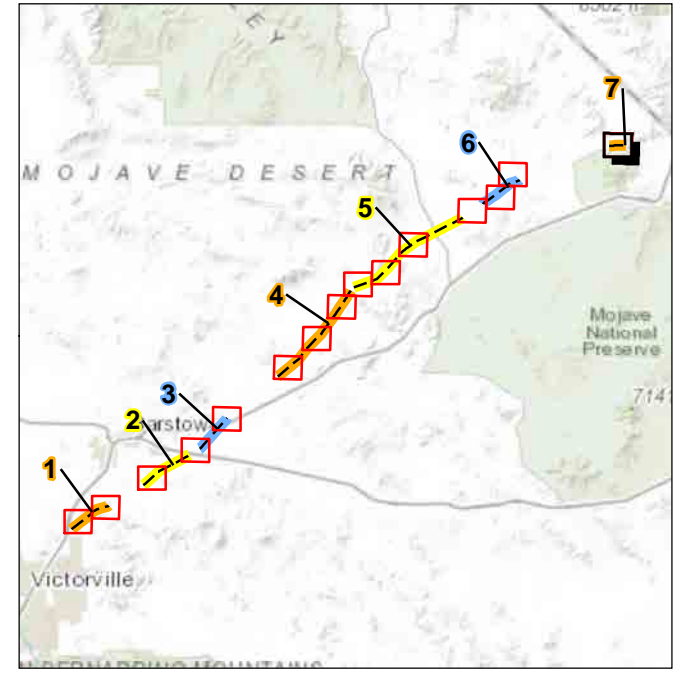


Exhibit 2n Survey Area

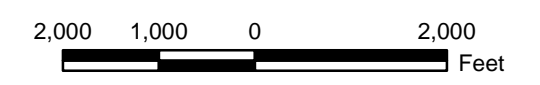
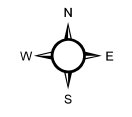
Path 46 Transmission Line Clearances Project

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- Tower Location
- ▭ Survey Area



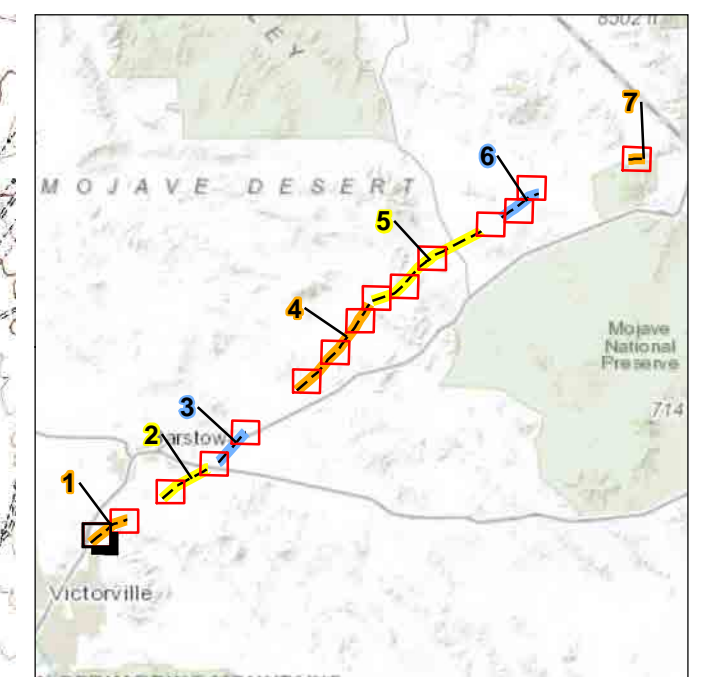
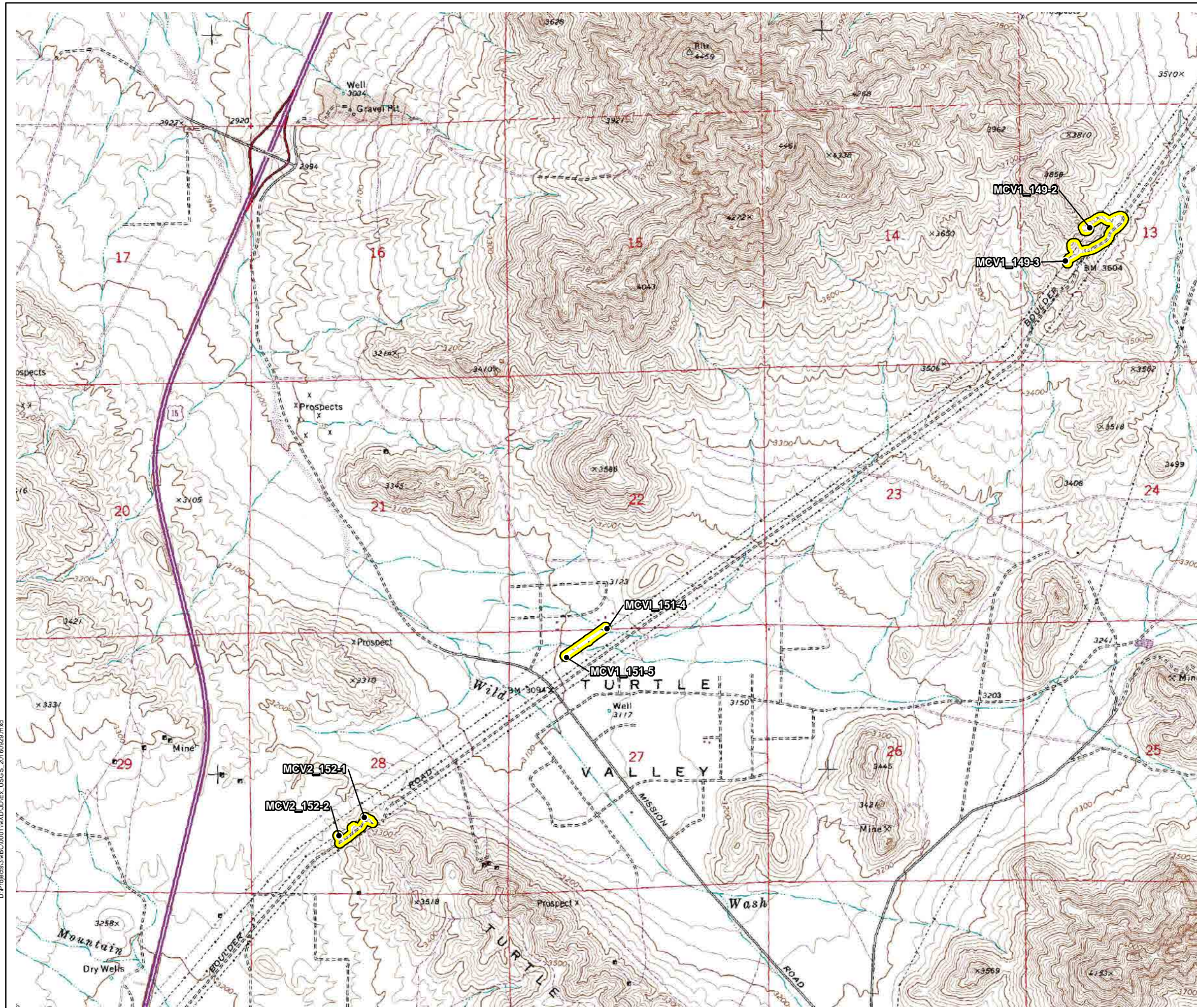
Aerial Source: ESRI, NAIP 2014



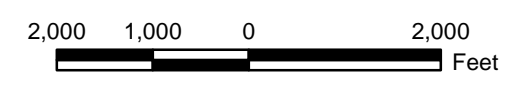
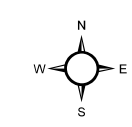
Exhibit 2o
Survey Area

Path 46 Transmission Line Clearances Project

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- Tower Location
 - ▭ Survey Area
- Quadrangle**
Turtle Valley, CA
- Meridian, Township, Range, Section**
- Overlapping the Survey Area:**
- S07N03W12
 - S07N03W13
 - S07N03W22
 - S07N03W27
 - S07N03W28



PSOMAS

Exhibit 3a

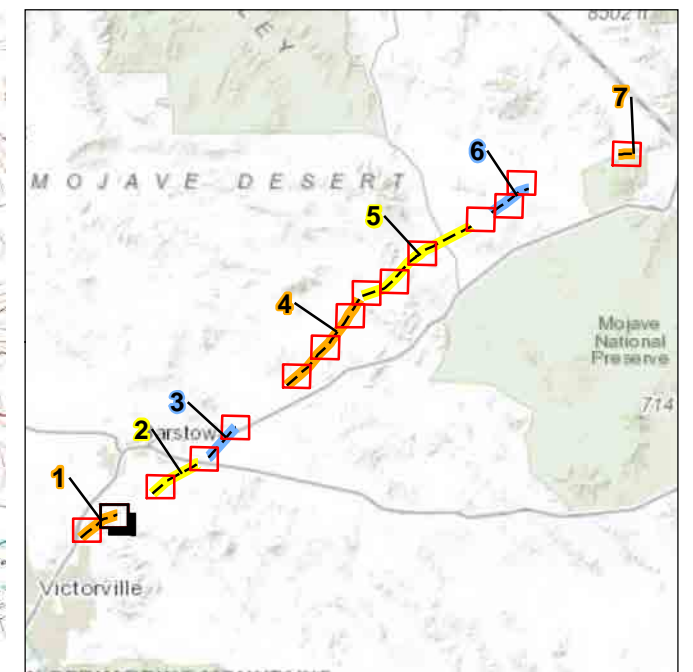
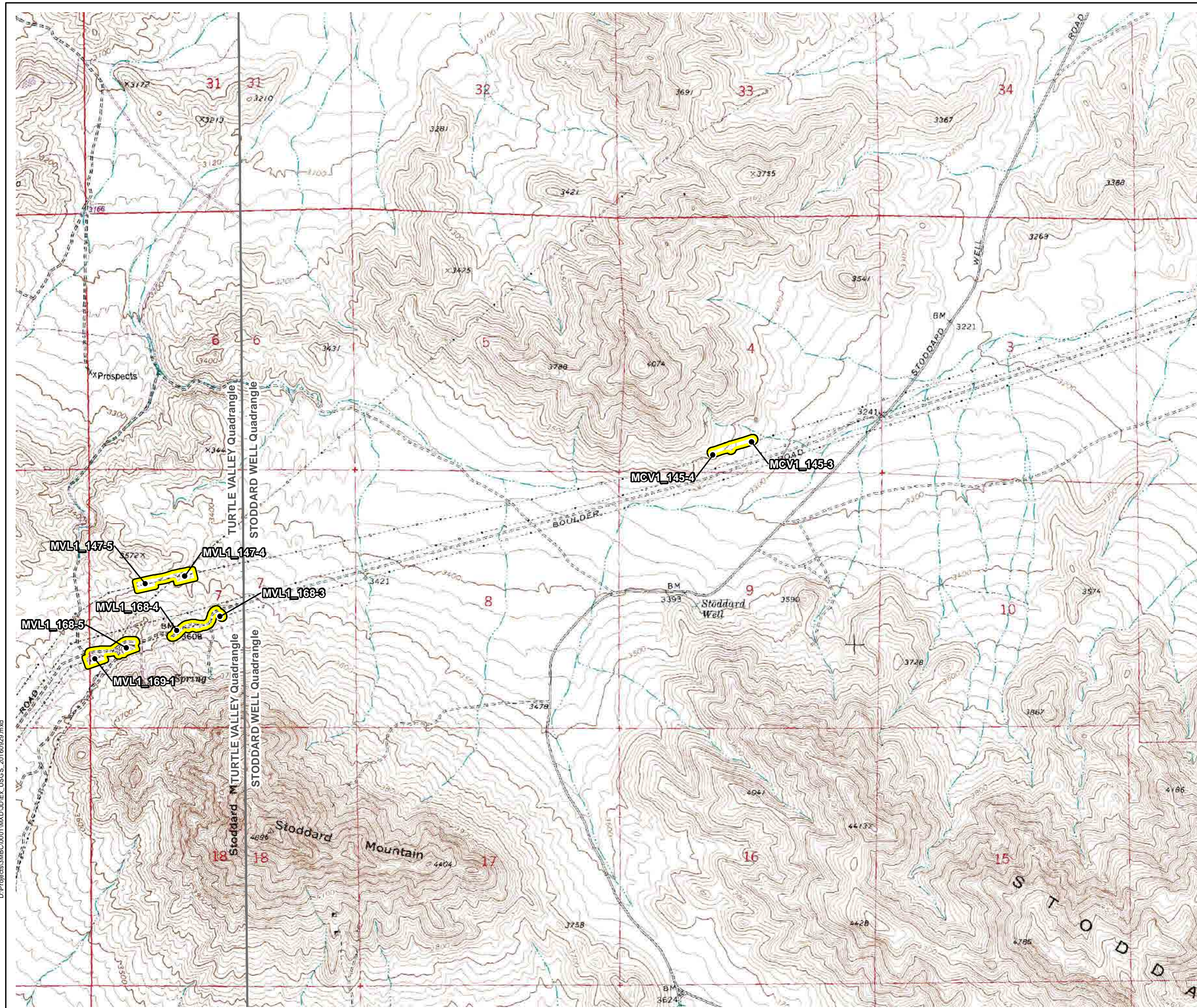
USGS 7.5-minute

Topographic Quadrangle

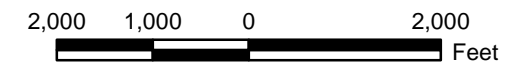
Path 46 Transmission Line Clearances Project

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- Tower Location
 - ▭ Survey Area
- Quadrangle**
 Stoddard Well, CA
 Turtle Valley, CA
- Meridian, Township, Range, Section**
Overlapping the Survey Area:
 S07N02W04
 S07N02W07
 S07N02W09
 S07N03W12
 S07N03W13



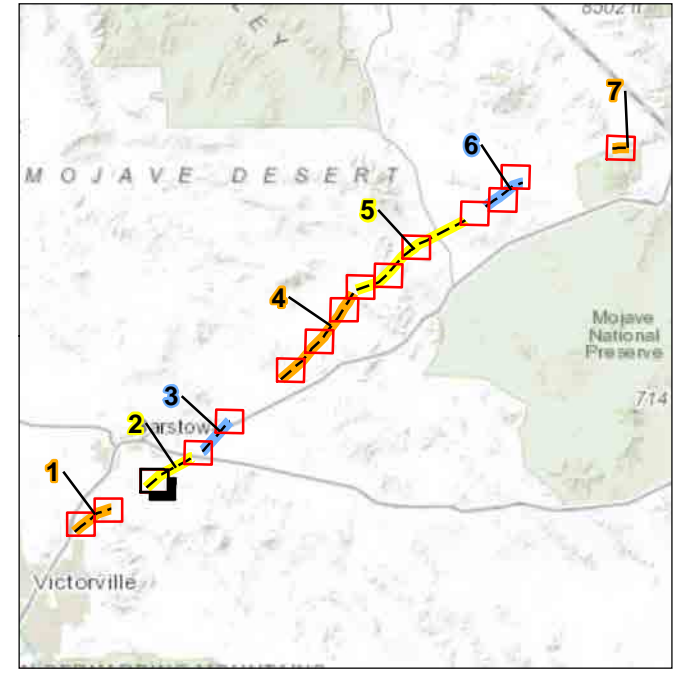
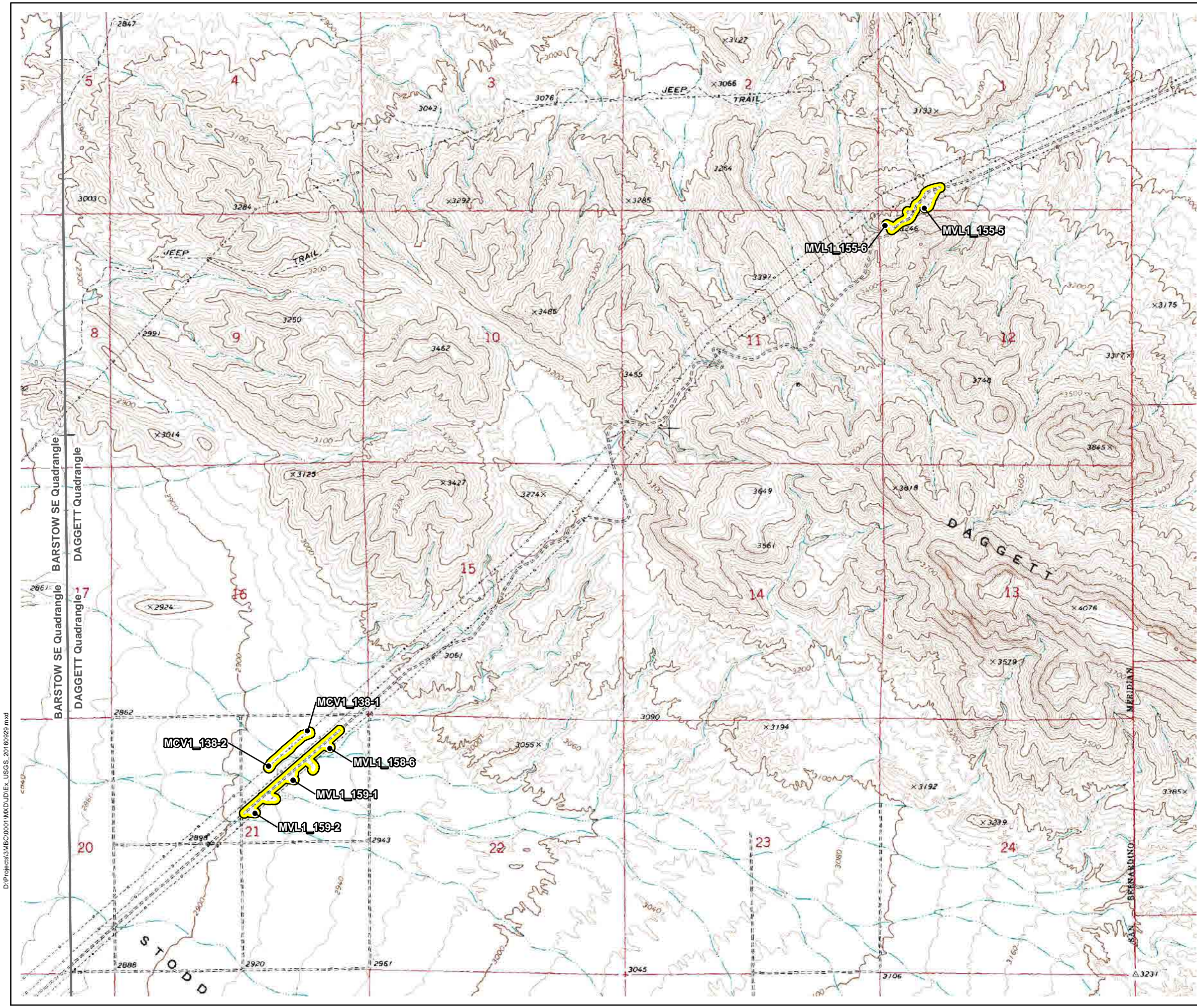
PSOMAS

Exhibit 3b
USGS 7.5-minute
Topographic Quadrangle

Path 46 Transmission Line Clearances Project

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- Tower Location
 - ▭ Survey Area
- Quadrangle**
 Barstow SE, CA
 Daggett, CA
- Meridian, Township, Range, Section**
Overlapping the Survey Area:
 S08N01W01
 S08N01W02
 S08N01W11
 S08N01W12
 S08N01W16
 S08N01W21

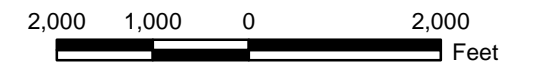
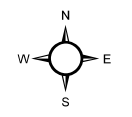
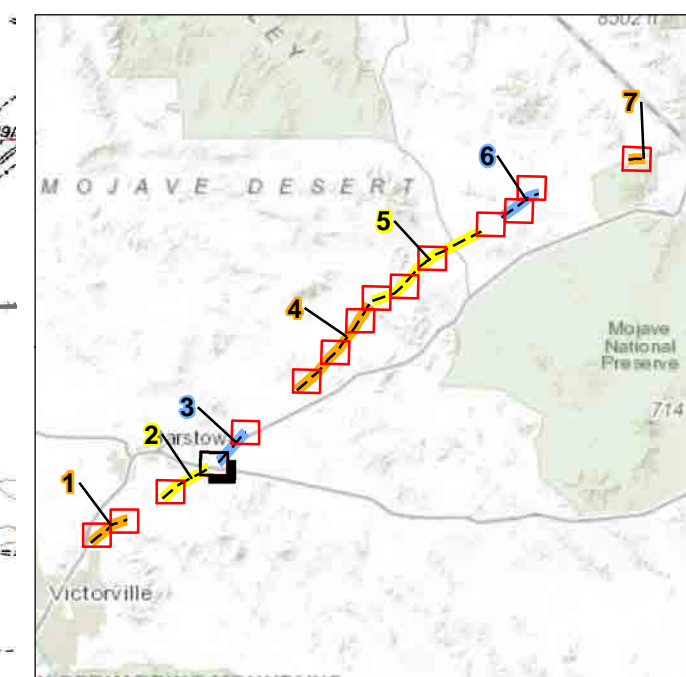
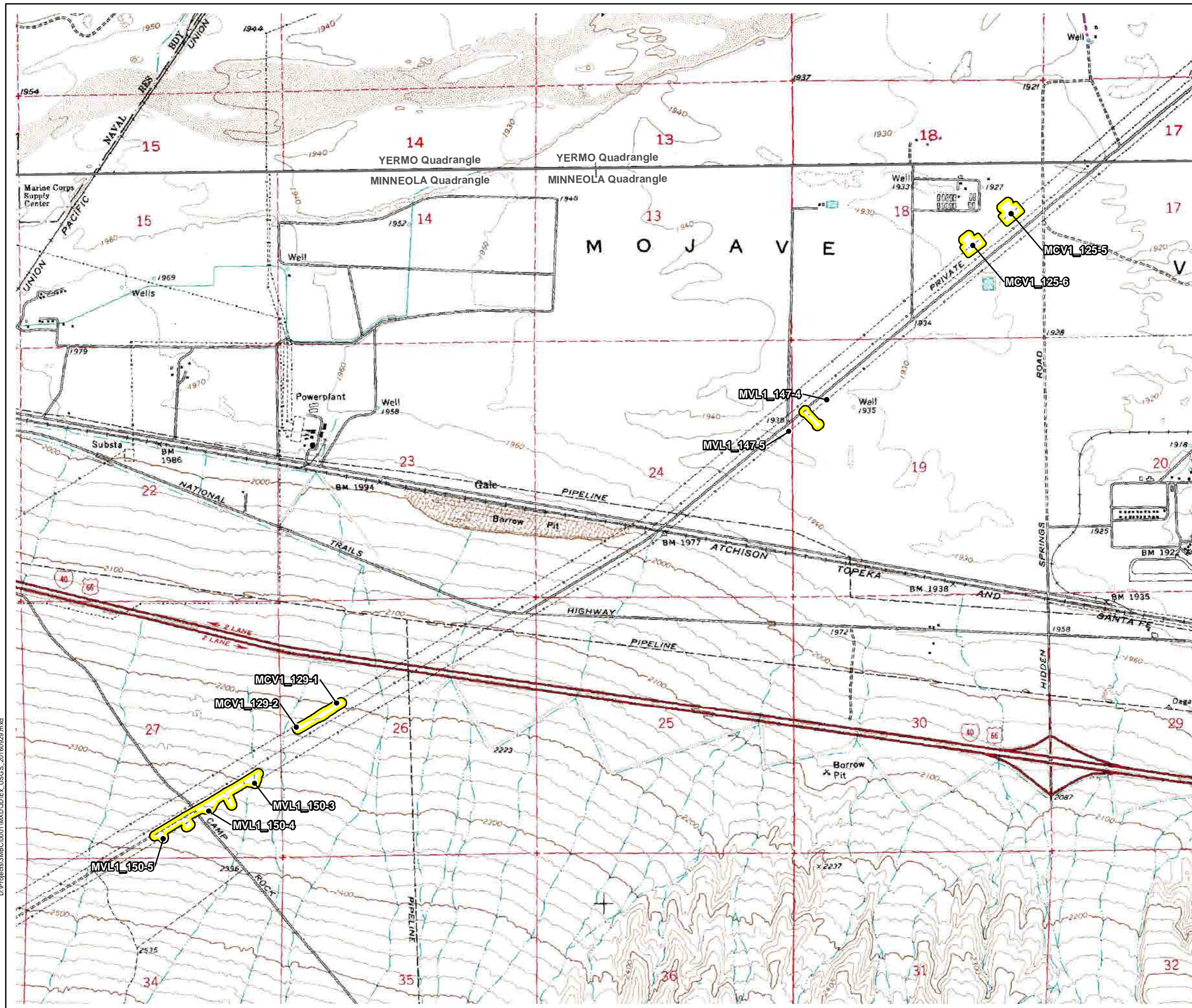


Exhibit 3c
 USGS 7.5-minute
 Topographic Quadrangle

Path 46 Transmission Line Clearances Project

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- Tower Location
- ▭ Survey Area

Quadrangle
 Minneola, CA
 Yermo, CA

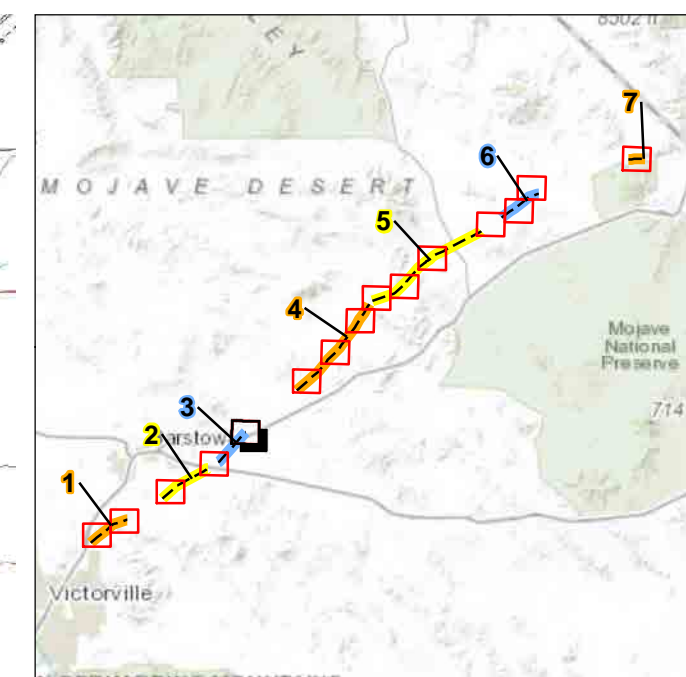
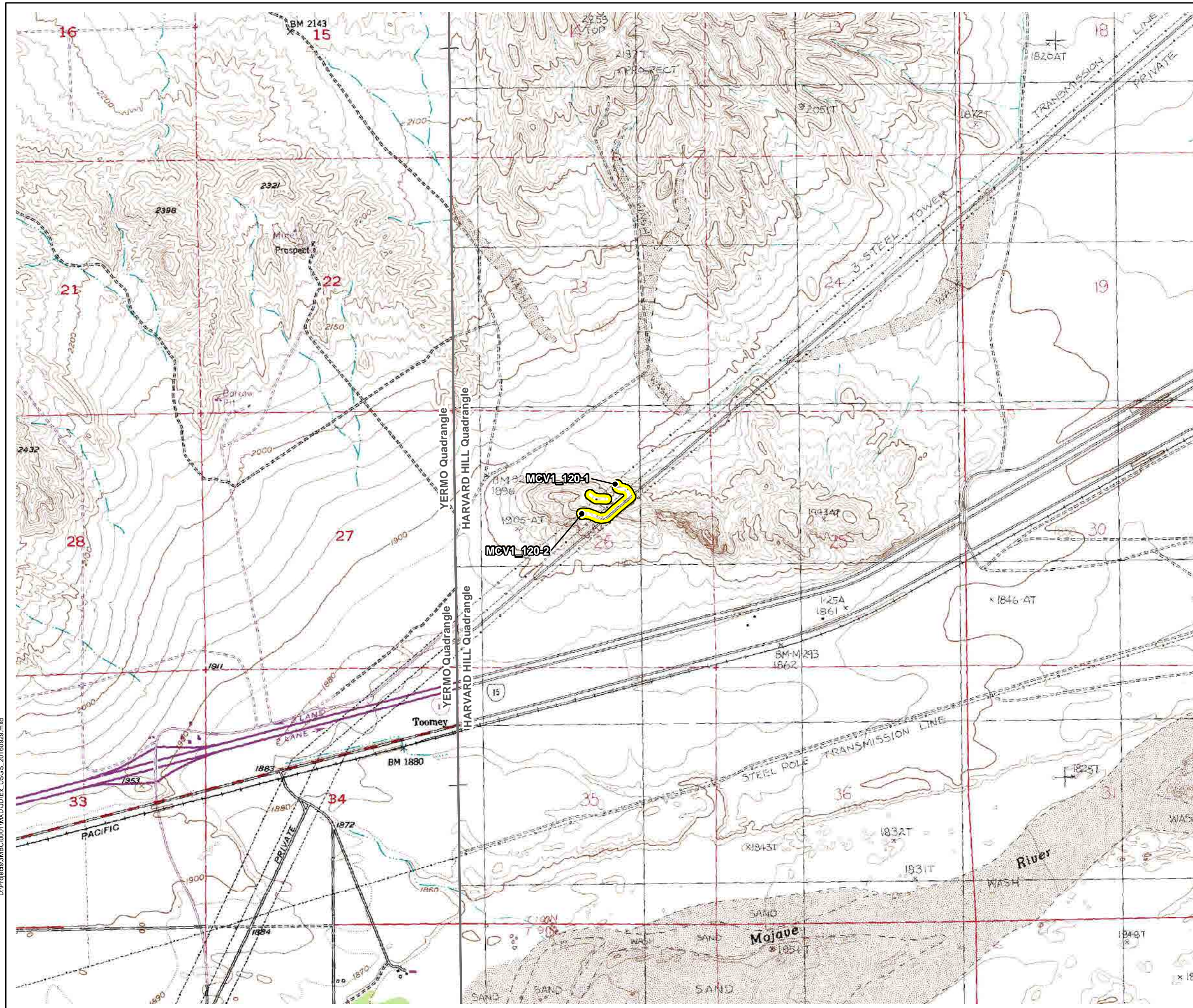
Meridian, Township, Range, Section
Overlapping the Survey Area:
 S09N01E24
 S09N01E26
 S09N01E27
 S09N01E34
 S09N02E18
 S09N02E19

Exhibit 3d
 USGS 7.5-minute
 Topographic Quadrangle

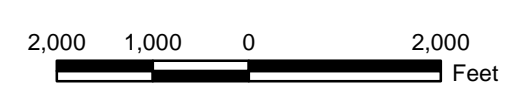
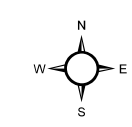
Path 46 Transmission Line Clearances Project

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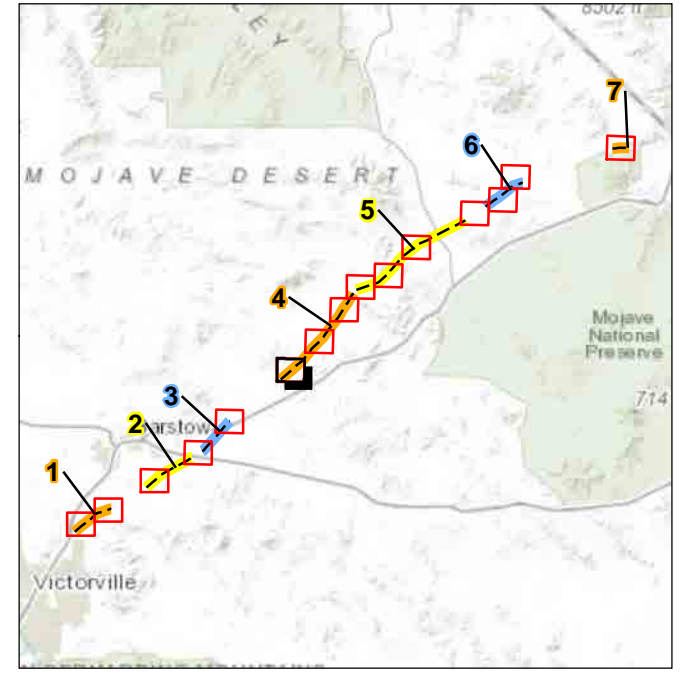
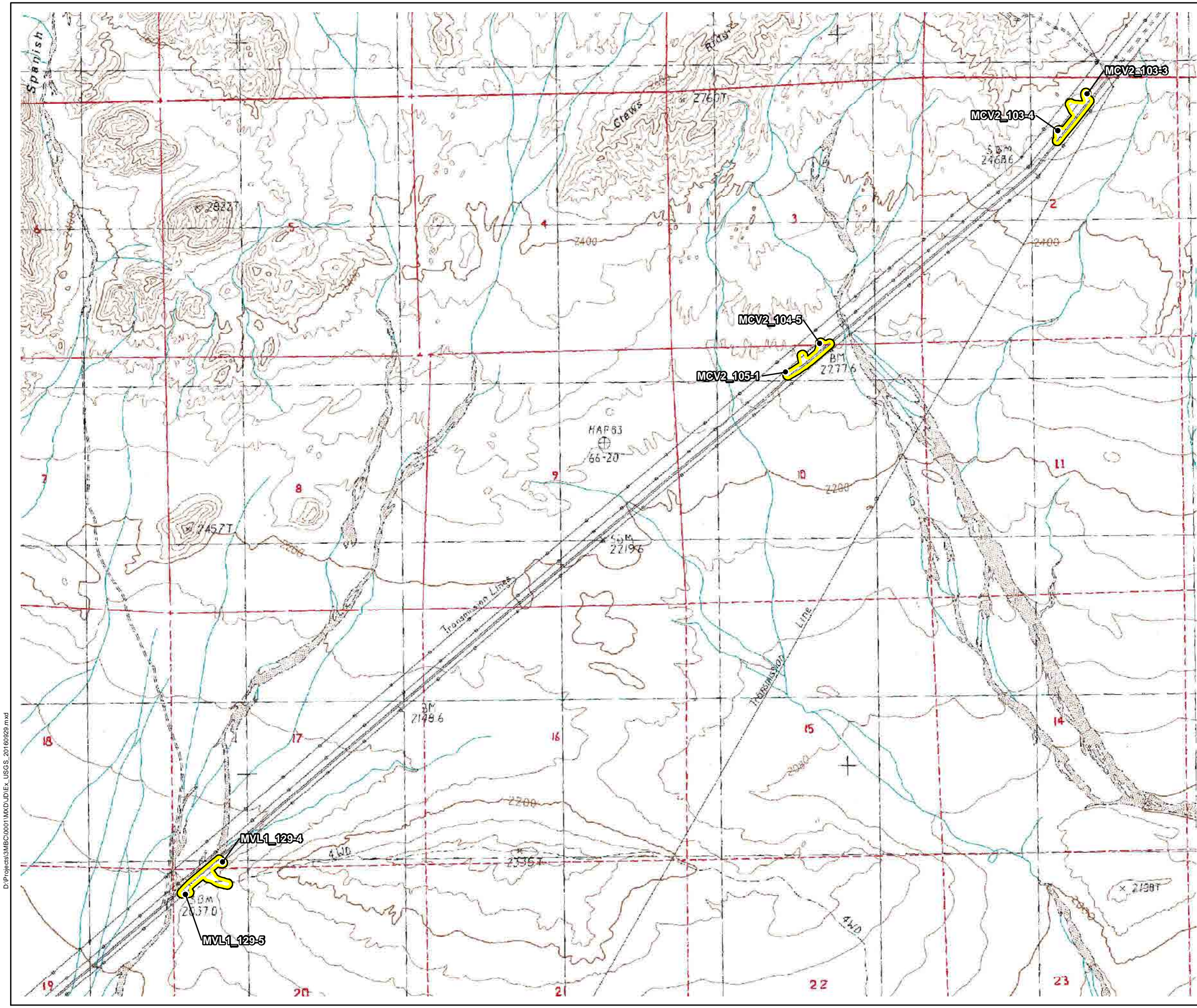
- Tower Location
 - ▭ Survey Area
- Quadrangle**
 Harvard Hill, CA
 Yermo, CA
- Meridian, Township, Range, Section**
Overlapping the Survey Area:
 S10N02E26



PSOMAS Exhibit 3e
 USGS 7.5-minute
 Topographic Quadrangle
 Path 46 Transmission Line Clearances Project

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- Tower Location
- ▭ Survey Area

Quadrangle
Alvord Mountain East, CA

Meridian, Township, Range, Section

Overlapping the Survey Area:

- S11N04E02
- S11N04E03
- S11N04E10
- S11N04E17
- S11N04E18
- S11N04E19
- S11N04E20
- S12N04E35

PSOMAS

Exhibit 3f

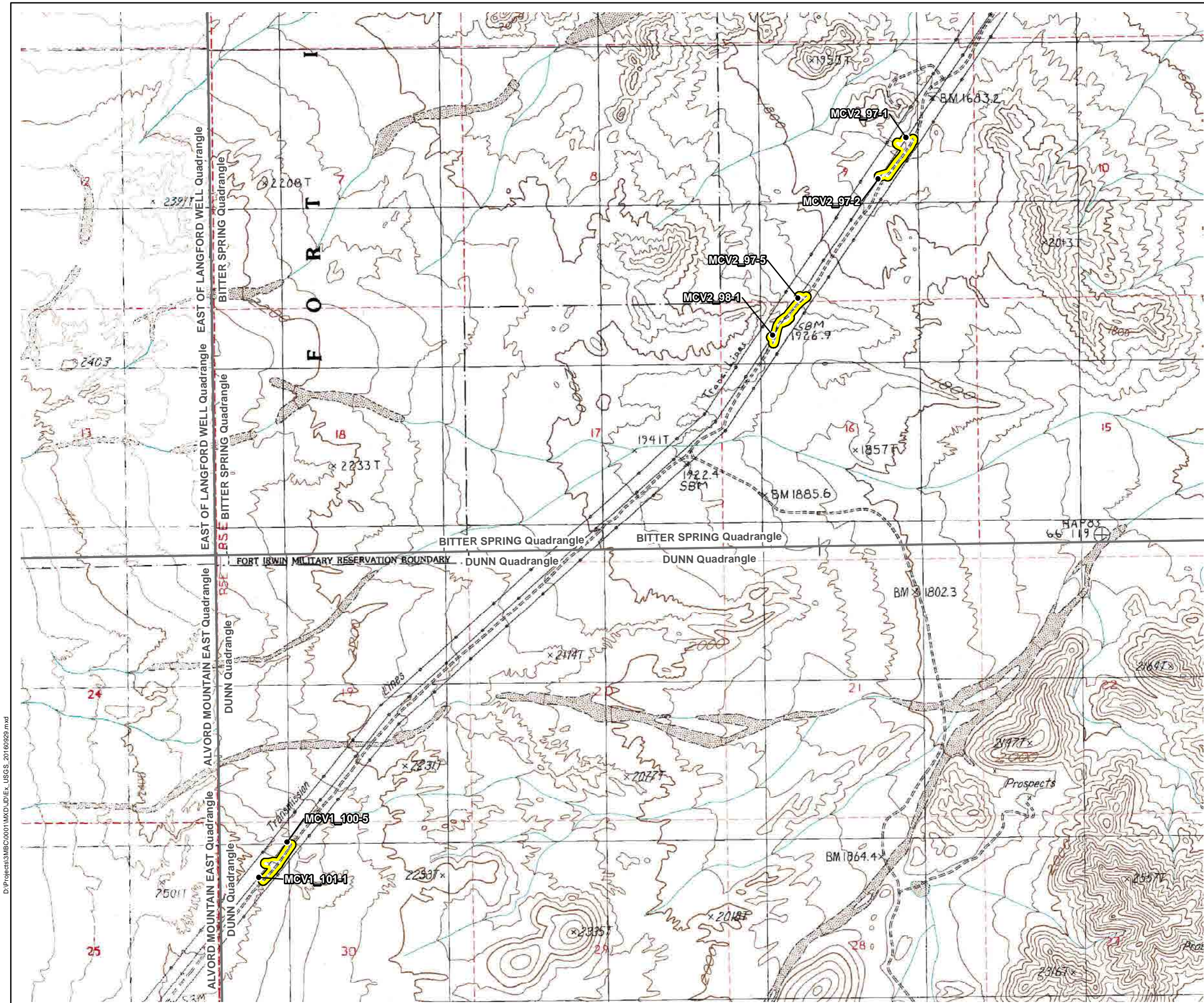
USGS 7.5-minute

Topographic Quadrangle

Path 46 Transmission Line Clearances Project

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- Tower Location
- ▭ Survey Area

Quadrangle

- Alvord Mountain East, CA
- Bitter Spring, CA
- Dunn, CA
- East Of Langford Well, CA

Meridian, Township, Range, Section

Overlapping the Survey Area:

- S12N04E24
- S12N04E25
- S12N05E09
- S12N05E16
- S12N05E19
- S12N05E30

2,000 1,000 0 2,000 Feet

Exhibit 3g

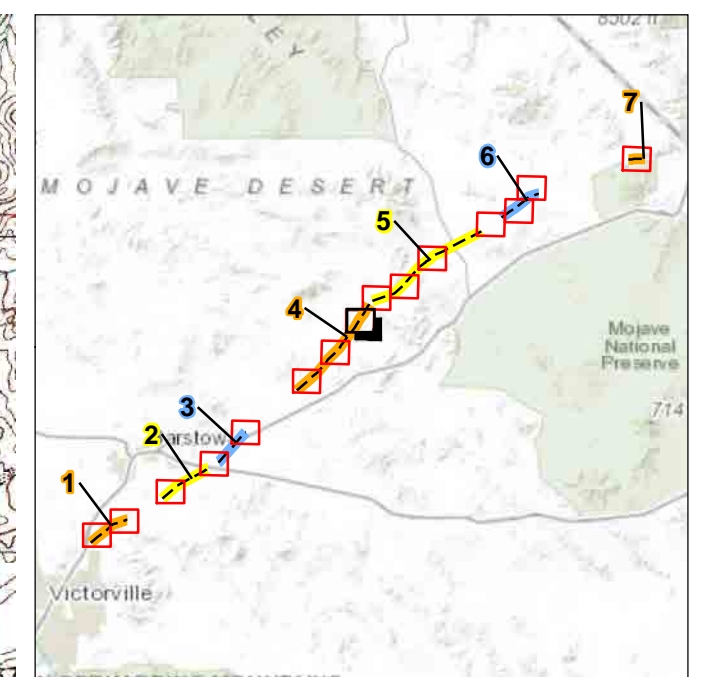
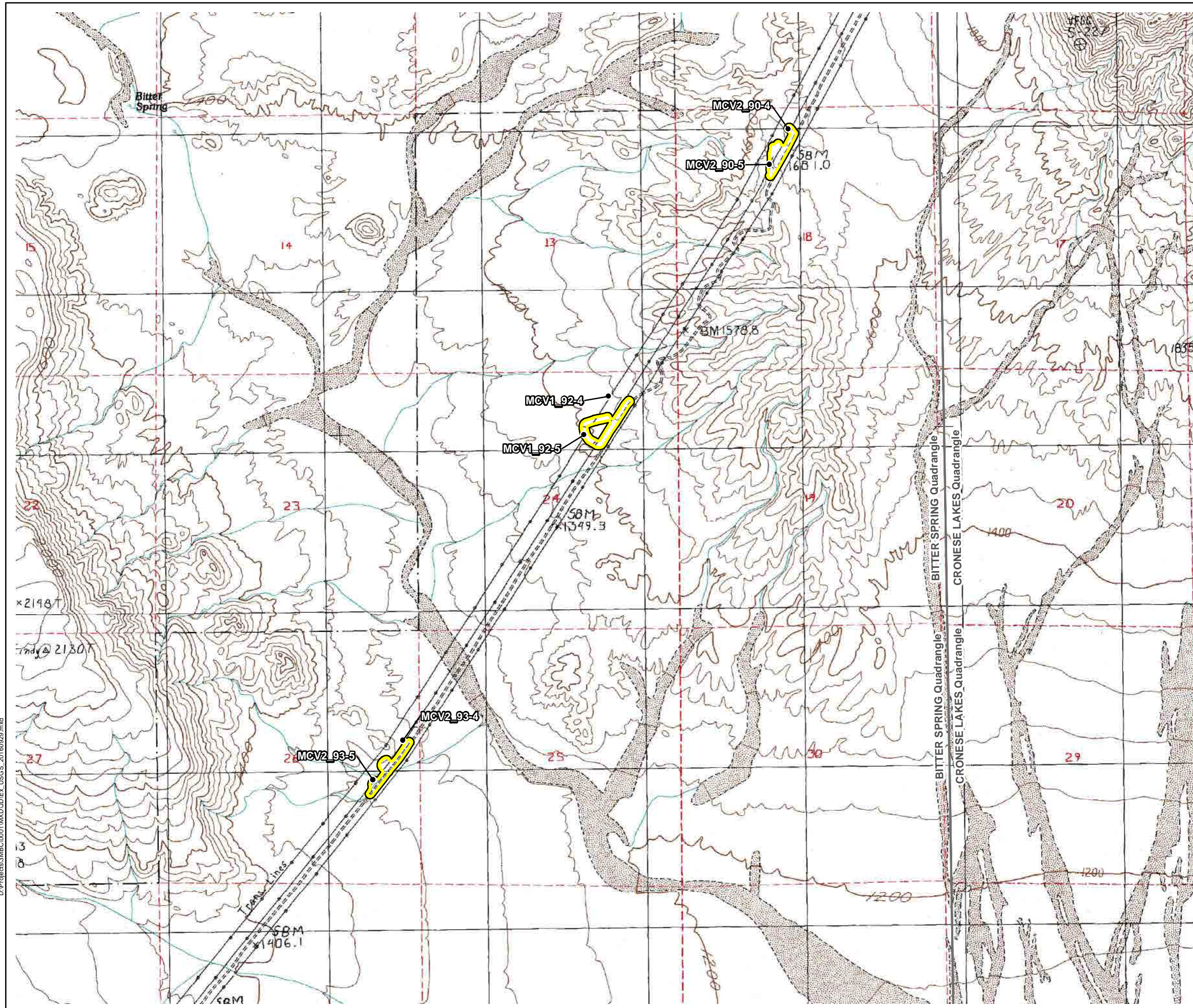
USGS 7.5-minute

Topographic Quadrangle

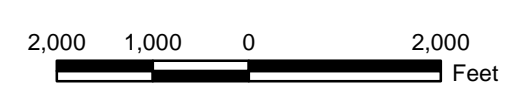
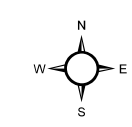
Path 46 Transmission Line Clearances Project

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- Tower Location
- ▭ Survey Area
- Quadrangle**
- Bitter Spring, CA
- Cronese Lakes, CA
- Meridian, Township, Range, Section**
- Overlapping the Survey Area:**
- S13N05E24
- S13N05E25
- S13N05E26
- S13N06E07
- S13N06E08
- S13N06E18



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PSOMAS

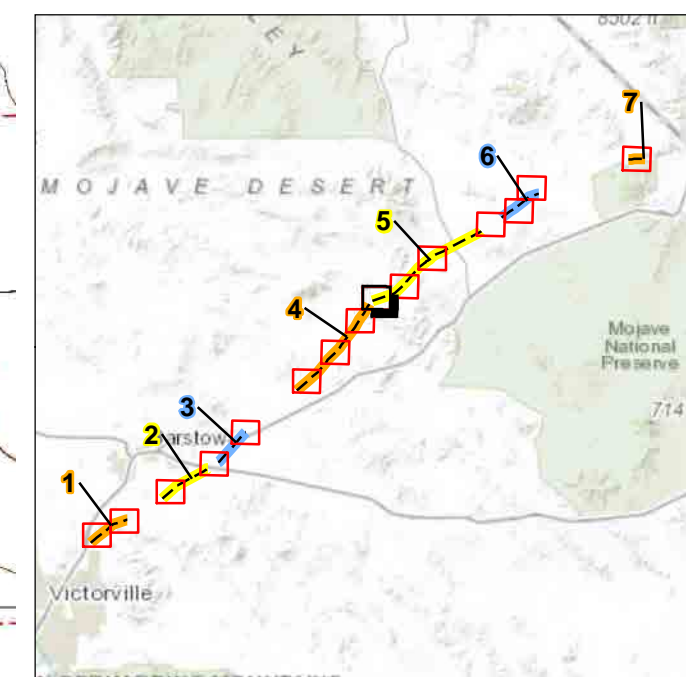
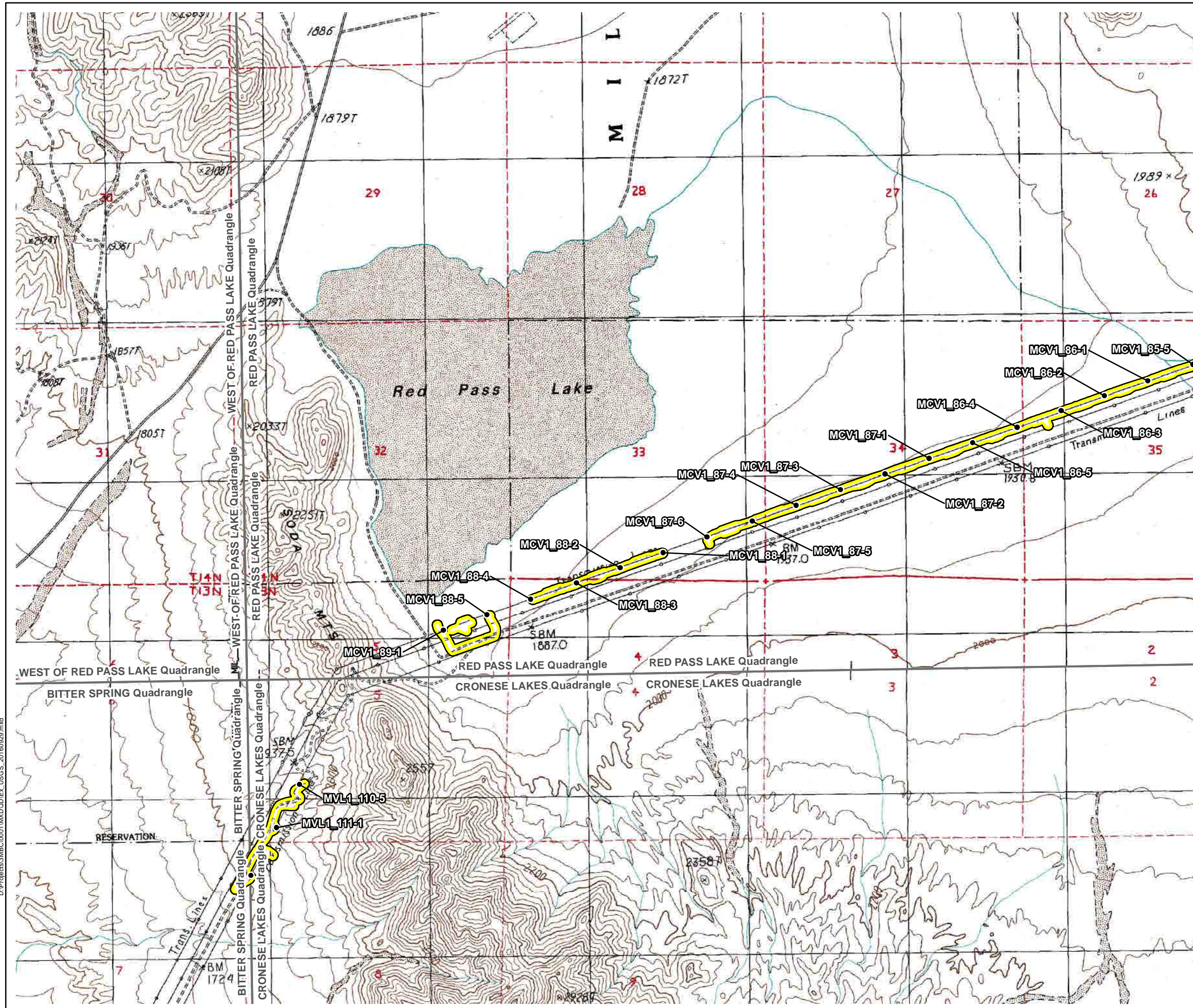
Exhibit 3h

USGS 7.5-minute

Topographic Quadrangle

Path 46 Transmission Line Clearances Project

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- Tower Location
- ▭ Survey Area

Quadrangle

- Bitter Spring, CA
- Cronese Lakes, CA
- Red Pass Lake, CA
- West Of Red Pass Lake, CA

Meridian, Township, Range, Section

Overlapping the Survey Area:

- S13N06E04
- S13N06E05
- S13N06E06
- S13N06E07
- S13N06E08
- S14N06E26
- S14N06E33
- S14N06E34
- S14N06E35

Exhibit 3i

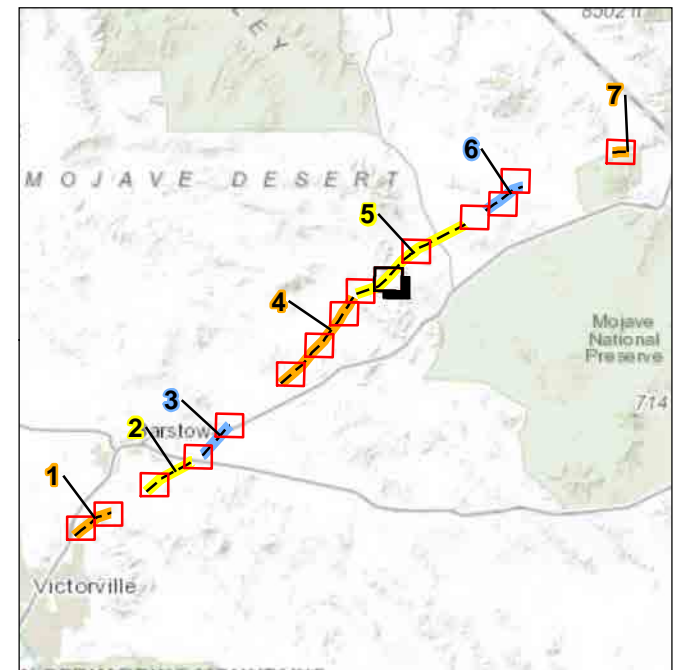
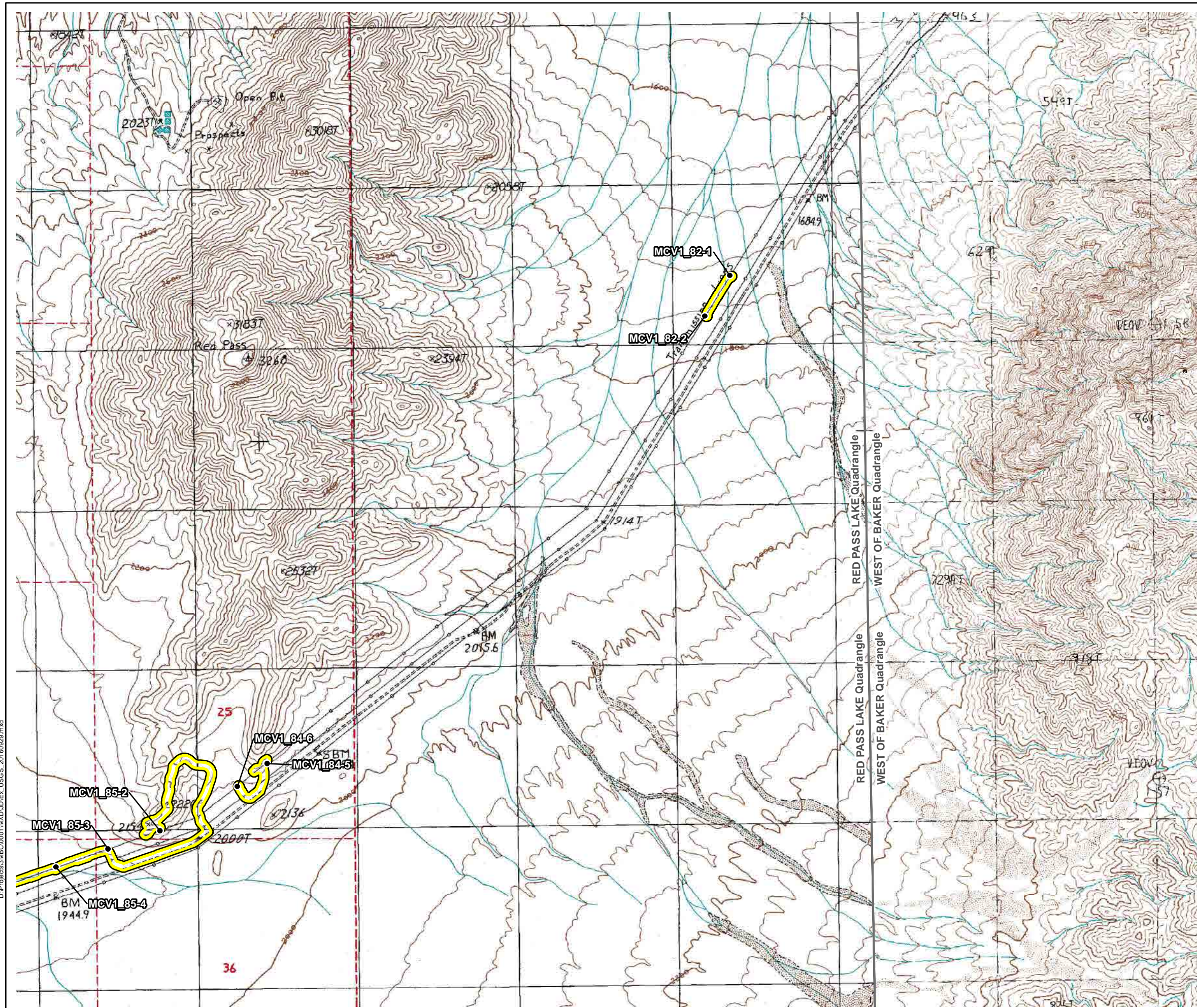
USGS 7.5-minute

Topographic Quadrangle

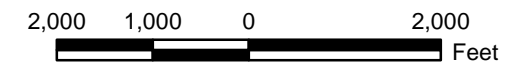
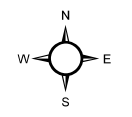
Path 46 Transmission Line Clearances Project


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- Tower Location
- ▭ Survey Area
- Quadrangle**
- Red Pass Lake, CA
- West Of Baker, CA
- Meridian, Township, Range, Section**
- Overlapping the Survey Area:**
- S14N06E25
- S14N06E26
- S14N06E35
- S14N06E36
- S14N07E17
- S14N07E20





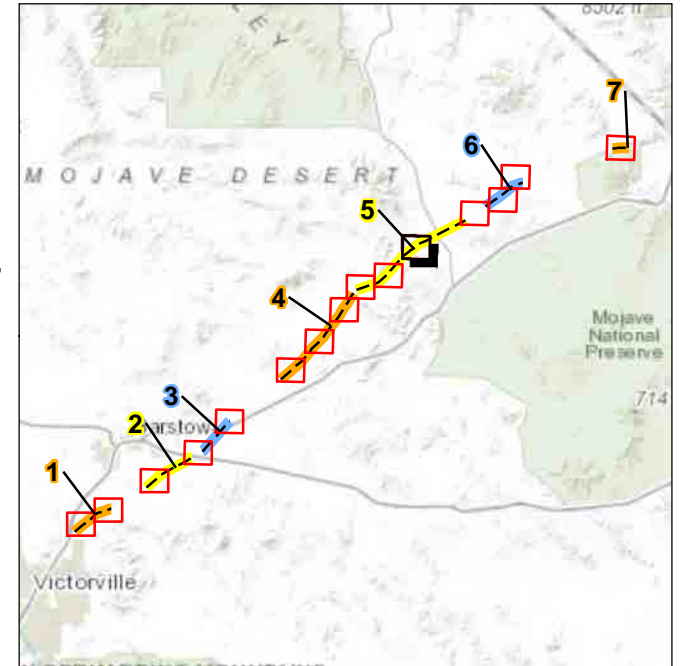
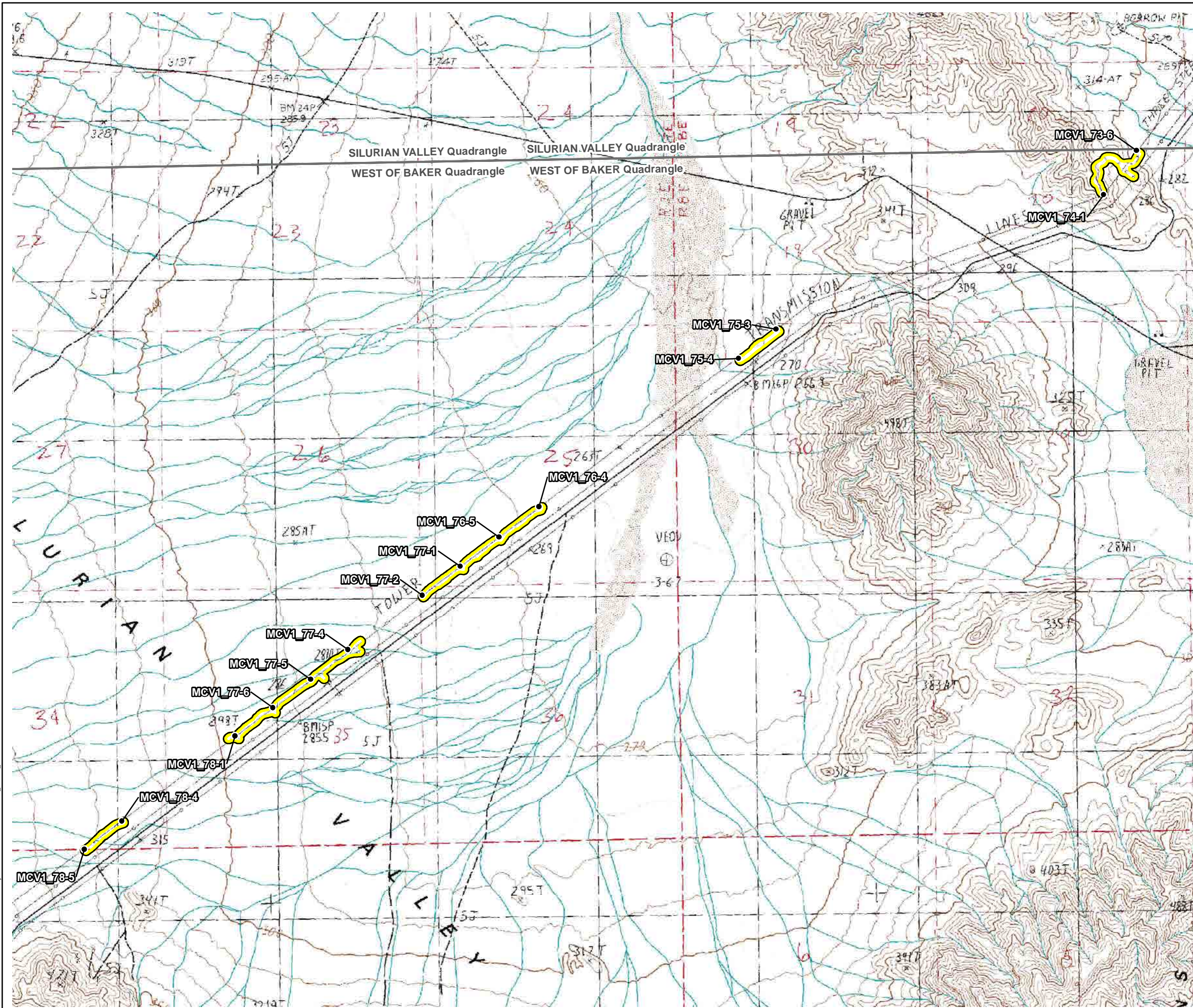
PSOMAS

Exhibit 3j
USGS 7.5-minute
Topographic Quadrangle

Path 46 Transmission Line Clearances Project

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- Tower Location
- ▭ Survey Area

Quadrangle

- Silurian Valley, CA
- West Of Baker, CA

Meridian, Township, Range, Section

Overlapping the Survey Area:

- S14N07E03
- S15N07E25
- S15N07E26
- S15N07E34
- S15N07E35
- S15N07E36
- S15N08E19
- S15N08E20
- S15N08E30

2,000 1,000 0 2,000 Feet

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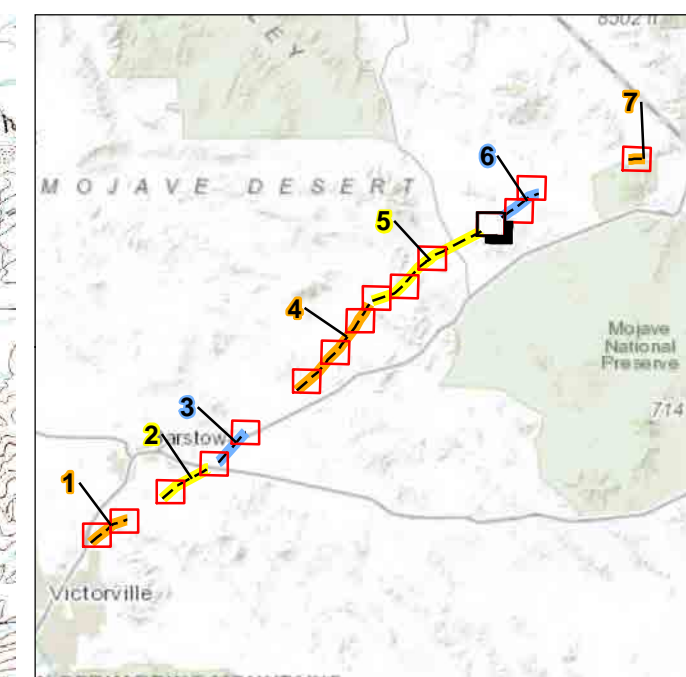
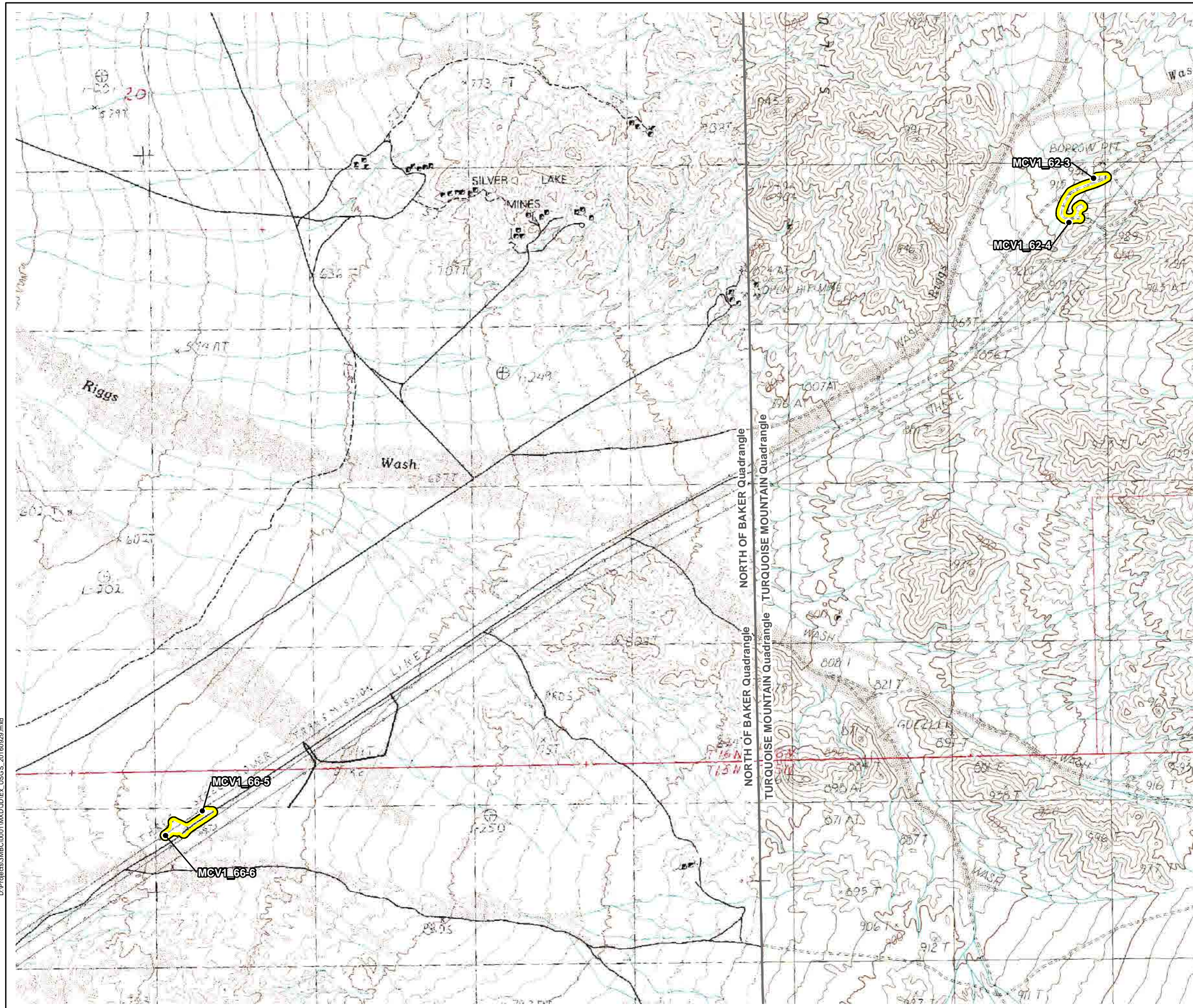
Exhibit 3k

USGS 7.5-minute

Topographic Quadrangle

Path 46 Transmission Line Clearances Project

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- Tower Location
- ▭ Survey Area

Quadrangle

- North Of Baker, CA
- Turquoise Mountain, CA

Meridian, Township, Range, Section

Overlapping the Survey Area:

- S15N09E04
- S15N09E05
- S16N09E23
- S16N09E24
- S16N09E25
- S16N09E26
- S16N09E32

2,000 1,000 0 2,000 Feet

PSOMAS

Exhibit 3I

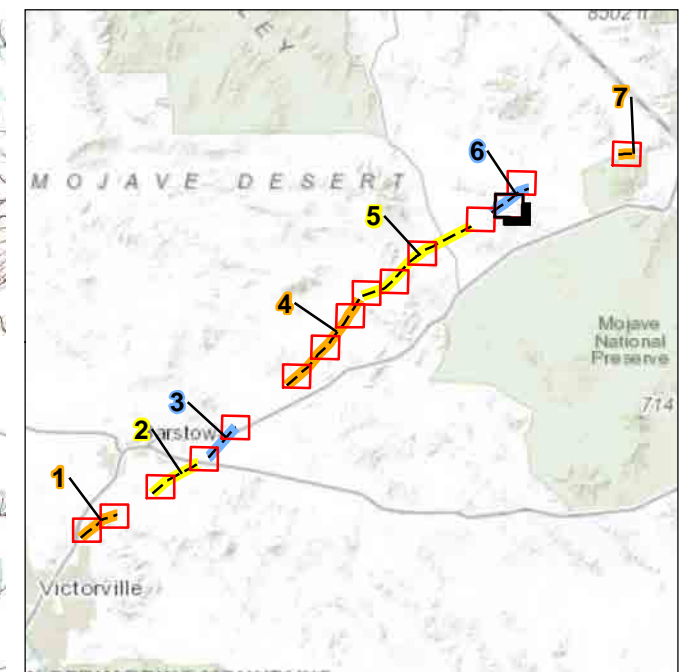
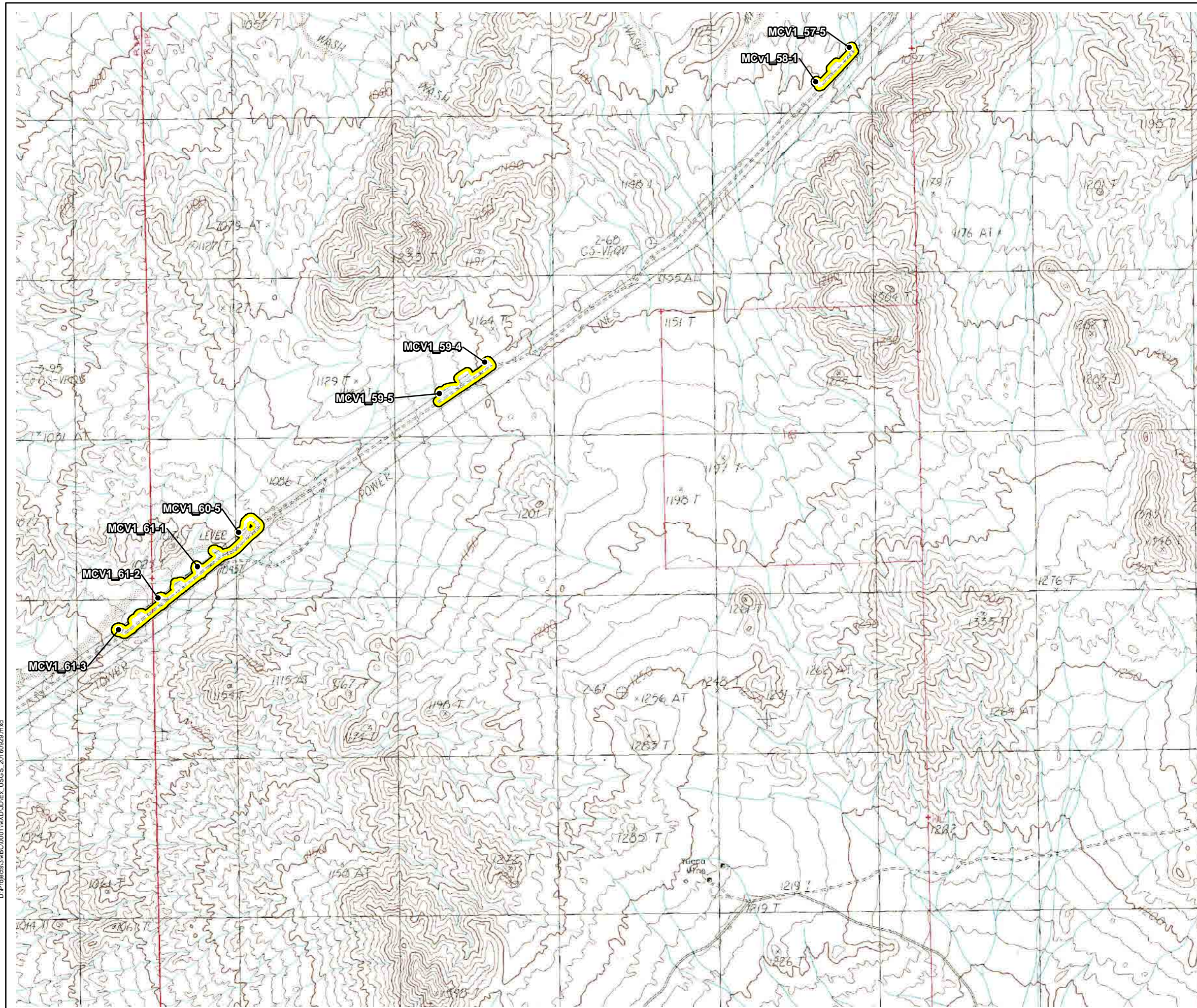
USGS 7.5-minute

Topographic Quadrangle

Path 46 Transmission Line Clearances Project

(Rev. 09/29/2016 LEW) R:\Projects\MBC\3MBC000100\Graphics\JDI\Ex3_USGS_20160929.pdf

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- Tower Location
- ▭ Survey Area
- Quadrangle**
Turquoise Mountain, CA
- Meridian, Township, Range, Section**
- Overlapping the Survey Area:**
- S16N09E13
- S16N09E24
- S16N09E25
- S16N10E02
- S16N10E03
- S16N10E04
- S16N10E09
- S16N10E17
- S16N10E18
- S16N10E19

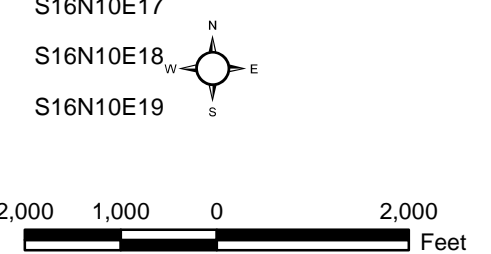
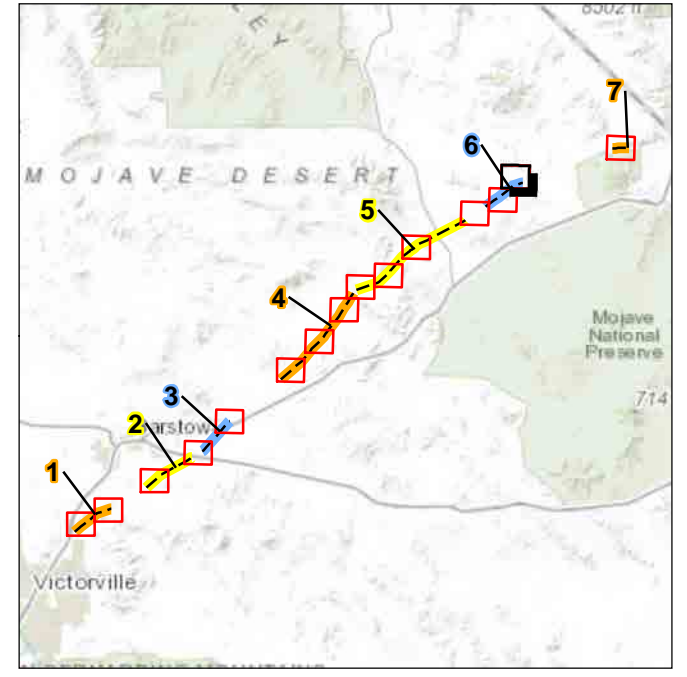
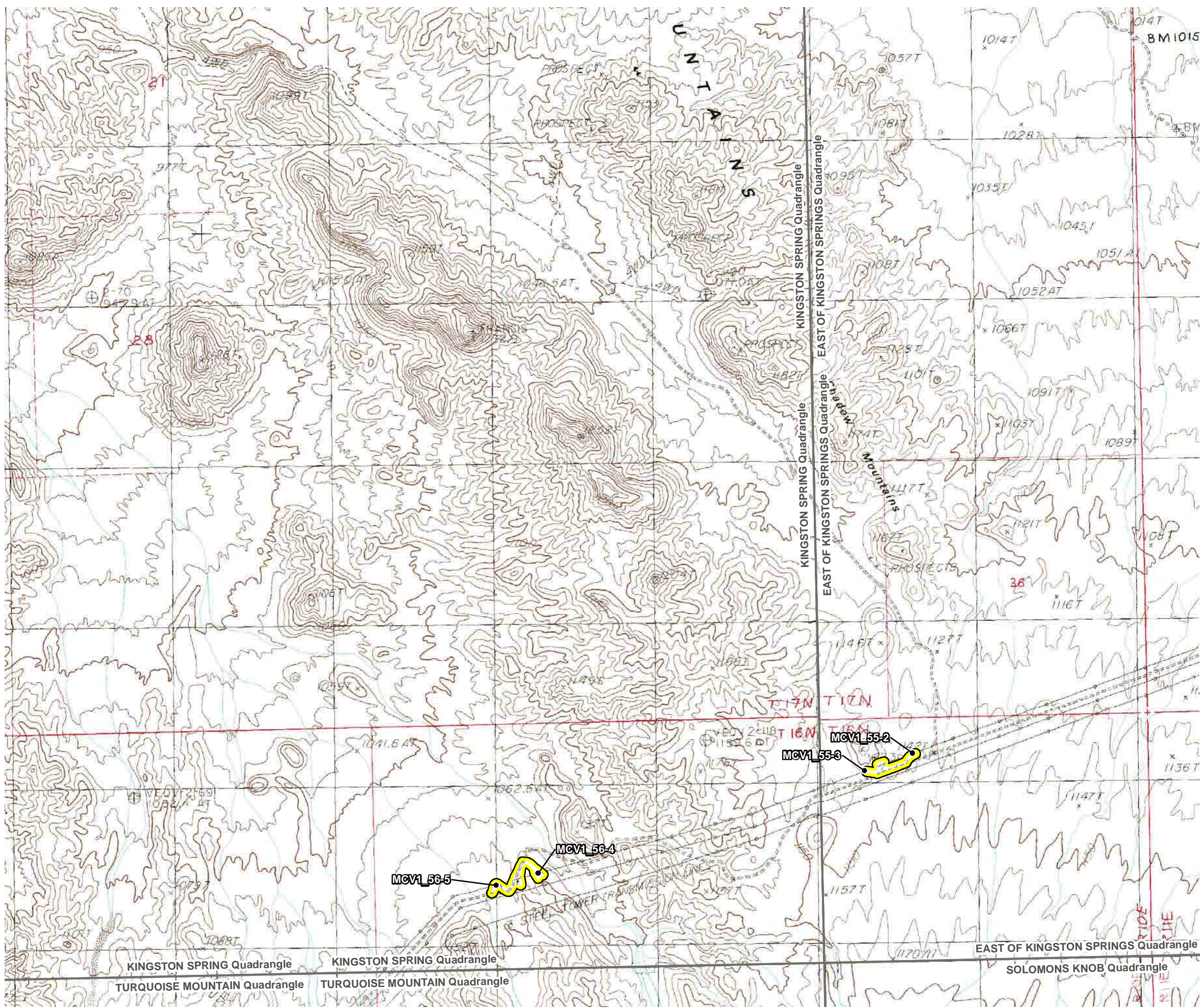


Exhibit 3m
USGS 7.5-minute
Topographic Quadrangle
 Path 46 Transmission Line Clearances Project

(Rev. 09/29/2016 LEW) R:\Projects\MBC\3MBC000100\Graphics\JDI\Ex3_USGS_20160929.pdf

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- Tower Location
- ▭ Survey Area

Quadrangle

- East Of Kingston Springs, CA
- Kingston Spring, CA
- Solomons Knob, CA
- Turquoise Mountain, CA

Meridian, Township, Range, Section

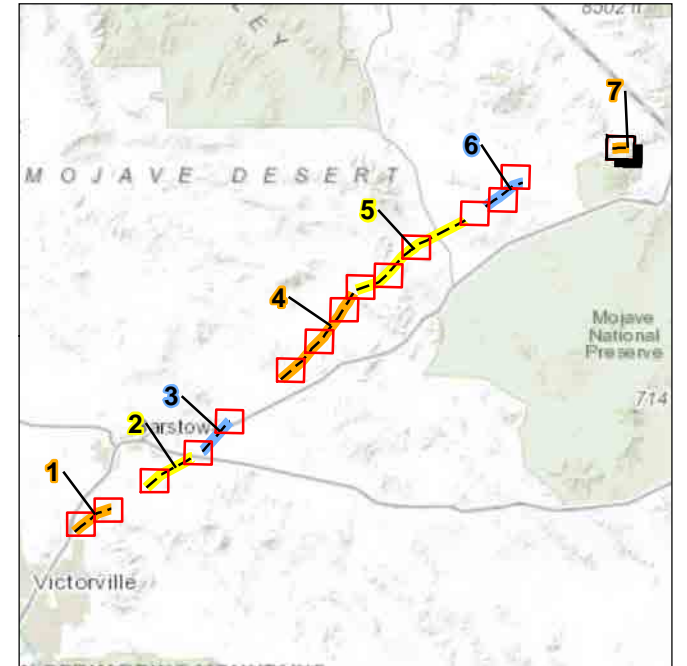
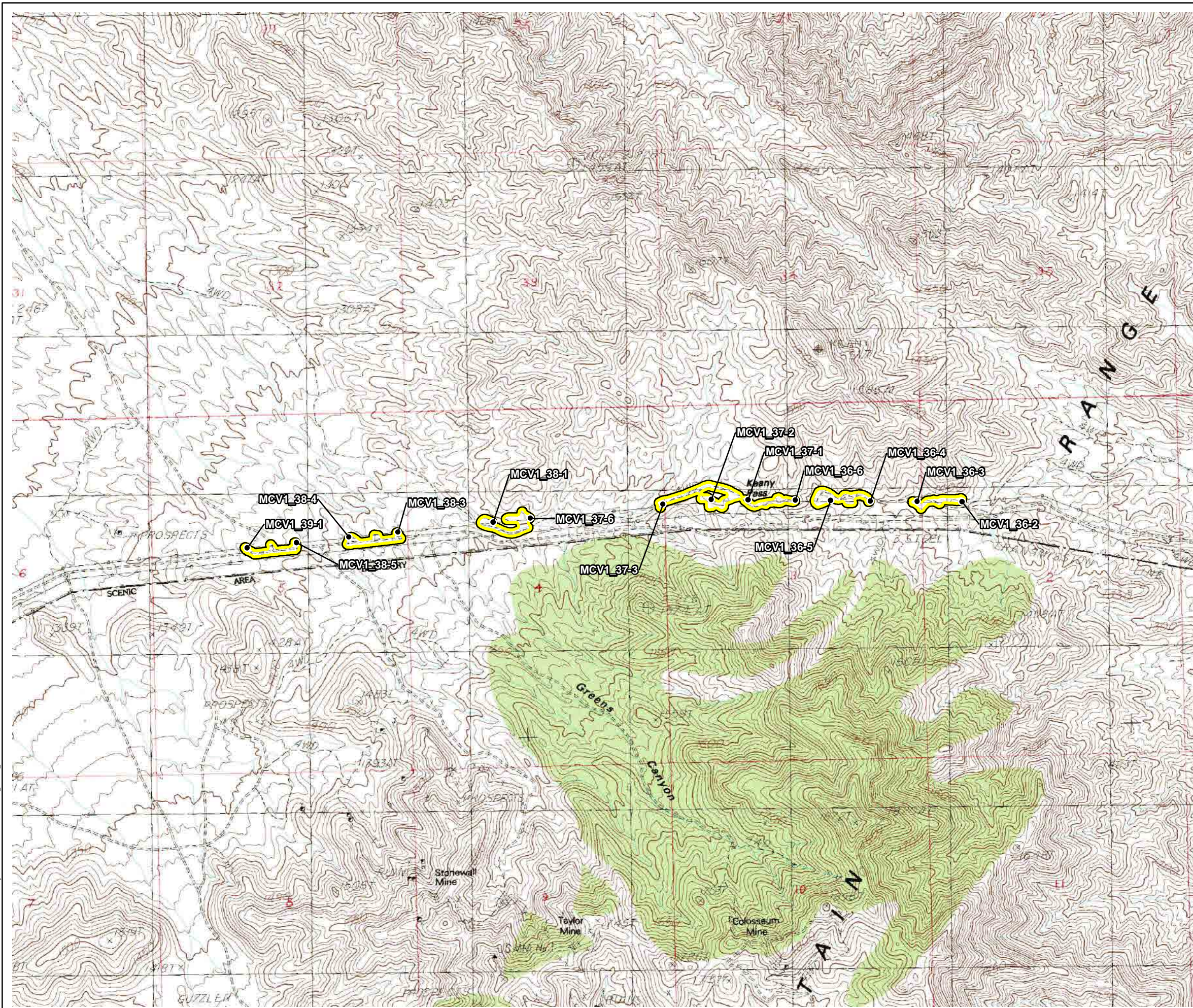
Overlapping the Survey Area:

- S16N10E01
- S16N10E02
- S16N10E03
- S16N10E04
- S17N10E35
- S17N10E36

Exhibit 3n
USGS 7.5-minute
Topographic Quadrangle

Path 46 Transmission Line Clearances Project

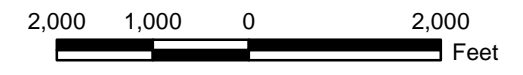
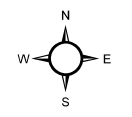
(Rev. 09/29/2016 LEW) R:\Projects\3MBC\000100\Graphics\JDI\Ex3_USGS_20160929.pdf



- Tower Location
 - ▭ Survey Area
- Quadrangle**
Clark Mountain, CA

Meridian, Township, Range, Section
Overlapping the Survey Area:

- S17N13E02
- S17N13E03
- S17N13E04
- S17N13E05



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PSOMAS

Exhibit 3o

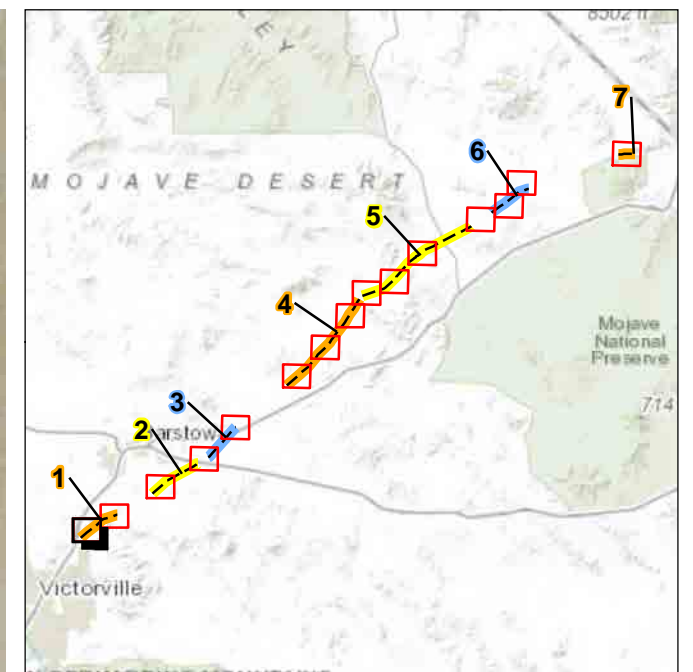
USGS 7.5-minute

Topographic Quadrangle

Path 46 Transmission Line Clearances Project

(Rev. 09/29/2016 LEW) R:\Projects\3MBC\000100\Graphics\JDI\Ex3_USGS_20160929.pdf

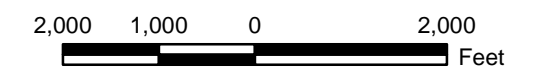
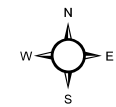
D:\Projects\3\MBC\0001\MXD\JDE\Soils_20160929.mxd



Survey Area

Soil Types

- 118 - Cajon-arizo complex, 2 to 15 percent slopes*
- 162 - Sparkhule-rock outcrop complex, 15 to 50 percent slopes*



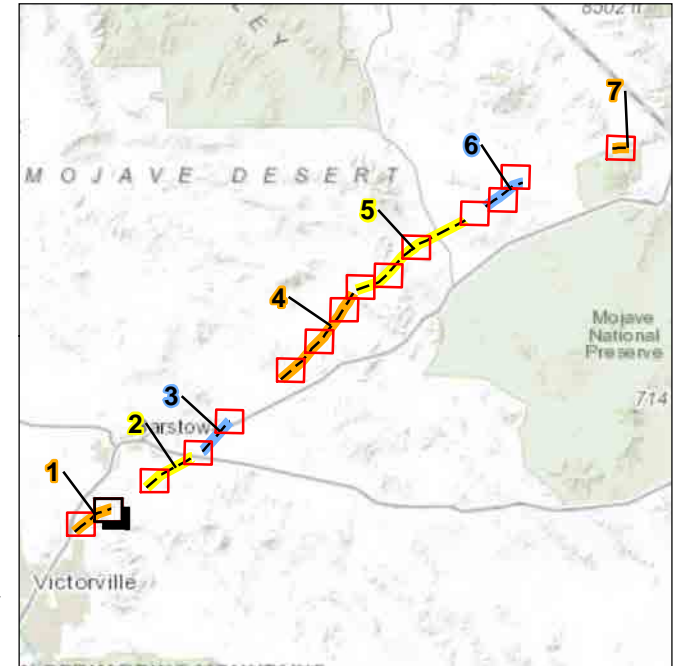
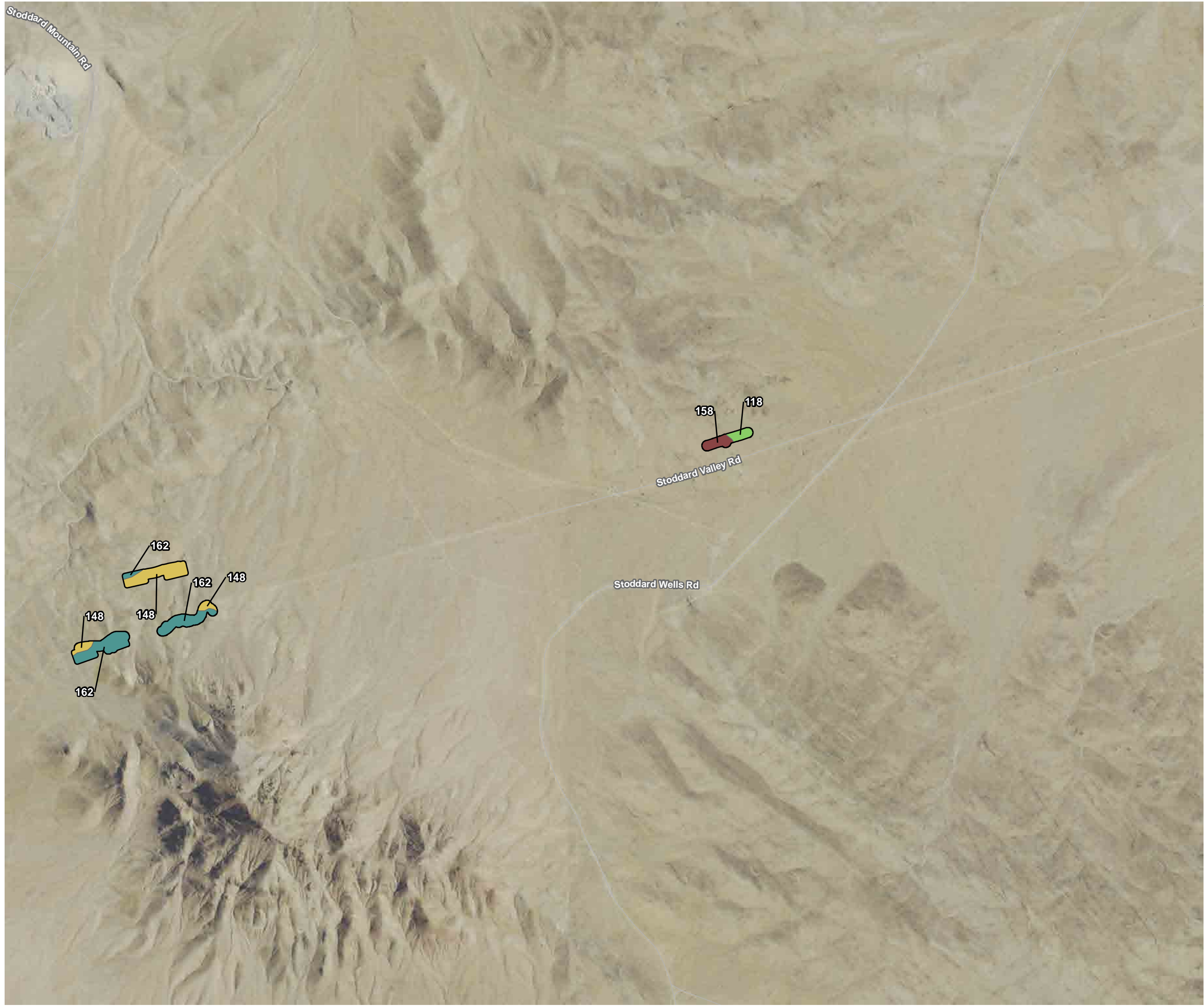
Aerial Source: ESRI, NAIP 2014



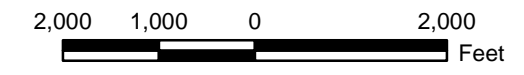
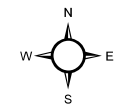
**Exhibit 4a
Soil Types**

Path 46 Transmission Line Clearances Project

(Rev: 09/29/2016 LEW) R:\Projects\MBC\3\MBC000100\Graphics\JDE\Ex4_Soils_20160929.pdf



- Survey Area
- Soil Types**
- 118 - Cajon-arizo complex, 2 to 15 percent slopes*
 - 148 - Mirage sandy loam, 2 to 5 percent slopes*
 - 158 - Rock outcrop-lithic torriorthents complex, 15 to 50 percent slopes*
 - 162 - Sparkhule-rock outcrop complex, 15 to 50 percent slopes*



Aerial Source: ESRI, NAIP 2014



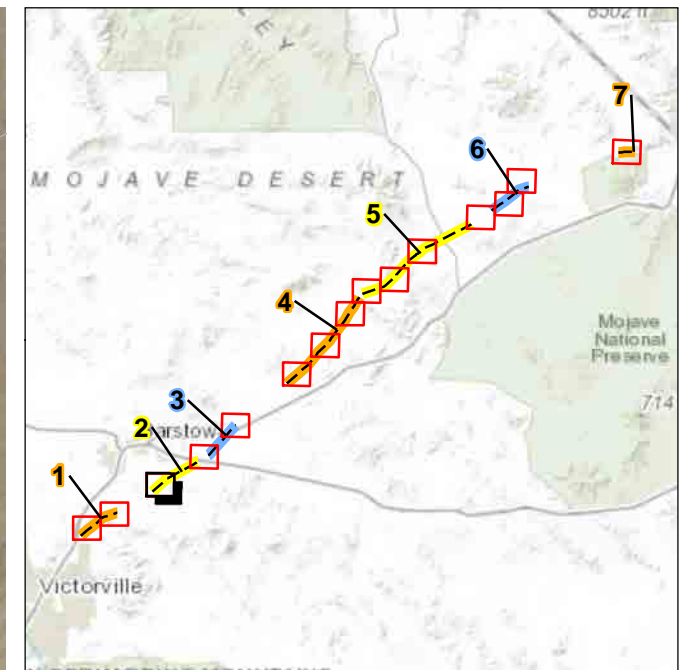
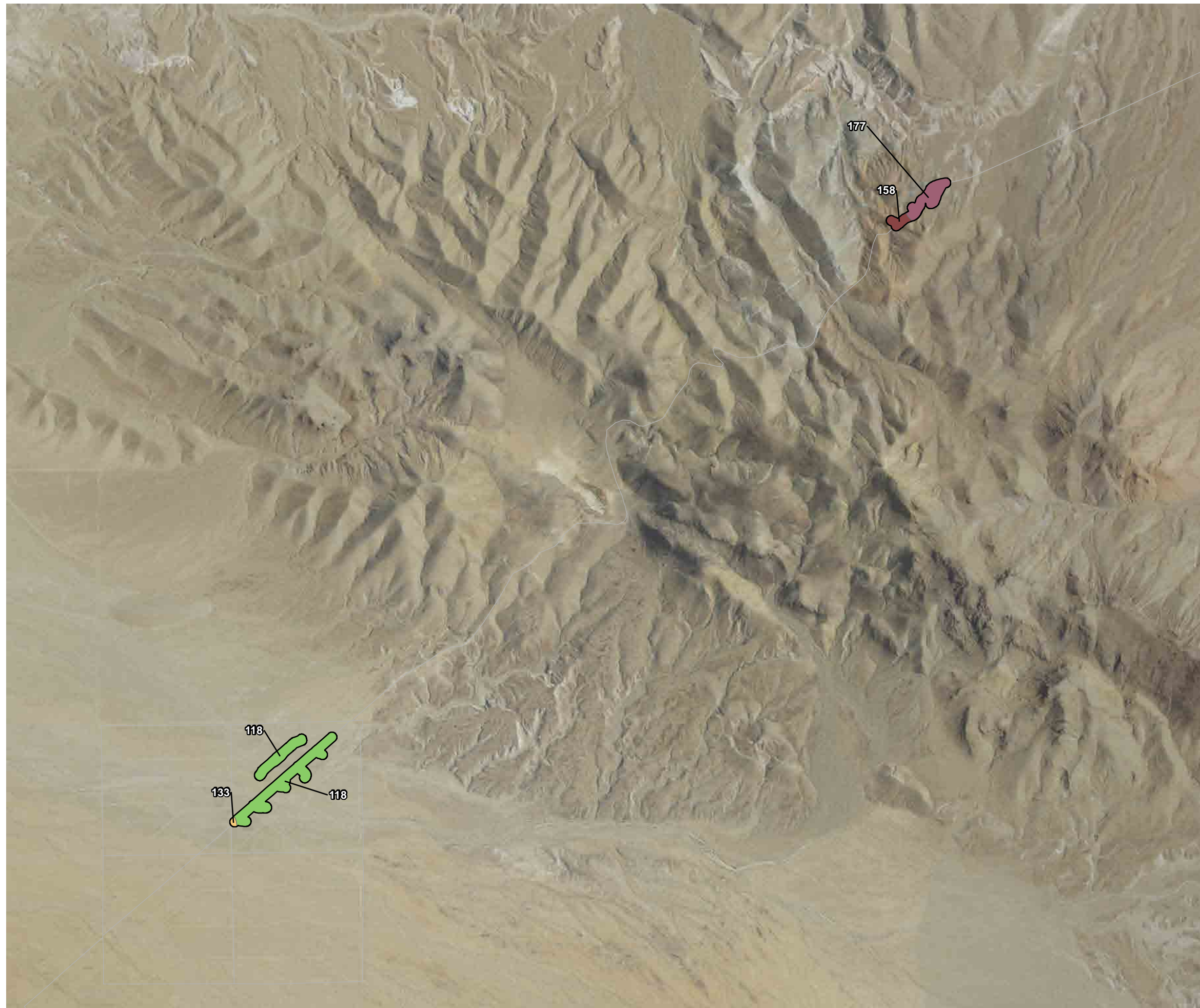
**Exhibit 4b
Soil Types**

Path 46 Transmission Line Clearances Project

(Rev: 09/29/2016 LEW) R:\Projects\MBC\3MBC000100\Graphics\JD\Ex4_Soils_20160929.pdf





D:\Projects\3MBC\0001\MXD\JD\Ex_Soils_20160929.mxd

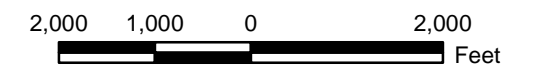
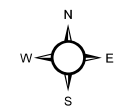
D:\Projects\3MBC\0001\MXD\JDE\Soils_20160929.mxd



Survey Area

Soil Types

-  118 - Cajon-arizo complex, 2 to 15 percent slopes*
-  133 - Helendale-bryman loamy sands, 2 to 5 percent slopes*
-  158 - Rock outcrop-lithic torriorthents complex, 15 to 50 percent slopes*
-  177 - Yermo-kimberlina, cool, association, sloping*

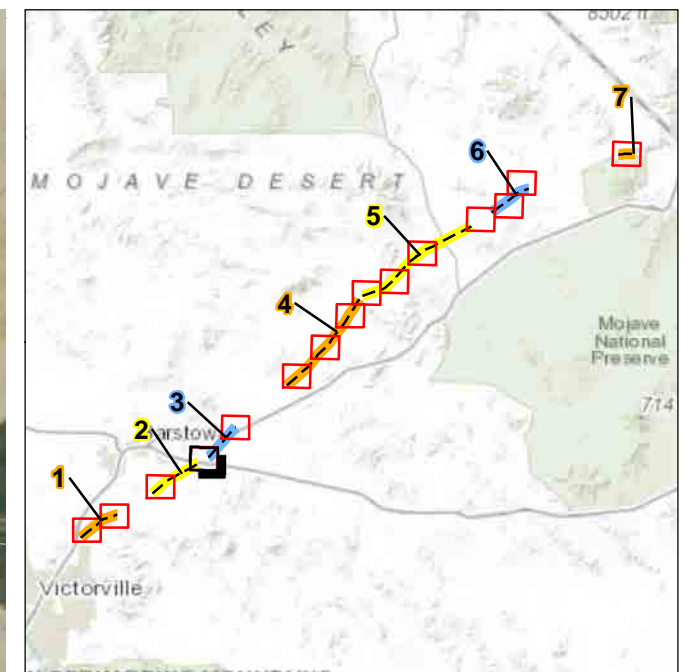


Aerial Source: ESRI, NAIP 2014



**Exhibit 4c
Soil Types**

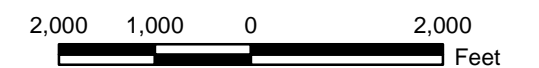
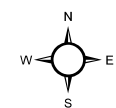
Path 46 Transmission Line Clearances Project



Survey Area

Soil Types

- 112 - Cajon sand, 0 to 2 percent slopes
- 115 - Cajon gravelly sand, 2 to 15 percent slopes
- 137 - Kimberlina loamy fine sand, cool, 0 to 2 percent slopes
- 151 - Nebona-cuddeback complex, 2 to 9 percent slopes*



Aerial Source: ESRI, NAIP 2014

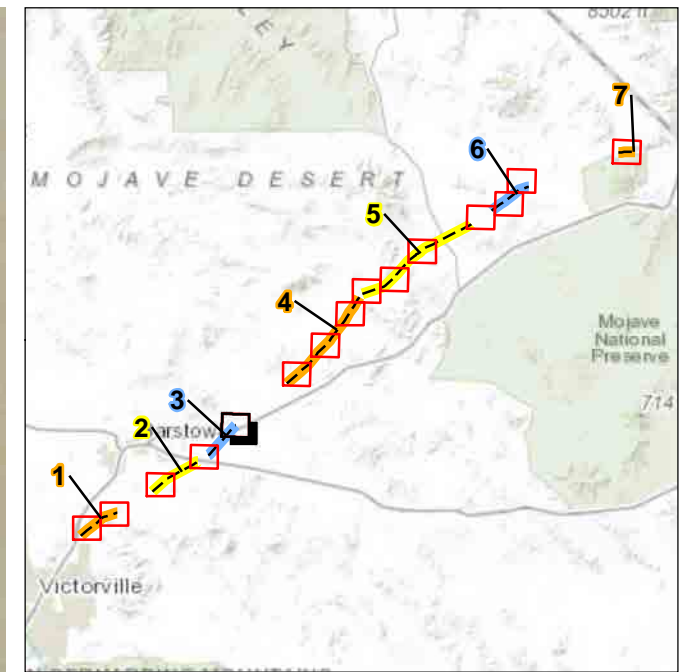
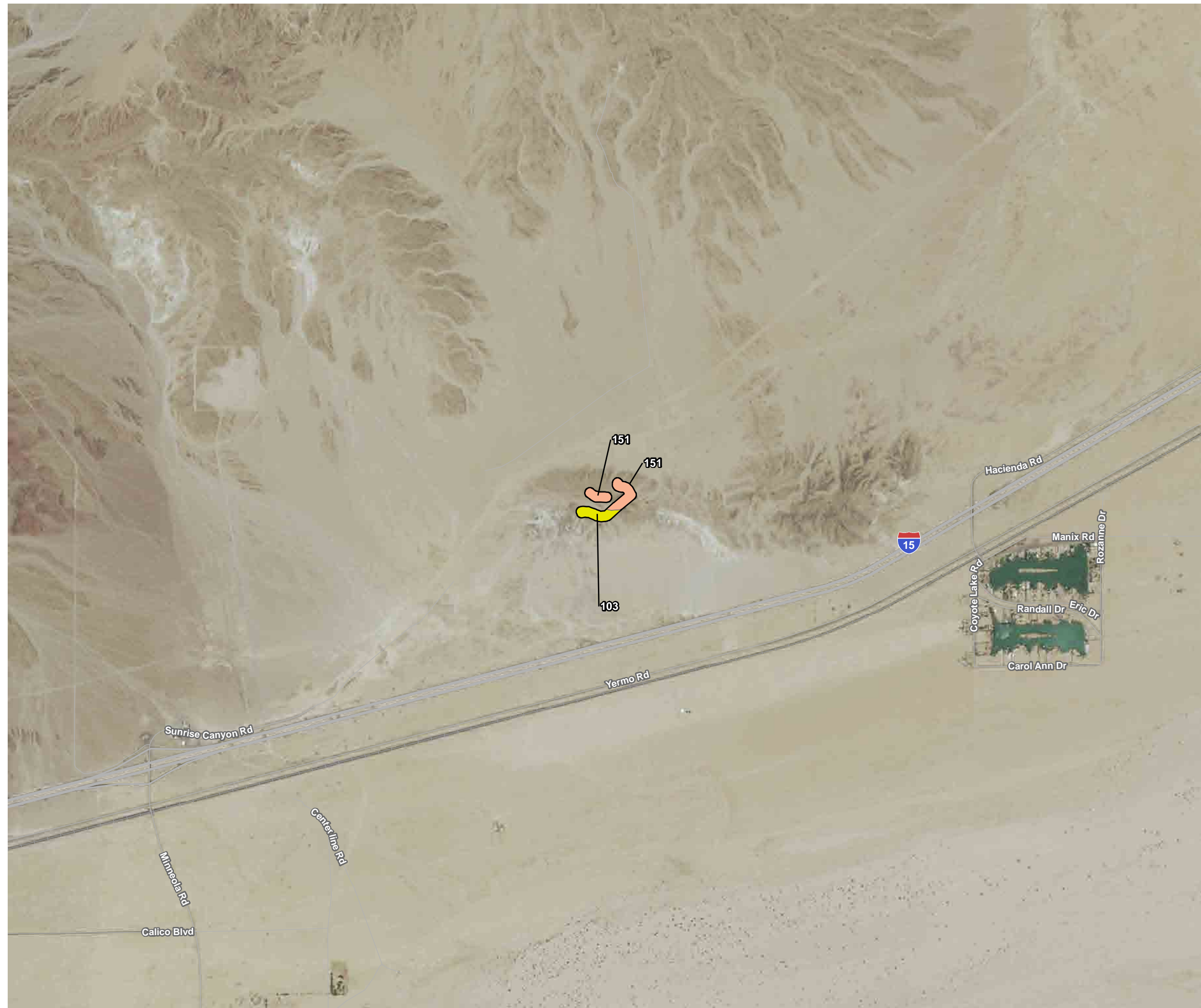


**Exhibit 4d
Soil Types**

Path 46 Transmission Line Clearances Project

(Rev: 09/29/2016 LEW) R:\Projects\MBC\3MBC000100\Graphics\JD\Ex4_Soils_20160929.pdf

D:\Projects\3MBC\0001\MXD\JDE\Soils_20160929.mxd

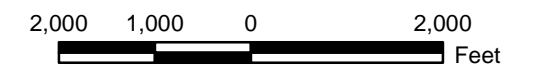
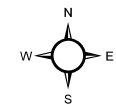


Survey Area

Soil Types

103 - Badland

151 - Nebona-cuddeback complex, 2 to 9 percent slopes*



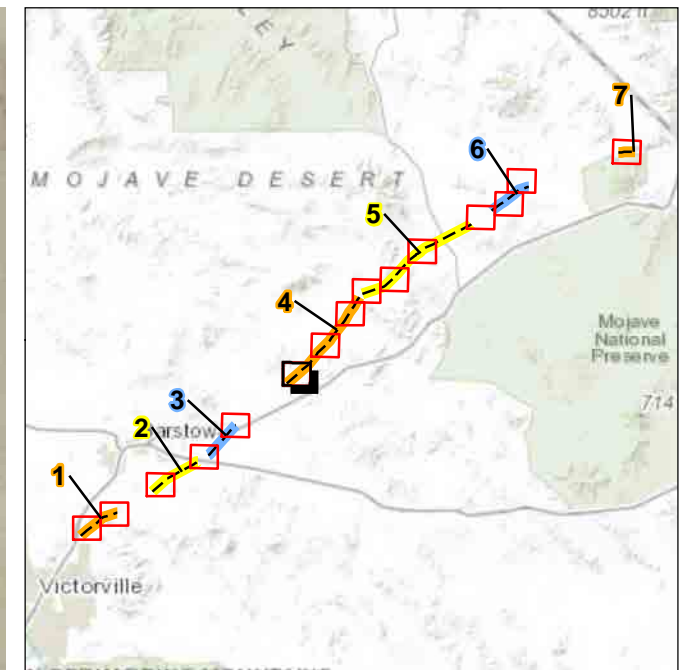
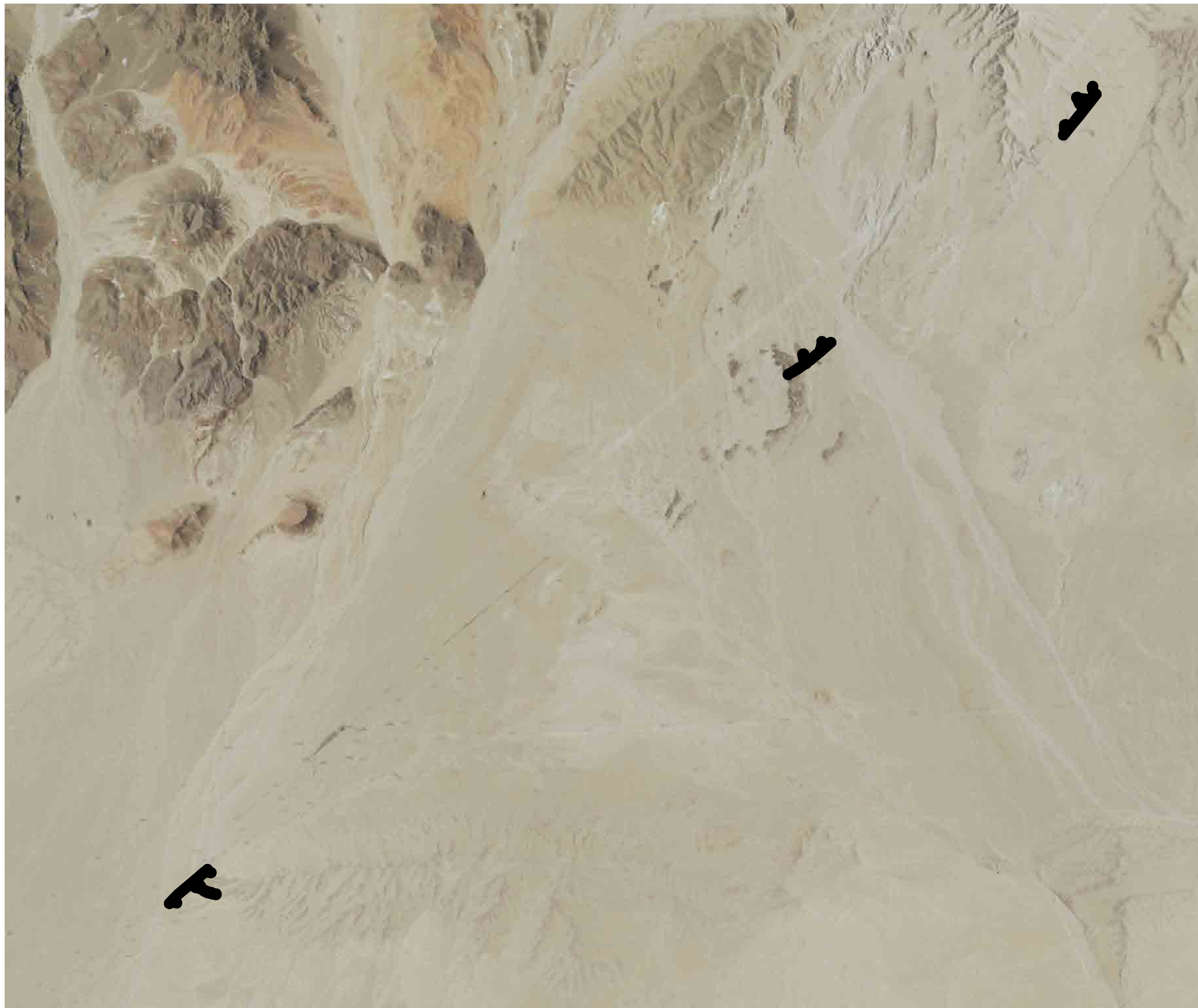
Aerial Source: ESRI, NAIP 2014



**Exhibit 4e
Soil Types**

Path 46 Transmission Line Clearances Project

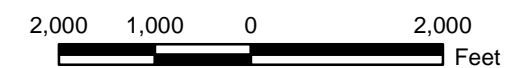
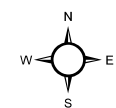
(Rev: 09/29/2016 LEW) R:\Projects\3MBC\000100\Graphics\JDE\Ex4_Soils_20160929.pdf



Survey Area

Soil Types

No digital data available



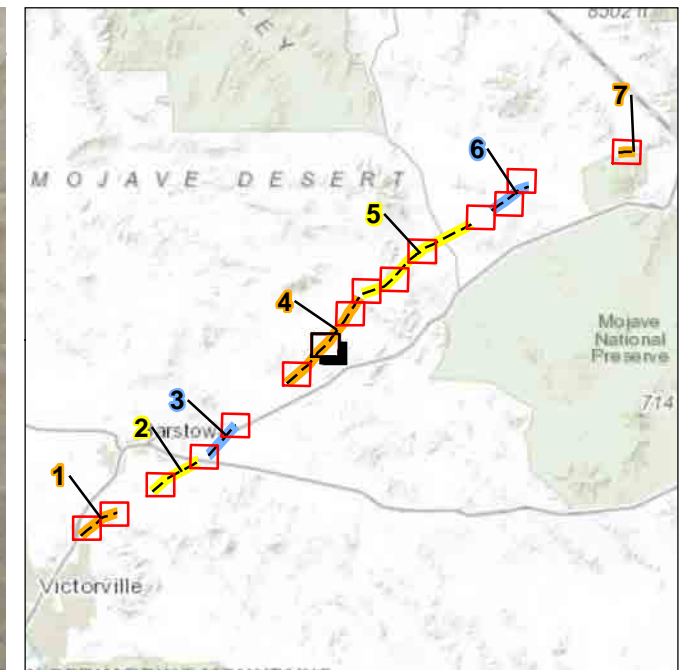
Aerial Source: ESRI, NAIP 2014




**Exhibit 4f
Soil Types**

Path 46 Transmission Line Clearances Project

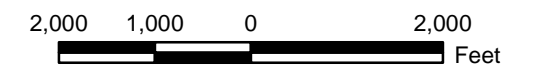
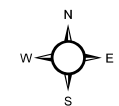
D:\Projects\3MBC\0001\MXD\JDE\Ex_Soils_20160929.mxd



 Survey Area

Soil Types

 No digital data available



Aerial Source: ESRI, NAIP 2014

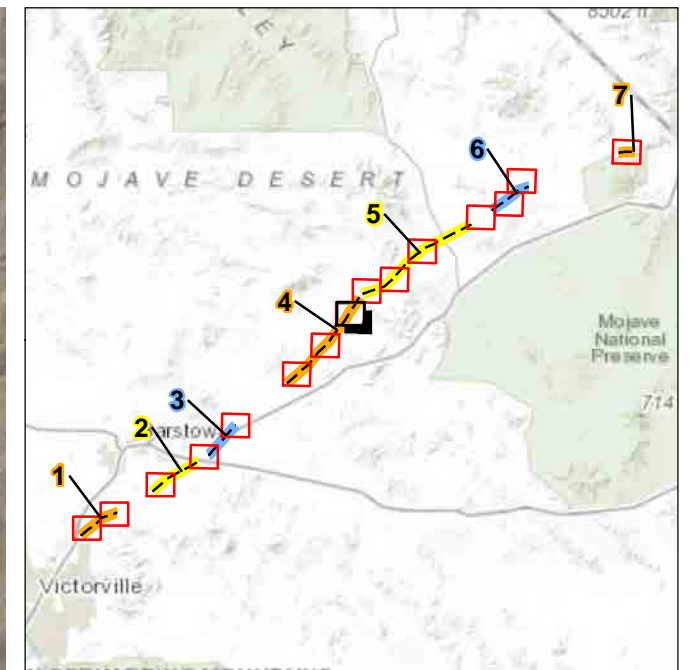
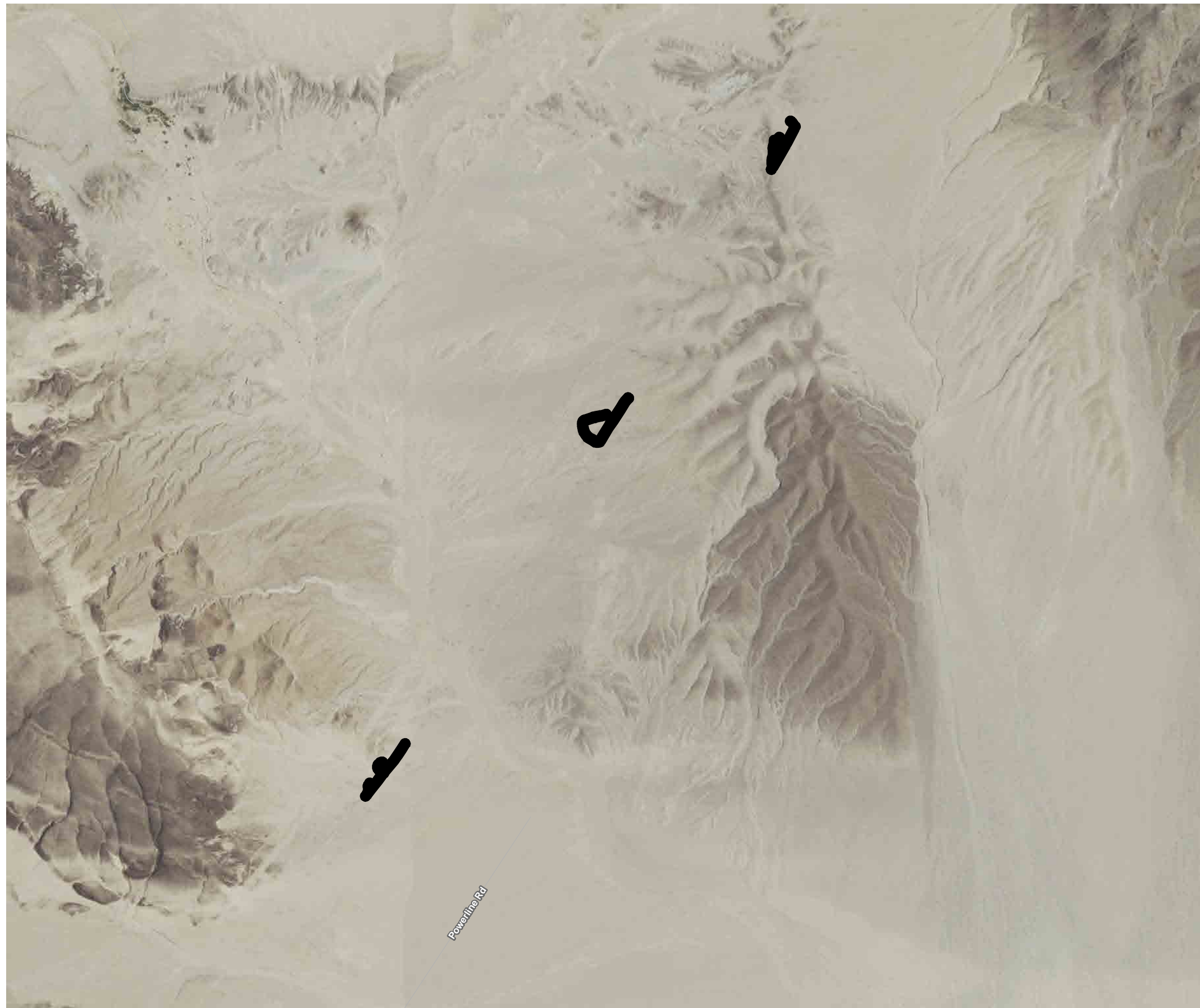


**Exhibit 4g
Soil Types**

Path 46 Transmission Line Clearances Project

(Rev: 09/29/2016 LEW) R:\Projects\3MBC\000100\Graphics\JDE\Ex4_Soils_20160929.pdf

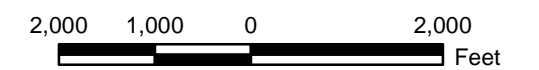
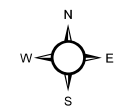
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Survey Area

Soil Types

No digital data available



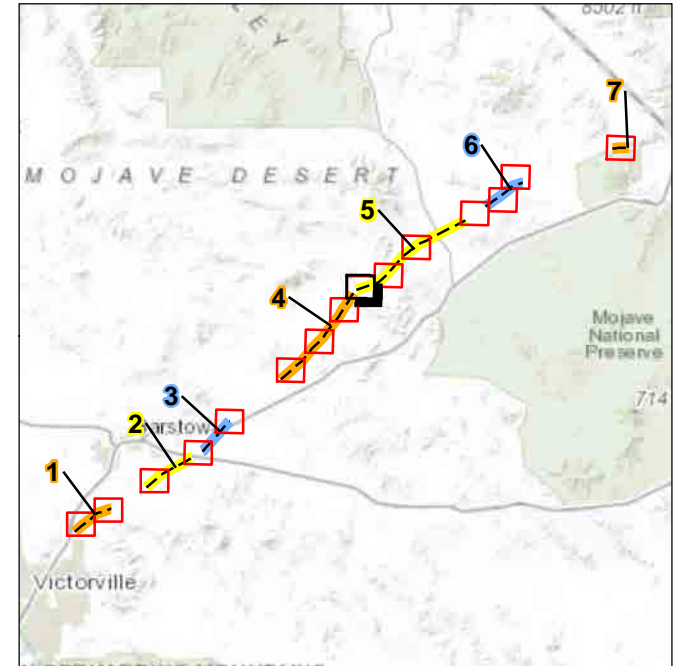
Aerial Source: ESRI, NAIP 2014



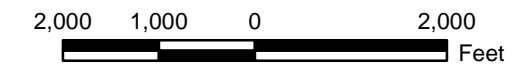
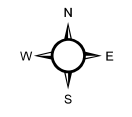
Exhibit 4h Soil Types

Path 46 Transmission Line Clearances Project

(Rev: 09/29/2016 LEW) R:\Projects\3MBC\3MBC000100\Graphics\JDE\Ex4_Soils_20160929.pdf



- Survey Area
- Soil Types**
- No digital data available



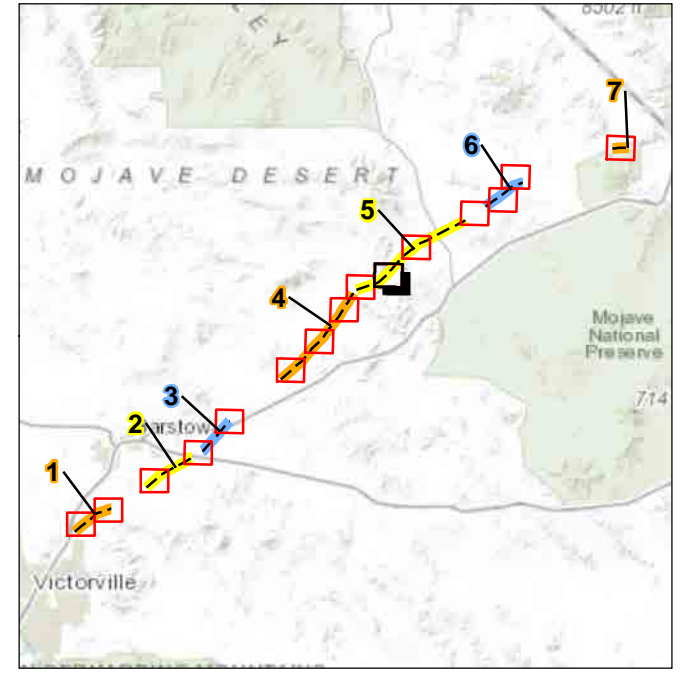
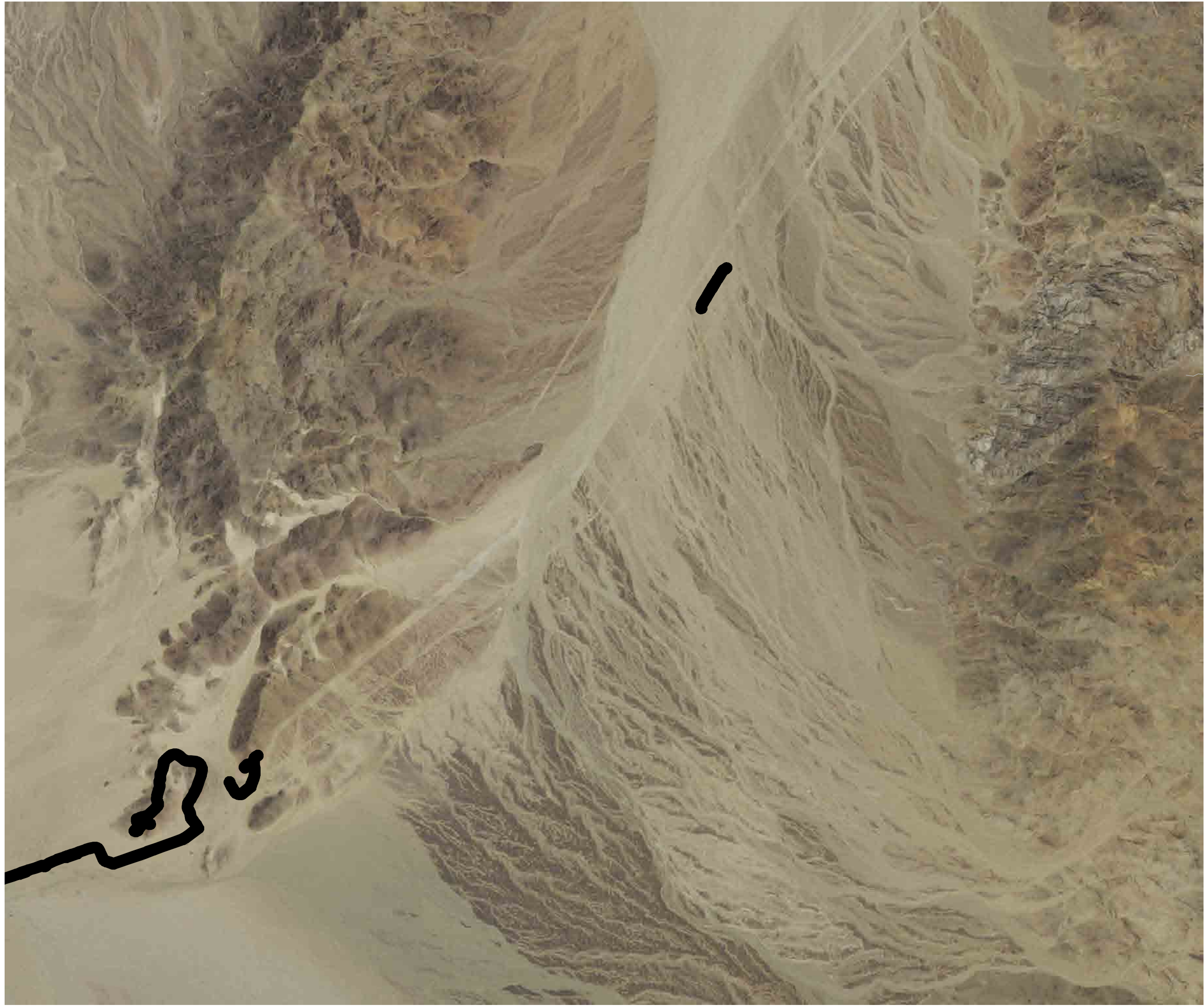
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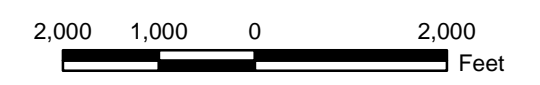
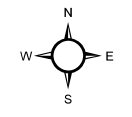
Exhibit 4i Soil Types

Path 46 Transmission Line Clearances Project

D:\Projects\3\MBC\0001\MXD\JDI\Ex_Soils_20160929.mxd



-  Survey Area
- Soil Types**
-  No digital data available



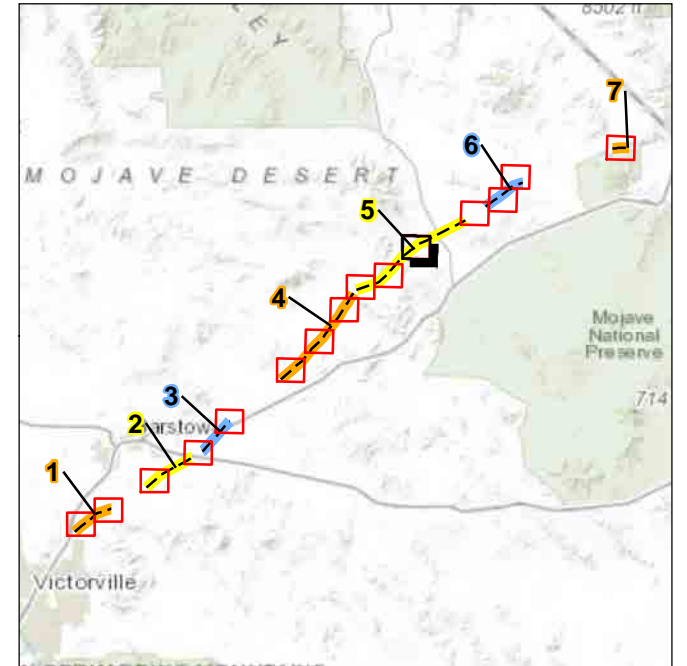
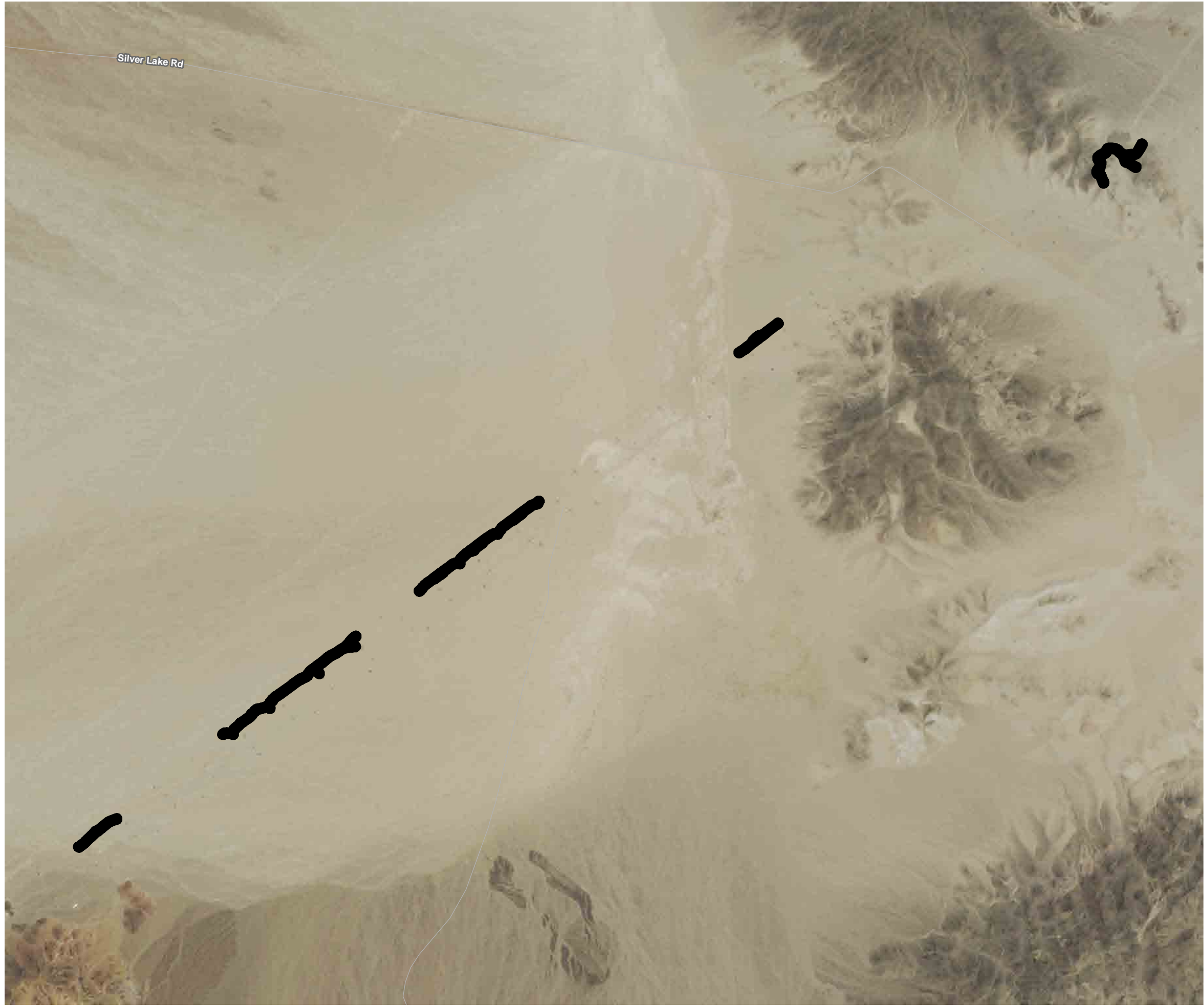
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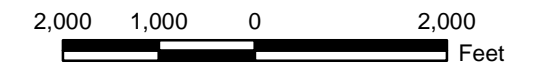
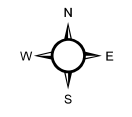
Exhibit 4j Soil Types

Path 46 Transmission Line Clearances Project

(Rev: 09/29/2016 LEW) R:\Projects\MBC\3\MBC000100\Graphics\JDI\Ex4_Soils_20160929.pdf



- Survey Area
- Soil Types**
- No digital data available



Aerial Source: ESRI, NAIP 2014



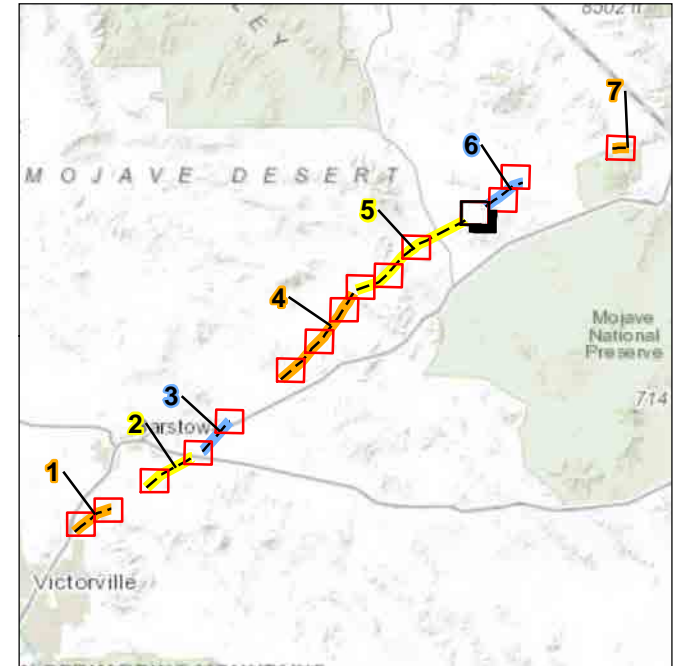
Exhibit 4k Soil Types

Path 46 Transmission Line Clearances Project

(Rev: 09/29/2016 LEW) R:\Projects\MBC\3MBC000100\Graphics\JD\Ex4_Soils_20160929.pdf

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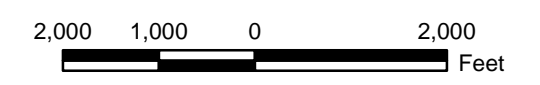
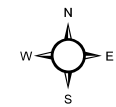
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Survey Area

Soil Types

No digital data available



Aerial Source: ESRI, NAIP 2014

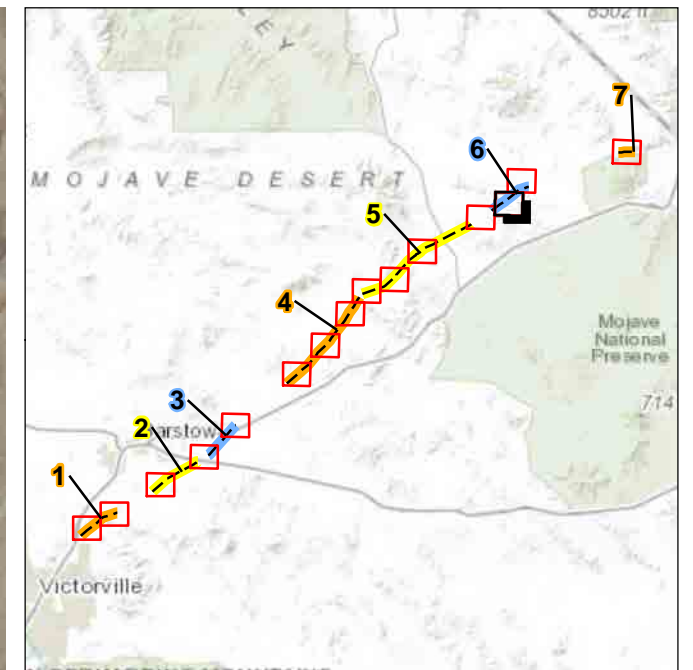
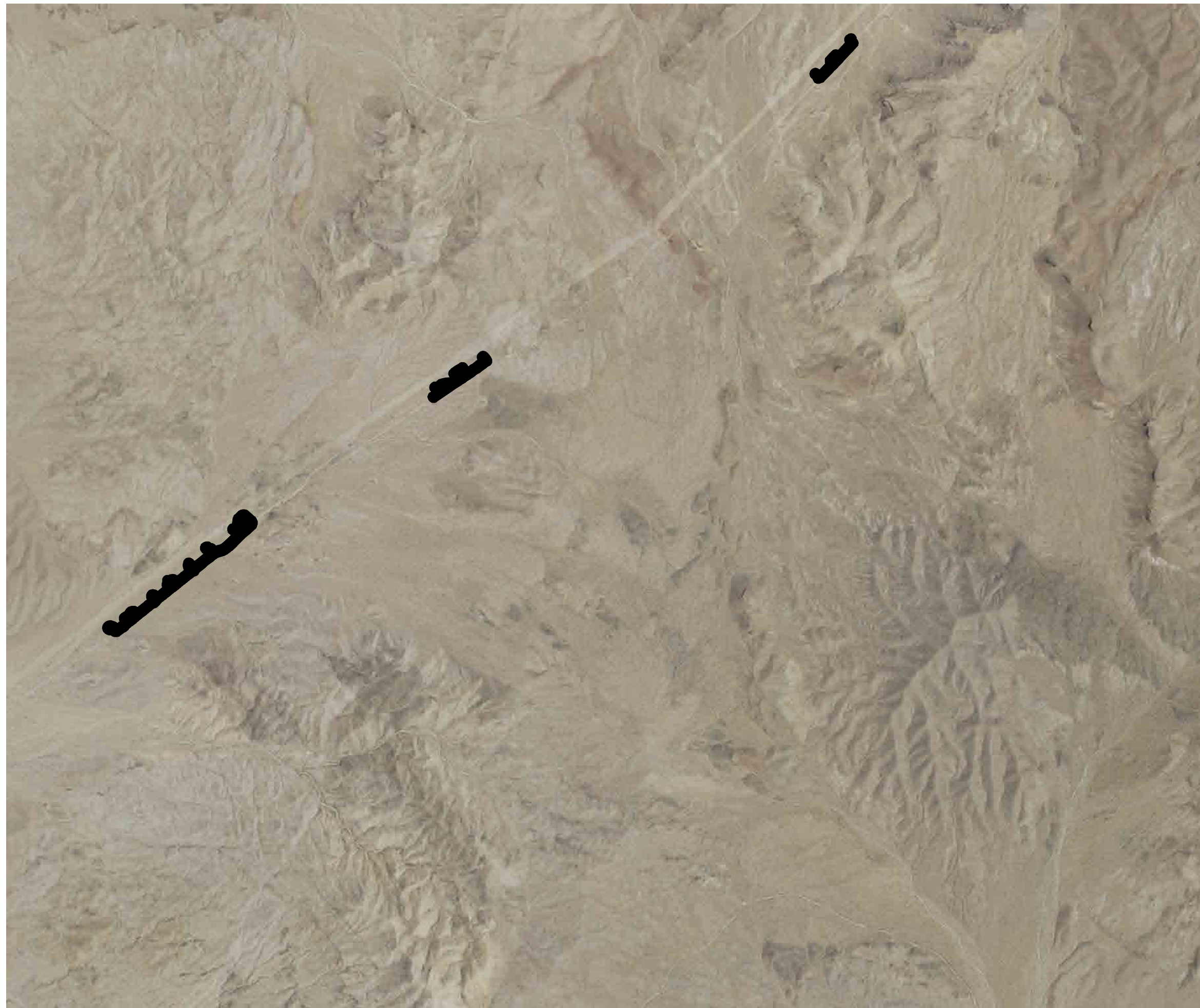



**Exhibit 4I
Soil Types**

Path 46 Transmission Line Clearances Project


(Rev: 09/29/2016 LEW) R:\Projects\3MBC\000100\Graphics\JDE\Ex4_Soils_20160929.pdf

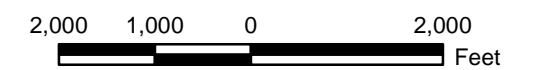
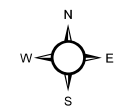
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 Survey Area

Soil Types

 No digital data available



Aerial Source: ESRI, NAIP 2014

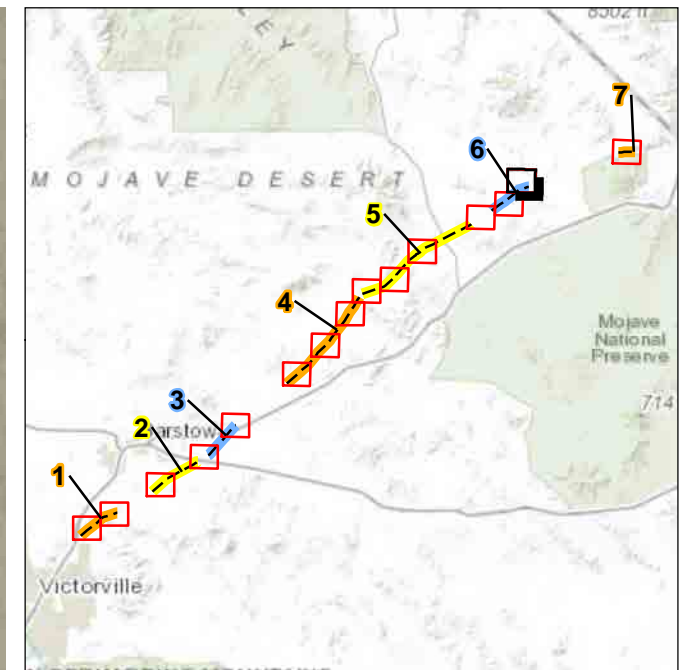


**Exhibit 4m
Soil Types**

Path 46 Transmission Line Clearances Project

(Rev: 09/29/2016 LEW) R:\Projects\3MBC\000100\Graphics\JDI\Ex4_Soils_20160929.pdf

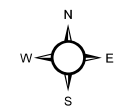
D:\Projects\3MBC\0001\MXD\JDIEx_Soils_20160929.mxd



Survey Area

Soil Types

No digital data available



2,000 1,000 0 2,000 Feet

Aerial Source: ESRI, NAIP 2014

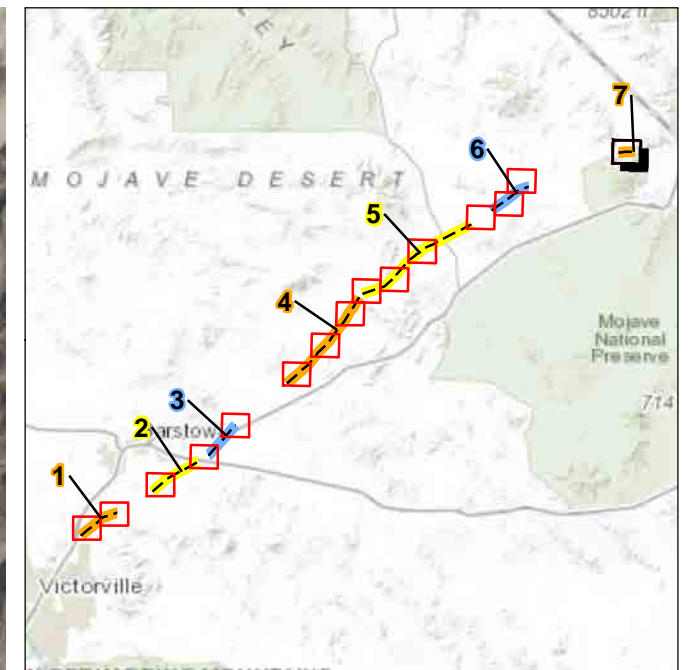


Exhibit 4n
Soil Types

Path 46 Transmission Line Clearances Project

(Rev: 09/29/2016 LEW) R:\Projects\3MBC\000100\Graphics\JDIEx4_Soils_20160929.pdf

D:\Projects\3MBC\0001\MXD\JDE\Ex_Soils_20160929.mxd

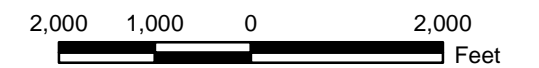
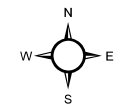


Survey Area

Soil Types

3000 - Copperworld association, 30 to 60 percent slopes

4200 - Owshead loam, 2 to 30 percent slopes



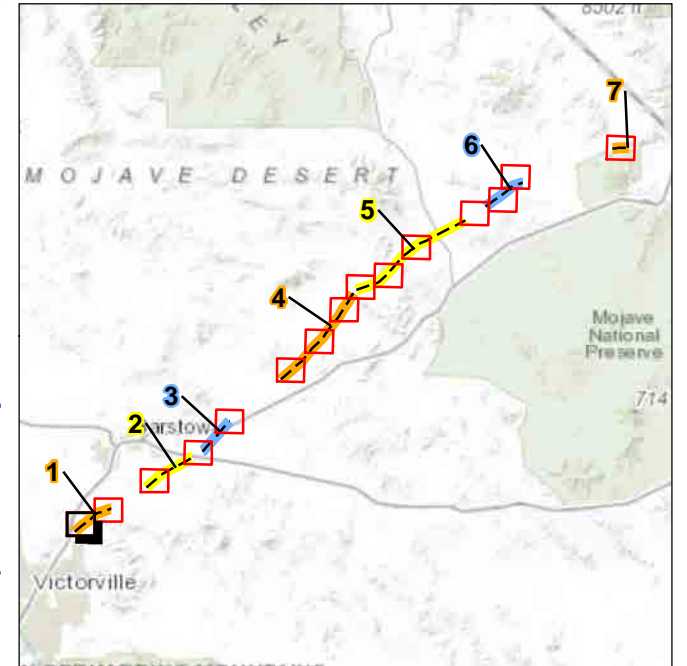
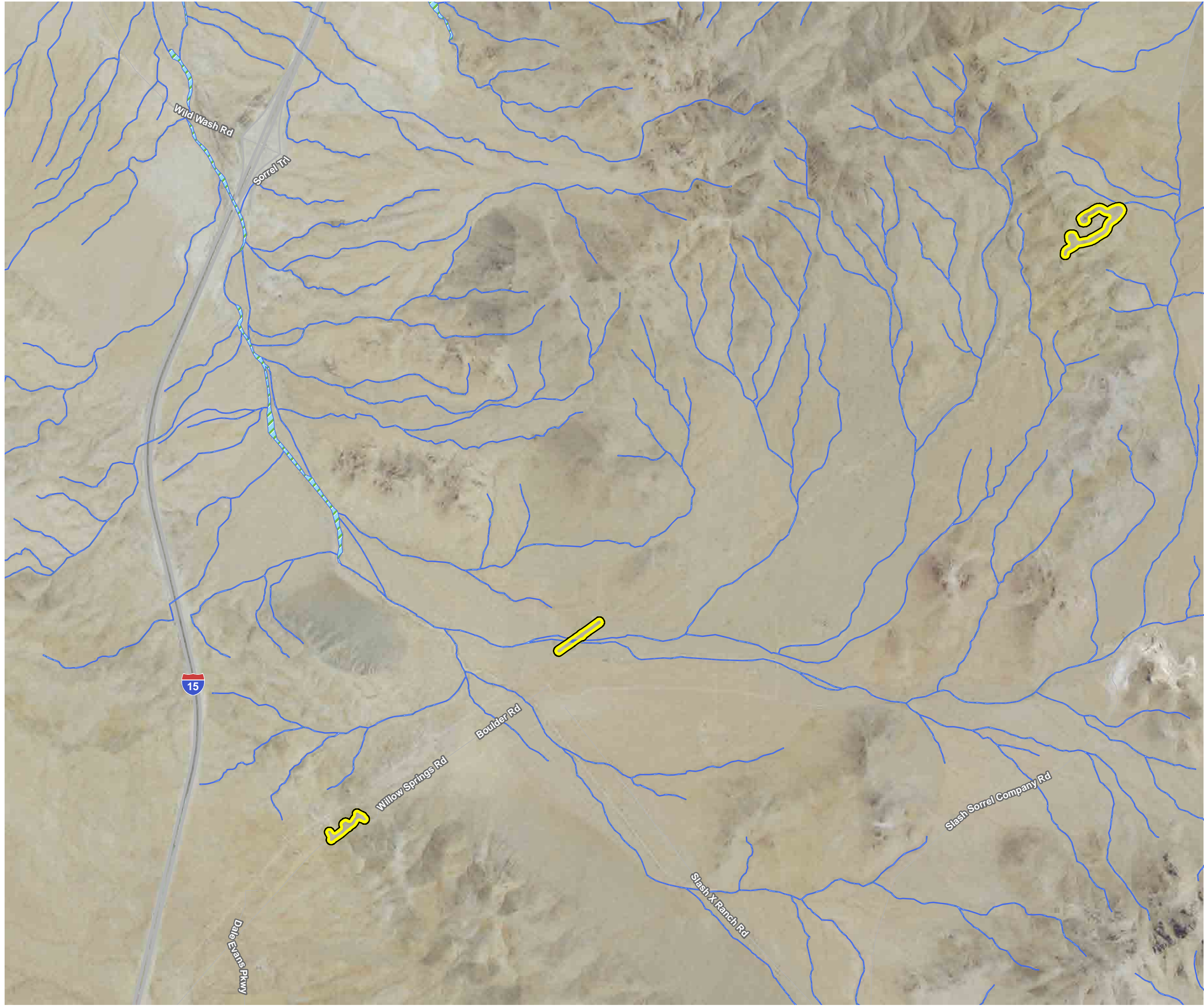
Aerial Source: ESRI, NAIP 2014





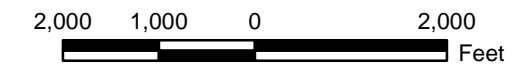
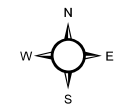
**Exhibit 4o
Soil Types**

Path 46 Transmission Line Clearances Project

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-  Survey Area
-  NWI Wetland (R4SBJ)



Aerial Source: ESRI, NAIP 2014

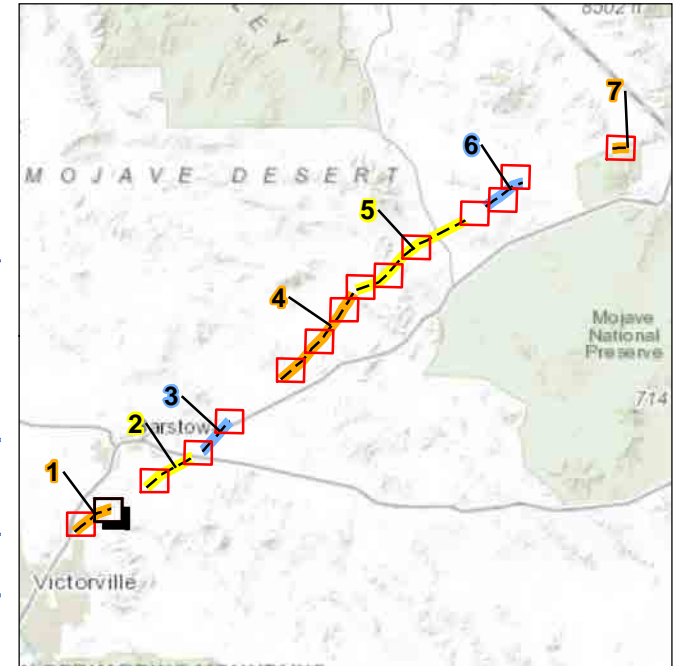
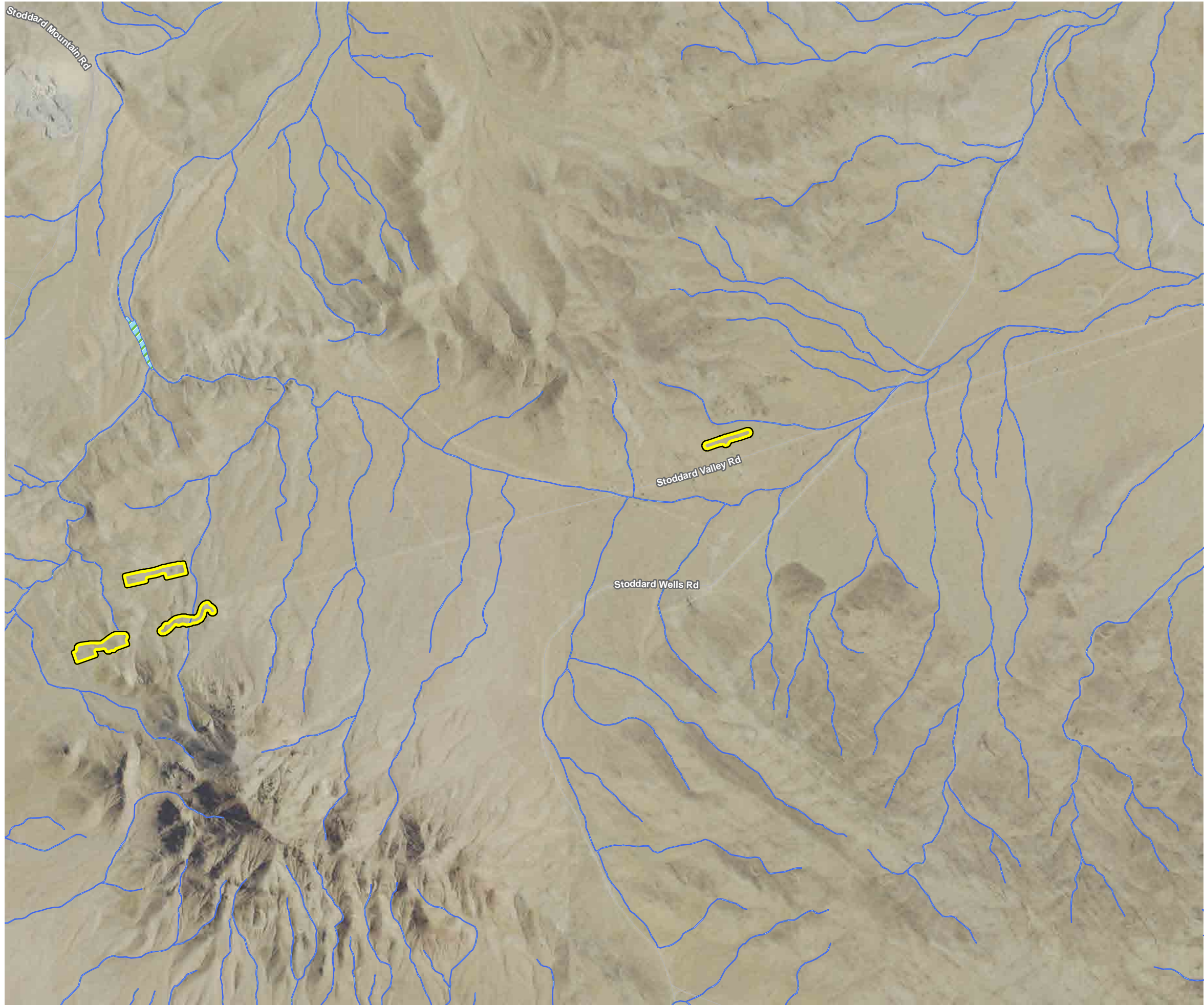




Exhibit 5a National Wetlands Inventory

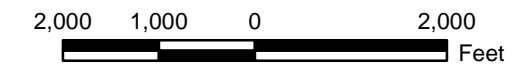
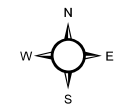
Path 46 Transmission Line Clearances Project

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-  Survey Area
-  NWI Wetland (R4SBJ)



Aerial Source: ESRI, NAIP 2014



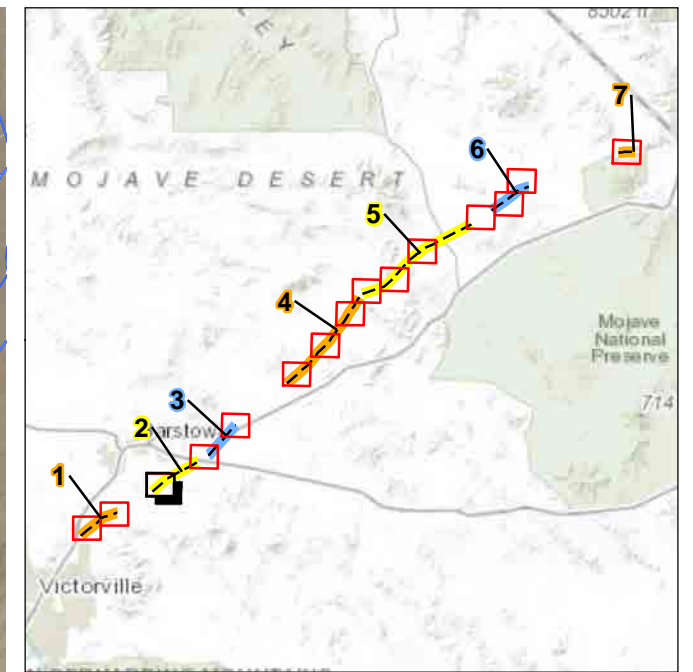
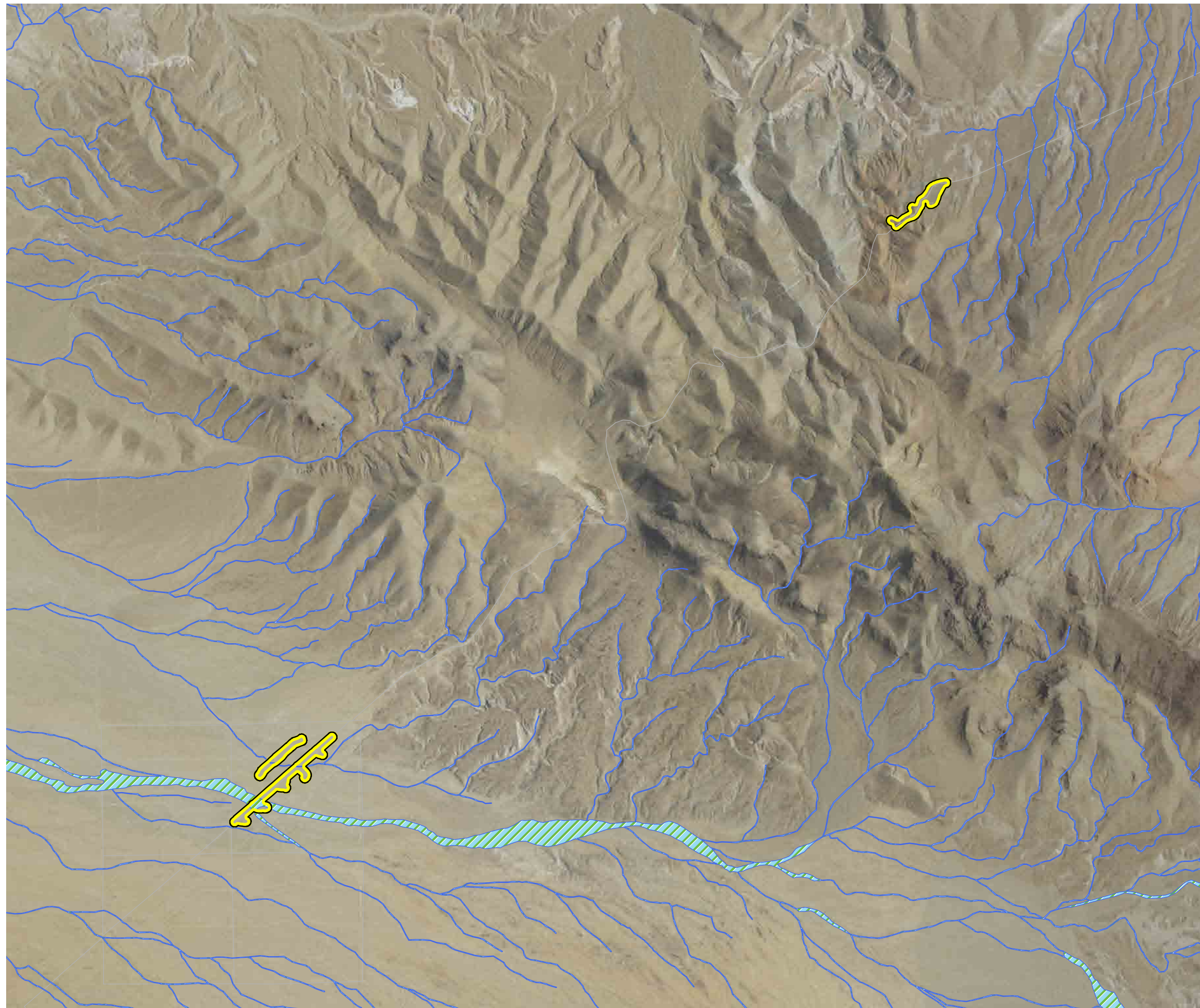
Exhibit 5b National Wetlands Inventory



Path 46 Transmission Line Clearances Project

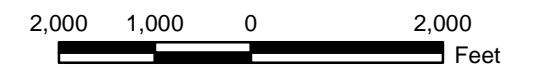
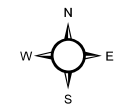
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-  Survey Area
-  NWI Wetland (R4SBJ)



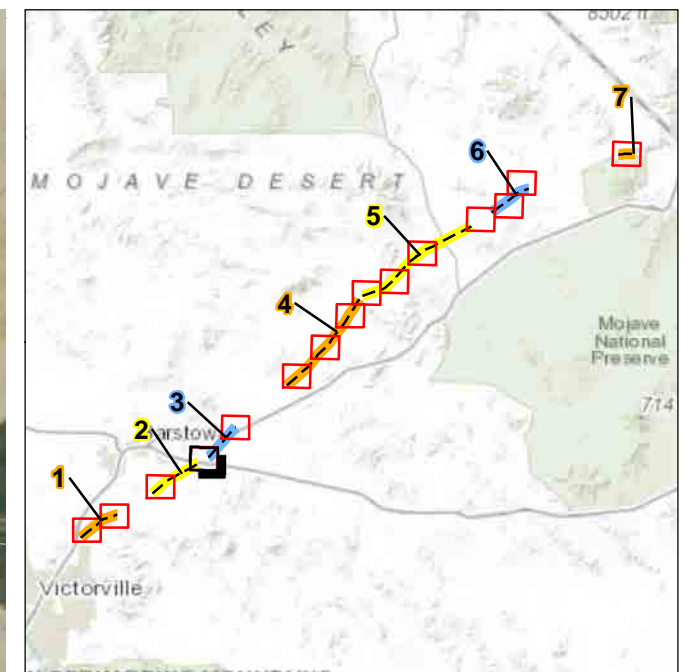
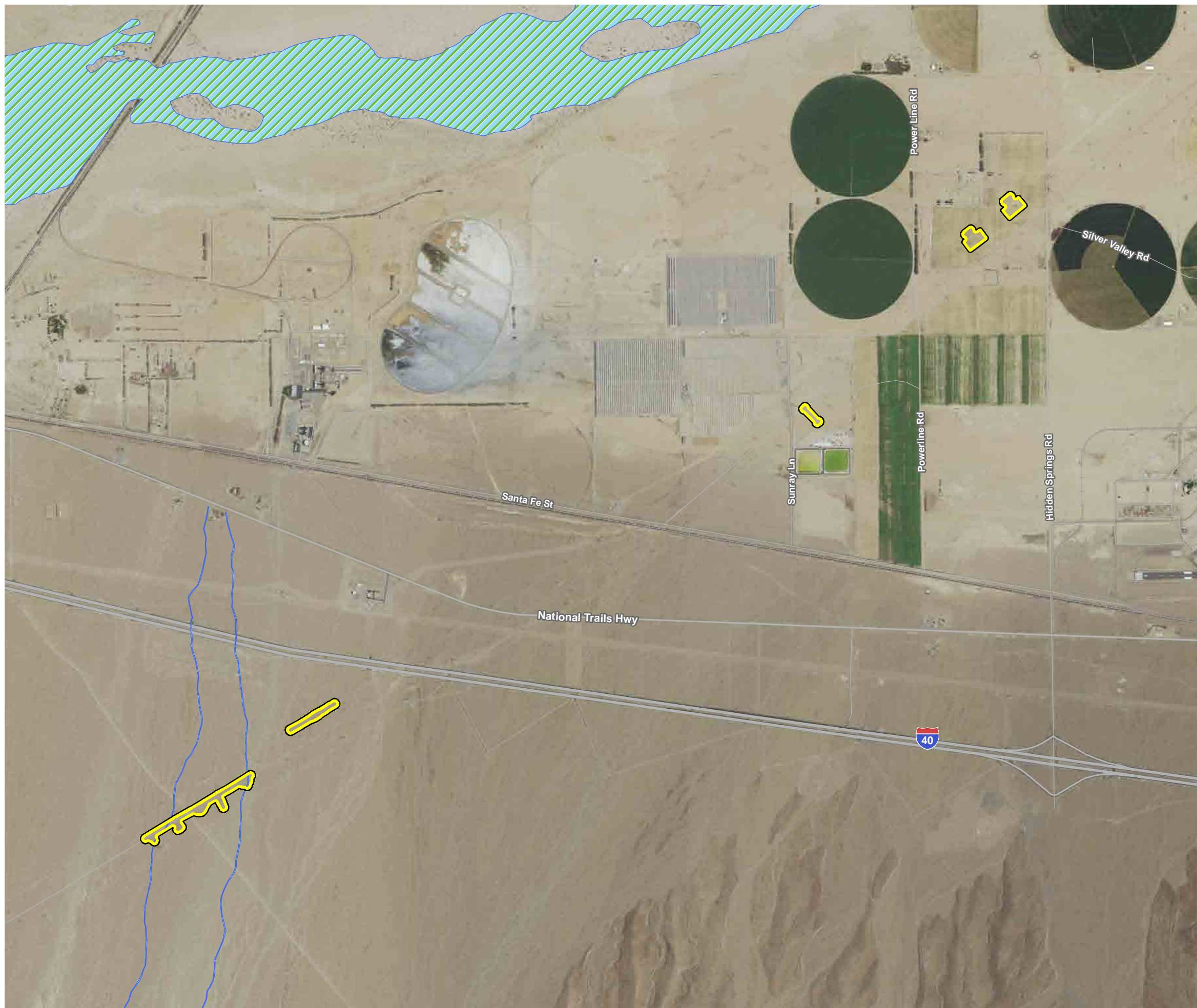
Aerial Source: ESRI, NAIP 2014





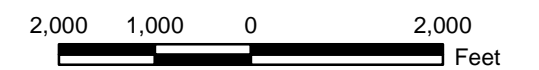
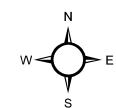
Exhibit 5c National Wetlands Inventory

Path 46 Transmission Line Clearances Project

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-  Survey Area
-  NWI Wetland (R4SBJ)



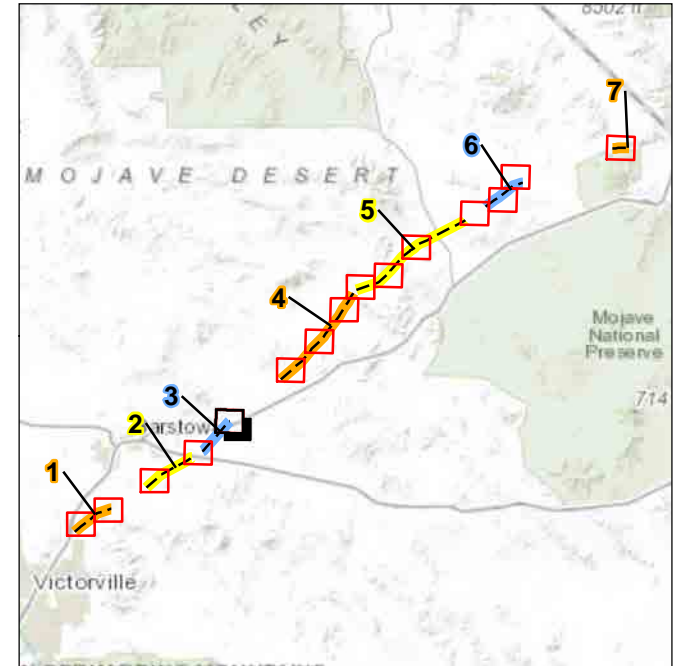
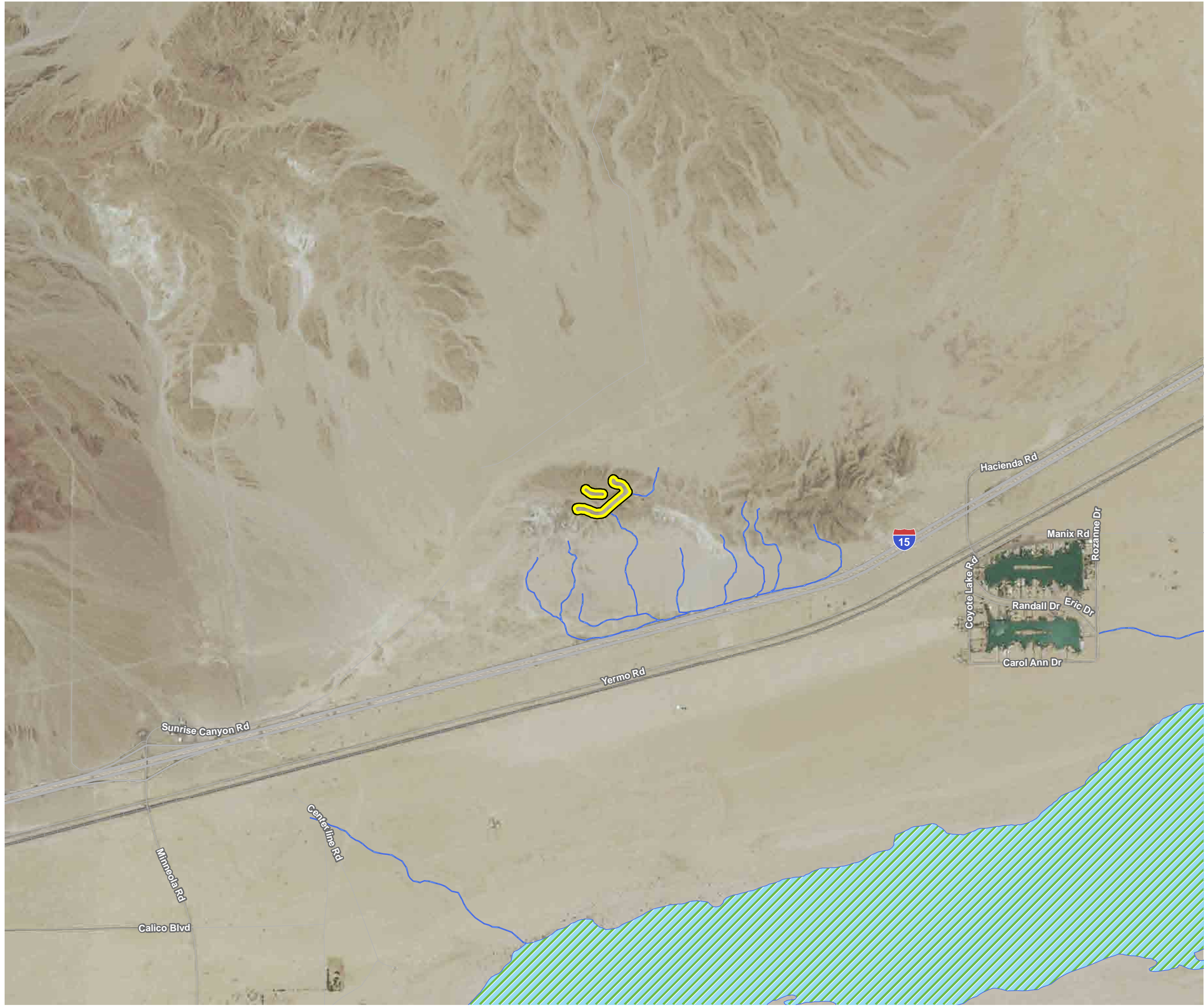
Aerial Source: ESRI, NAIP 2014





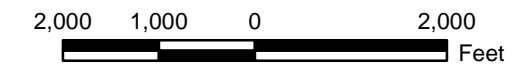
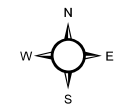
Exhibit 5d National Wetlands Inventory

Path 46 Transmission Line Clearances Project

(Rev: 09/29/2016 LEW) R:\Projects\MBC\3MBC000100\Graphics\UDI\Ex5_NWI_20160929.pdf



-  Survey Area
-  NWI Wetland (R4SBJ)



Aerial Source: ESRI, NAIP 2014



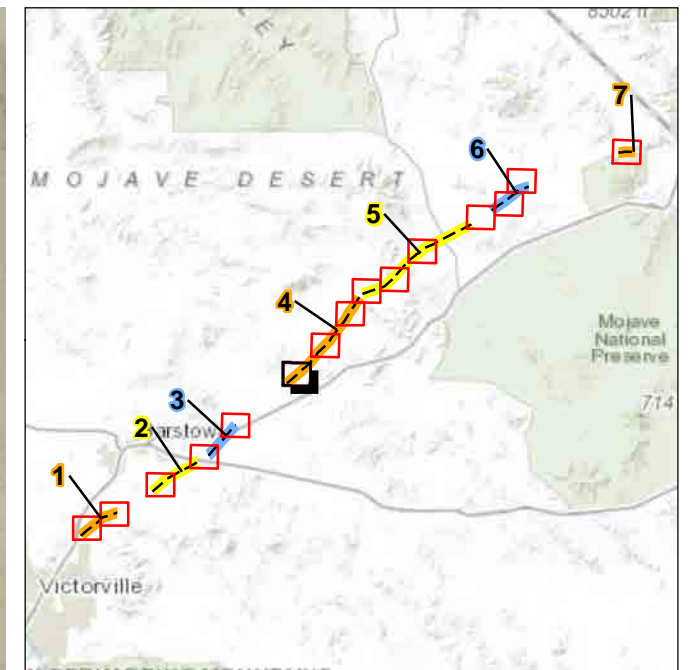
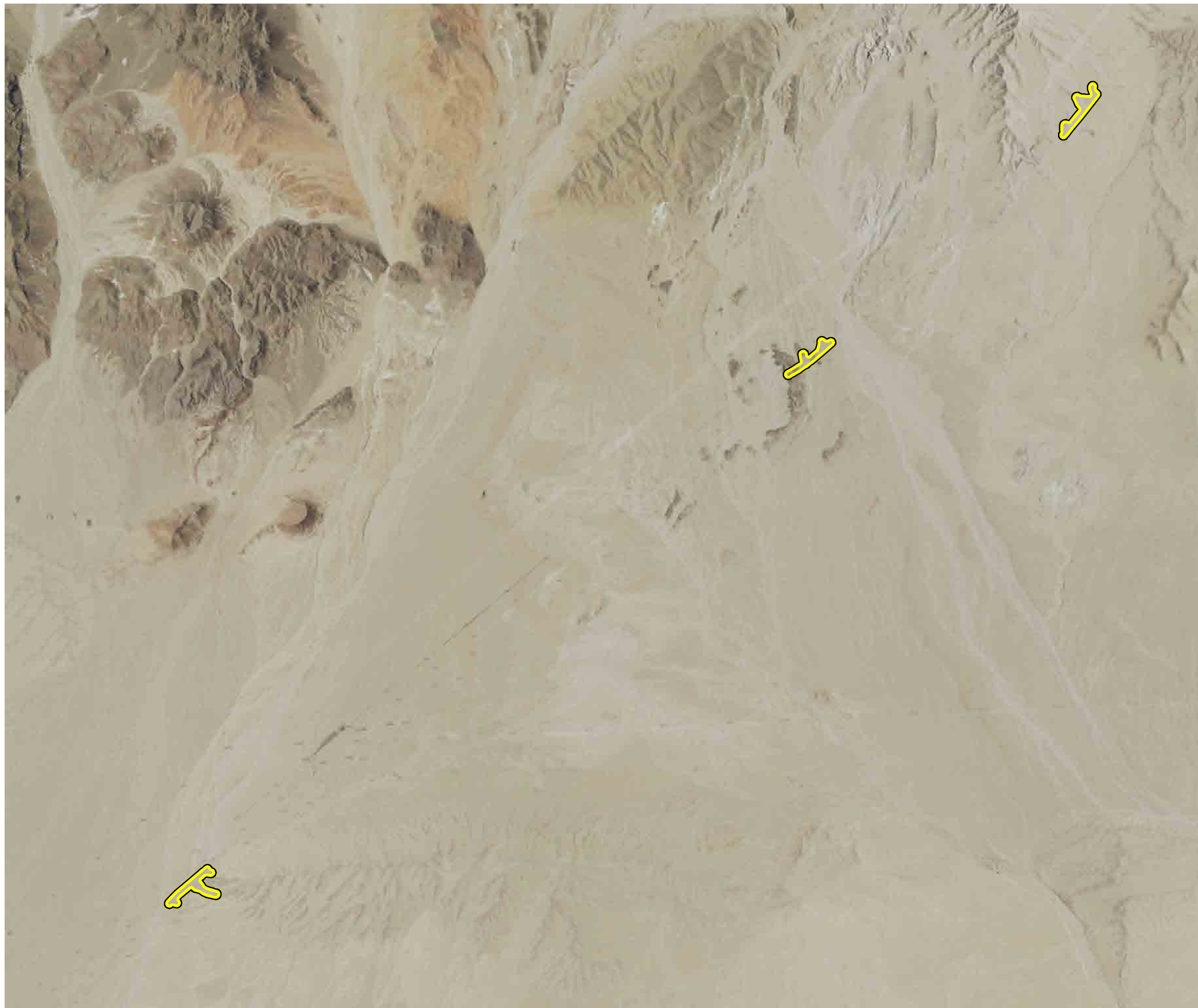
Exhibit 5e National Wetlands Inventory


Path 46 Transmission Line Clearances Project

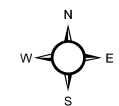
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 Survey Area



2,000 1,000 0 2,000
Feet

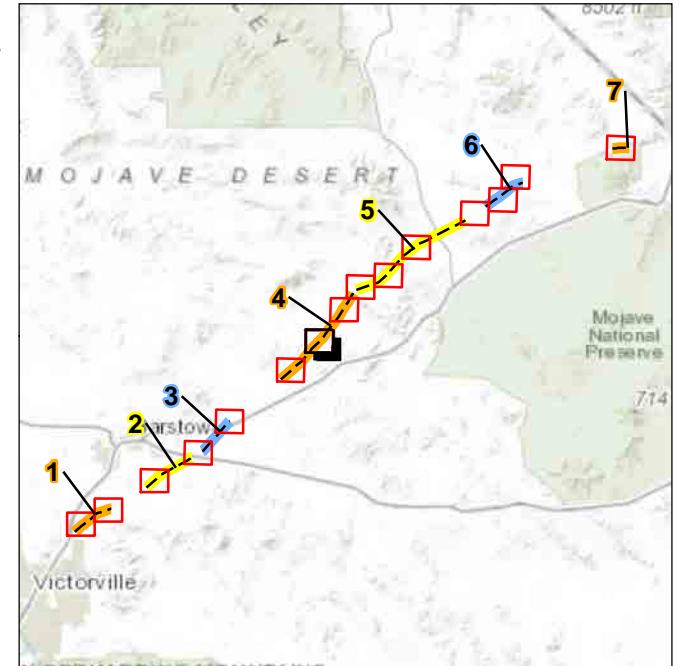
Aerial Source: ESRI, NAIP 2014




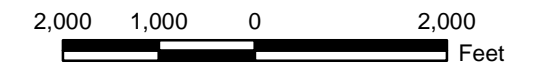
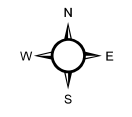
Exhibit 5f National Wetlands Inventory

Path 46 Transmission Line Clearances Project

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 Survey Area



Aerial Source: ESRI, NAIP 2014



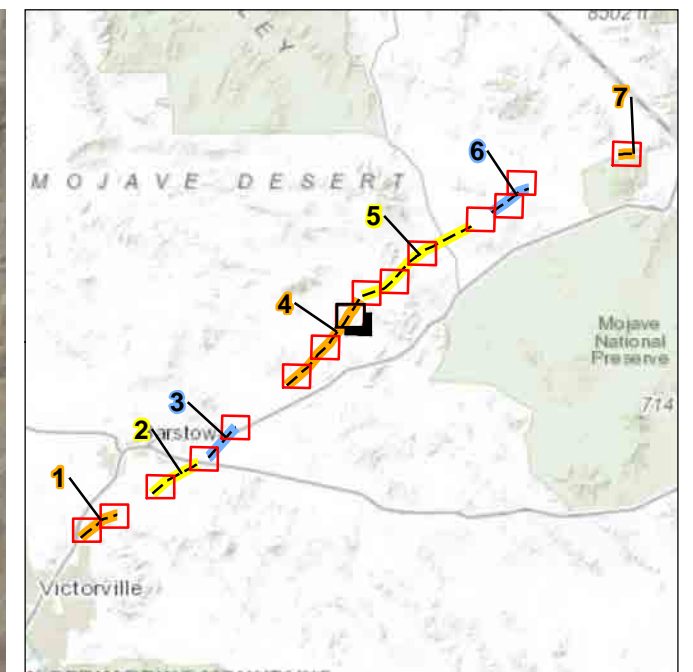
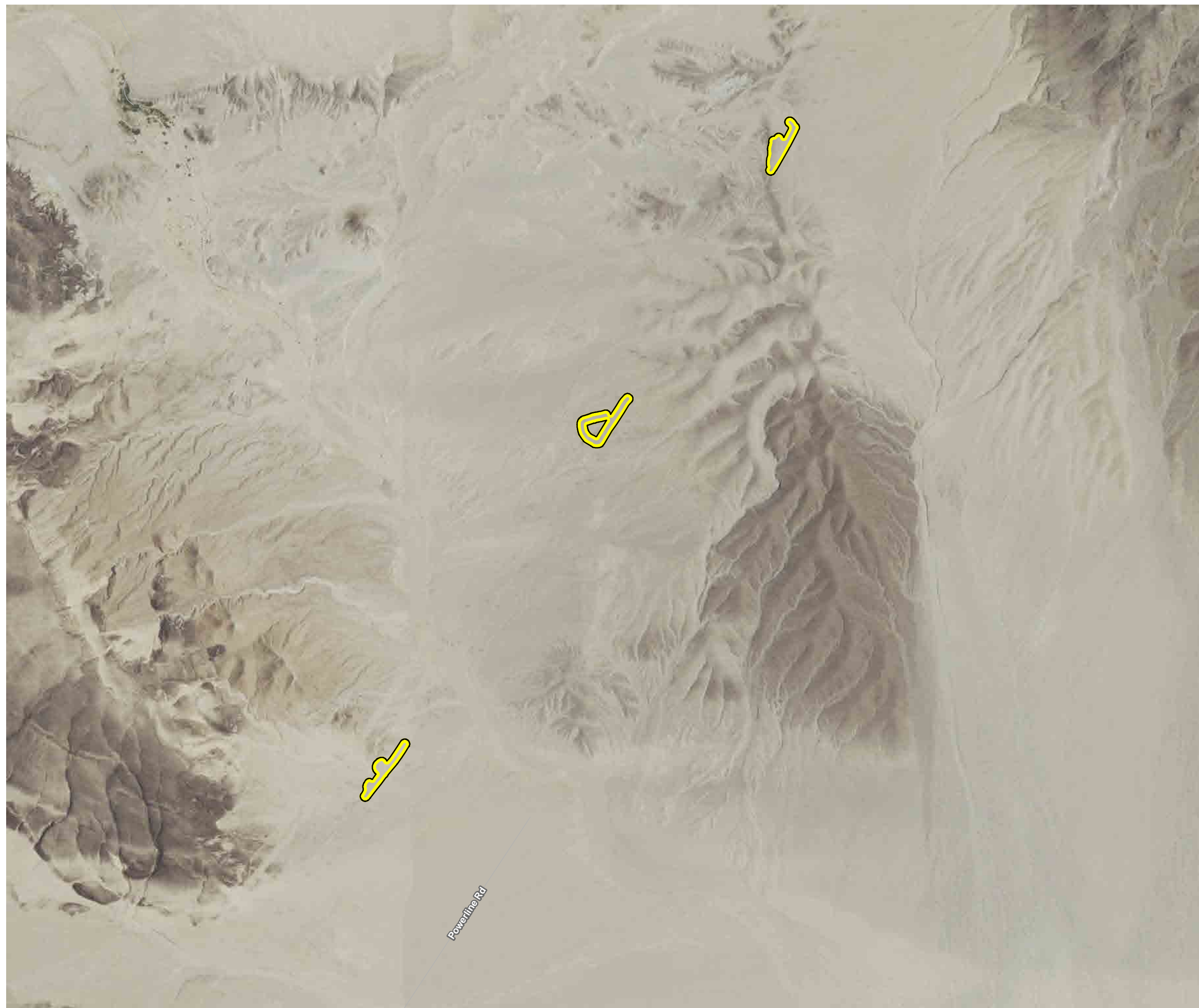
Exhibit 5g National Wetlands Inventory


Path 46 Transmission Line Clearances Project

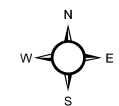
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 Survey Area



2,000 1,000 0 2,000
Feet

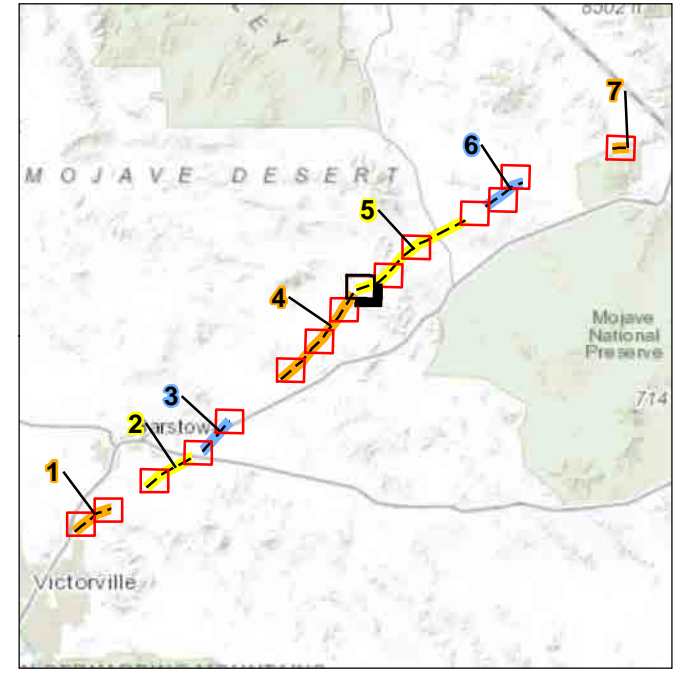
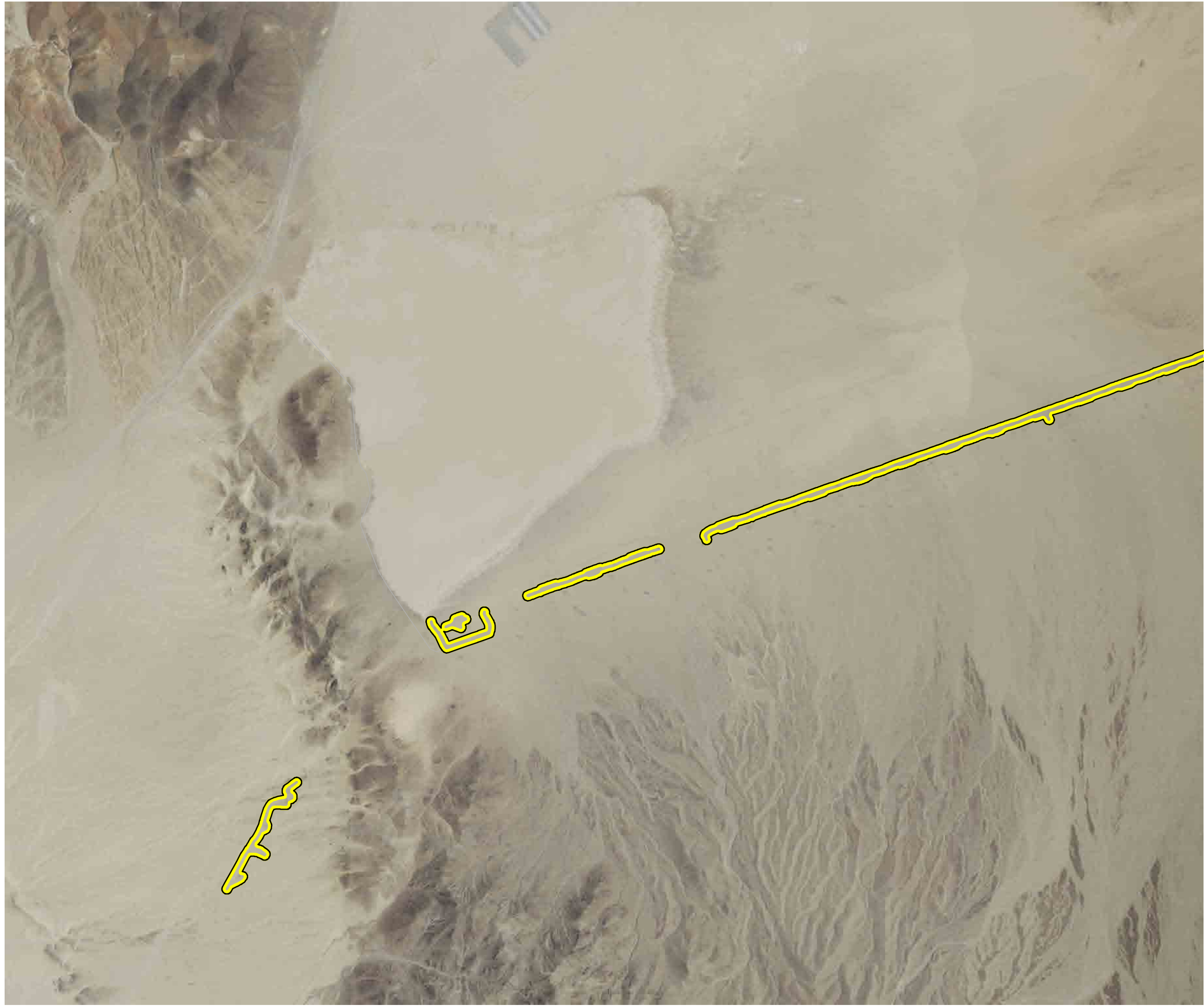
Aerial Source: ESRI, NAIP 2014




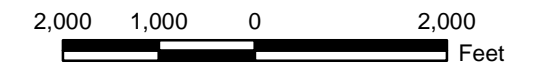
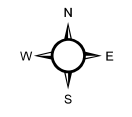
Exhibit 5h National Wetlands Inventory

Path 46 Transmission Line Clearances Project

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 Survey Area



Aerial Source: ESRI, NAIP 2014

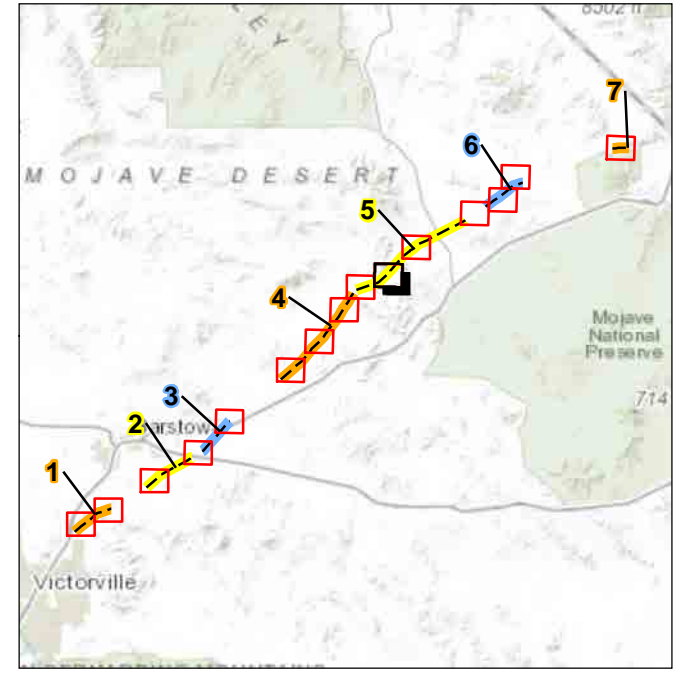
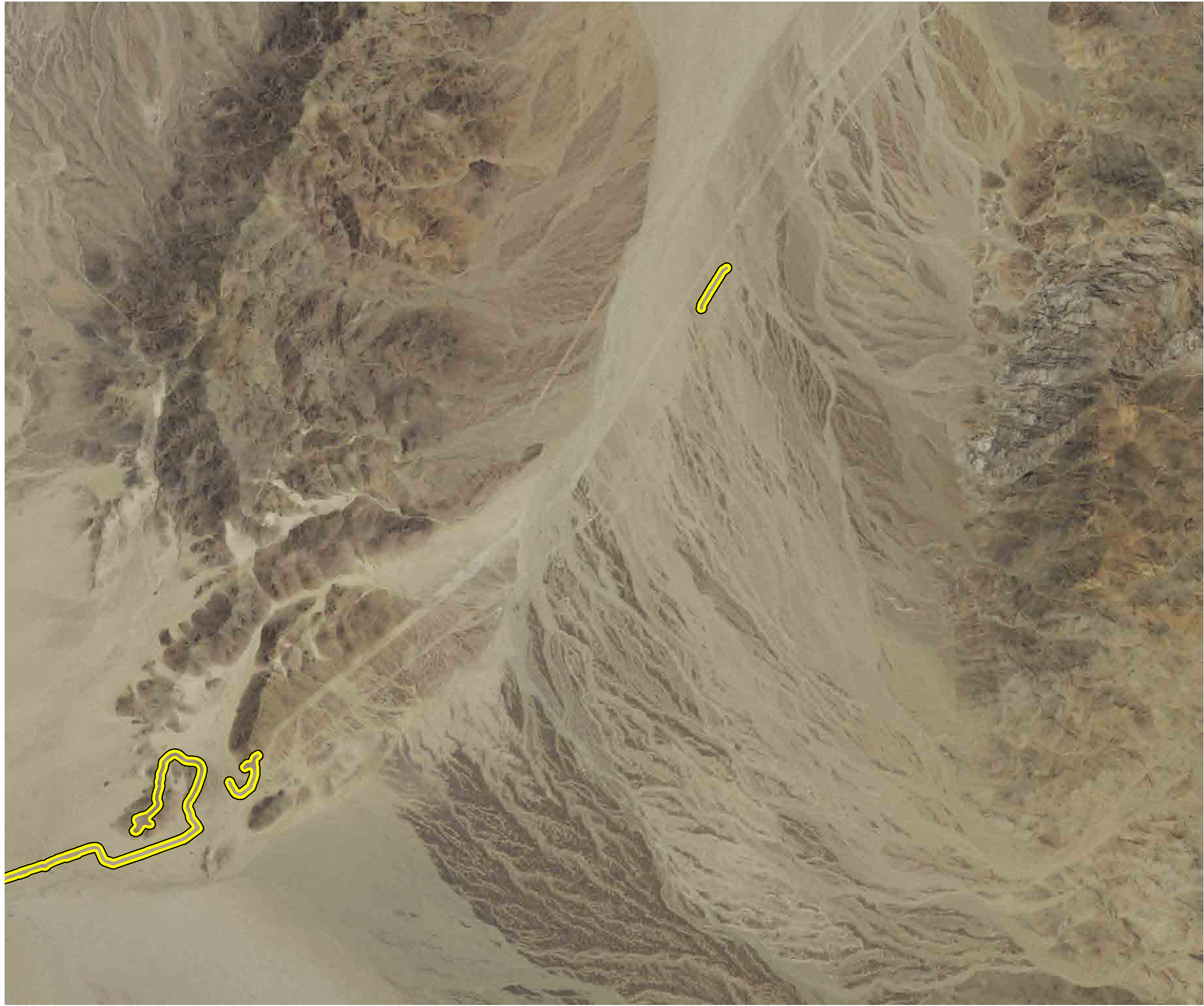



Exhibit 5i National Wetlands Inventory

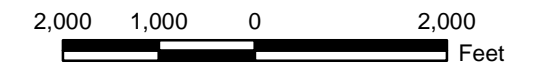
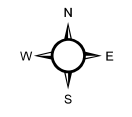
Path 46 Transmission Line Clearances Project

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 Survey Area



Aerial Source: ESRI, NAIP 2014

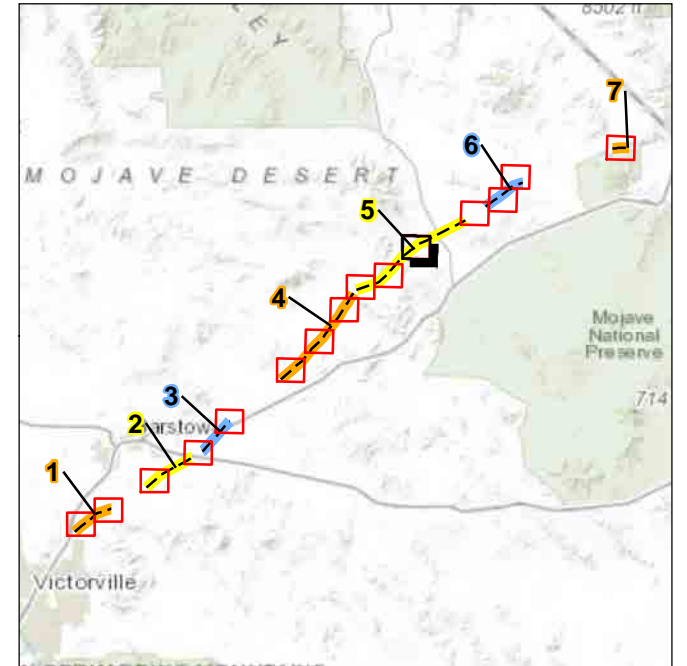
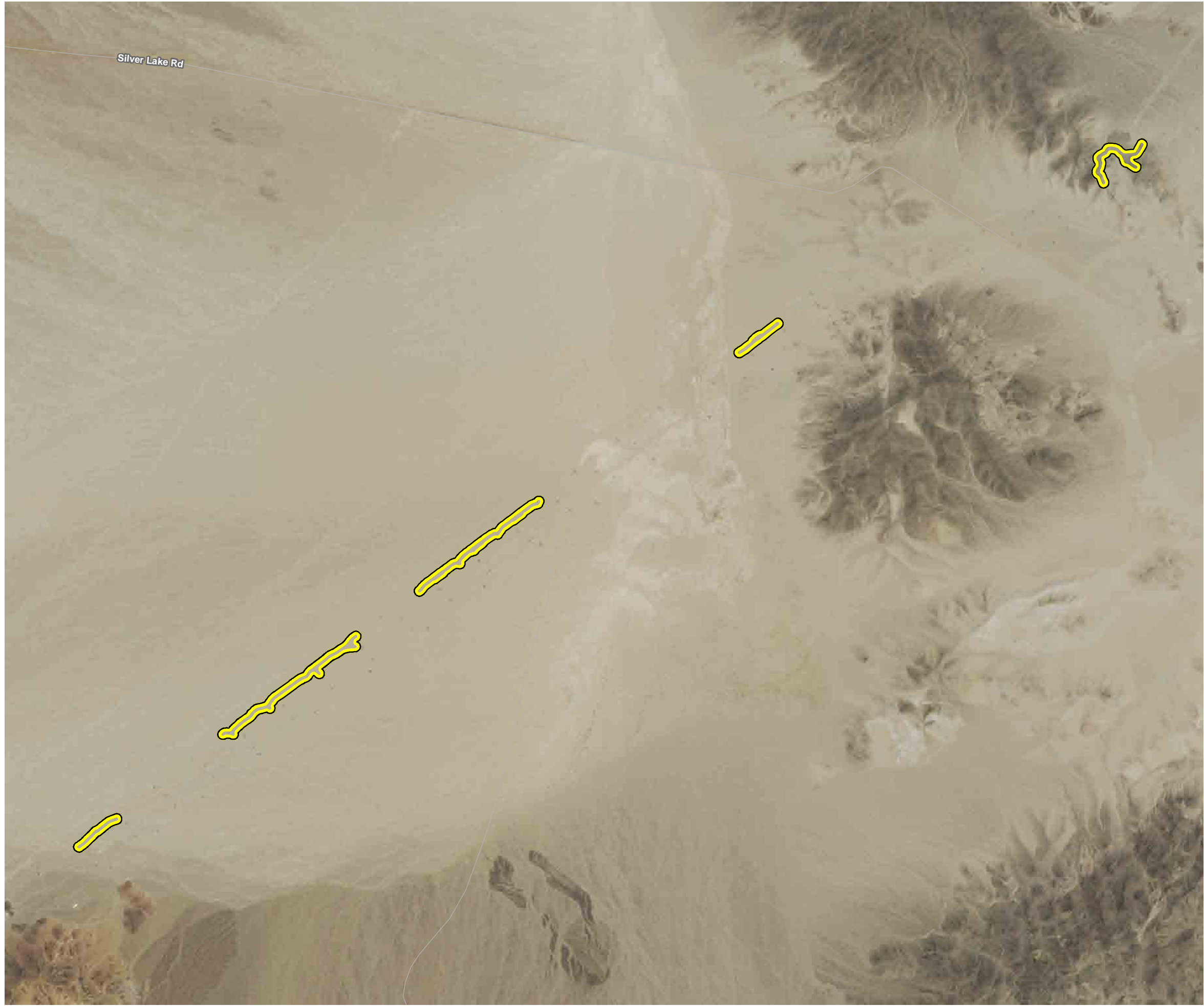



Exhibit 5j National Wetlands Inventory

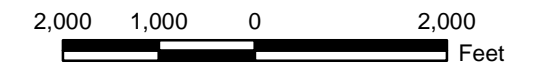
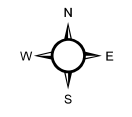
Path 46 Transmission Line Clearances Project

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 Survey Area



Aerial Source: ESRI, NAIP 2014



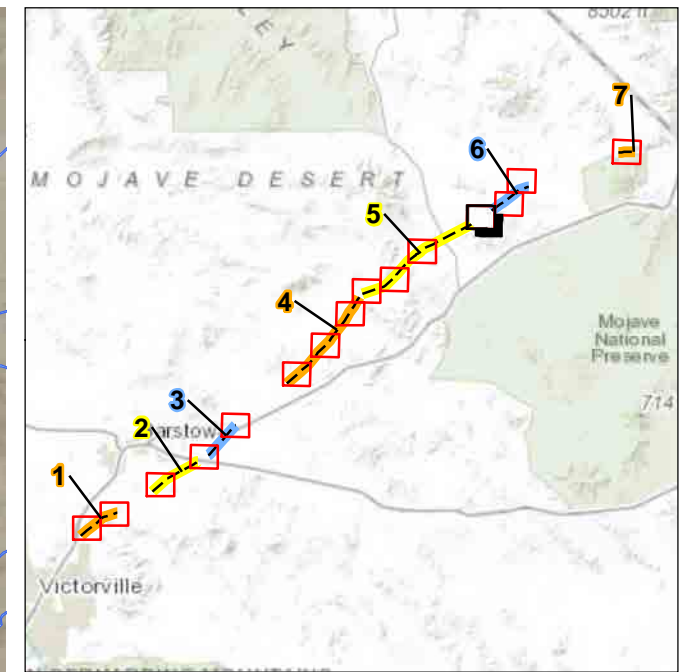
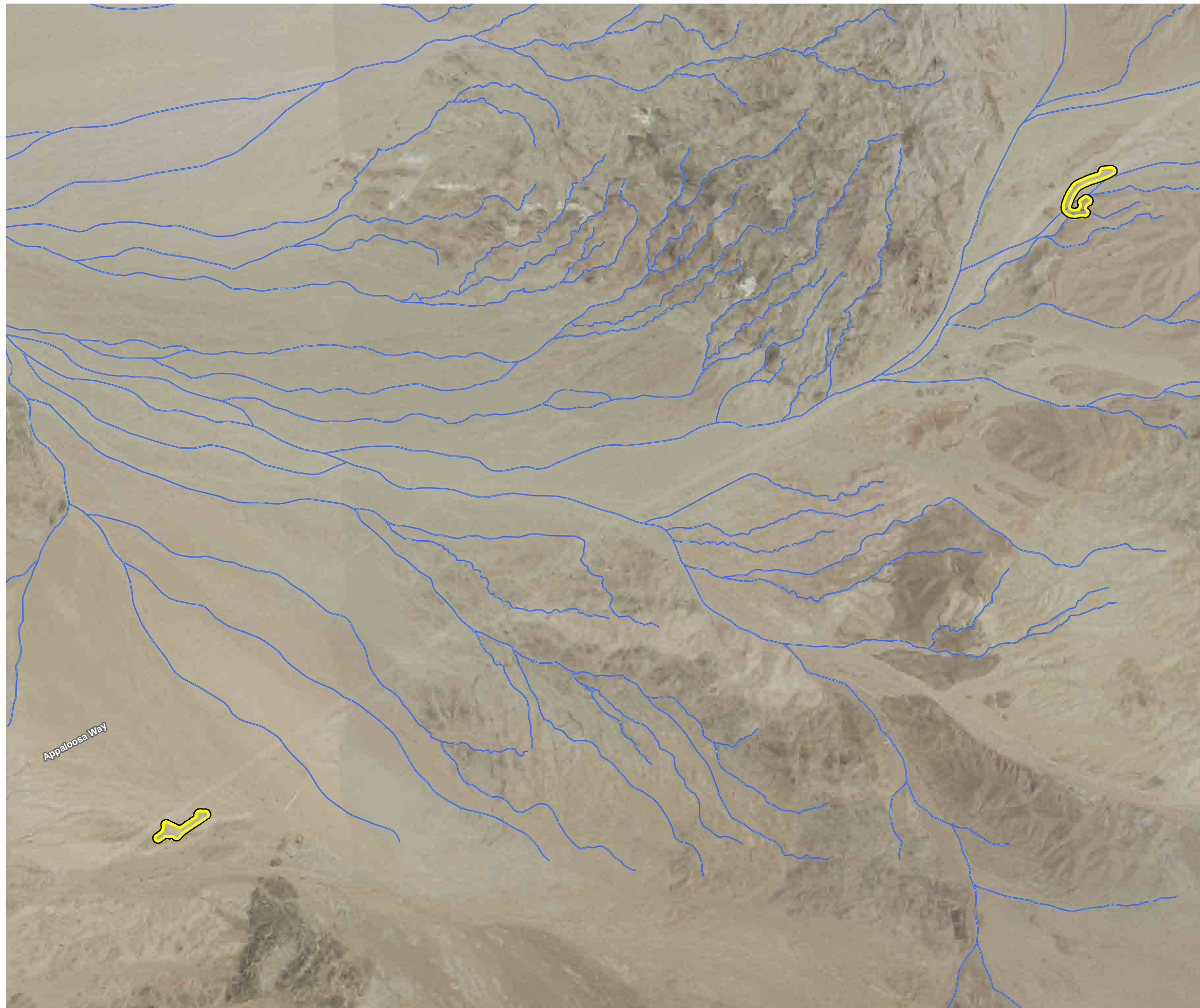
**Exhibit 5k
National Wetlands
Inventory**



Path 46 Transmission Line Clearances Project

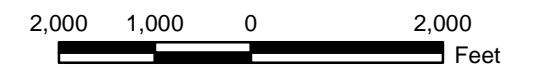
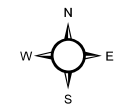
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-  Survey Area
-  NWI Wetland (R4SBJ)



Aerial Source: ESRI, NAIP 2014

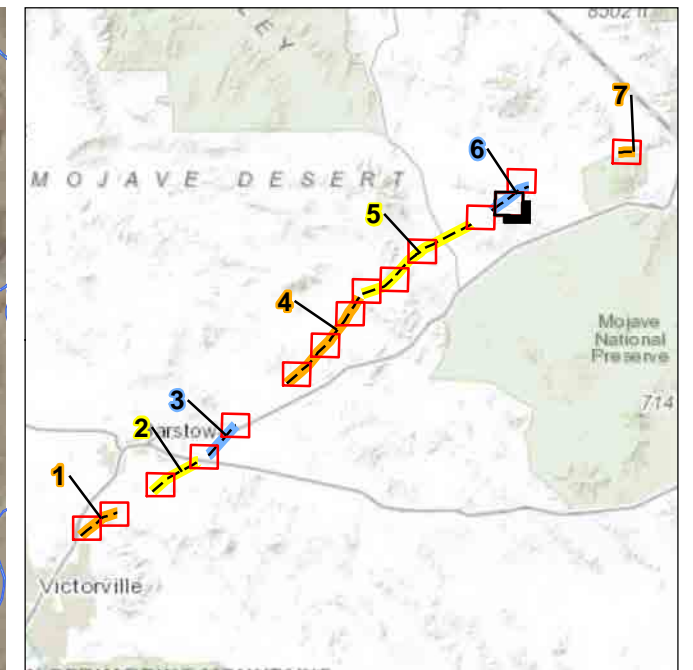
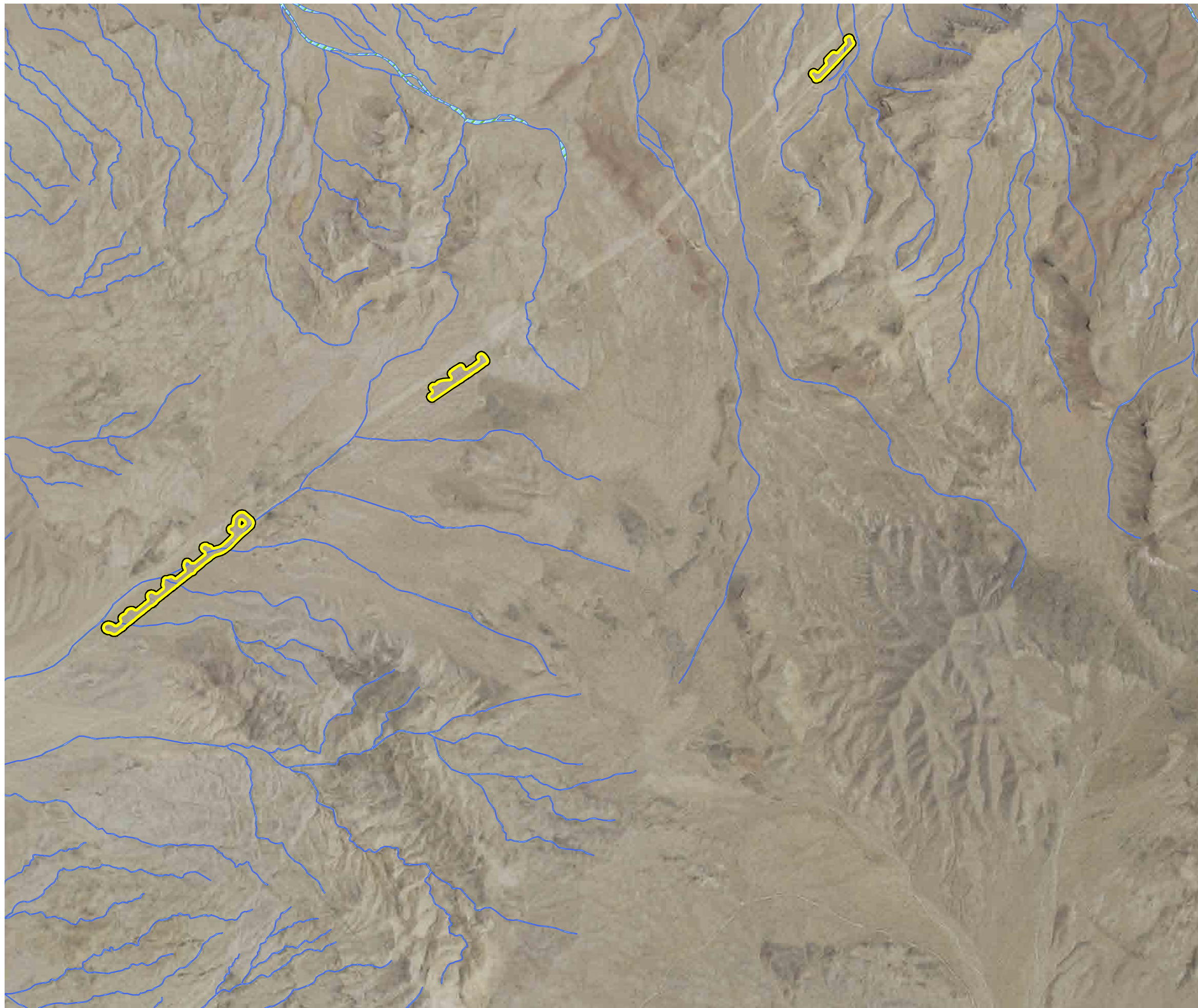




**Exhibit 5I
National Wetlands
Inventory**

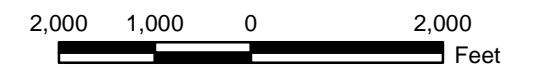
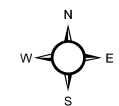
Path 46 Transmission Line Clearances Project

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-  Survey Area
-  NWI Wetland (R4SBJ)



Aerial Source: ESRI, NAIP 2014

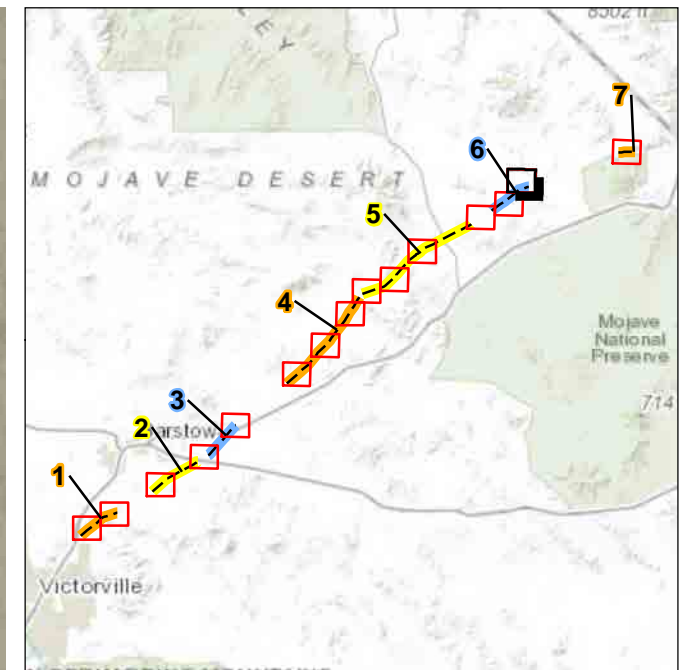
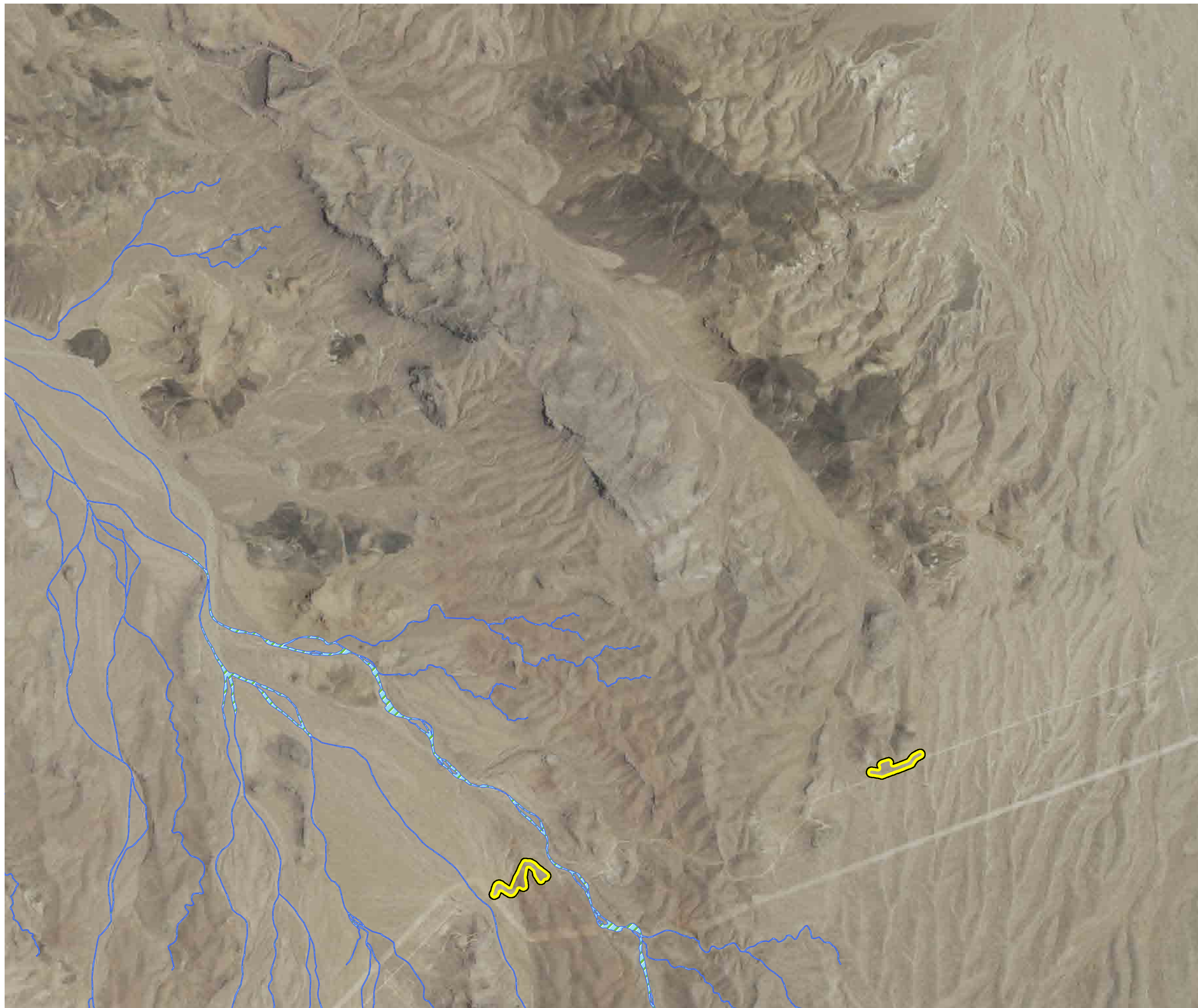




**Exhibit 5m
National Wetlands
Inventory**

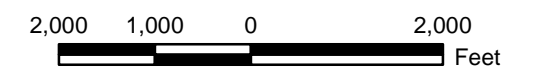
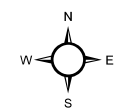
Path 46 Transmission Line Clearances Project

(Rev: 09/29/2016 LEW) R:\Projects\MBC\3\MBC000100\Graphics\JDE\Ex5_NWI_20160929.pdf

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-  Survey Area
-  NWI Wetland (R4SBJ)



Aerial Source: ESRI, NAIP 2014

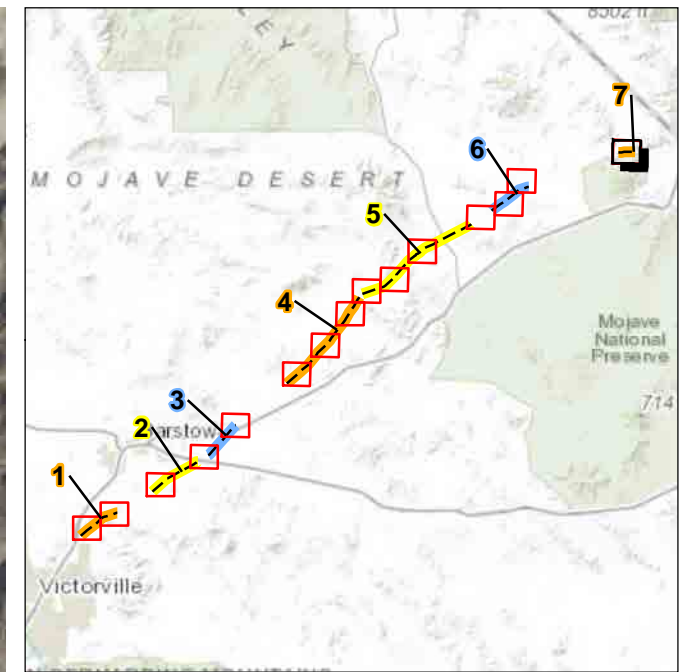
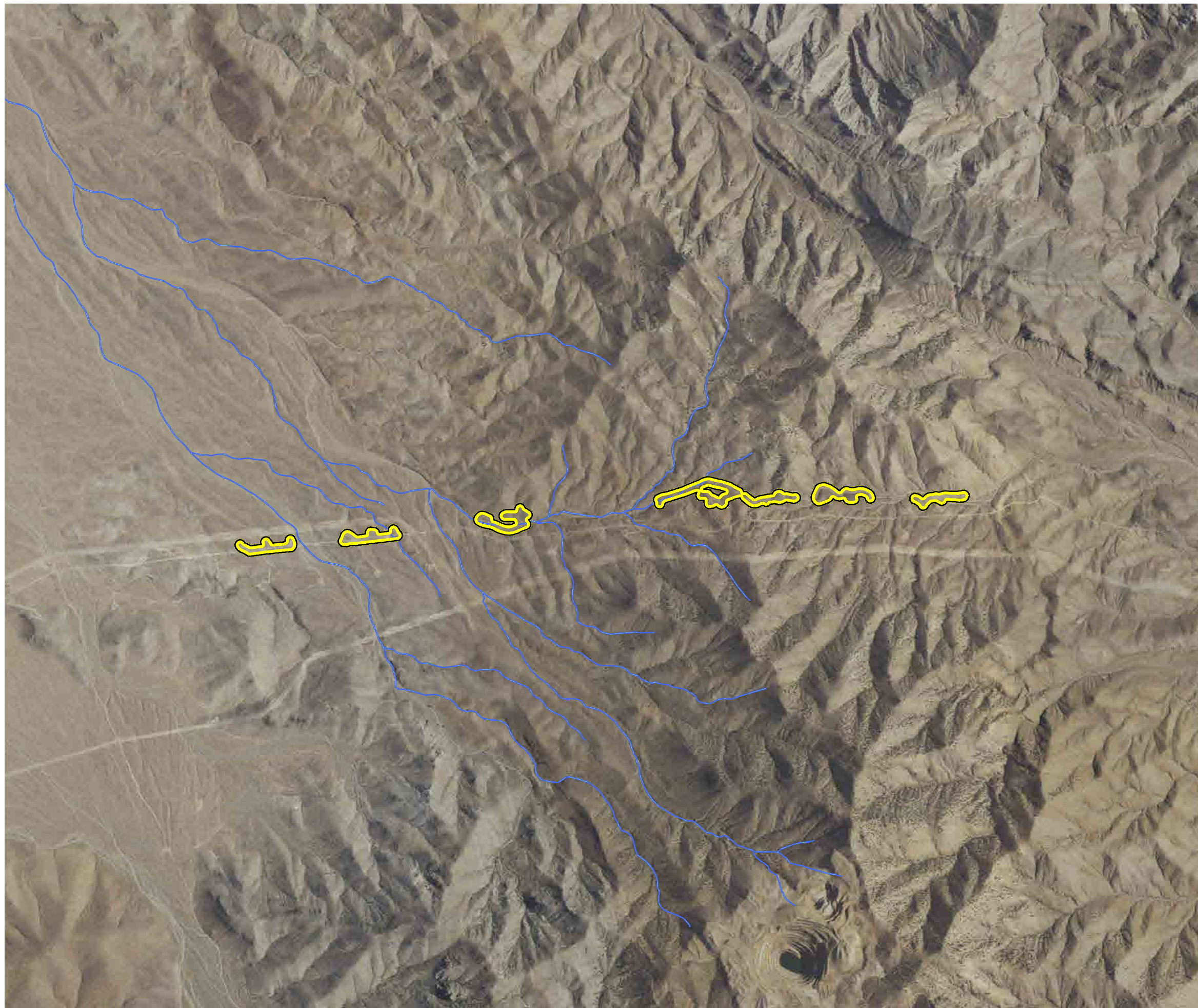




Exhibit 5n National Wetlands Inventory

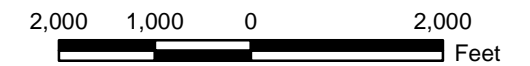
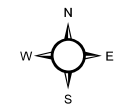
Path 46 Transmission Line Clearances Project

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-  Survey Area
-  NWI Wetland (R4SBJ)



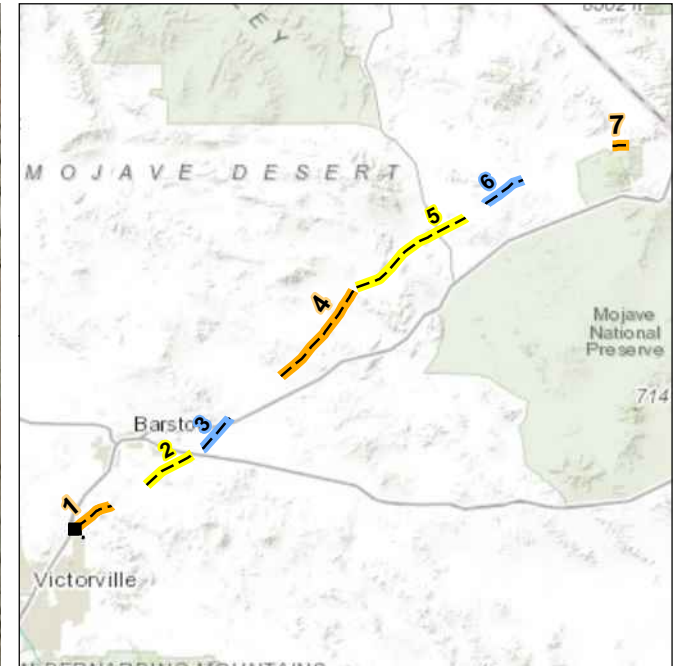
Aerial Source: ESRI, NAIP 2014



Exhibit 5o
National Wetlands
Inventory

Path 46 Transmission Line Clearances Project

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- Survey Area
- Jurisdictional Resources**
- Centerline (OHWM/TOB width – feet)
- Ordinary High Water Mark (OHWM) Extent
- Top of Bank (TOB) Extent



Aerial Source: ESRI, NAIP 2014

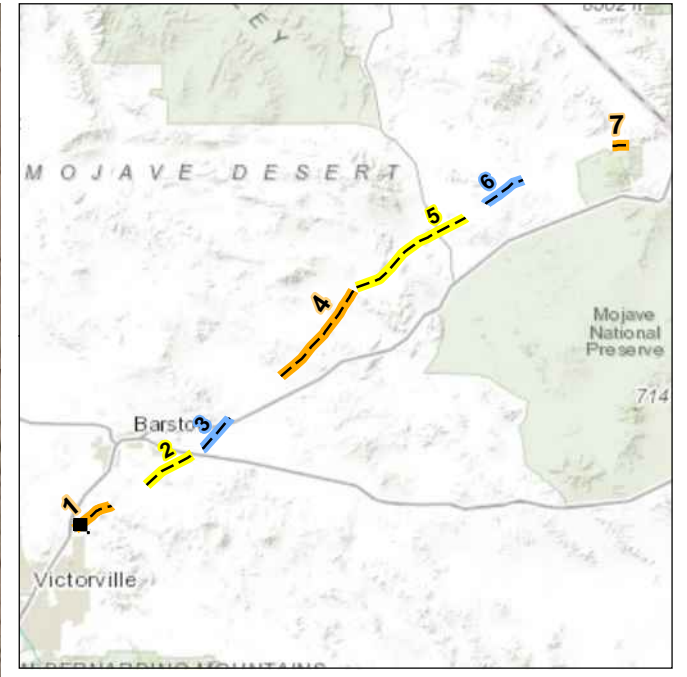
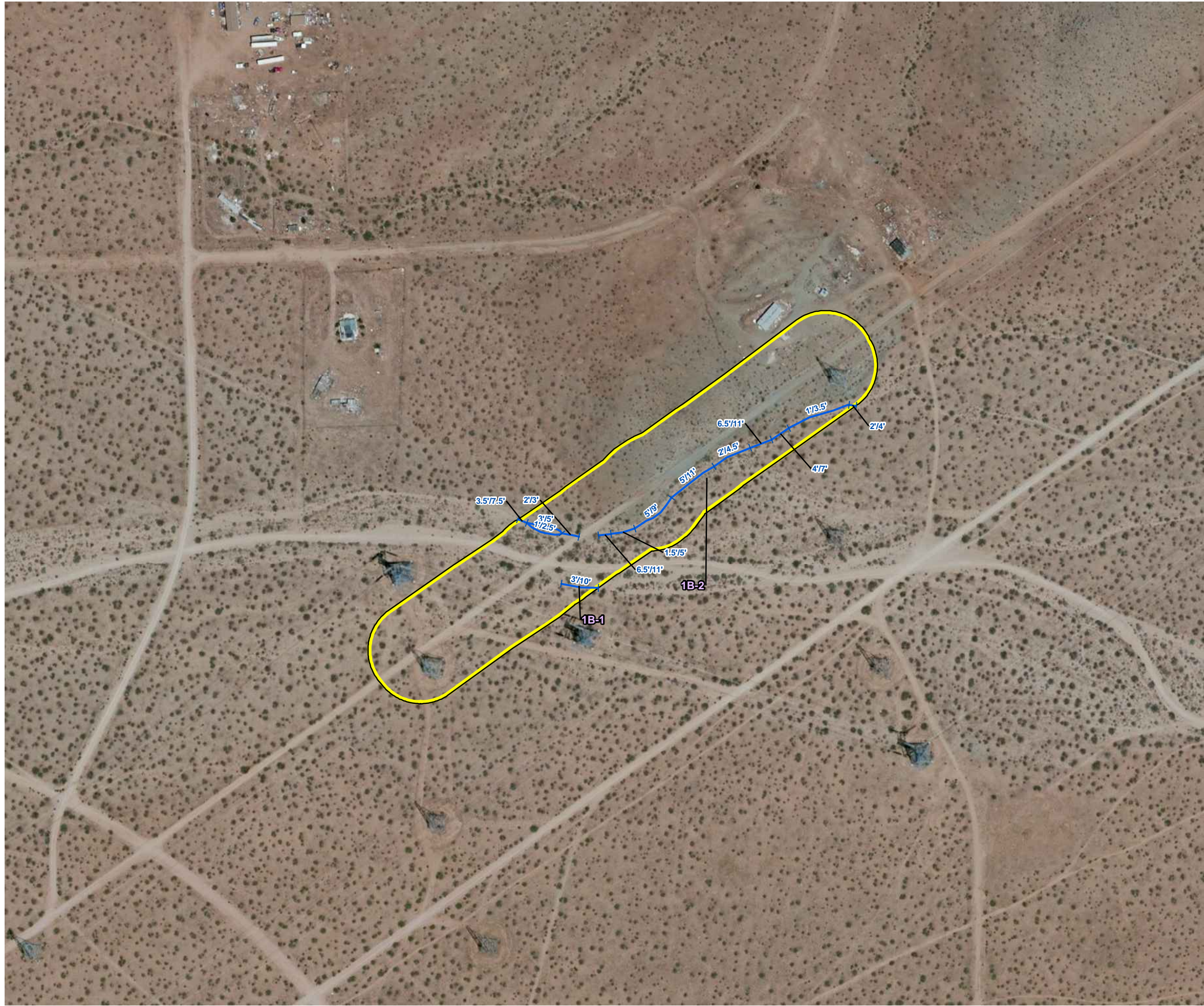


Exhibit 6 Jurisdictional Resources Segment 1a

Path 46 Transmission Line Clearances Project

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- Survey Area
- Jurisdictional Resources**
- Centerline (OHWM/TOB width – feet)
- Ordinary High Water Mark (OHWM) Extent
- Top of Bank (TOB) Extent



Aerial Source: ESRI, NAIP 2014

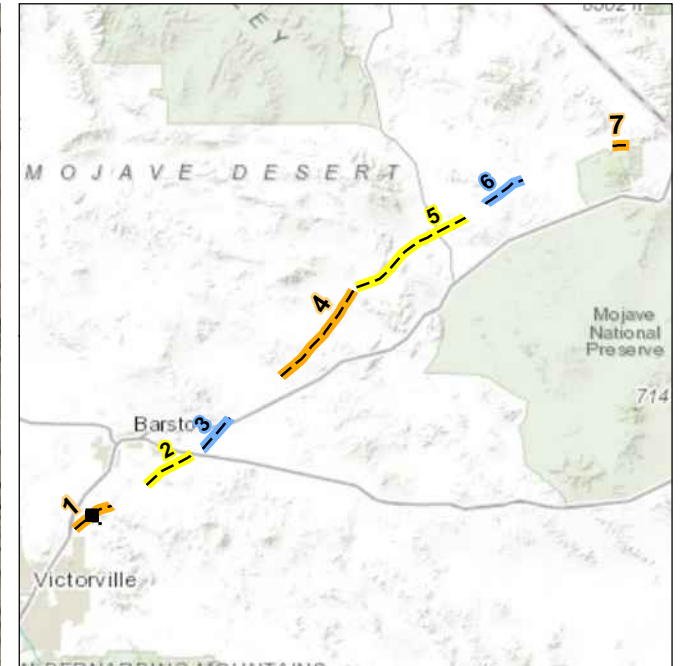
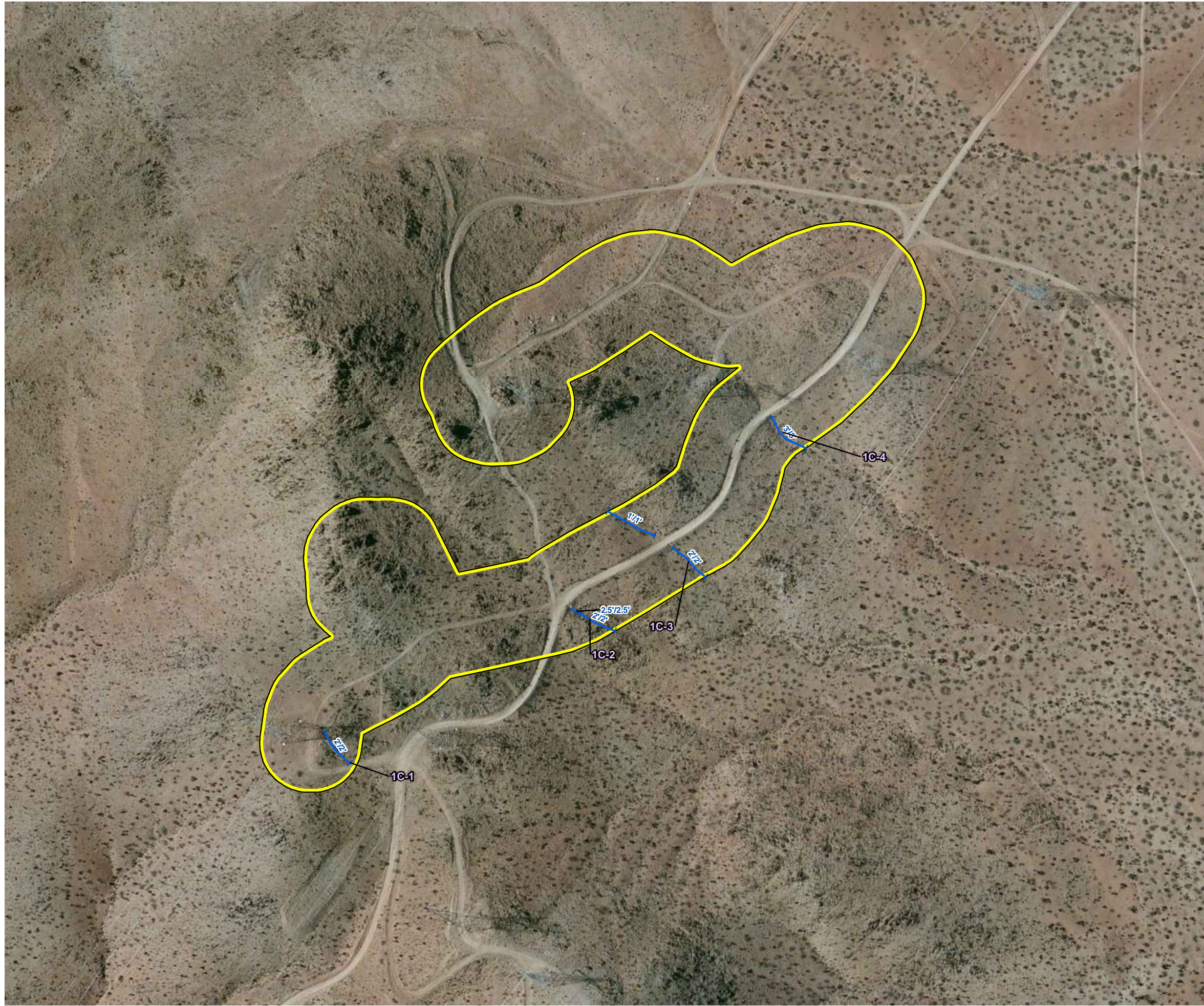


Exhibit 6 Jurisdictional Resources Segment 1b

Path 46 Transmission Line Clearances Project

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- Survey Area
- Jurisdictional Resources**
- Centerline (OHWM/TOB width – feet)
- Ordinary High Water Mark (OHWM) Extent
- Top of Bank (TOB) Extent



Aerial Source: ESRI, NAIP 2014

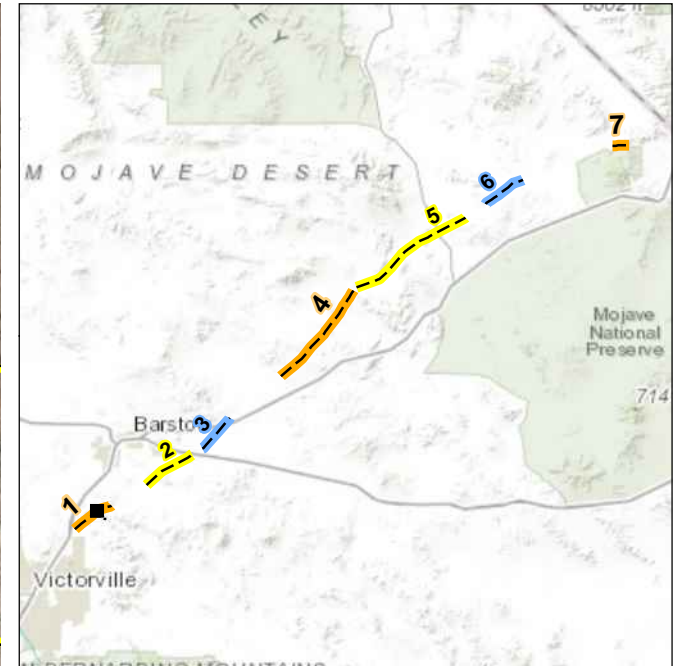
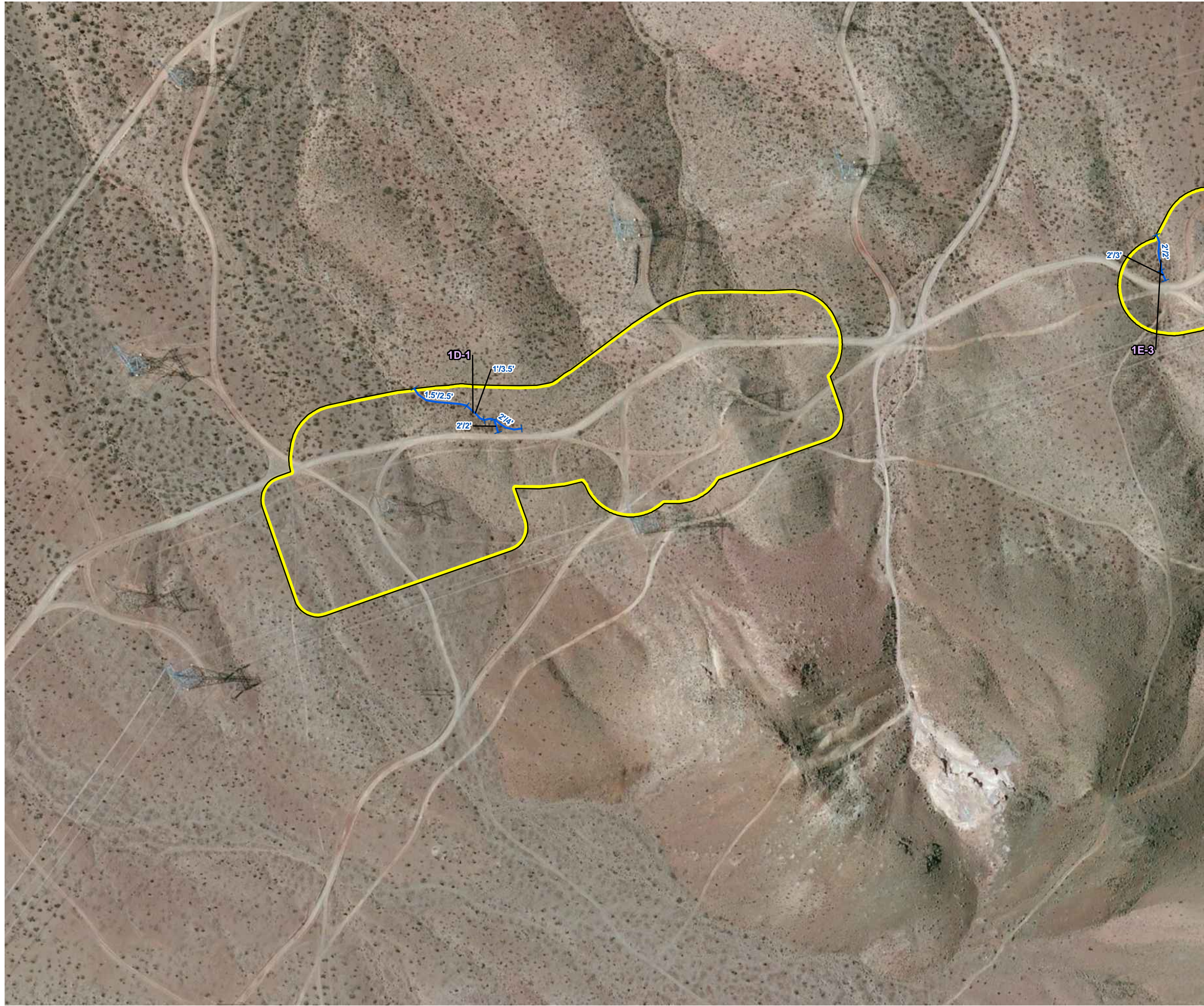


Exhibit 6 Jurisdictional Resources Segment 1c

Path 46 Transmission Line Clearances Project

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- Survey Area
- Jurisdictional Resources**
- Centerline (OHWM/TOB width – feet)
- Ordinary High Water Mark (OHWM) Extent
- Top of Bank (TOB) Extent



Aerial Source: ESRI, NAIP 2014

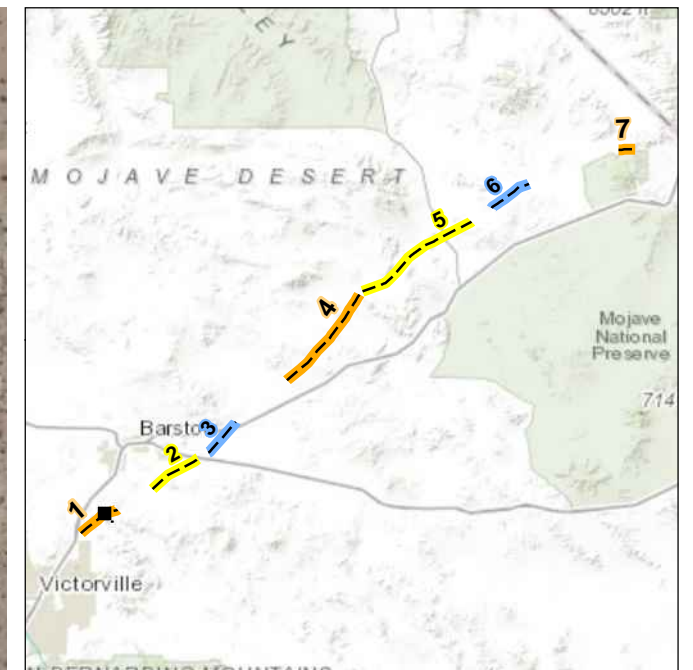
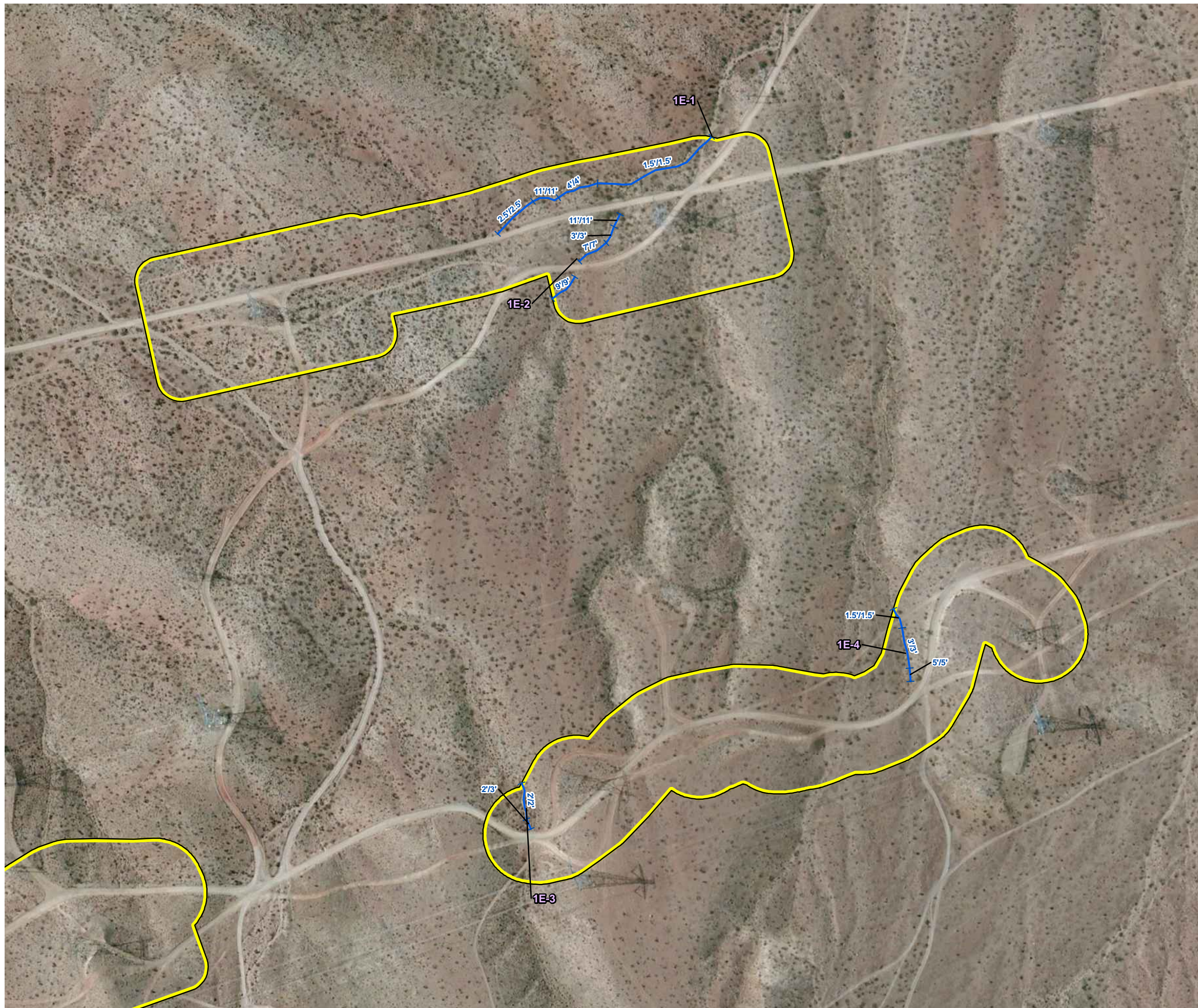


Exhibit 6 Jurisdictional Resources Segment 1d

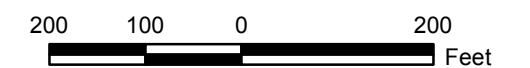
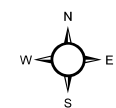
Path 46 Transmission Line Clearances Project

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- Survey Area
- Jurisdictional Resources**
- Centerline (OHWM/TOB width – feet)
- Ordinary High Water Mark (OHWM) Extent
- Top of Bank (TOB) Extent



Aerial Source: ESRI, NAIP 2014

PSOMAS

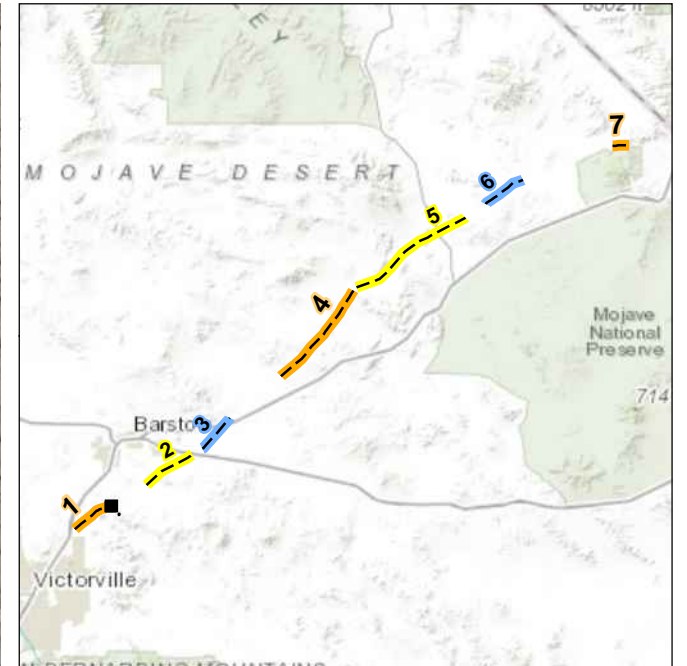
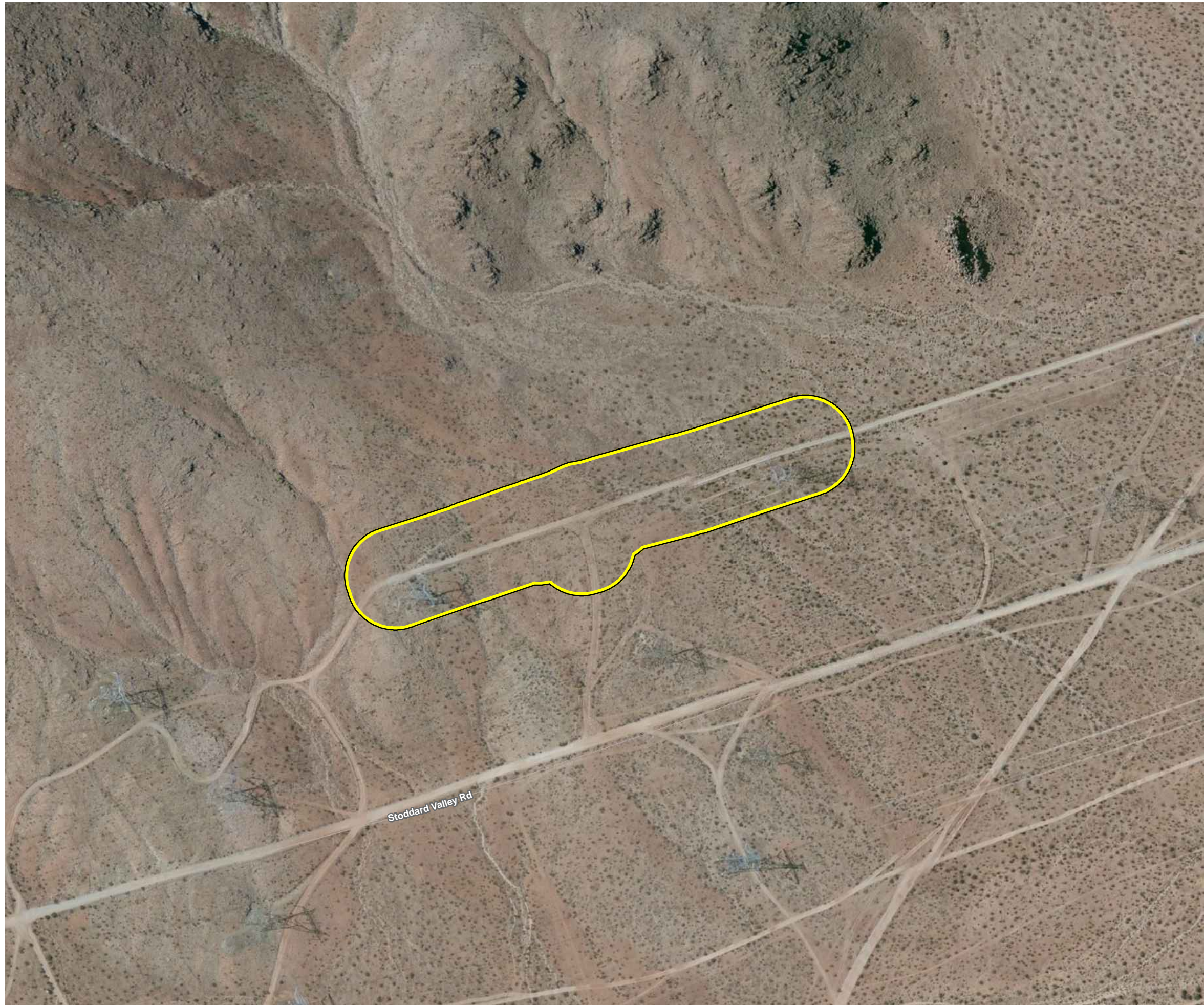
Exhibit 6





Jurisdictional Resources

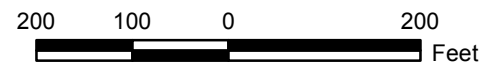
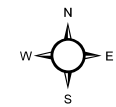
Segment 1e

Path 46 Transmission Line Clearances Project

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-  Survey Area
- Jurisdictional Resources**
-  Centerline (OHWM/TOB width – feet)
-  Ordinary High Water Mark (OHWM) Extent
-  Top of Bank (TOB) Extent



Aerial Source: ESRI, NAIP 2014

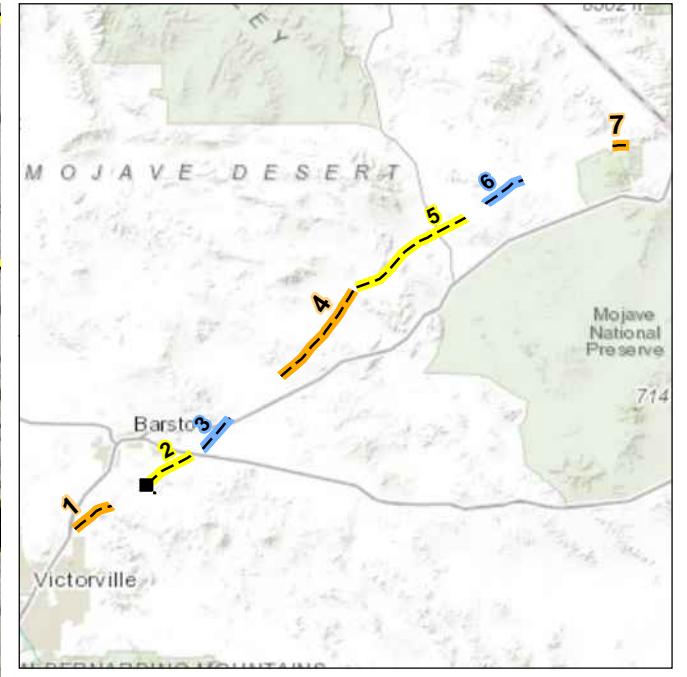
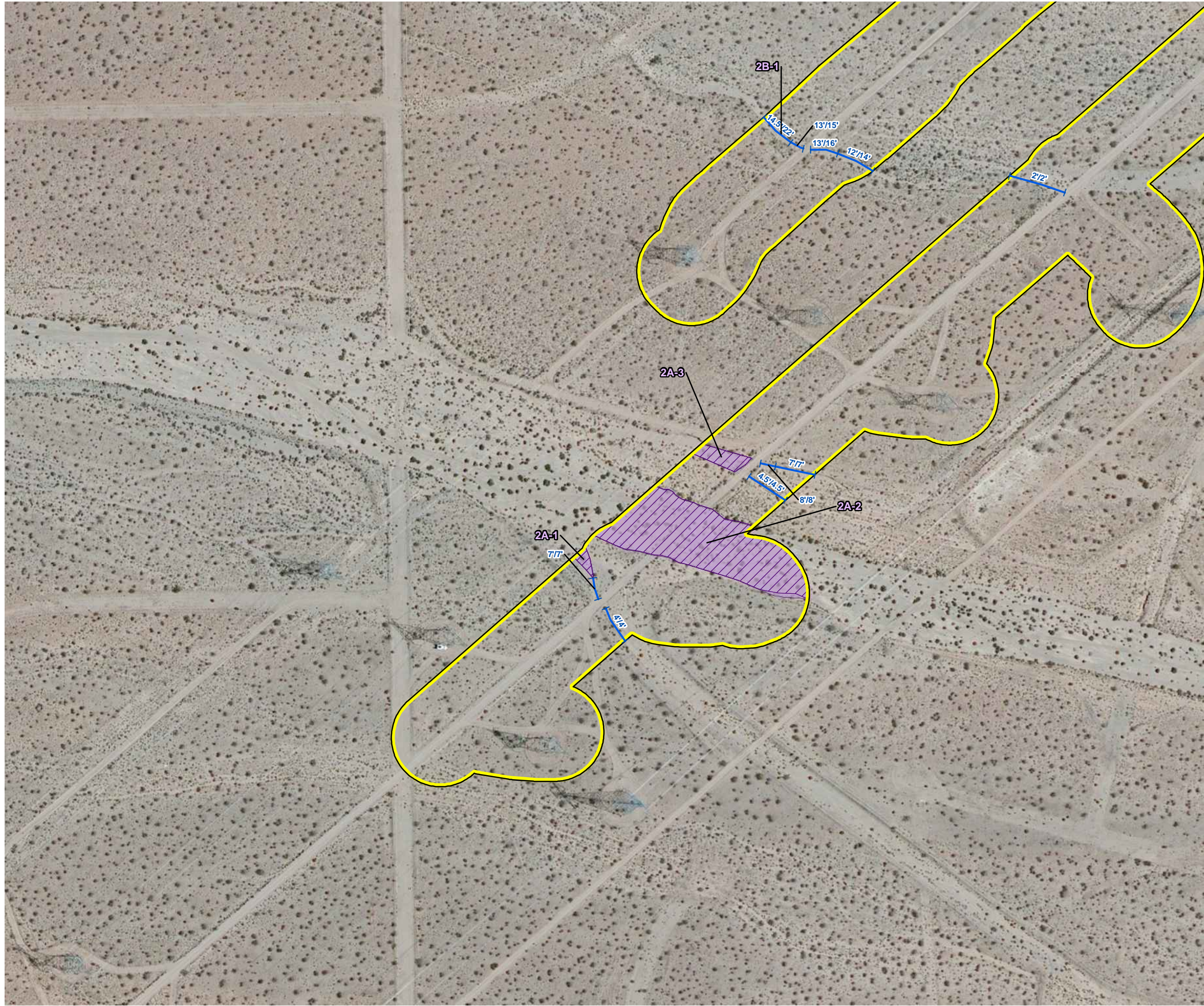


Exhibit 6 Jurisdictional Resources Segment 1f

Path 46 Transmission Line Clearances Project

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- Survey Area
- Jurisdictional Resources**
- Centerline (OHWM/TOB width – feet)
- Ordinary High Water Mark (OHWM) Extent
- Top of Bank (TOB) Extent



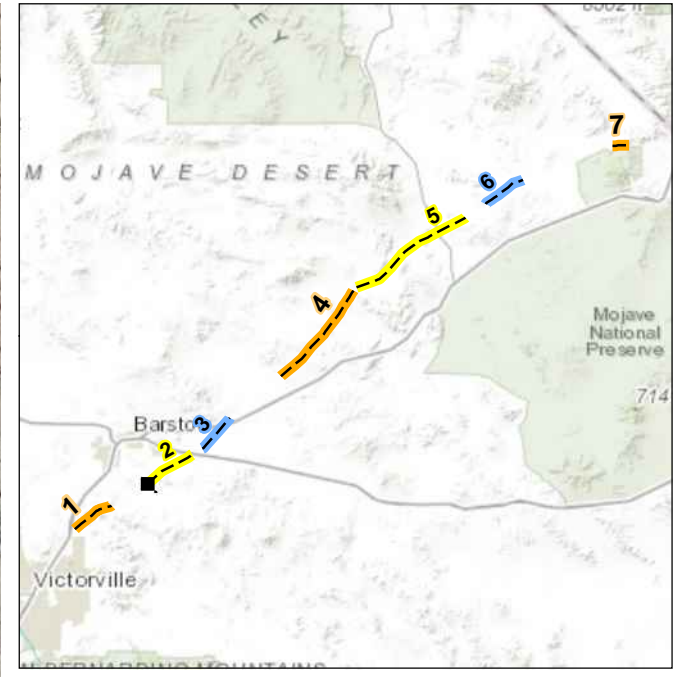
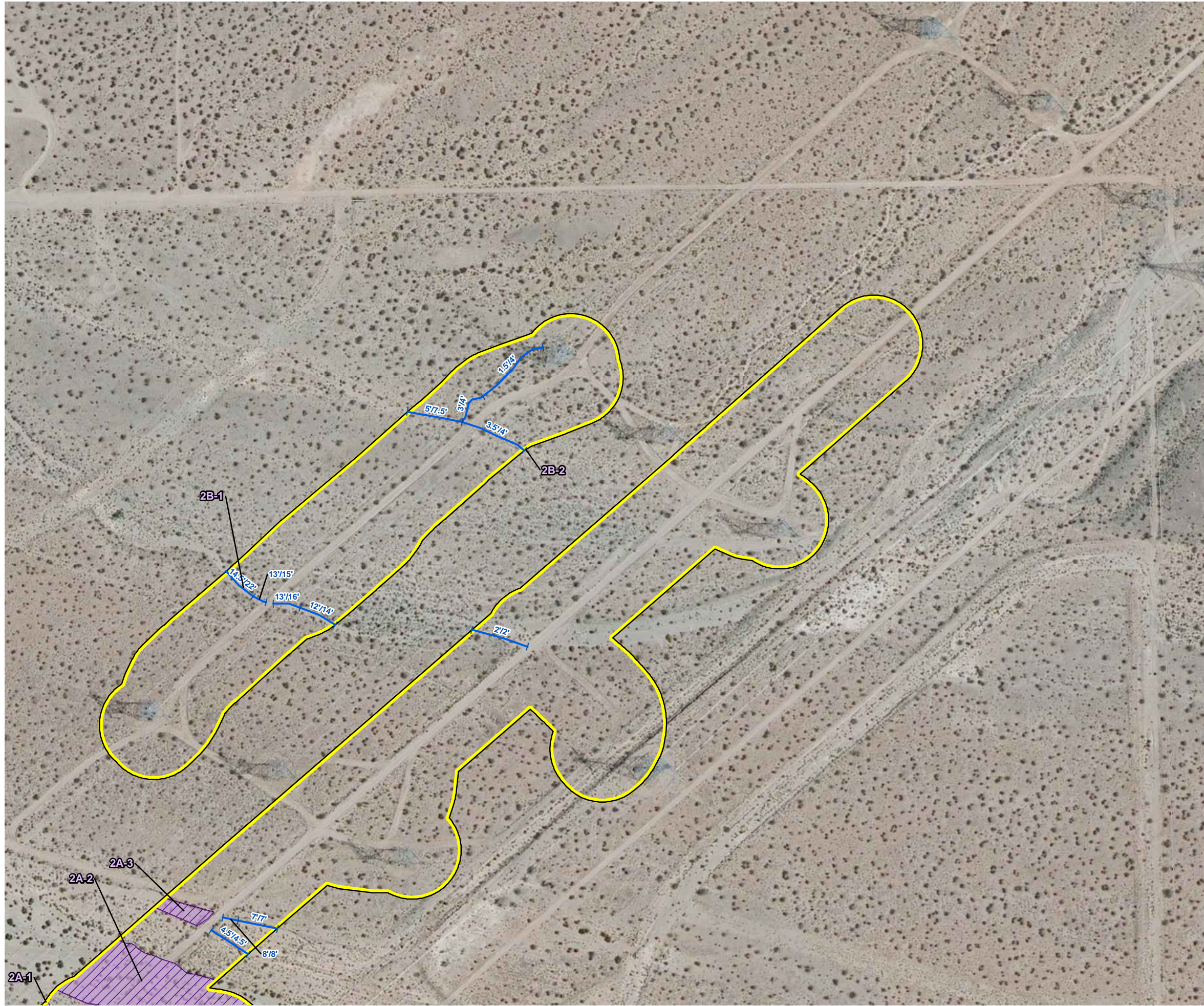
Aerial Source: ESRI, NAIP 2014



Exhibit 6 Jurisdictional Resources Segment 2a

Path 46 Transmission Line Clearances Project

(Rev: 09/30/2016 LEW) R:\Projects\MBC\3MBC000100\Graphics\JD\Ex6_JD_20160929.pdf



- Survey Area
- Jurisdictional Resources**
- Centerline (OHWM/TOB width – feet)
- Ordinary High Water Mark (OHWM) Extent
- Top of Bank (TOB) Extent



Aerial Source: ESRI, NAIP 2014

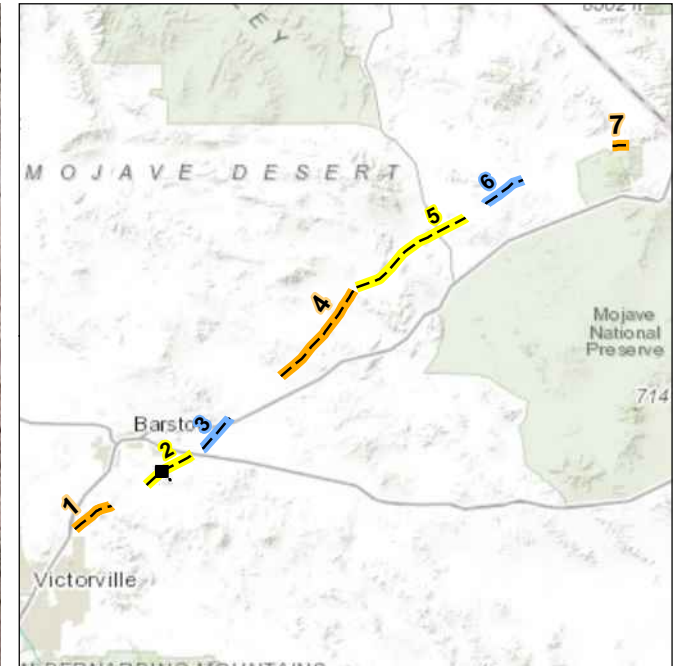






Exhibit 6 Jurisdictional Resources Segment 2b

Path 46 Transmission Line Clearances Project

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-  Survey Area
- Jurisdictional Resources**
-  Centerline (OHWM/TOB width – feet)
-  Ordinary High Water Mark (OHWM) Extent
-  Top of Bank (TOB) Extent



Aerial Source: ESRI, NAIP 2014

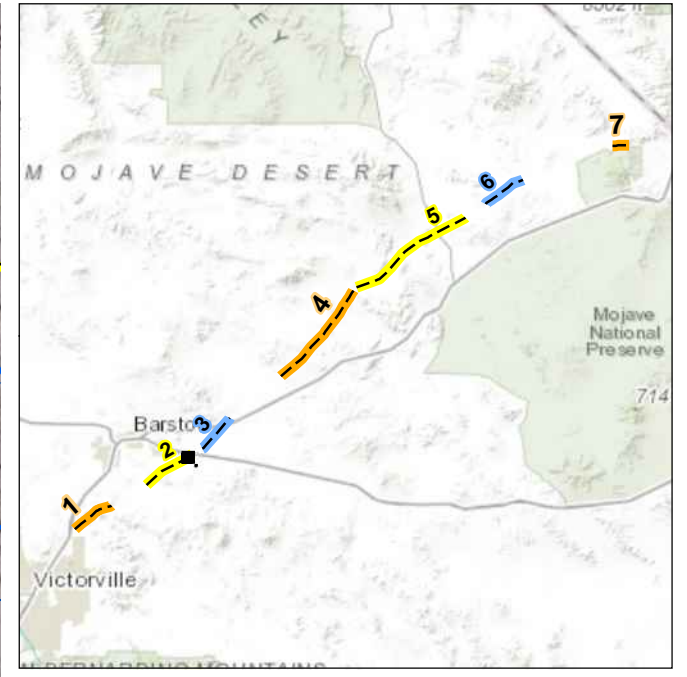


Exhibit 6
Jurisdictional Resources
Segment 2c

Path 46 Transmission Line Clearances Project

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- Survey Area
- Jurisdictional Resources**
- Centerline (OHWM/TOB width – feet)
- Ordinary High Water Mark (OHWM) Extent
- Top of Bank (TOB) Extent



Aerial Source: ESRI, NAIP 2014



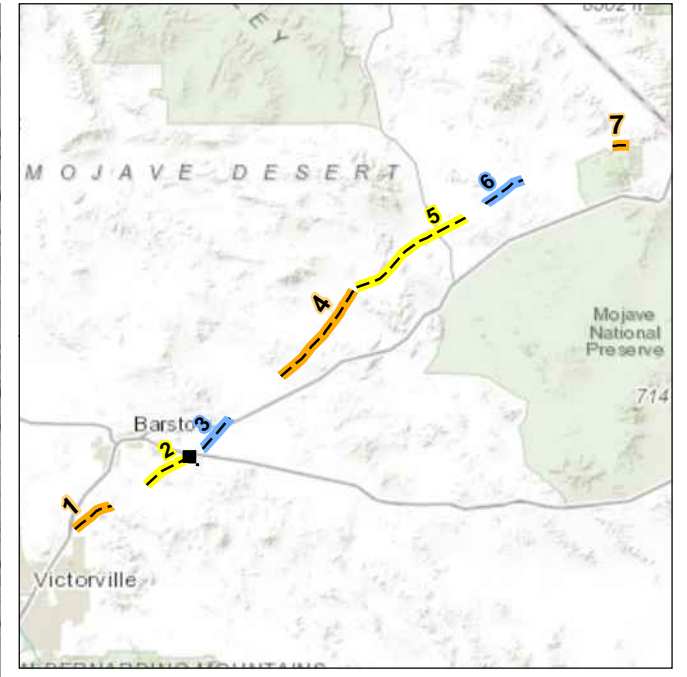
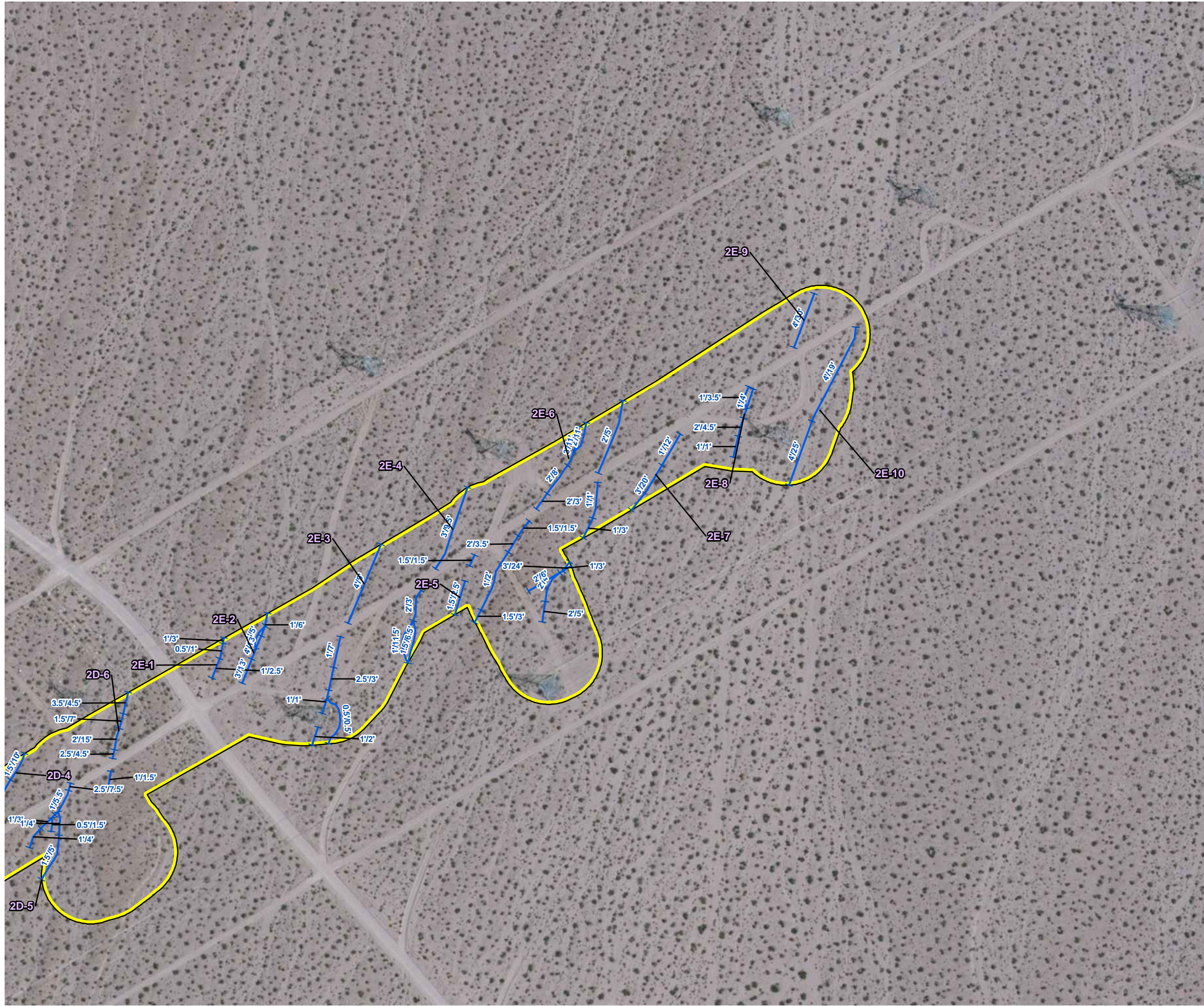
Exhibit 6 Jurisdictional Resources Segment 2d





Path 46 Transmission Line Clearances Project

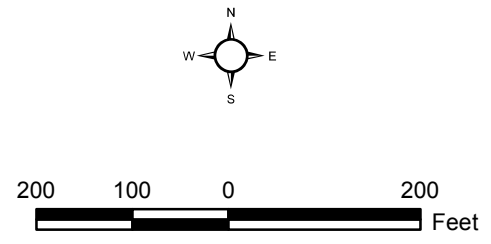
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-  Survey Area
- Jurisdictional Resources**
-  Centerline (OHWM/TOB width – feet)
-  Ordinary High Water Mark (OHWM) Extent
-  Top of Bank (TOB) Extent



Aerial Source: ESRI, NAIP 2014

PSOMAS

Exhibit 6

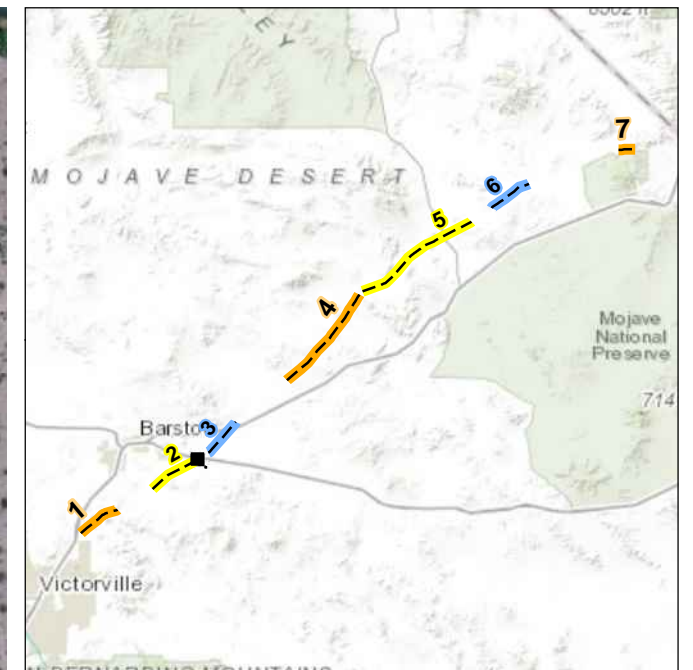
Jurisdictional Resources





Segment 2e

Path 46 Transmission Line Clearances Project

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-  Survey Area
- Jurisdictional Resources**
-  Centerline (OHWM/TOB width – feet)
-  Ordinary High Water Mark (OHWM) Extent
-  Top of Bank (TOB) Extent



Aerial Source: ESRI, NAIP 2014

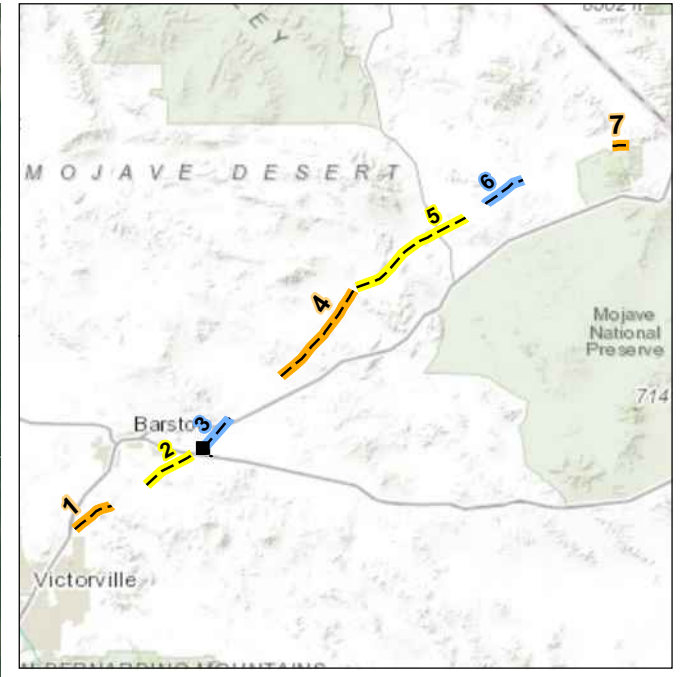


PSOMAS

Exhibit 6
Jurisdictional Resources
Segment 2f

Path 46 Transmission Line Clearances Project

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- Survey Area
- Jurisdictional Resources**
- Centerline (OHWM/TOB width – feet)
- Ordinary High Water Mark (OHWM) Extent
- Top of Bank (TOB) Extent



Aerial Source: ESRI, NAIP 2014

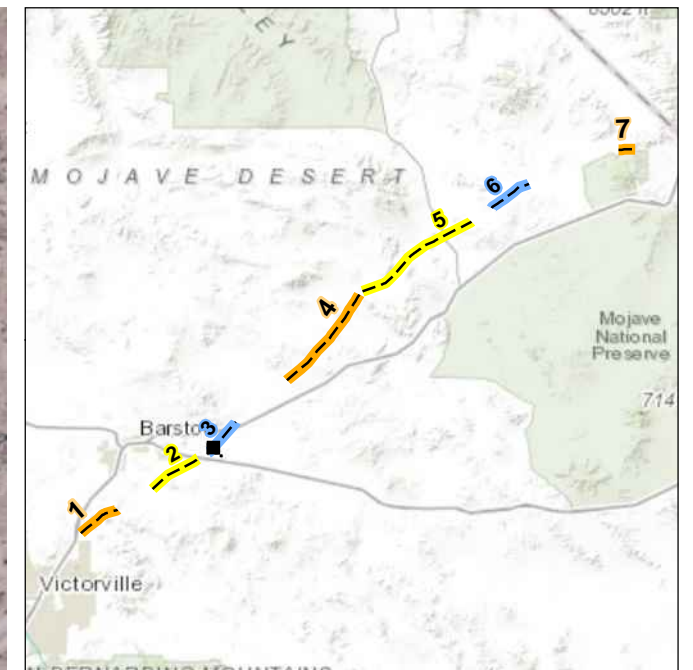
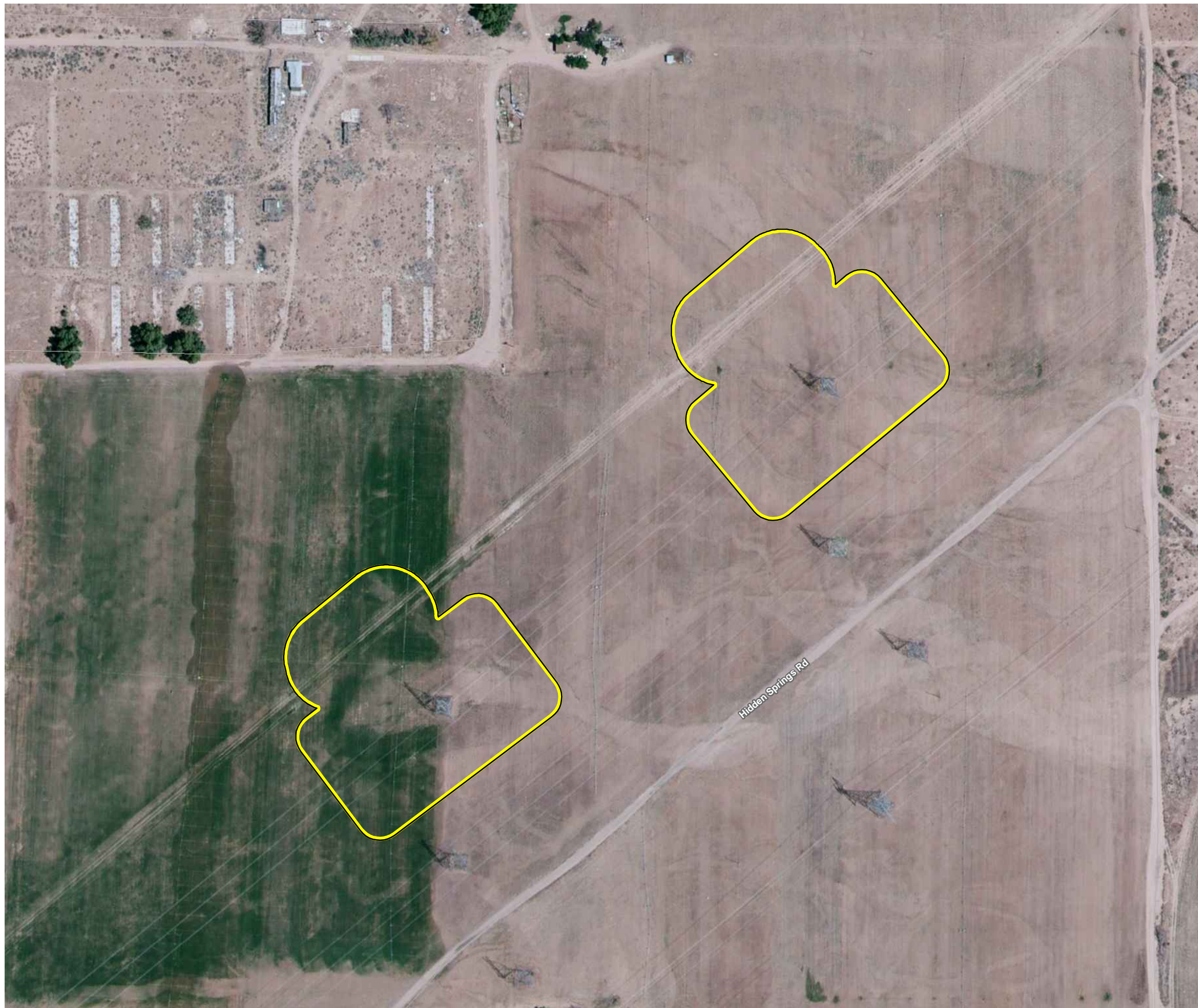






Exhibit 6
Jurisdictional Resources
Segment 3a

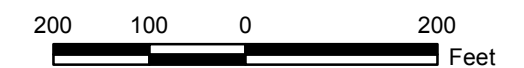
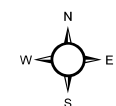
Path 46 Transmission Line Clearances Project

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-  Survey Area
- Jurisdictional Resources**
-  Centerline (OHWM/TOB width – feet)
-  Ordinary High Water Mark (OHWM) Extent
-  Top of Bank (TOB) Extent



Aerial Source: ESRI, NAIP 2014

PSOMAS

Exhibit 6

Jurisdictional Resources

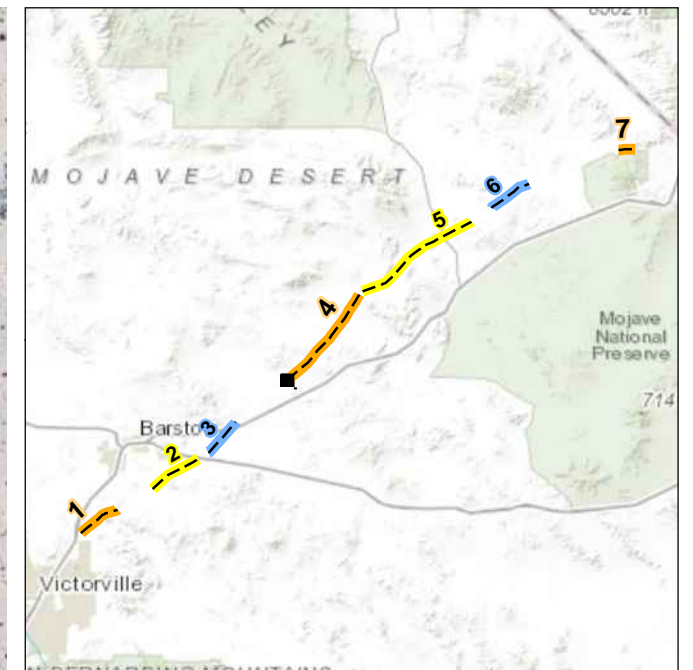
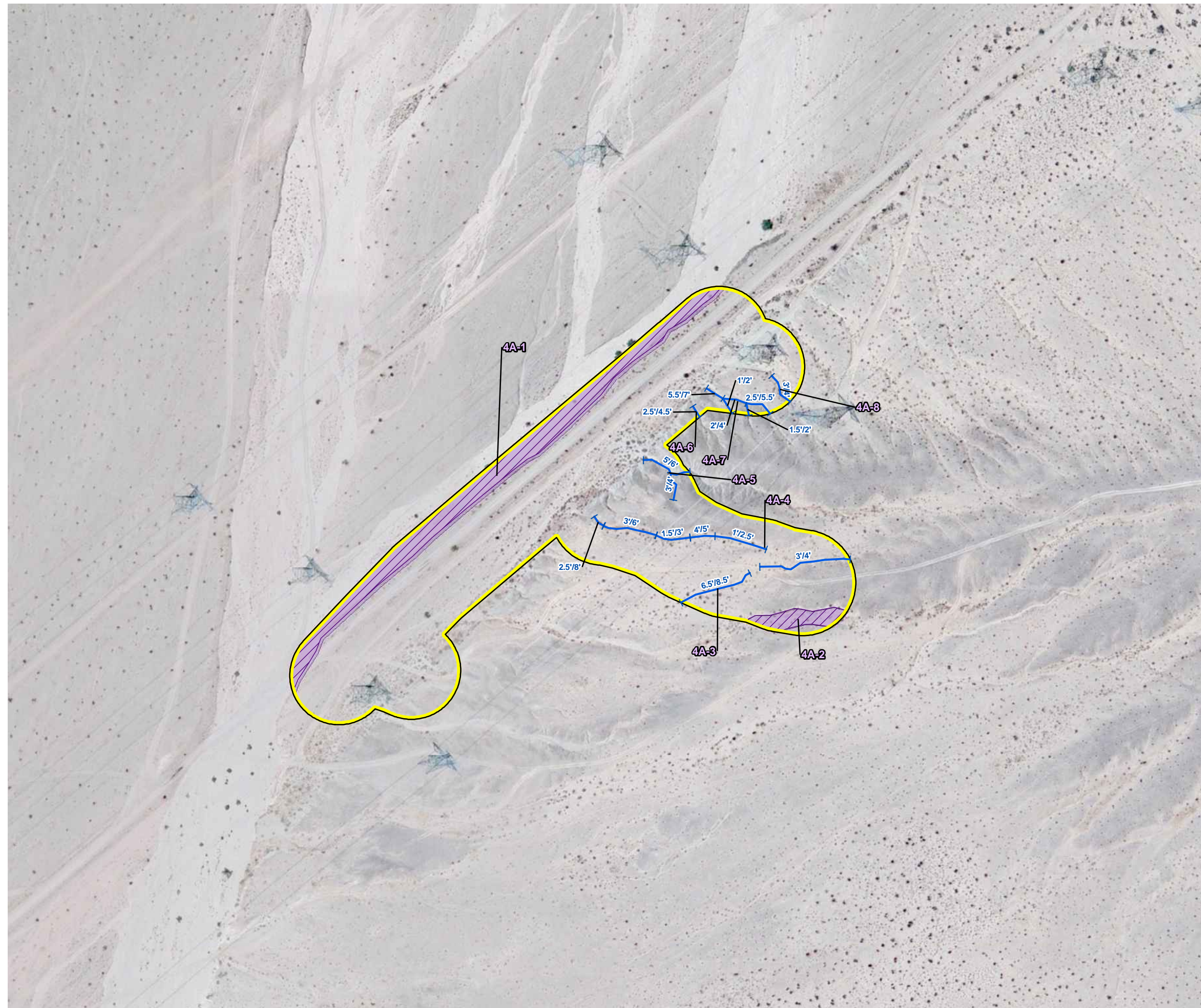
Segment 3b





Path 46 Transmission Line Clearances Project

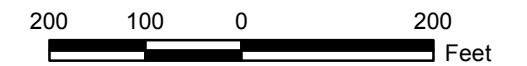
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-  Survey Area
- Jurisdictional Resources**
-  Centerline (OHWM/TOB width – feet)
-  Ordinary High Water Mark (OHWM) Extent
-  Top of Bank (TOB) Extent



Aerial Source: ESRI, NAIP 2014

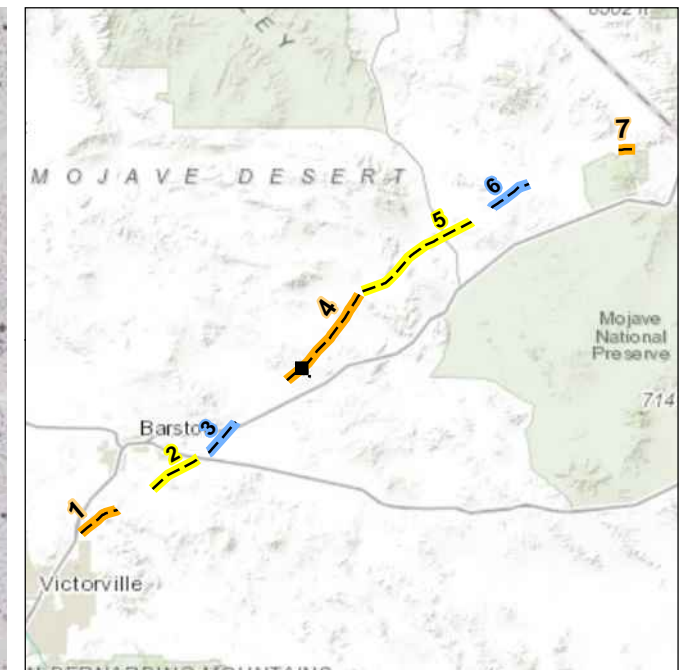






Exhibit 6
Jurisdictional Resources
Segment 4a

Path 46 Transmission Line Clearances Project

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-  Survey Area
- Jurisdictional Resources**
-  Centerline (OHWM/TOB width – feet)
-  Ordinary High Water Mark (OHWM) Extent
-  Top of Bank (TOB) Extent



Aerial Source: ESRI, NAIP 2014



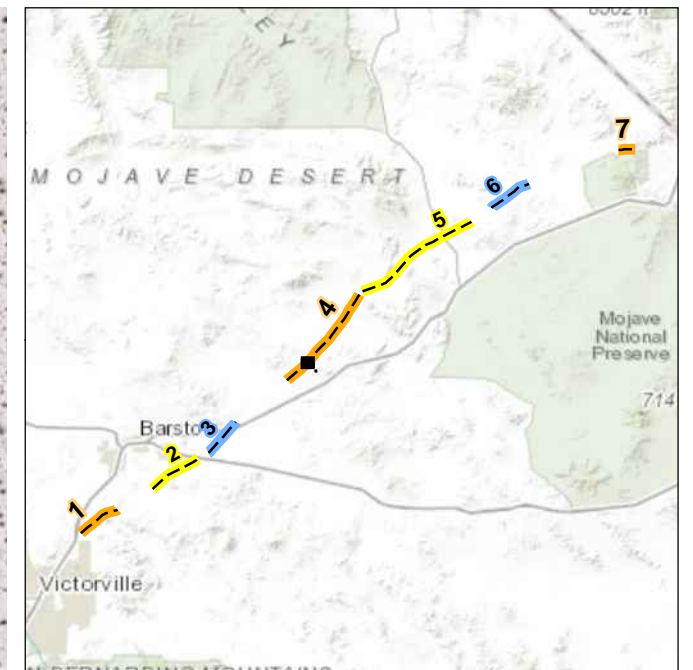
PSOMAS

Exhibit 6
Jurisdictional Resources
Segment 4b

Path 46 Transmission Line Clearances Project

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- Survey Area
- Jurisdictional Resources**
- Centerline (OHWM/TOB width – feet)
- Ordinary High Water Mark (OHWM) Extent
- Top of Bank (TOB) Extent



Aerial Source: ESRI, NAIP 2014



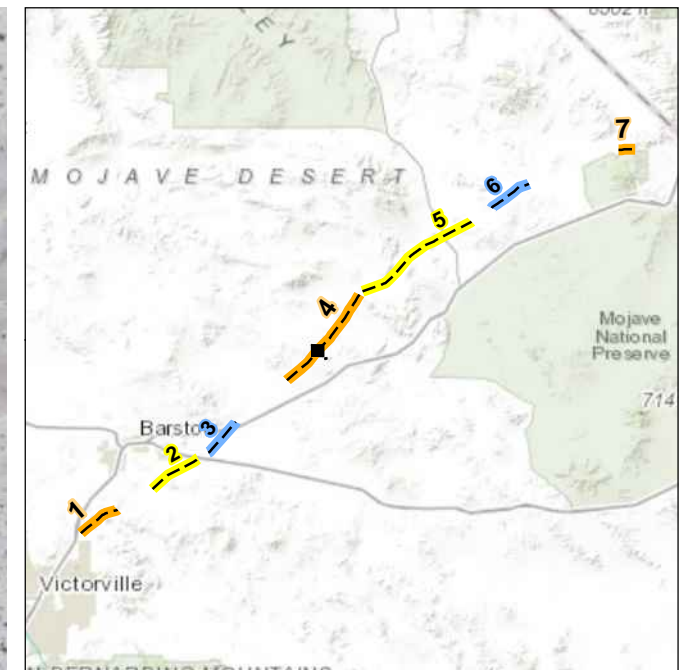
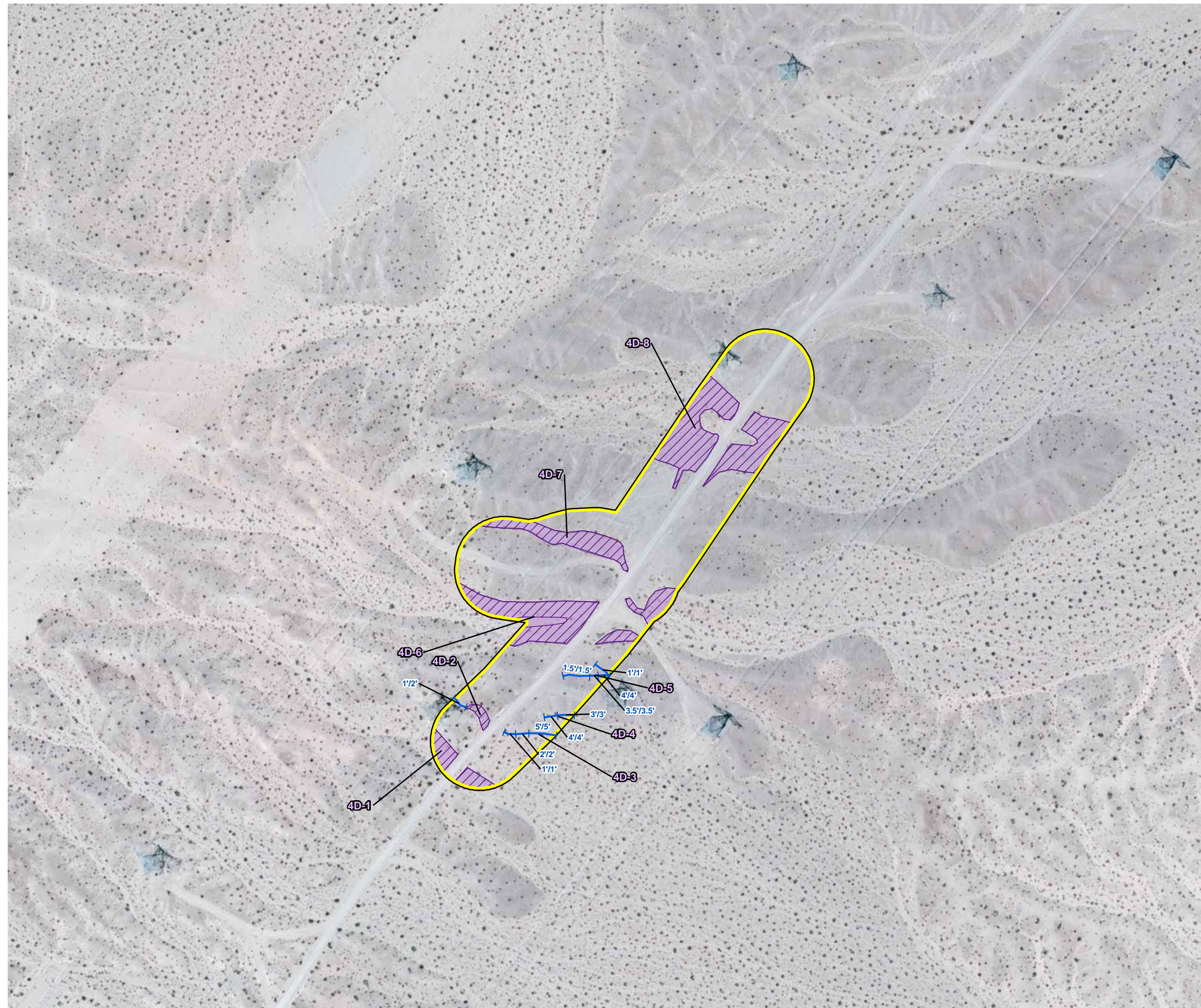
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Exhibit 6
Jurisdictional Resources
Segment 4c

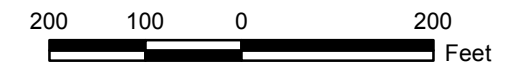
Path 46 Transmission Line Clearances Project

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-  Survey Area
- Jurisdictional Resources**
-  Centerline (OHWM/TOB width – feet)
-  Ordinary High Water Mark (OHWM) Extent
-  Top of Bank (TOB) Extent



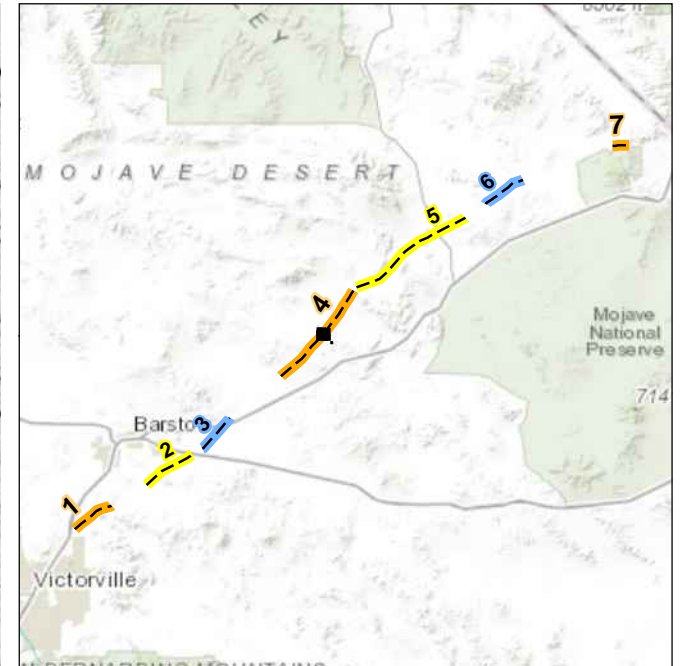
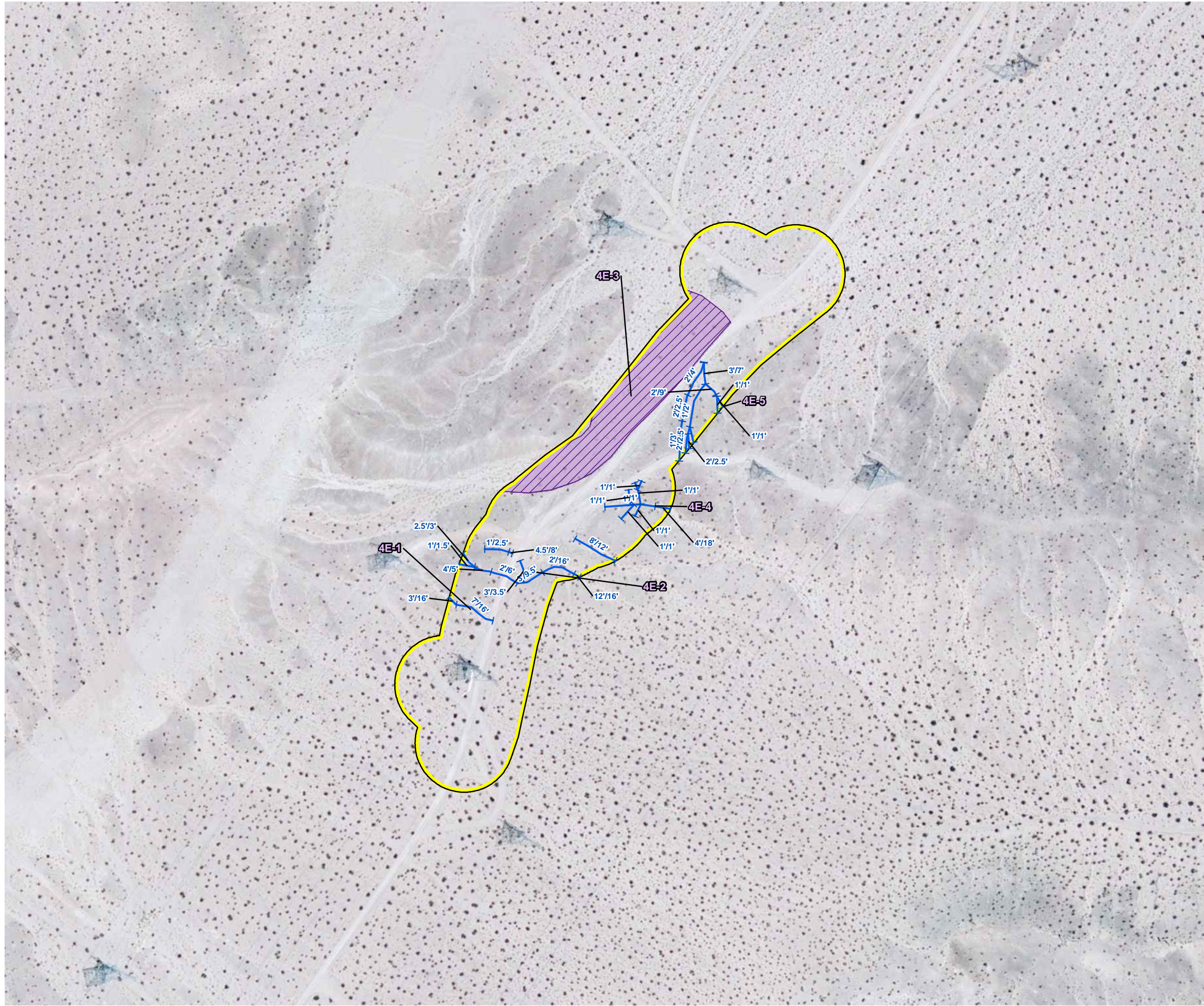
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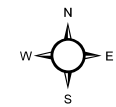
Exhibit 6
Jurisdictional Resources
Segment 4d

Path 46 Transmission Line Clearances Project

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- Survey Area
- Jurisdictional Resources**
- Centerline (OHWM/TOB width – feet)
- Ordinary High Water Mark (OHWM) Extent
- Top of Bank (TOB) Extent



Aerial Source: ESRI, NAIP 2014



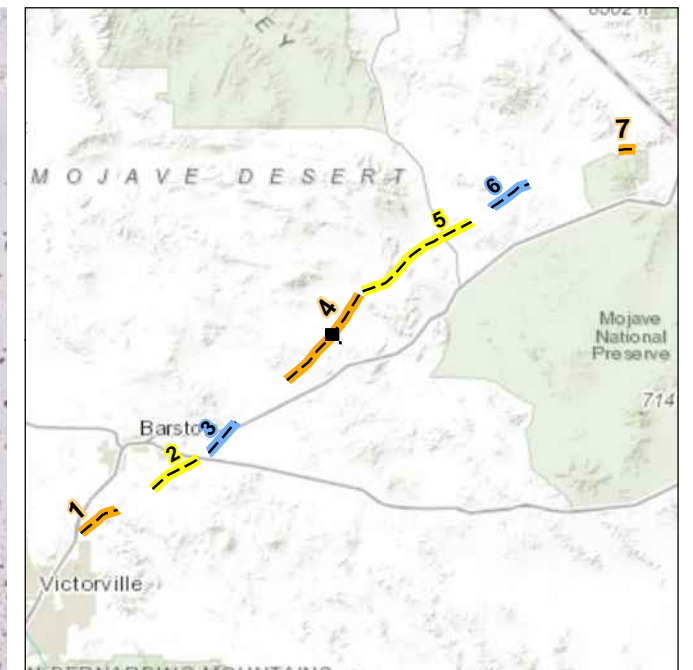
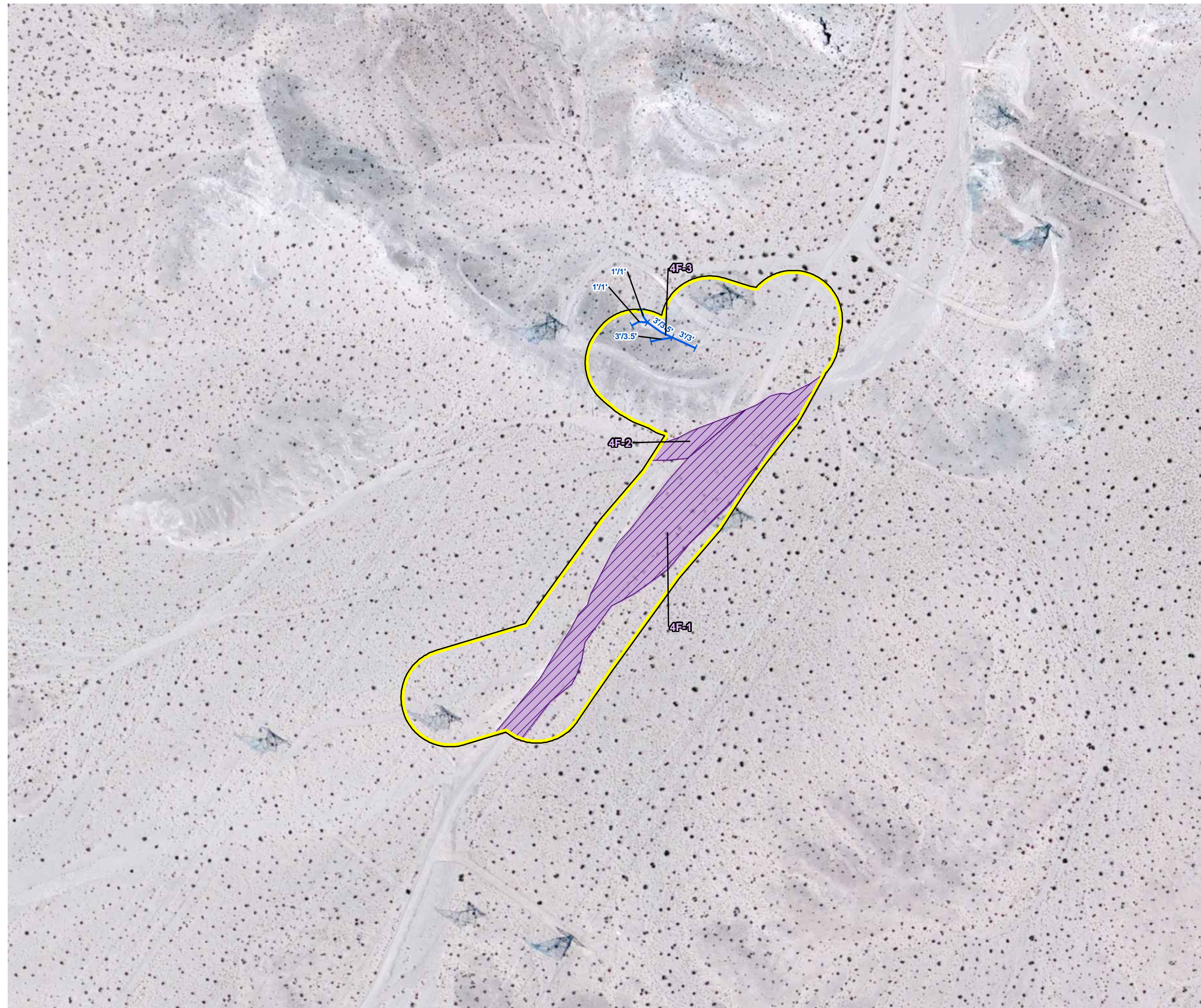
Exhibit 6 Jurisdictional Resources Segment 4e





Path 46 Transmission Line Clearances Project

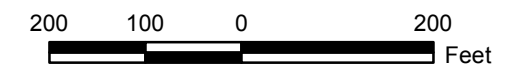
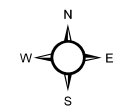
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-  Survey Area
- Jurisdictional Resources**
-  Centerline (OHWM/TOB width – feet)
-  Ordinary High Water Mark (OHWM) Extent
-  Top of Bank (TOB) Extent



Aerial Source: ESRI, NAIP 2014

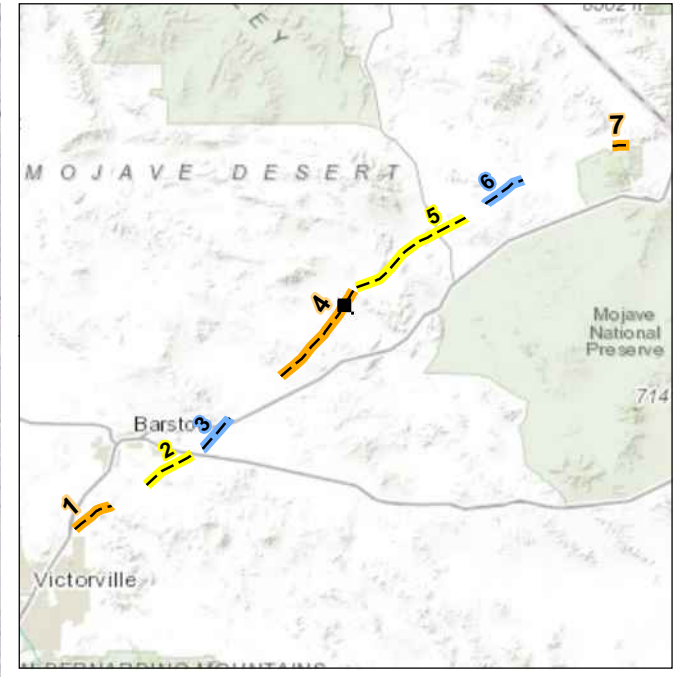
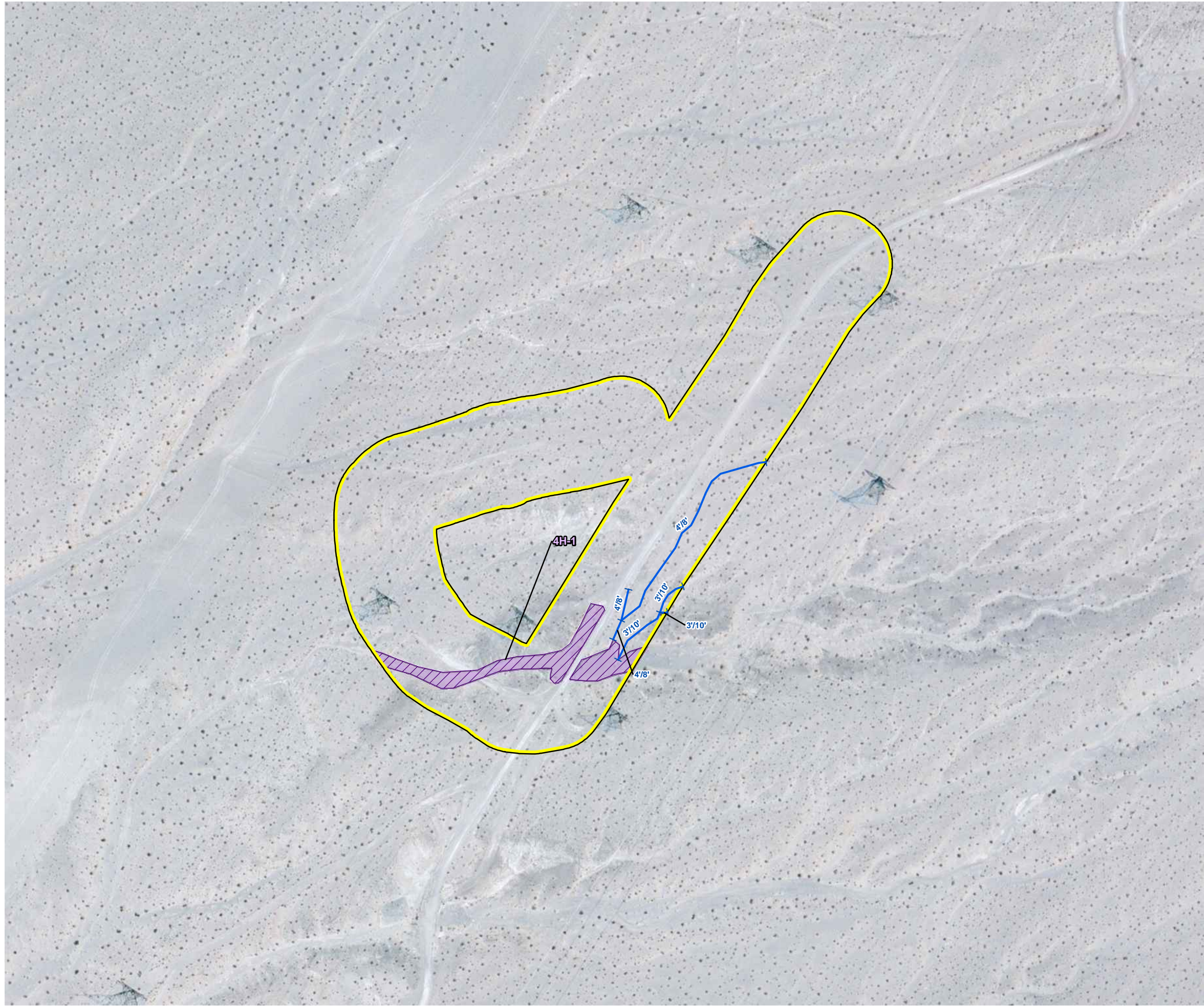






Exhibit 6
Jurisdictional Resources
Segment 4f

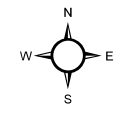
Path 46 Transmission Line Clearances Project

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-  Survey Area
- Jurisdictional Resources**
-  Centerline (OHWM/TOB width – feet)
-  Ordinary High Water Mark (OHWM) Extent
-  Top of Bank (TOB) Extent



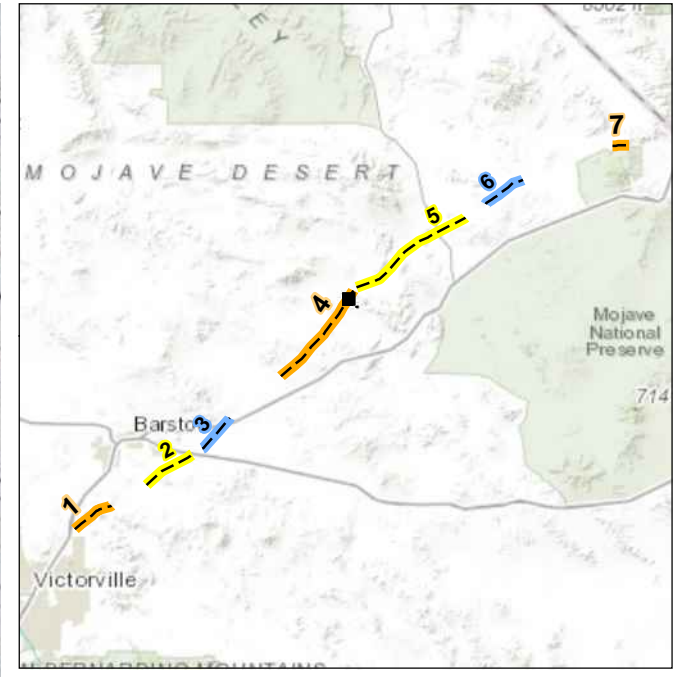
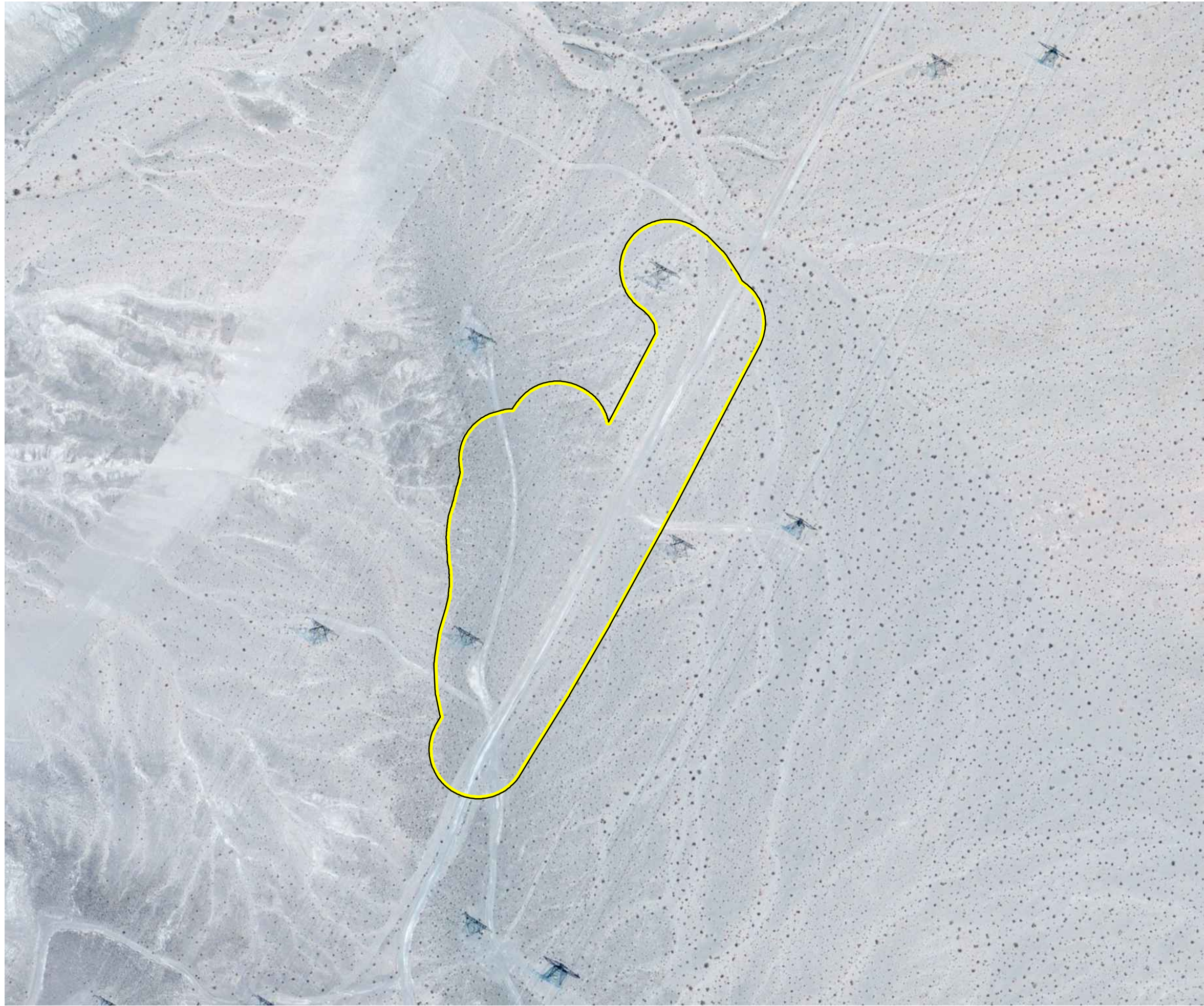
Aerial Source: ESRI, NAIP 2014







Exhibit 6
Jurisdictional Resources
Segment 4h

Path 46 Transmission Line Clearances Project

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-  Survey Area
- Jurisdictional Resources**
-  Centerline (OHWM/TOB width – feet)
-  Ordinary High Water Mark (OHWM) Extent
-  Top of Bank (TOB) Extent



Aerial Source: ESRI, NAIP 2014



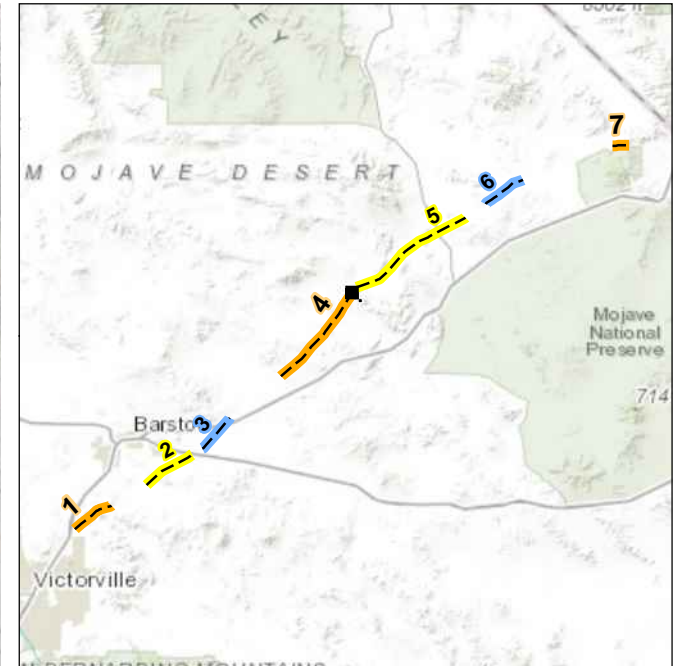
Exhibit 6
Jurisdictional Resources
Segment 4i

Path 46 Transmission Line Clearances Project

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- Survey Area
- Jurisdictional Resources**
- Centerline (OHWM/TOB width – feet)
- Ordinary High Water Mark (OHWM) Extent
- Top of Bank (TOB) Extent



Aerial Source: ESRI, NAIP 2014

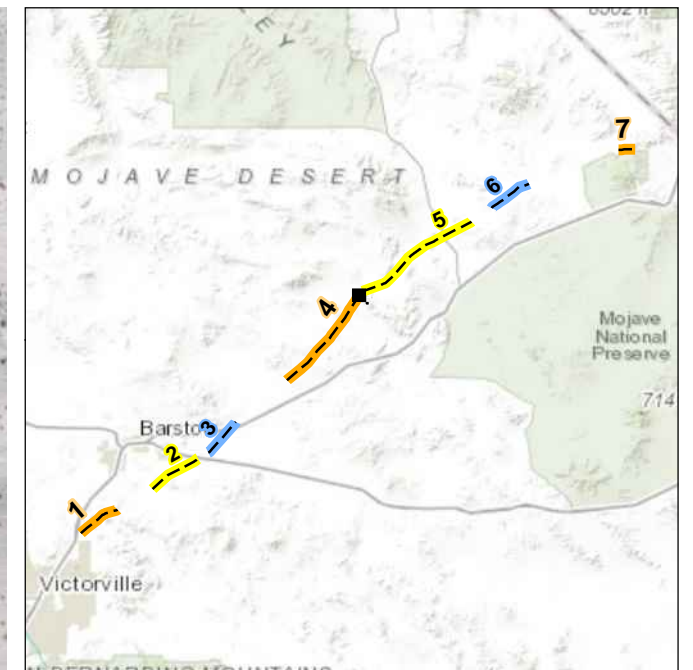
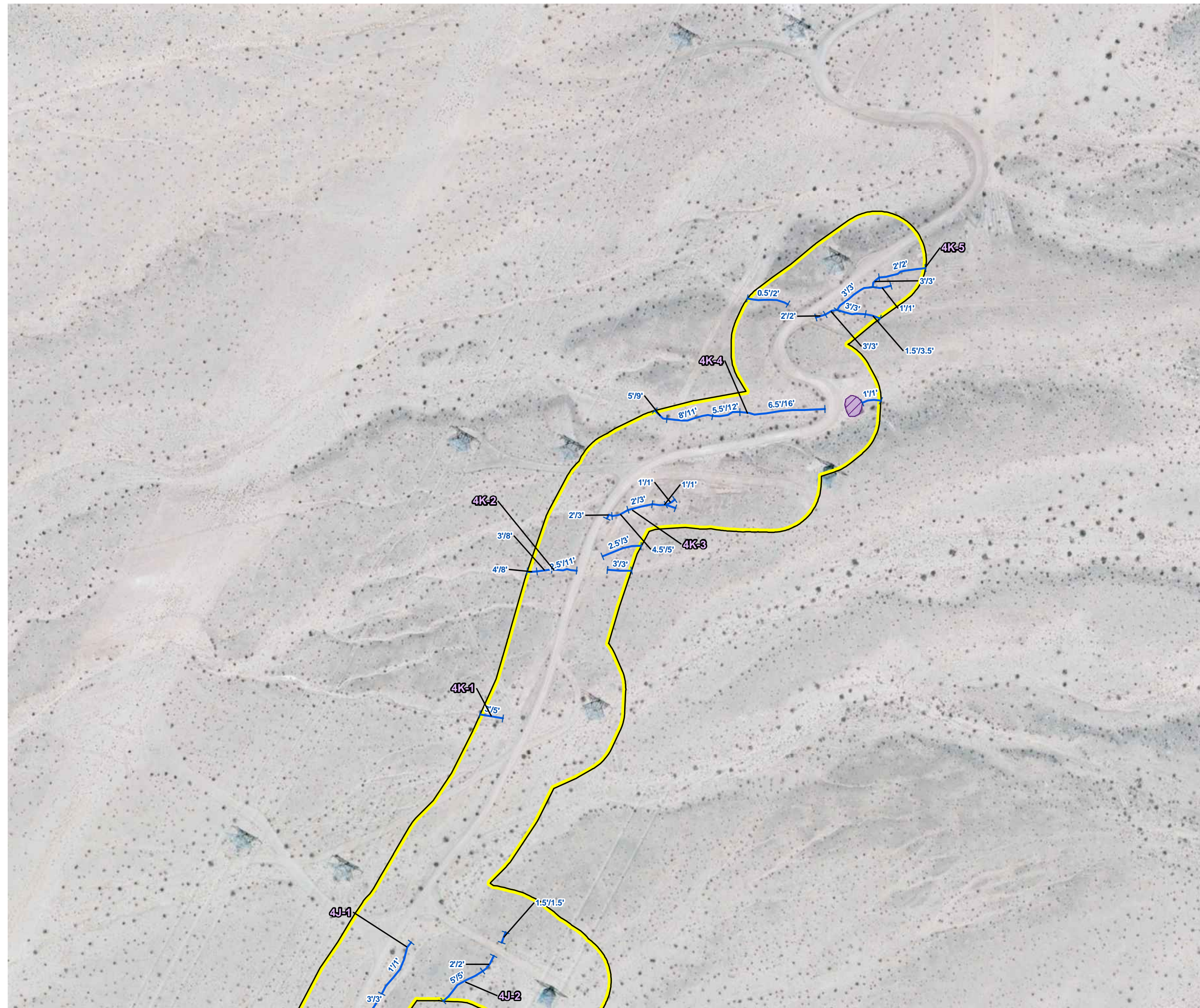


Exhibit 6
Jurisdictional Resources
Segment 4j

Path 46 Transmission Line Clearances Project

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- Survey Area
- Jurisdictional Resources**
- Centerline (OHWM/TOB width – feet)
- Ordinary High Water Mark (OHWM) Extent
- Top of Bank (TOB) Extent



Aerial Source: ESRI, NAIP 2014

PSOMAS

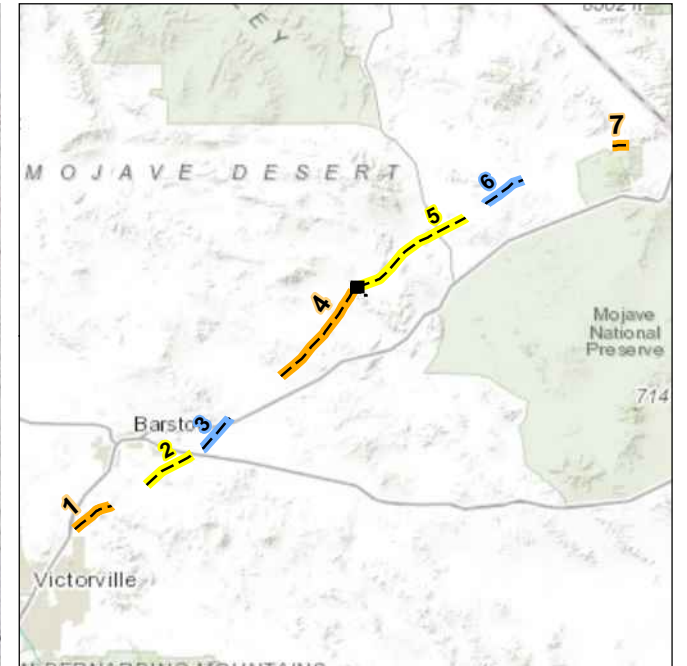
Exhibit 6





Jurisdictional Resources

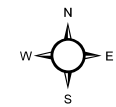
Segment 4k

Path 46 Transmission Line Clearances Project

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-  Survey Area
- Jurisdictional Resources**
-  Centerline (OHWM/TOB width – feet)
-  Ordinary High Water Mark (OHWM) Extent
-  Top of Bank (TOB) Extent



Aerial Source: ESRI, NAIP 2014



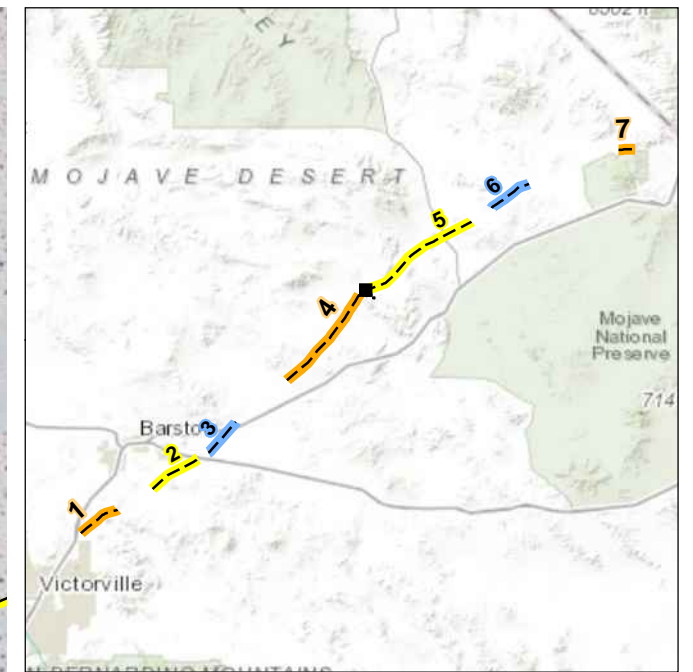
Exhibit 6 Jurisdictional Resources Segment 5a





Path 46 Transmission Line Clearances Project

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-  Survey Area
- Jurisdictional Resources**
-  Centerline (OHWM/TOB width – feet)
-  Ordinary High Water Mark (OHWM) Extent
-  Top of Bank (TOB) Extent



Aerial Source: ESRI, NAIP 2014



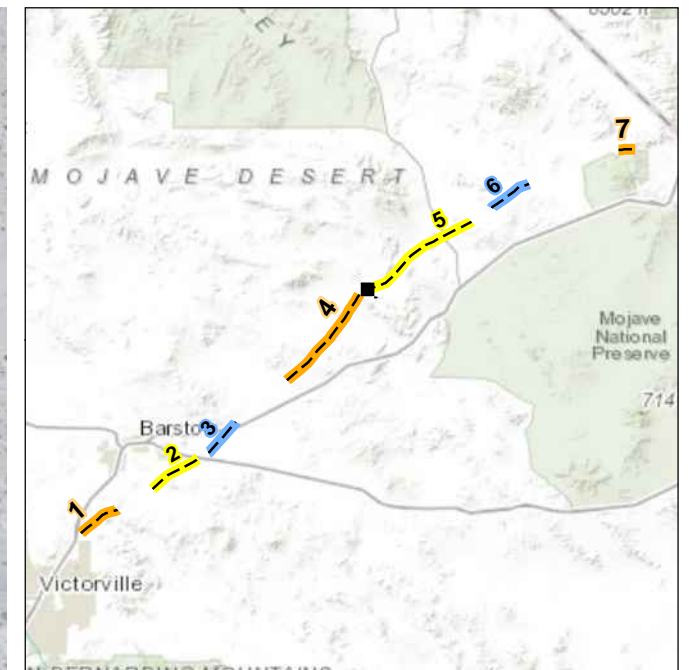
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Exhibit 6
Jurisdictional Resources
Segment 5b

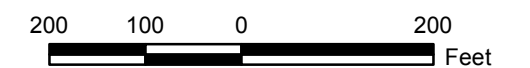
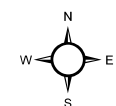
Path 46 Transmission Line Clearances Project

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-  Survey Area
- Jurisdictional Resources**
-  Centerline (OHWM/TOB width – feet)
-  Ordinary High Water Mark (OHWM) Extent
-  Top of Bank (TOB) Extent



Aerial Source: ESRI, NAIP 2014

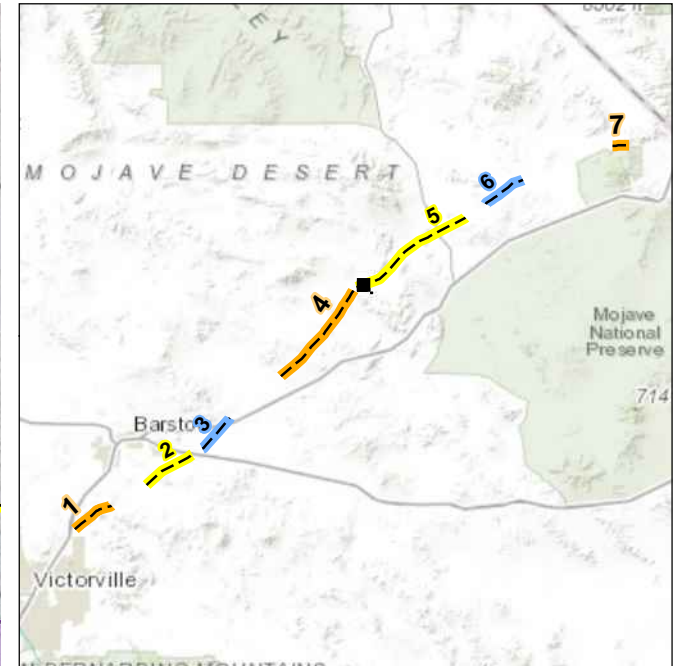
PSOMAS

Exhibit 6
Jurisdictional Resources
Segment 5c

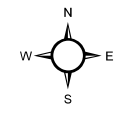
Path 46 Transmission Line Clearances Project

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- Survey Area
- Jurisdictional Resources**
- Centerline (OHWM/TOB width – feet)
- Ordinary High Water Mark (OHWM) Extent
- Top of Bank (TOB) Extent



Aerial Source: ESRI, NAIP 2014

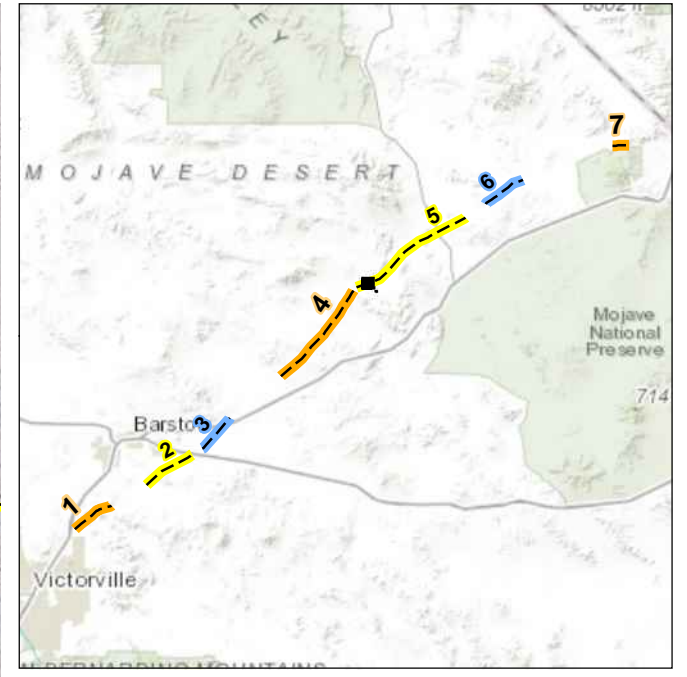


Exhibit 6
Jurisdictional Resources
Segment 5d

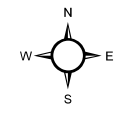
Path 46 Transmission Line Clearances Project

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- Survey Area
- Jurisdictional Resources**
- Centerline (OHWM/TOB width – feet)
- Ordinary High Water Mark (OHWM) Extent
- Top of Bank (TOB) Extent



Aerial Source: ESRI, NAIP 2014

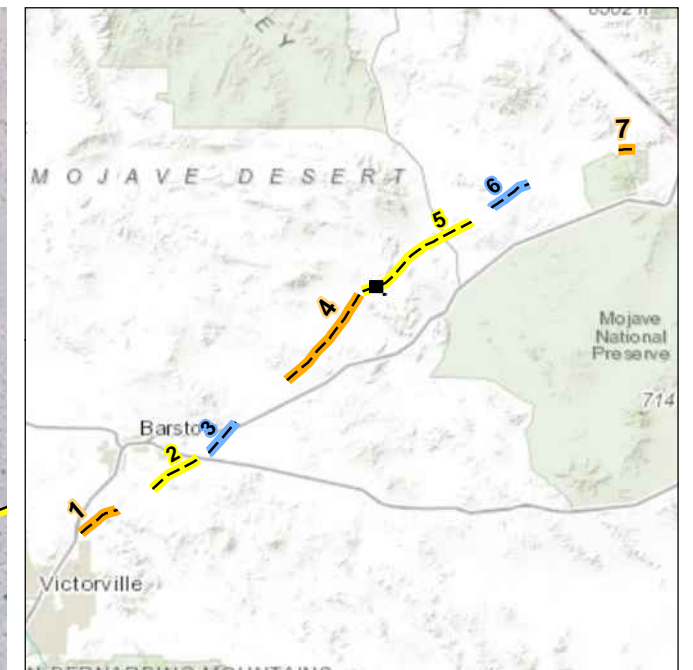


Exhibit 6
Jurisdictional Resources
Segment 5f

Path 46 Transmission Line Clearances Project

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- Survey Area
- Jurisdictional Resources**
- Centerline (OHWM/TOB width – feet)
- Ordinary High Water Mark (OHWM) Extent
- Top of Bank (TOB) Extent



Aerial Source: ESRI, NAIP 2014

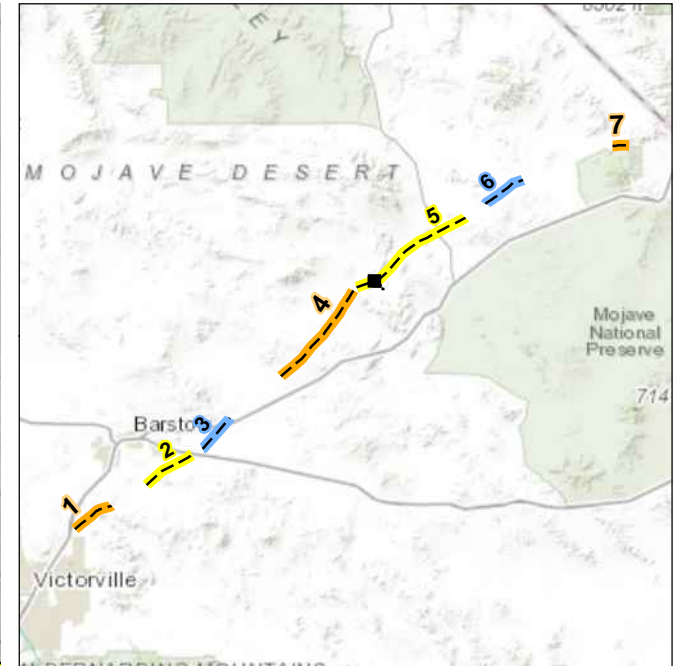


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Exhibit 6
Jurisdictional Resources
Segment 5g

Path 46 Transmission Line Clearances Project

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- Survey Area
- Jurisdictional Resources**
- Centerline (OHWM/TOB width – feet)
- Ordinary High Water Mark (OHWM) Extent
- Top of Bank (TOB) Extent



Aerial Source: ESRI, NAIP 2014

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Exhibit 6

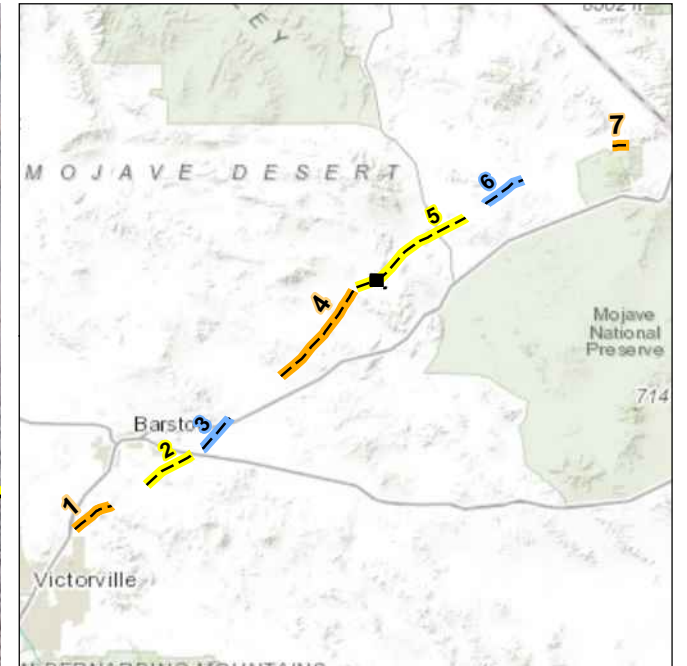
Jurisdictional Resources

Segment 5i

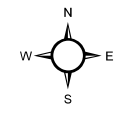
Path 46 Transmission Line Clearances Project

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- Survey Area
- Jurisdictional Resources**
- Centerline (OHWM/TOB width – feet)
- Ordinary High Water Mark (OHWM) Extent
- Top of Bank (TOB) Extent



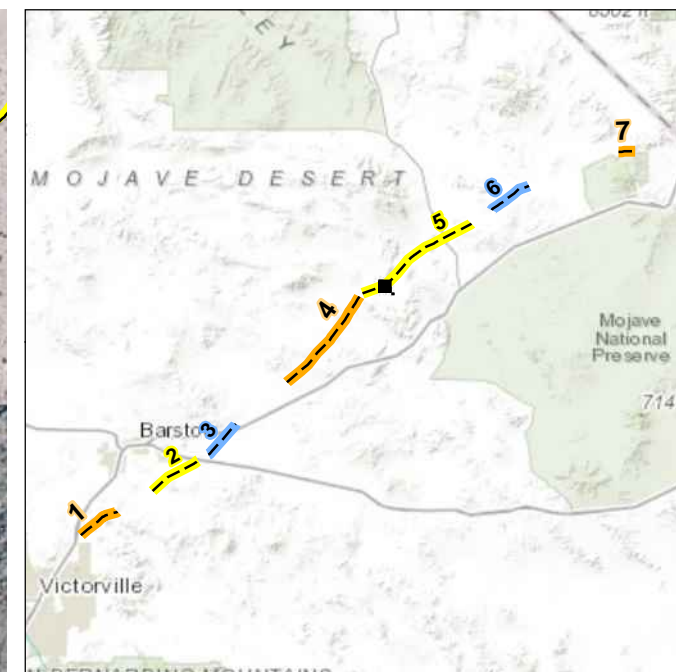
Aerial Source: ESRI, NAIP 2014



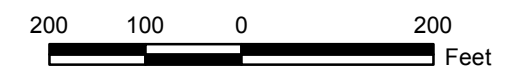
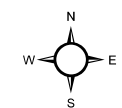
Exhibit 6
Jurisdictional Resources
Segment 5j

Path 46 Transmission Line Clearances Project

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- Survey Area
- Jurisdictional Resources**
- Centerline (OHWM/TOB width – feet)
- Ordinary High Water Mark (OHWM) Extent
- Top of Bank (TOB) Extent



Aerial Source: ESRI, NAIP 2014

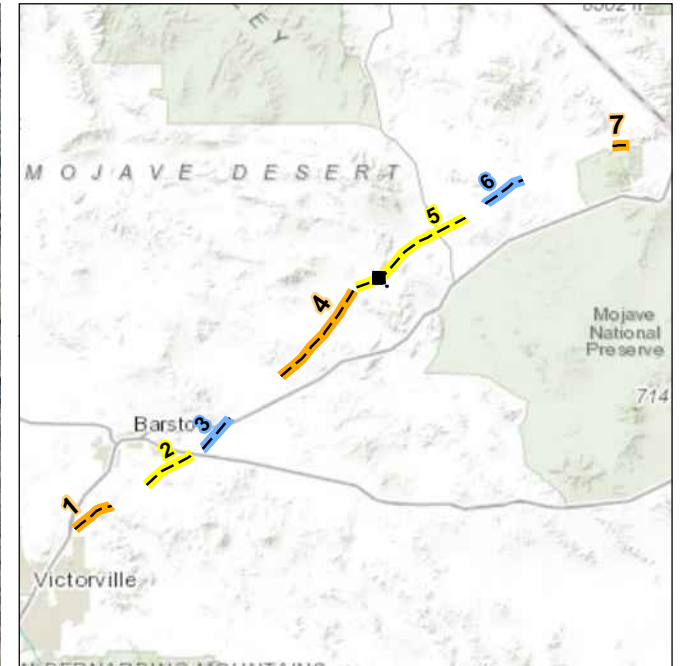


Exhibit 6 Jurisdictional Resources Segment 5k

Path 46 Transmission Line Clearances Project

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- Survey Area
- Jurisdictional Resources**
- Centerline (OHWM/TOB width – feet)
- Ordinary High Water Mark (OHWM) Extent
- Top of Bank (TOB) Extent



Aerial Source: ESRI, NAIP 2014

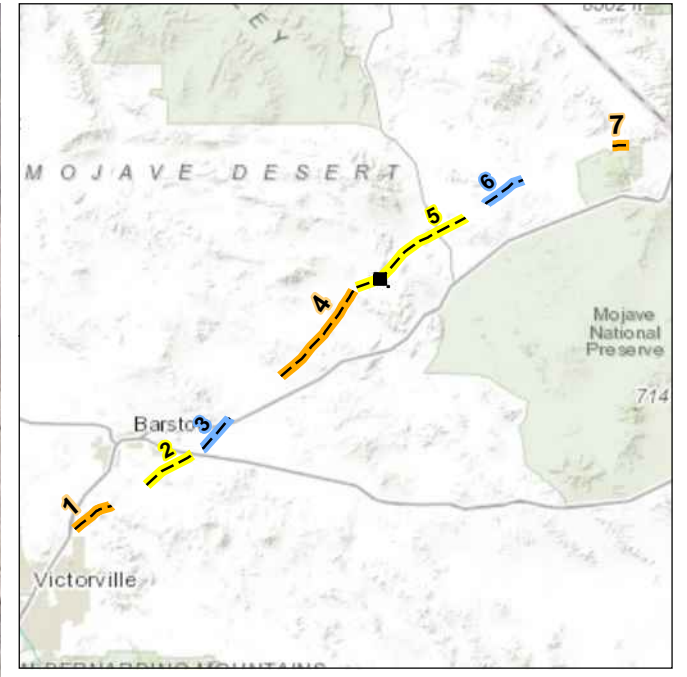


Exhibit 6
Jurisdictional Resources
Segment 5I

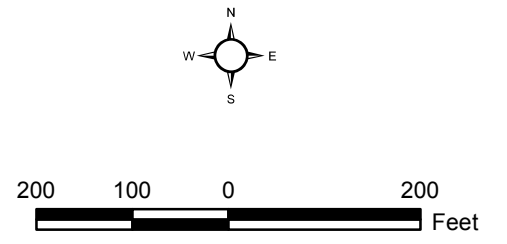
Path 46 Transmission Line Clearances Project

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- Survey Area
- Jurisdictional Resources**
- Centerline (OHWM/TOB width – feet)
- Ordinary High Water Mark (OHWM) Extent
- Top of Bank (TOB) Extent



Aerial Source: ESRI, NAIP 2014



PSOMAS

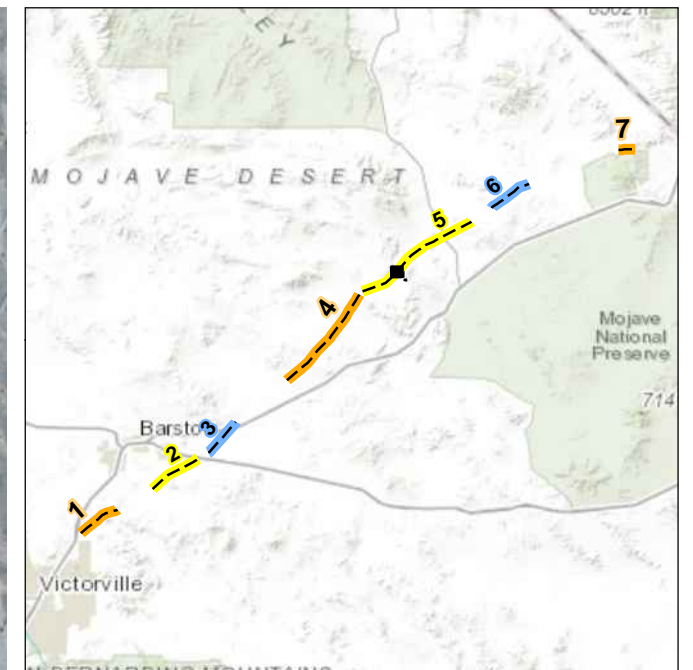
Exhibit 6
Jurisdictional Resources
Segment 5m





Path 46 Transmission Line Clearances Project

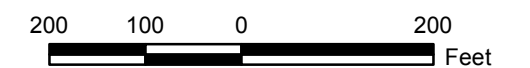
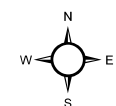
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-  Survey Area
- Jurisdictional Resources**
-  Centerline (OHWM/TOB width – feet)
-  Ordinary High Water Mark (OHWM) Extent
-  Top of Bank (TOB) Extent



Aerial Source: ESRI, NAIP 2014


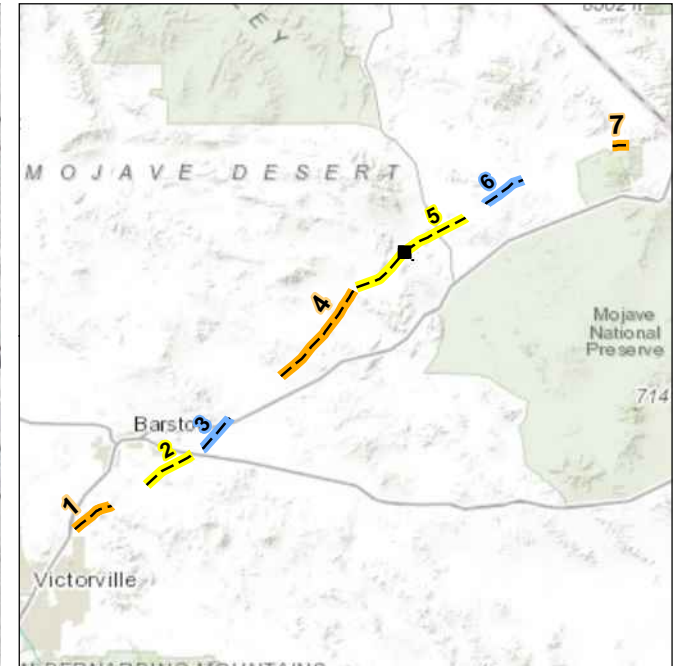






Exhibit 6
Jurisdictional Resources
Segment 5n

Path 46 Transmission Line Clearances Project

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-  Survey Area
- Jurisdictional Resources**
-  Centerline (OHWM/TOB width – feet)
-  Ordinary High Water Mark (OHWM) Extent
-  Top of Bank (TOB) Extent



Aerial Source: ESRI, NAIP 2014



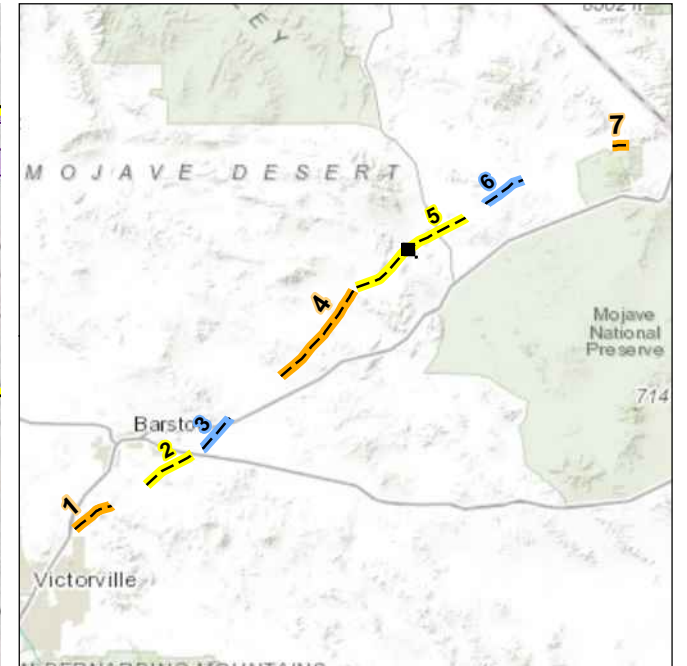
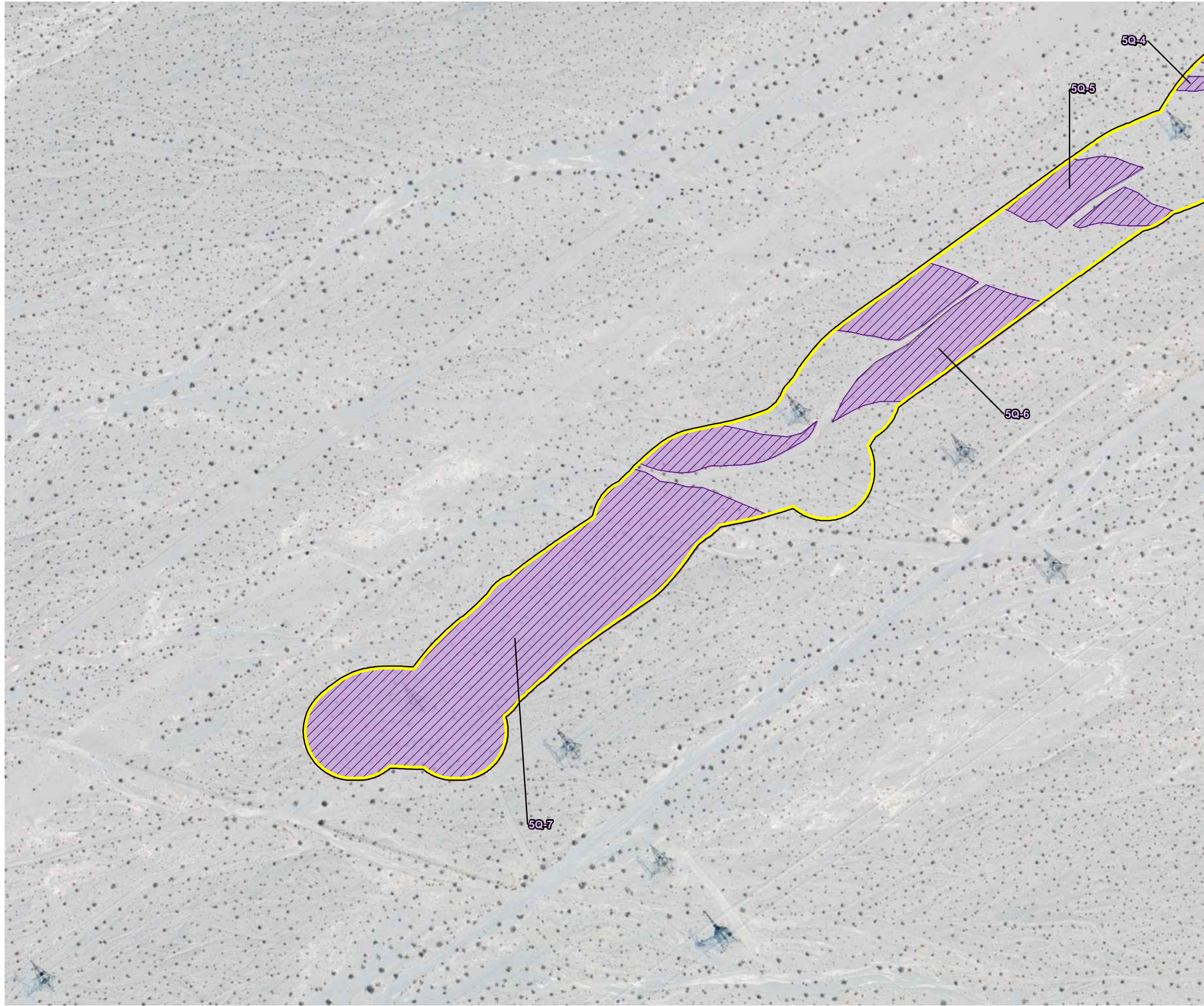
Exhibit 6
Jurisdictional Resources
Segment 50





Path 46 Transmission Line Clearances Project

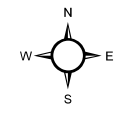
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-  Survey Area
- Jurisdictional Resources**
-  Centerline (OHWM/TOB width – feet)
-  Ordinary High Water Mark (OHWM) Extent
-  Top of Bank (TOB) Extent



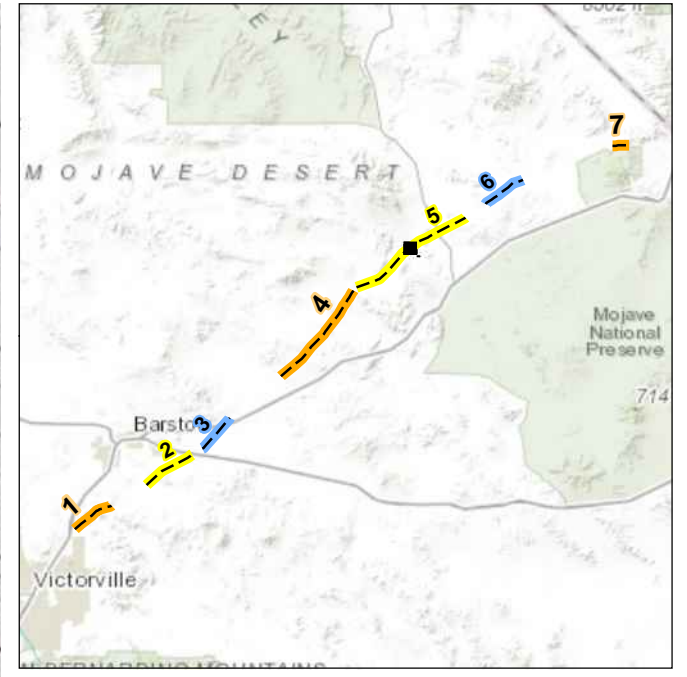
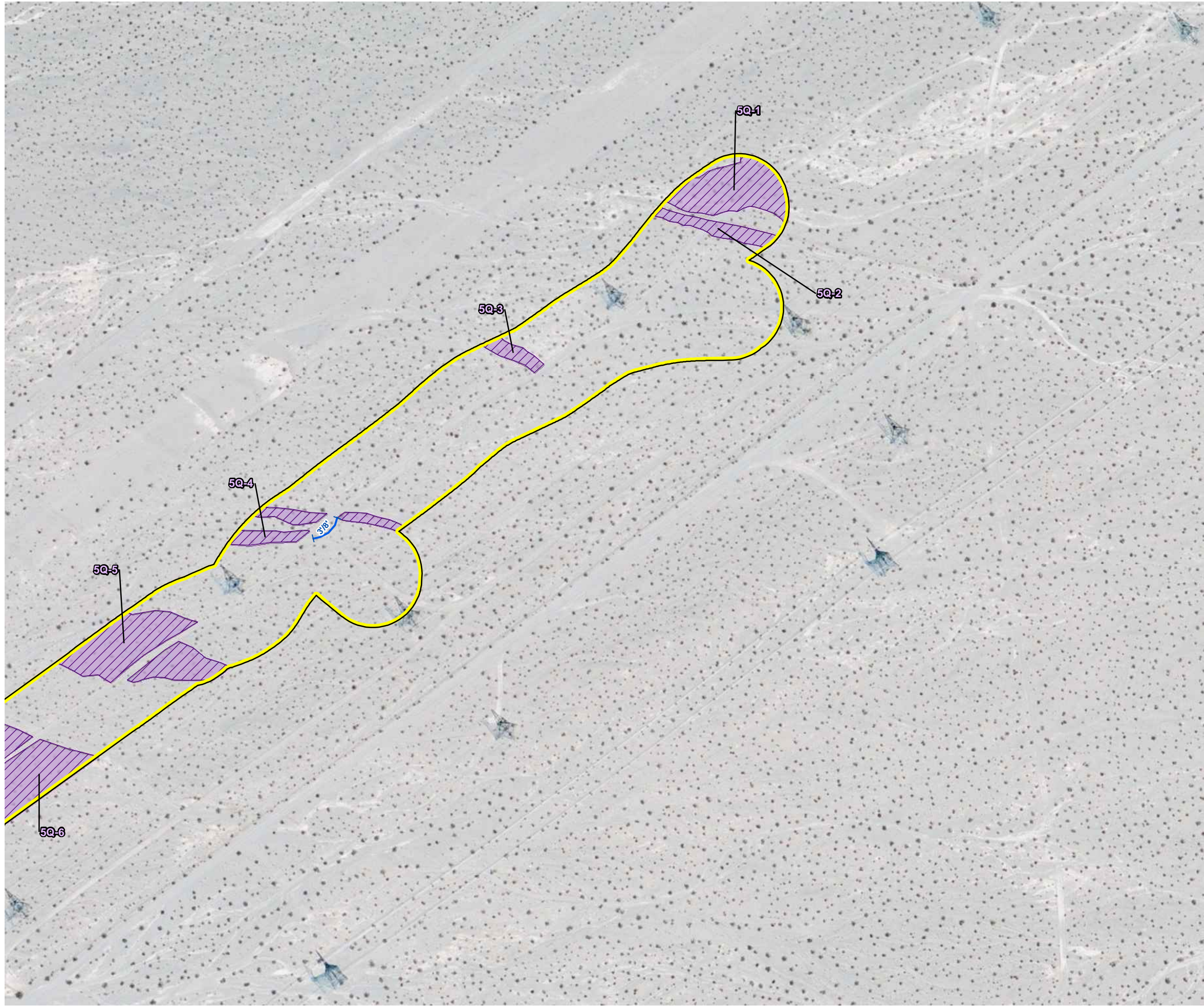
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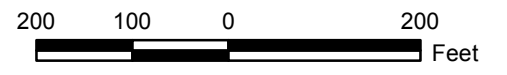
Exhibit 6
Jurisdictional Resources
Segment 5p

Path 46 Transmission Line Clearances Project

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-  Survey Area
- Jurisdictional Resources**
-  Centerline (OHWM/TOB width – feet)
-  Ordinary High Water Mark (OHWM) Extent
-  Top of Bank (TOB) Extent



Aerial Source: ESRI, NAIP 2014



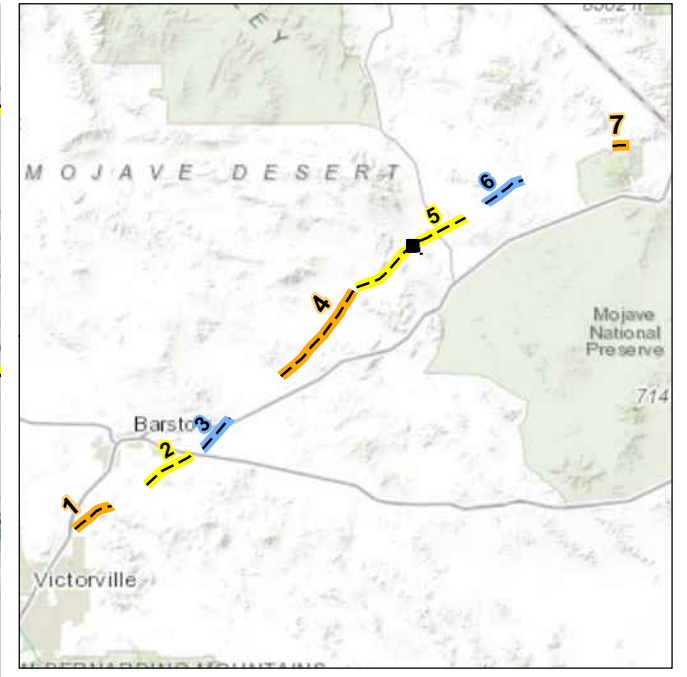
Exhibit 6
Jurisdictional Resources
Segment 5q





Path 46 Transmission Line Clearances Project

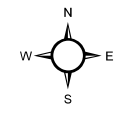
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-  Survey Area
- Jurisdictional Resources**
-  Centerline (OHWM/TOB width – feet)
-  Ordinary High Water Mark (OHWM) Extent
-  Top of Bank (TOB) Extent



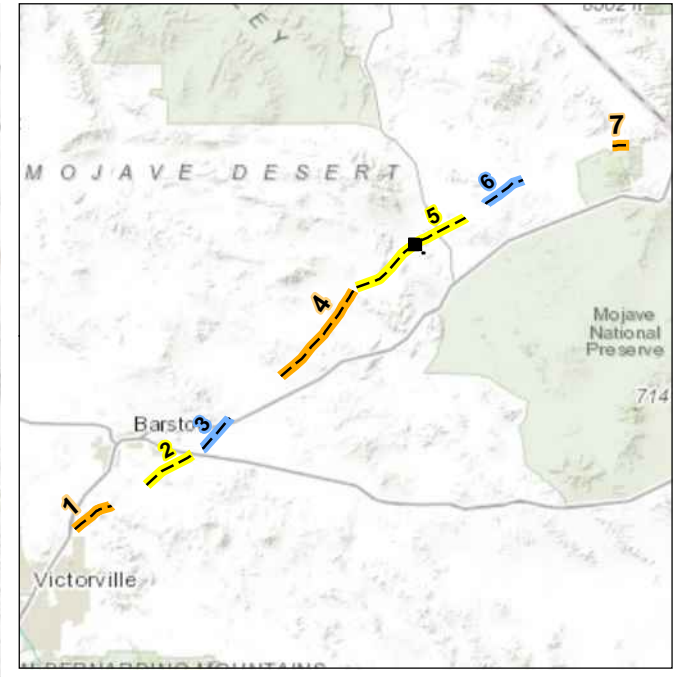
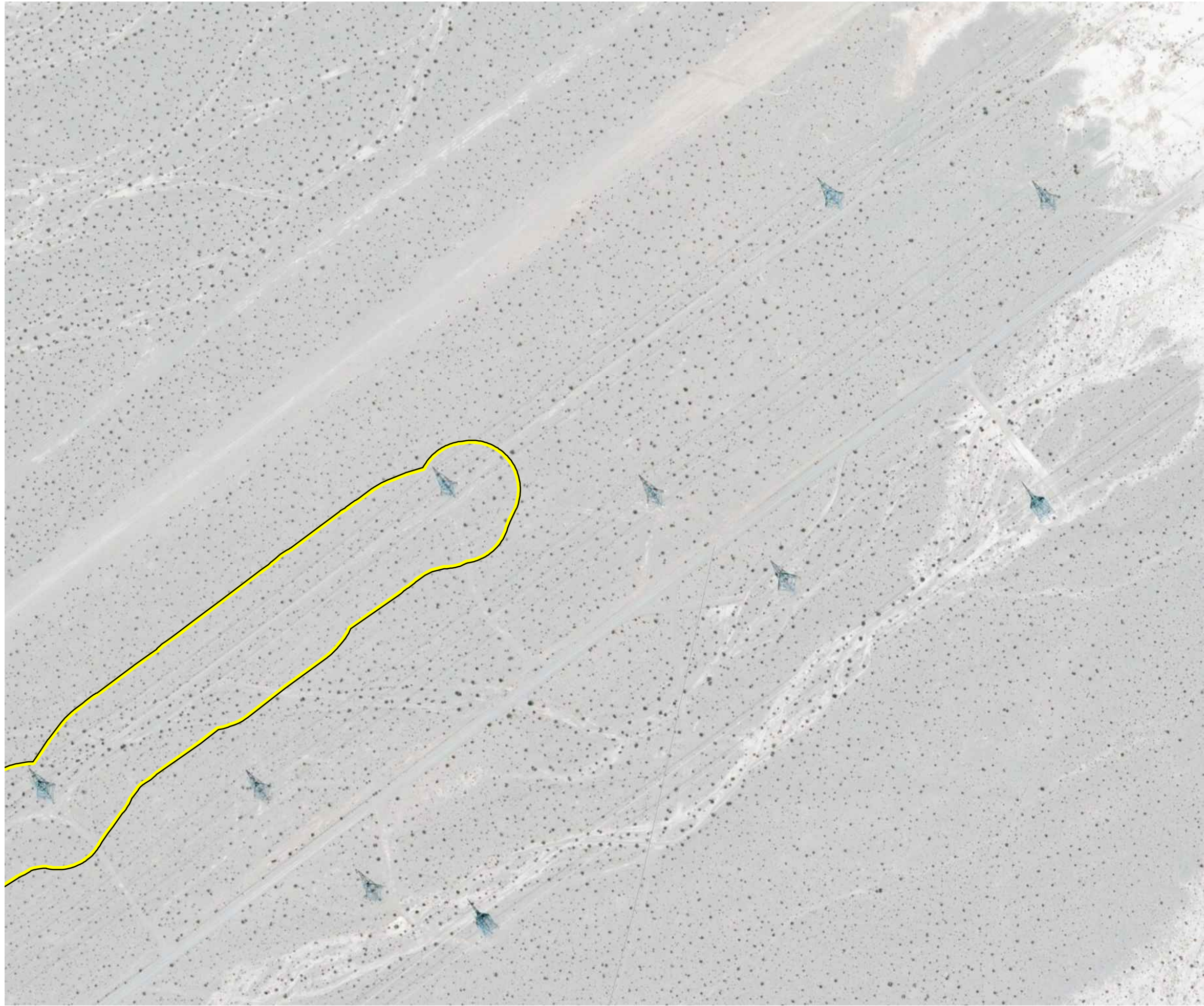
Aerial Source: ESRI, NAIP 2014







Exhibit 6
Jurisdictional Resources
Segment 5r

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-  Survey Area
- Jurisdictional Resources**
-  Centerline (OHWM/TOB width – feet)
-  Ordinary High Water Mark (OHWM) Extent
-  Top of Bank (TOB) Extent



Aerial Source: ESRI, NAIP 2014



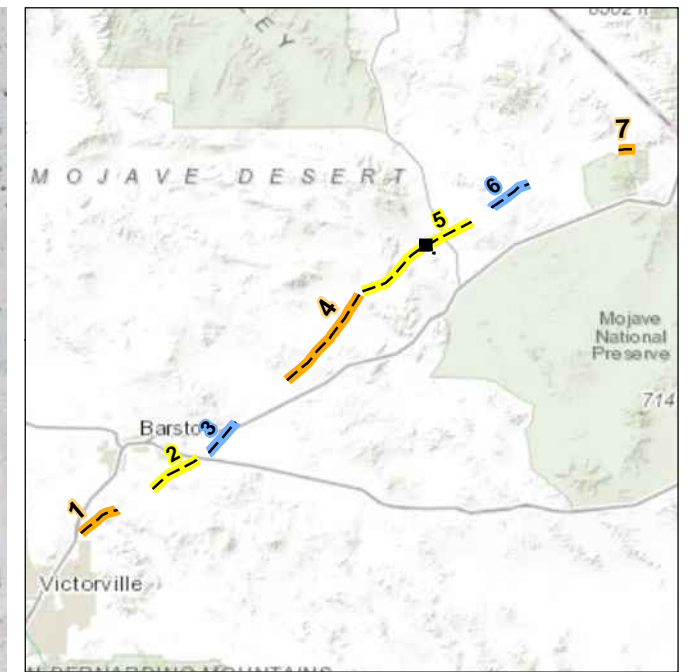
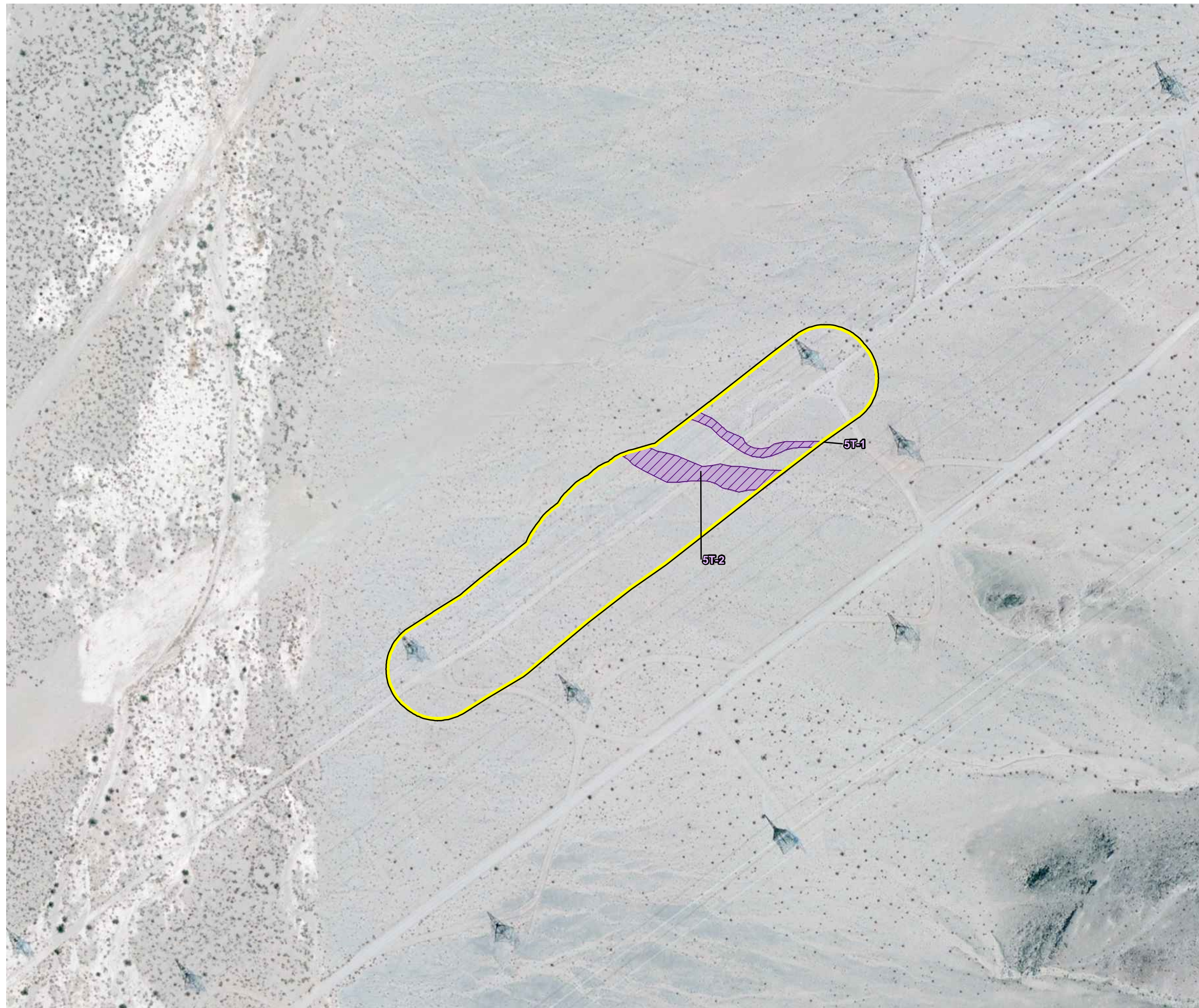
Exhibit 6
Jurisdictional Resources
Segment 5s





Path 46 Transmission Line Clearances Project

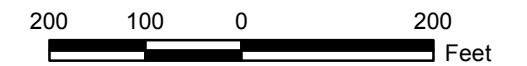
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-  Survey Area
- Jurisdictional Resources**
-  Centerline (OHWM/TOB width – feet)
-  Ordinary High Water Mark (OHWM) Extent
-  Top of Bank (TOB) Extent



Aerial Source: ESRI, NAIP 2014


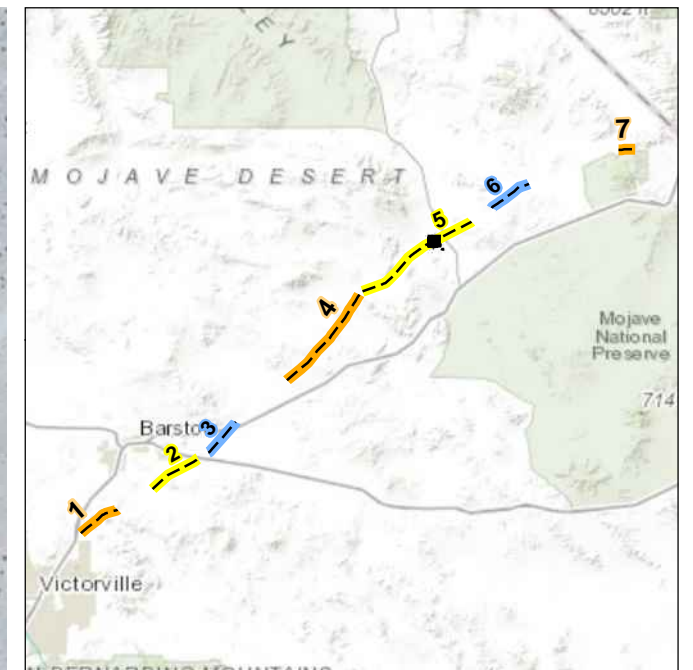






Exhibit 6
Jurisdictional Resources
Segment 5t

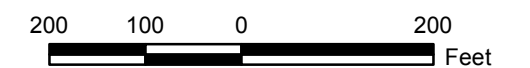
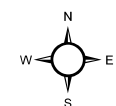
Path 46 Transmission Line Clearances Project

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-  Survey Area
- Jurisdictional Resources**
-  Centerline (OHWM/TOB width – feet)
-  Ordinary High Water Mark (OHWM) Extent
-  Top of Bank (TOB) Extent



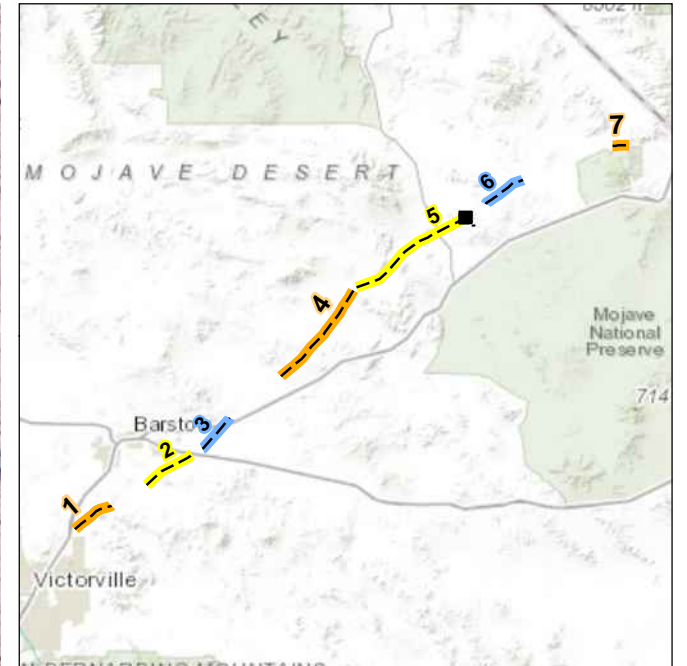
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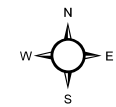
Exhibit 6
Jurisdictional Resources
Segment 5u

Path 46 Transmission Line Clearances Project

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- Survey Area
- Jurisdictional Resources**
- Centerline (OHWM/TOB width – feet)
- Ordinary High Water Mark (OHWM) Extent
- Top of Bank (TOB) Extent



Aerial Source: ESRI, NAIP 2014



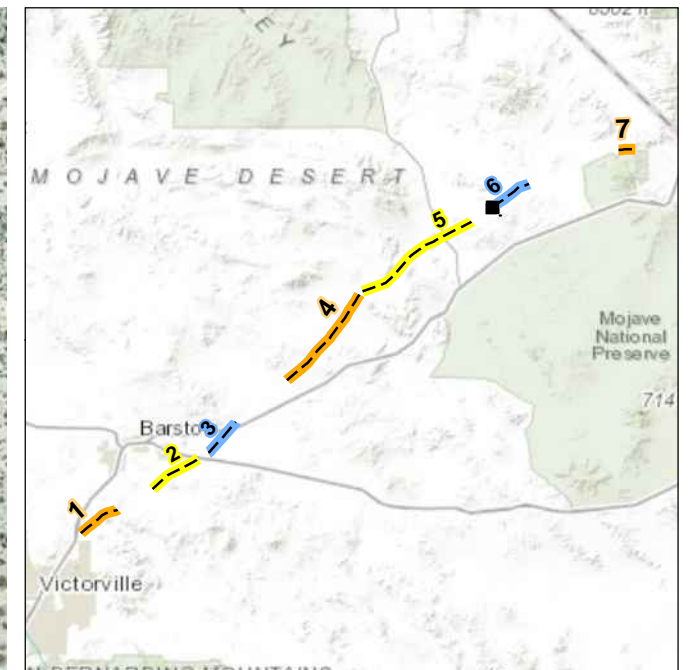
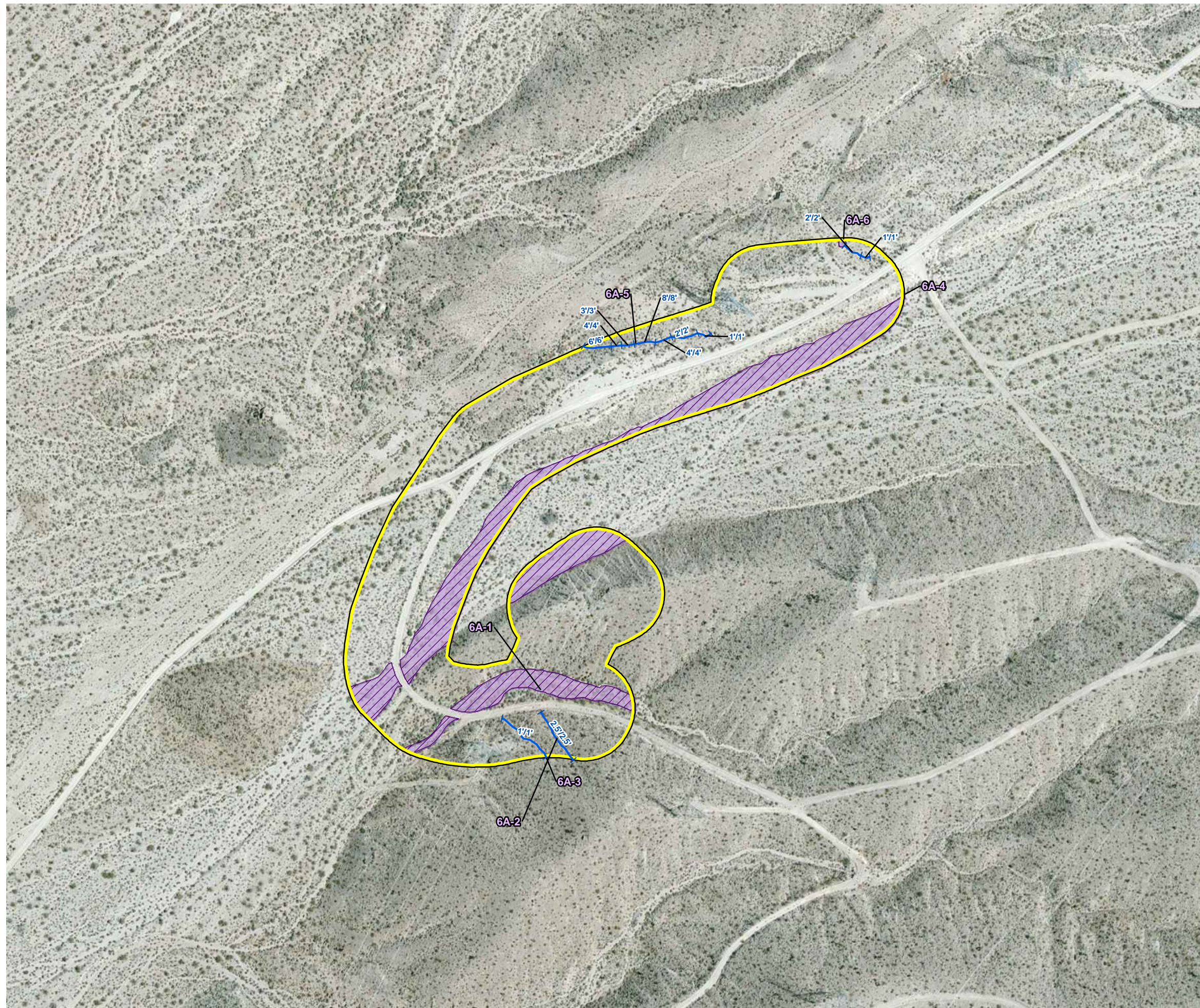
Exhibit 6 Jurisdictional Resources Segment 5v





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-  Survey Area
- Jurisdictional Resources**
-  Centerline (OHWM/TOB width – feet)
-  Ordinary High Water Mark (OHWM) Extent
-  Top of Bank (TOB) Extent



Aerial Source: ESRI, NAIP 2014

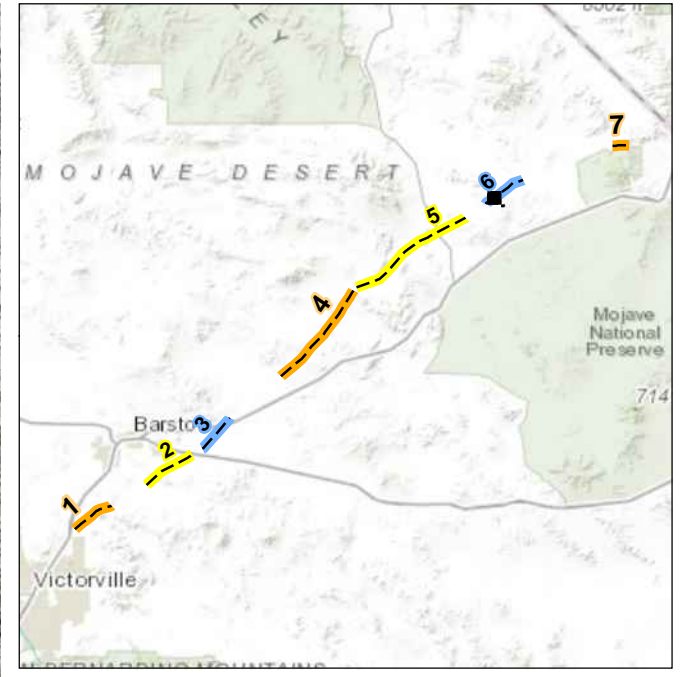
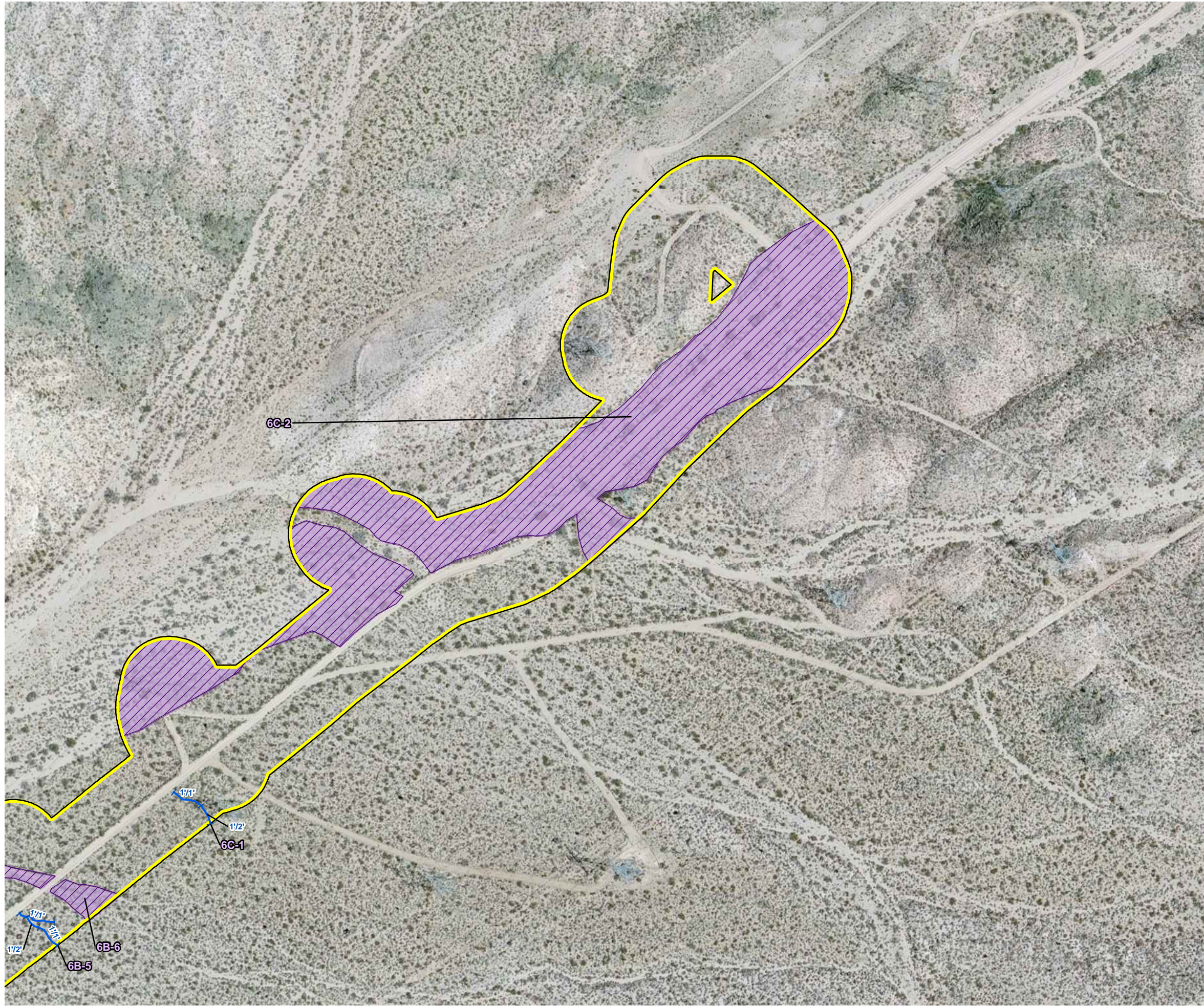






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Exhibit 6
Jurisdictional Resources
Segment 6a

Path 46 Transmission Line Clearances Project

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-  Survey Area
- Jurisdictional Resources**
-  Centerline (OHWM/TOB width – feet)
-  Ordinary High Water Mark (OHWM) Extent
-  Top of Bank (TOB) Extent



Aerial Source: ESRI, NAIP 2014



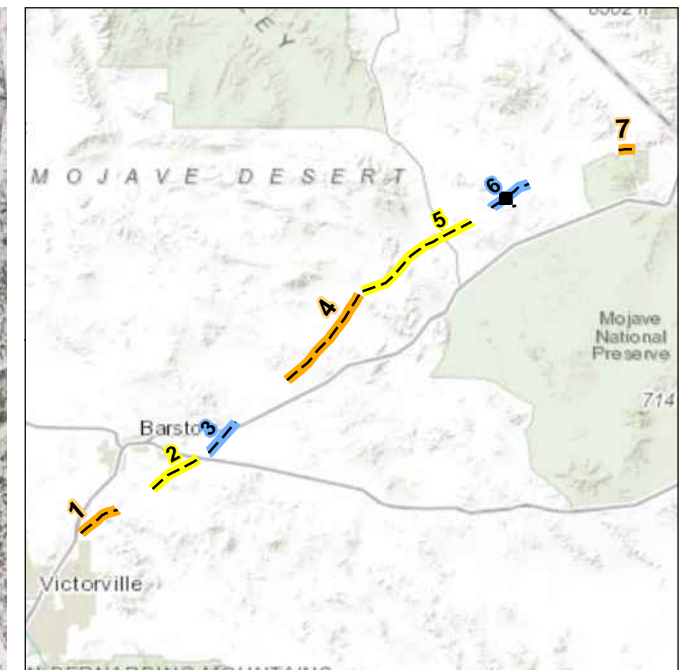
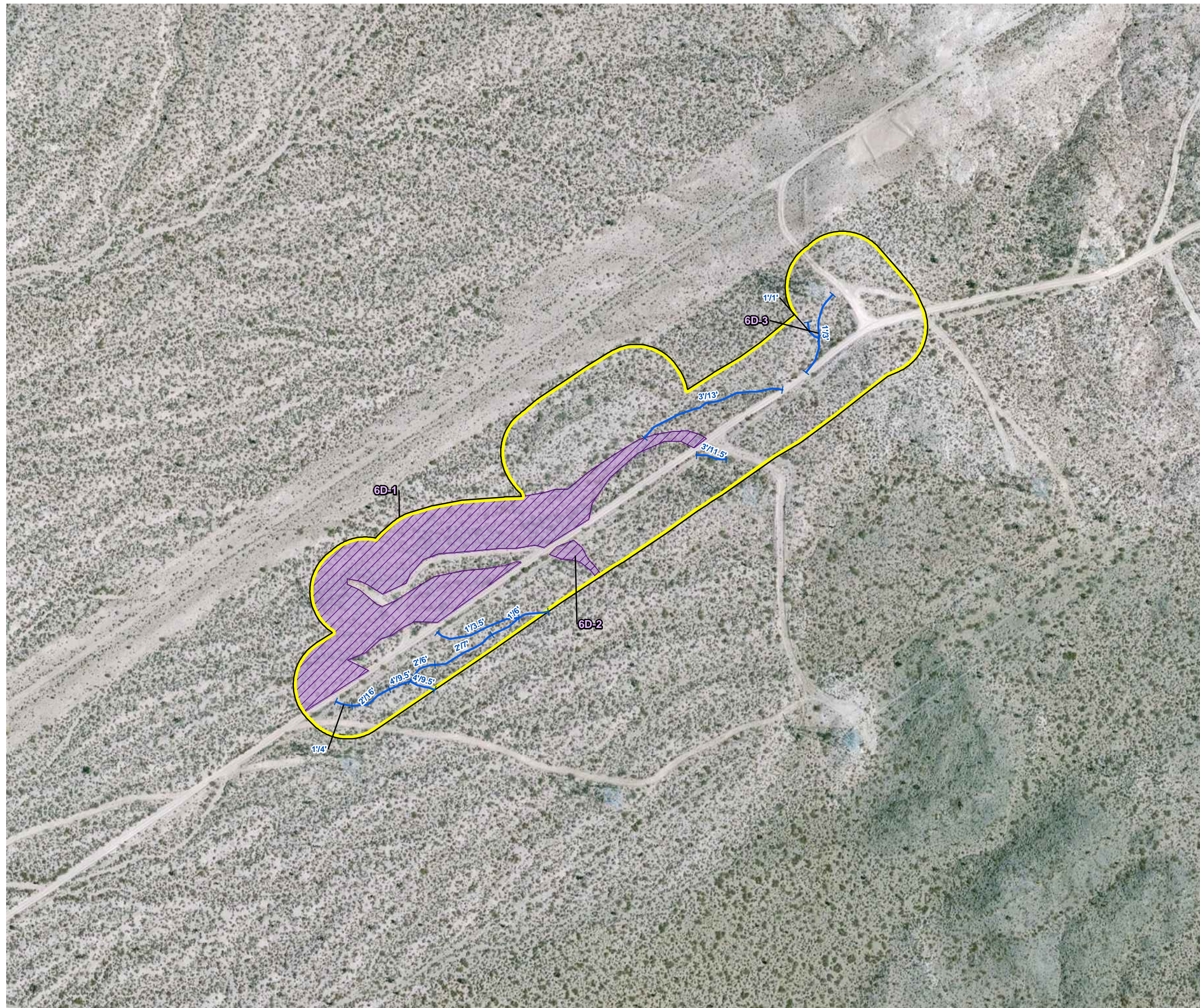
Exhibit 6 Jurisdictional Resources Segment 6c





Path 46 Transmission Line Clearances Project

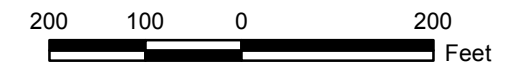
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-  Survey Area
- Jurisdictional Resources**
-  Centerline (OHWM/TOB width – feet)
-  Ordinary High Water Mark (OHWM) Extent
-  Top of Bank (TOB) Extent



Aerial Source: ESRI, NAIP 2014



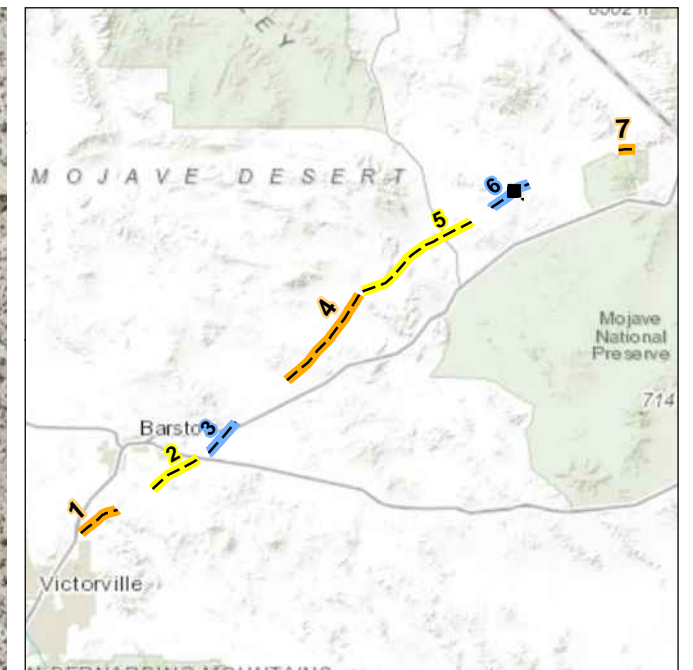
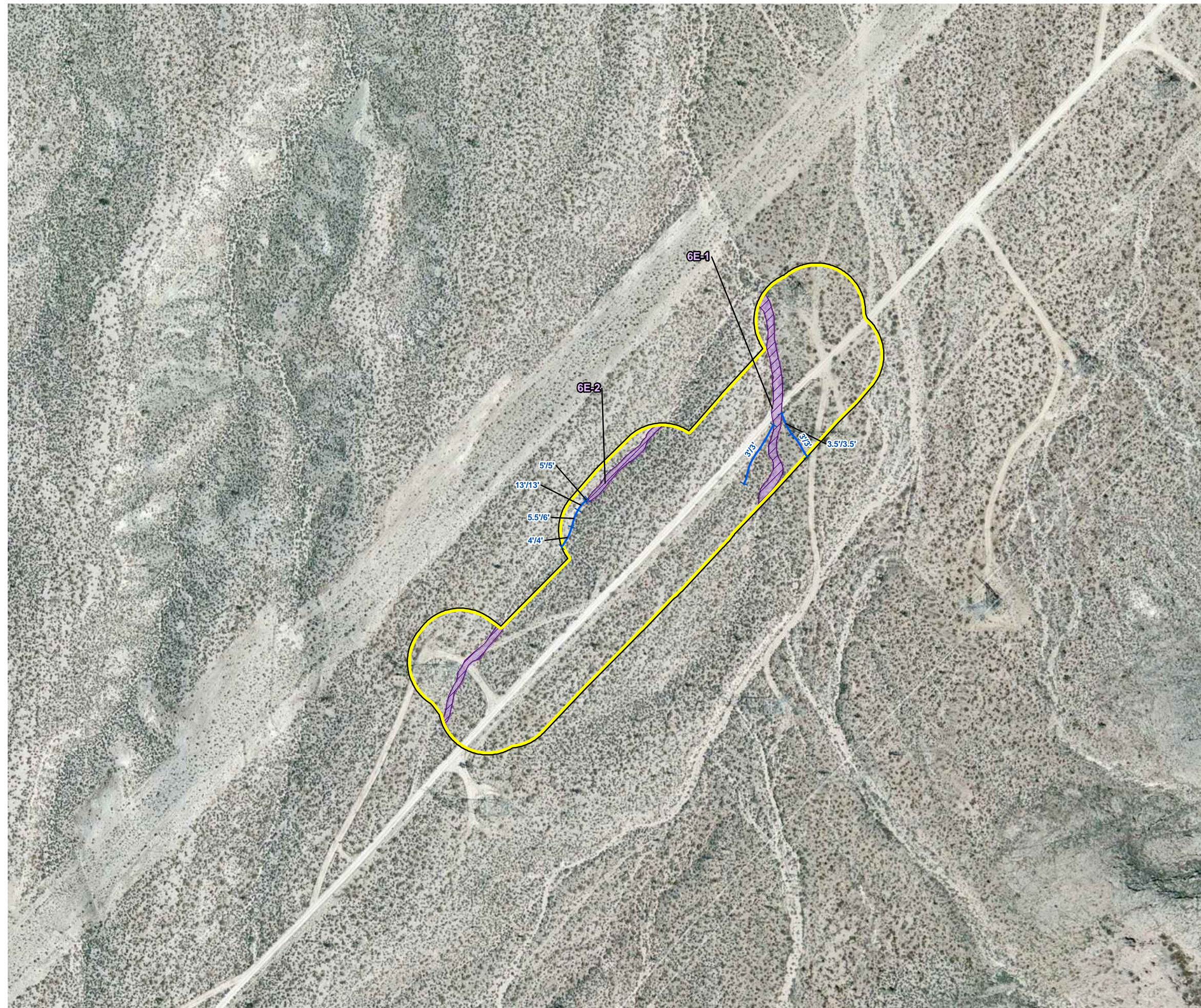
PSOMAS

Exhibit 6
Jurisdictional Resources
Segment 6d

Path 46 Transmission Line Clearances Project

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- Survey Area
- Jurisdictional Resources**
- Centerline (OHWM/TOB width – feet)
- Ordinary High Water Mark (OHWM) Extent
- Top of Bank (TOB) Extent



Aerial Source: ESRI, NAIP 2014

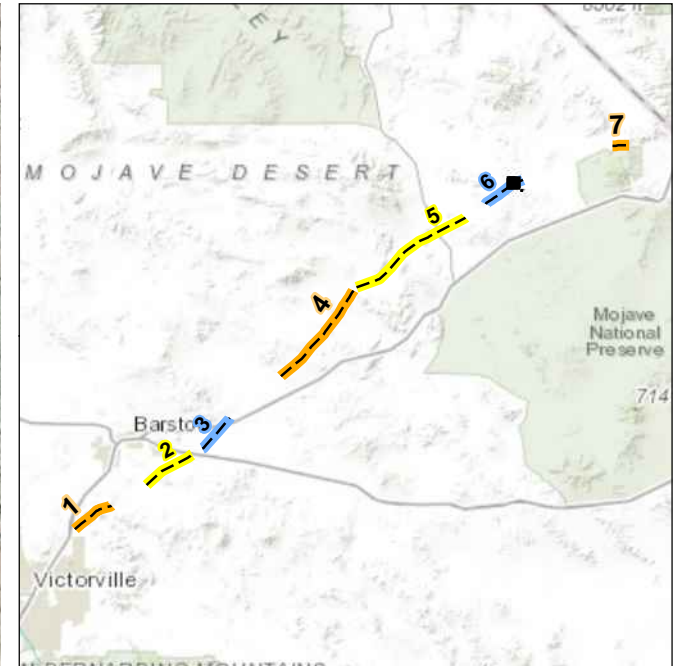
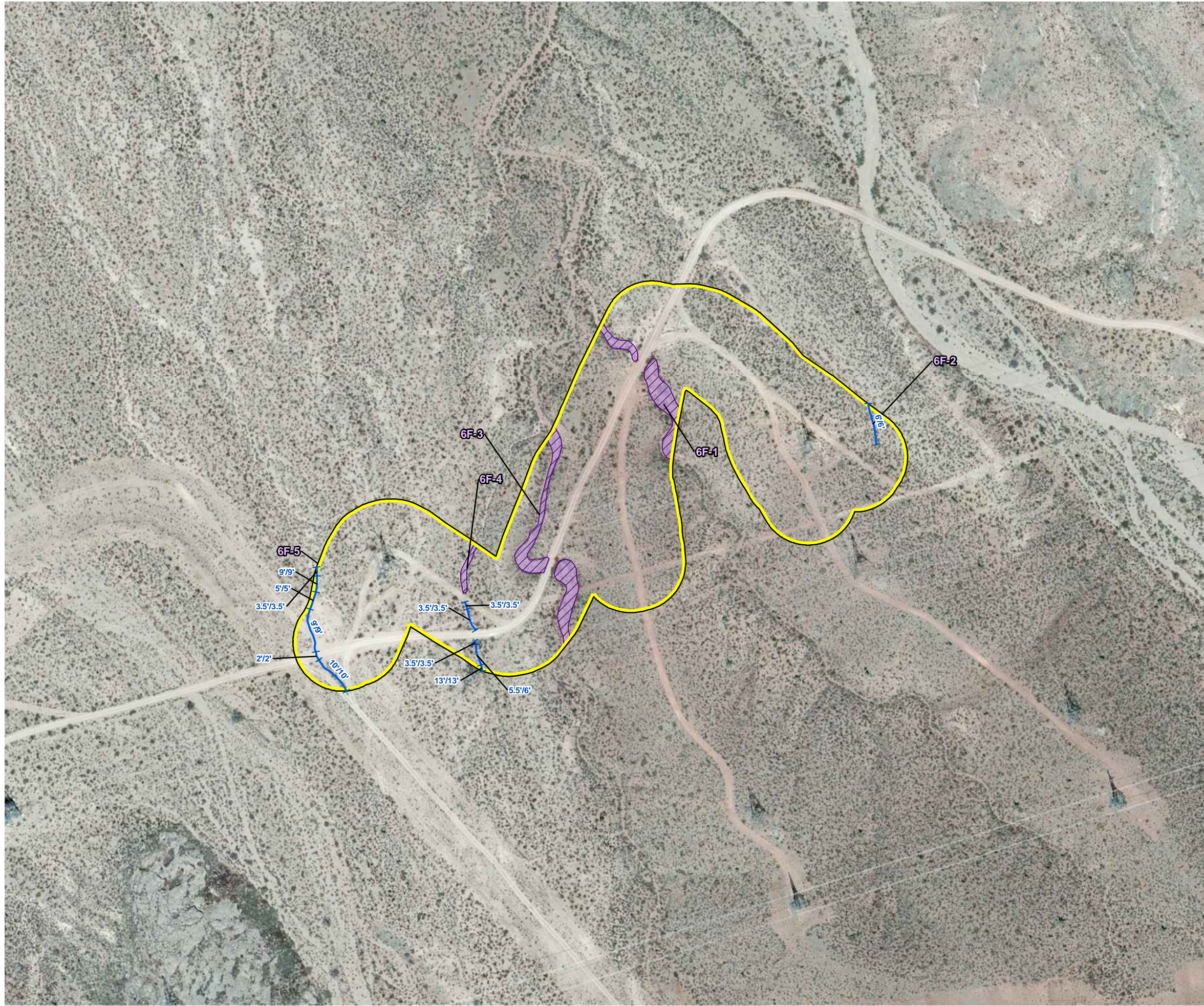


PSOMAS

Exhibit 6
Jurisdictional Resources
Segment 6e

Path 46 Transmission Line Clearances Project


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- Survey Area
- Jurisdictional Resources**
- Centerline (OHWM/TOB width – feet)
- Ordinary High Water Mark (OHWM) Extent
- Top of Bank (TOB) Extent



Aerial Source: ESRI, NAIP 2014



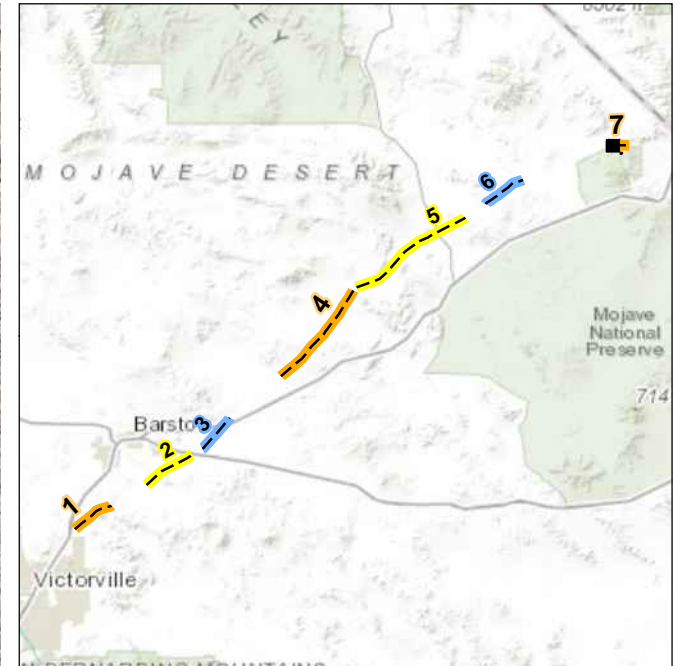
PSOMAS

Exhibit 6
Jurisdictional Resources
Segment 6f

Path 46 Transmission Line Clearances Project

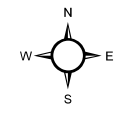
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- Survey Area
- Jurisdictional Resources**
- Centerline (OHWM/TOB width – feet)
- Ordinary High Water Mark (OHWM) Extent
- Top of Bank (TOB) Extent

7A-1
 5'5"
 2'2"
 13'5"/13'5"
 3'3"
 10'10"
 7'7"
 15'15"
 2'2"
 7A-2



Aerial Source: ESRI, NAIP 2014

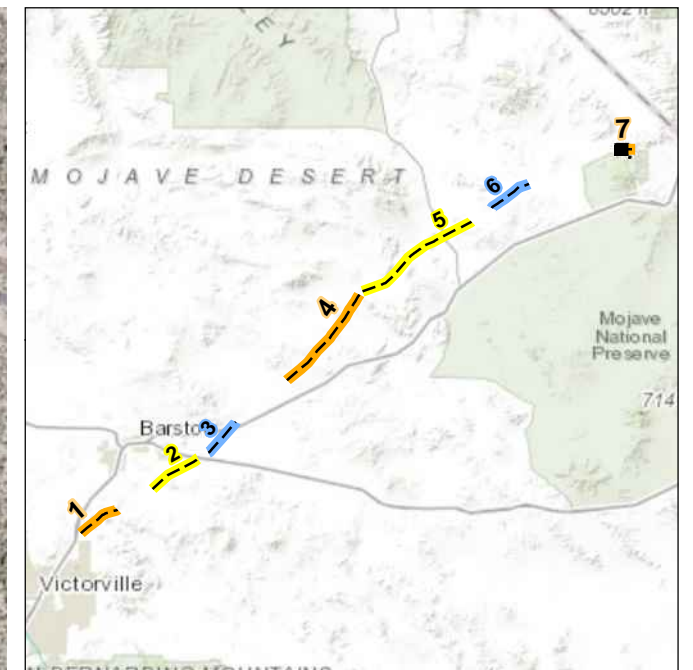






Exhibit 6
Jurisdictional Resources
Segment 7a

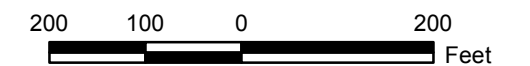
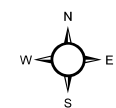
Path 46 Transmission Line Clearances Project

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-  Survey Area
- Jurisdictional Resources**
-  Centerline (OHWM/TOB width – feet)
-  Ordinary High Water Mark (OHWM) Extent
-  Top of Bank (TOB) Extent



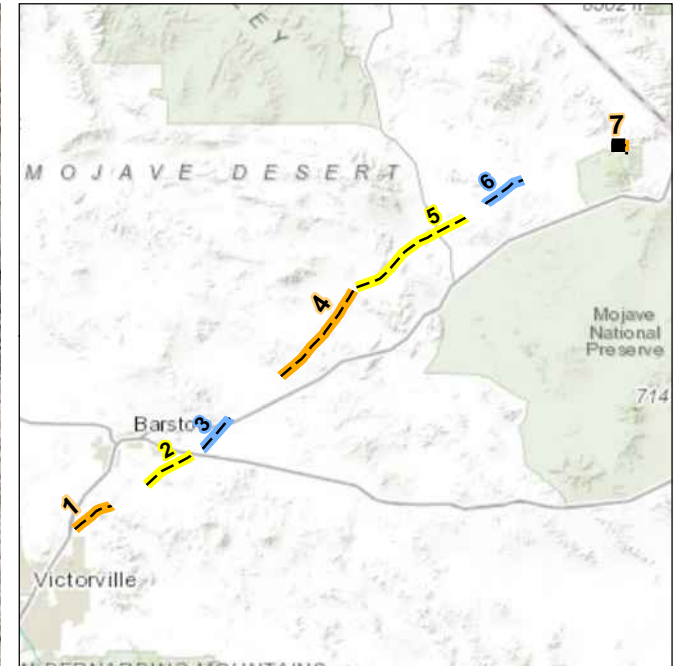
Aerial Source: ESRI, NAIP 2014



Exhibit 6
Jurisdictional Resources
Segment 7b

Path 46 Transmission Line Clearances Project

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- Survey Area
- Jurisdictional Resources**
- Centerline (OHWM/TOB width – feet)
- Ordinary High Water Mark (OHWM) Extent
- Top of Bank (TOB) Extent



Aerial Source: ESRI, NAIP 2014

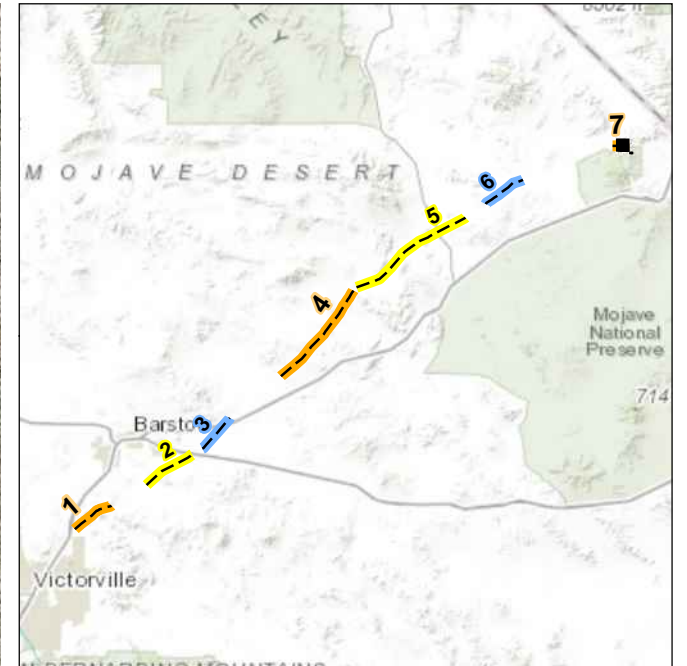
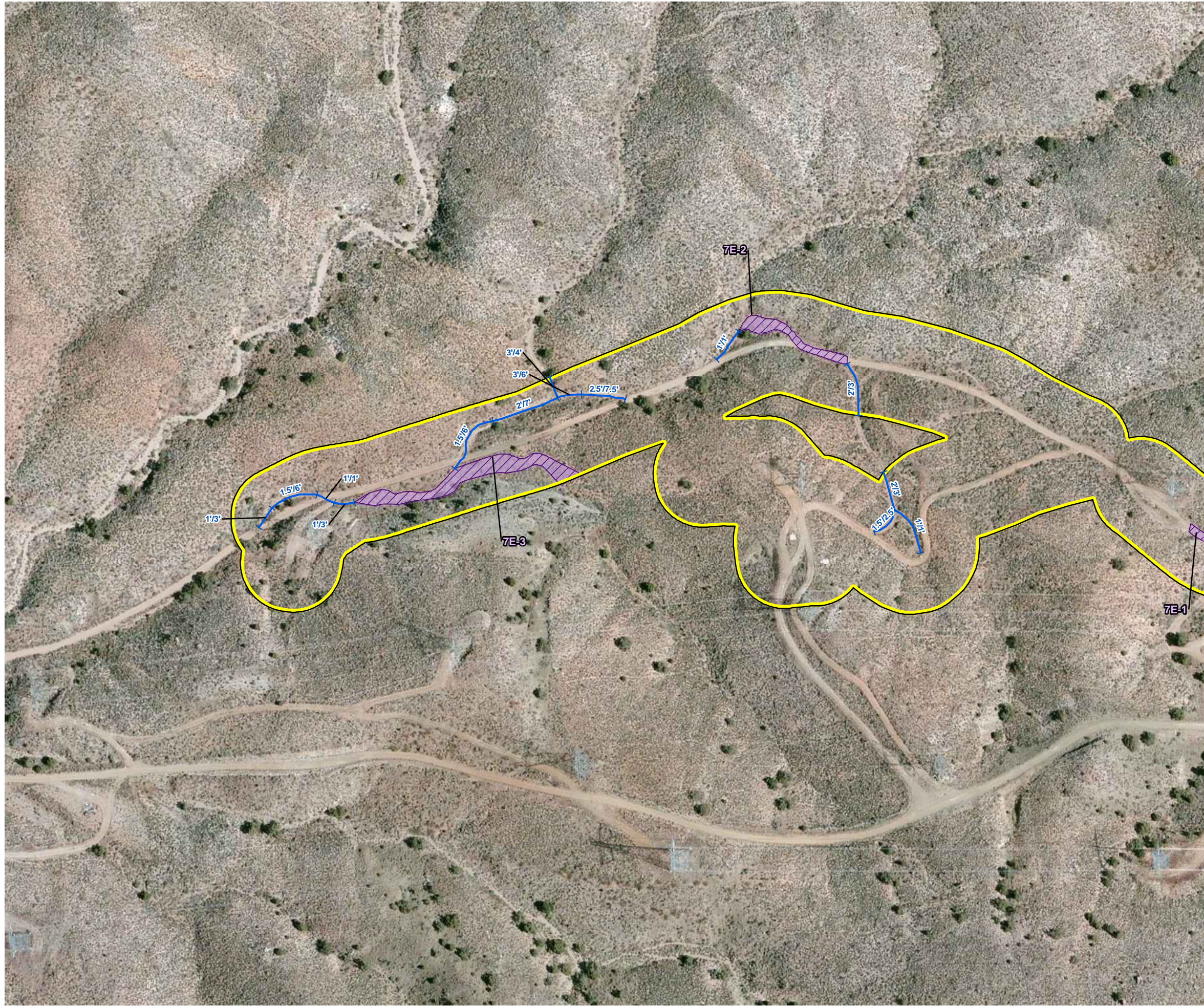


Exhibit 6 Jurisdictional Resources Segment 7c

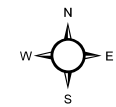
Path 46 Transmission Line Clearances Project

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- Survey Area
- Jurisdictional Resources**
- Centerline (OHWM/TOB width – feet)
- Ordinary High Water Mark (OHWM) Extent
- Top of Bank (TOB) Extent



Aerial Source: ESRI, NAIP 2014

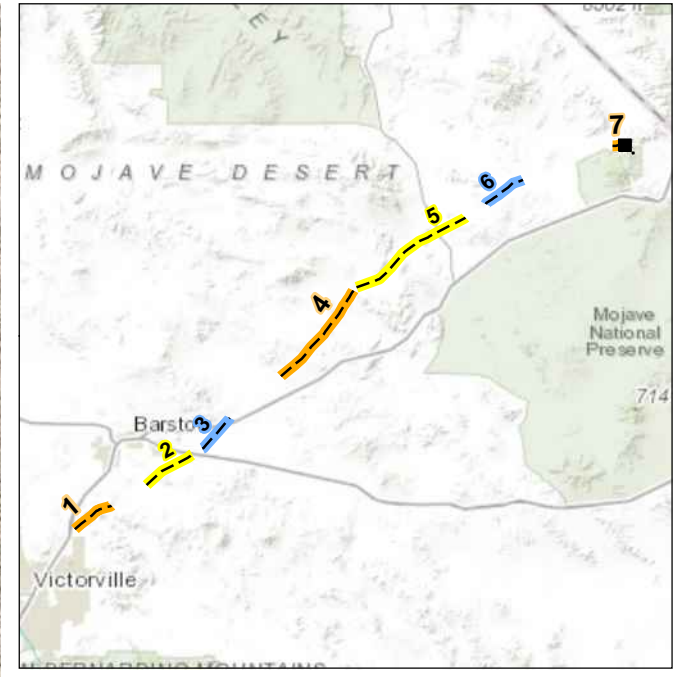
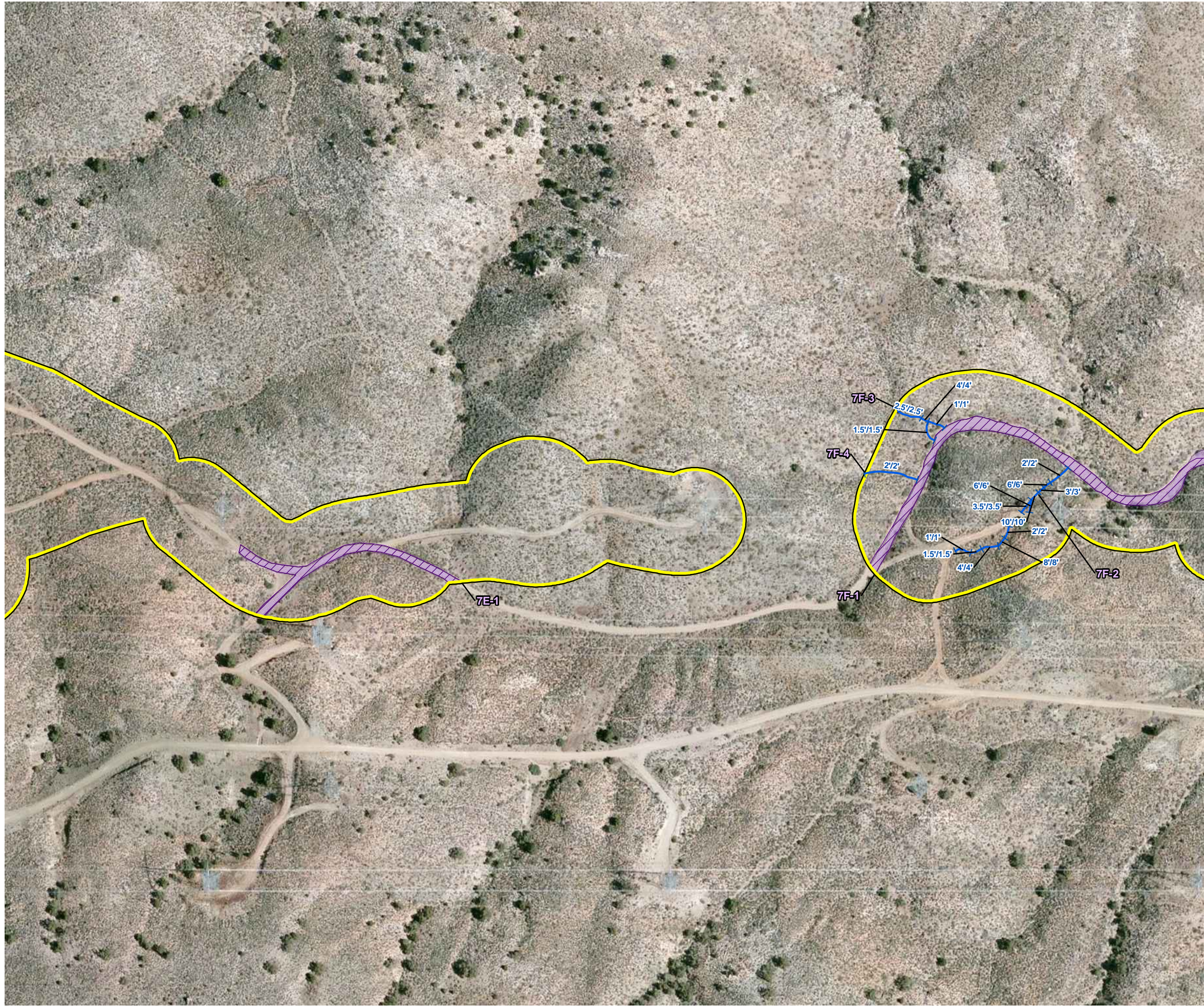


Exhibit 6 Jurisdictional Resources Segment 7d

Path 46 Transmission Line Clearances Project

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- Survey Area
- Jurisdictional Resources**
- Centerline (OHWM/TOB width – feet)
- Ordinary High Water Mark (OHWM) Extent
- Top of Bank (TOB) Extent



Aerial Source: ESRI, NAIP 2014

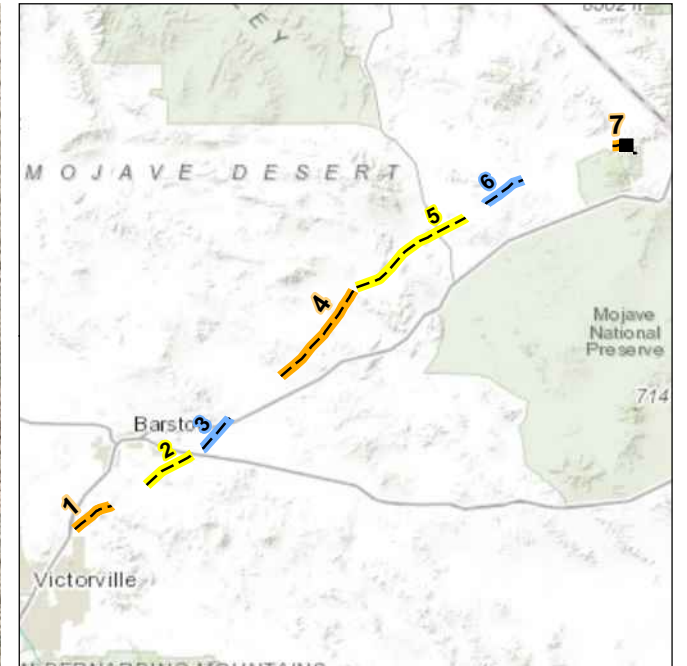


Exhibit 6
Jurisdictional Resources
Segment 7e

Path 46 Transmission Line Clearances Project

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- Survey Area
- Jurisdictional Resources**
- Centerline (OHWM/TOB width – feet)
- Ordinary High Water Mark (OHWM) Extent
- Top of Bank (TOB) Extent



Aerial Source: ESRI, NAIP 2014

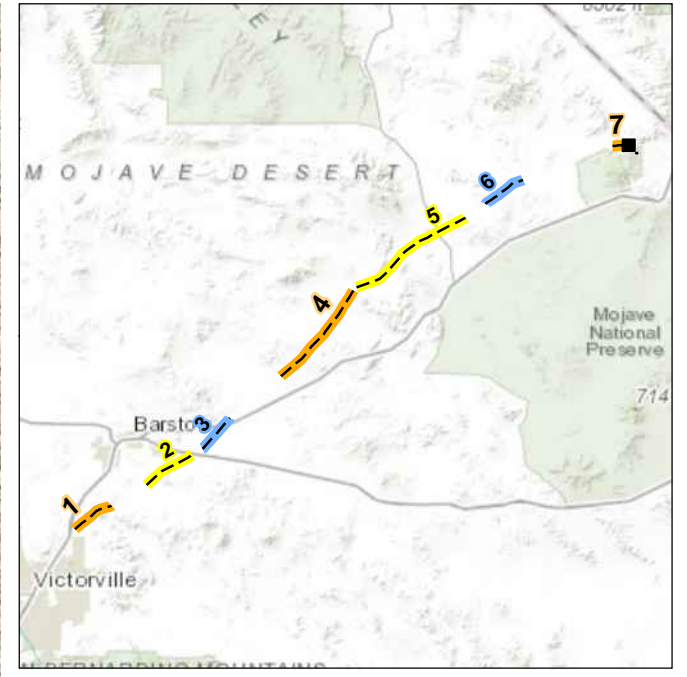
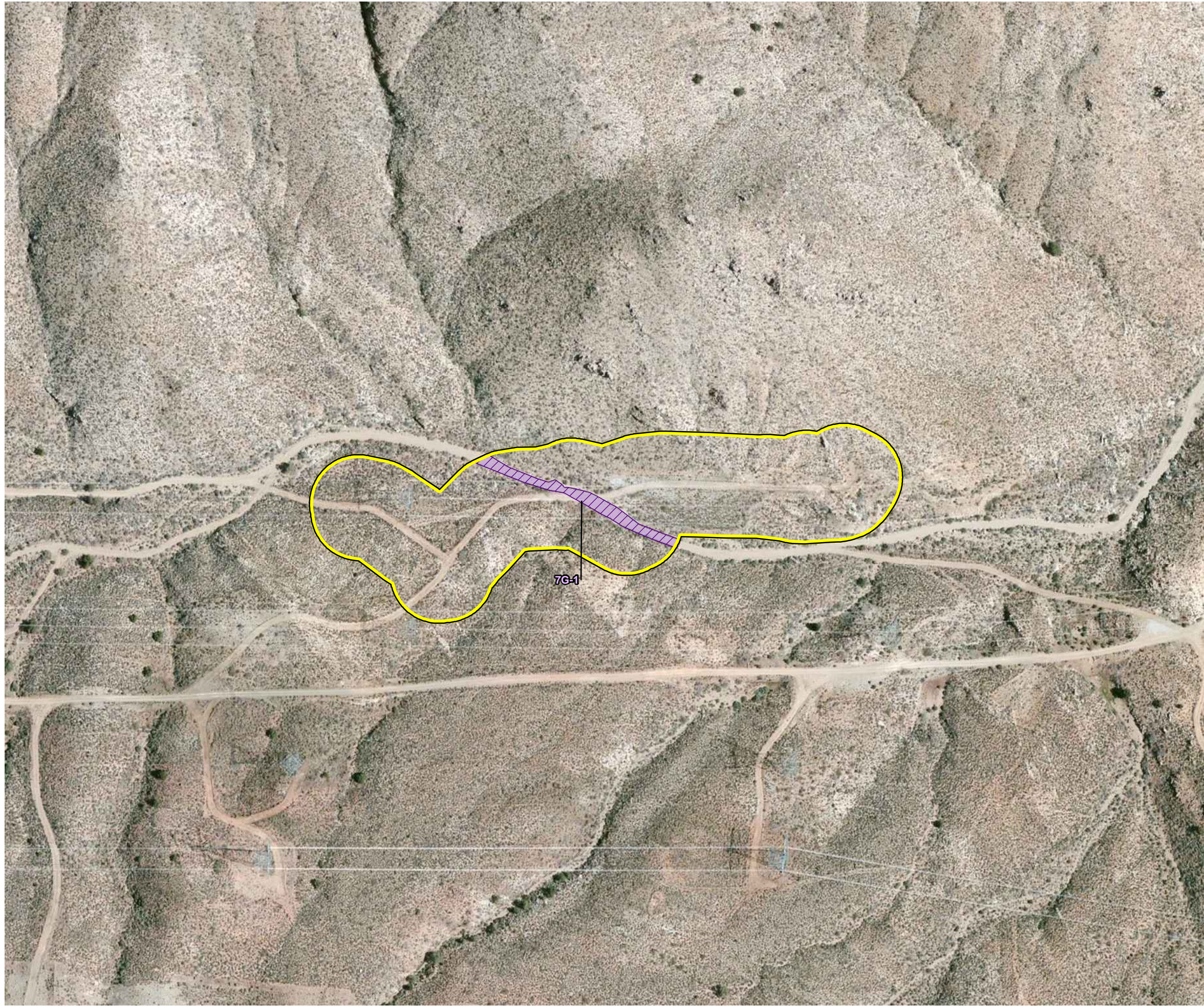






Exhibit 6 Jurisdictional Resources Segment 7f

Path 46 Transmission Line Clearances Project

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-  Survey Area
- Jurisdictional Resources**
-  Centerline (OHWM/TOB width – feet)
-  Ordinary High Water Mark (OHWM) Extent
-  Top of Bank (TOB) Extent



Aerial Source: ESRI, NAIP 2014



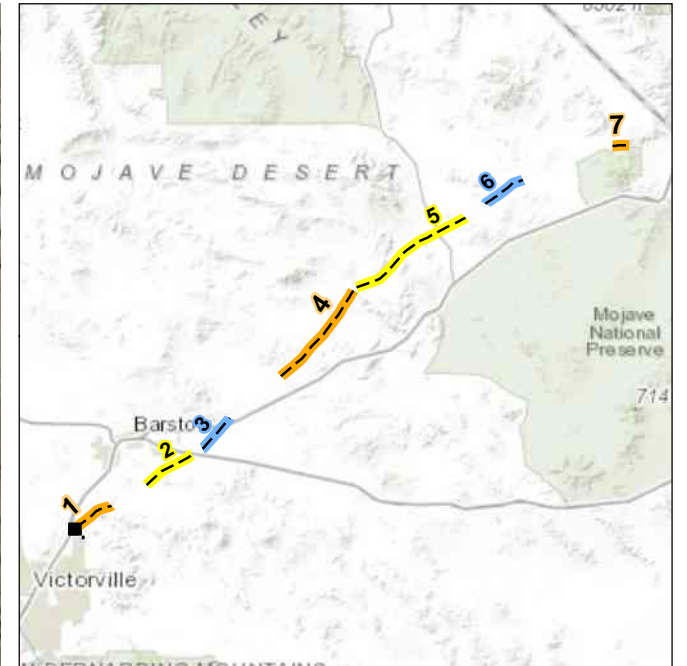
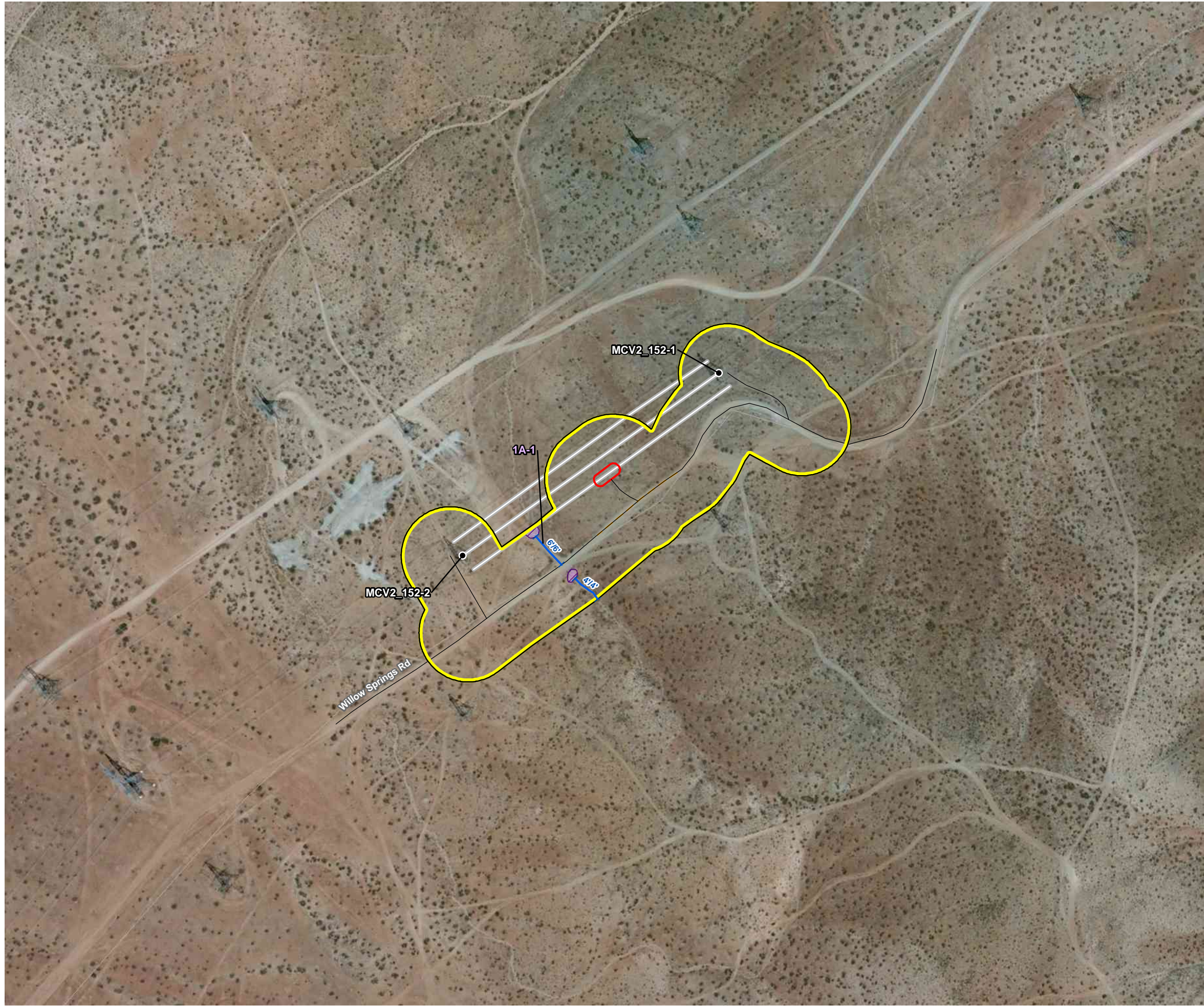
Exhibit 6
Jurisdictional Resources
Segment 7g

Path 46 Transmission Line Clearances Project

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Biological Survey Area

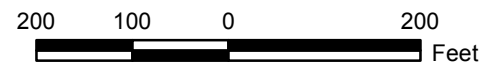
Project Features

- Tower Location
- Access Roads
- Power Lines
- - - Potential Soil Spreading
- - - Compacted Soil Barricade
- - - Demolish
- - - Grading Limits

Jurisdictional Resources

- Centerline (OHWM/TOB width – feet)
- ▨ Ordinary High Water Mark (OHWM) Extent
- ▨ Top of Bank (TOB) Extent

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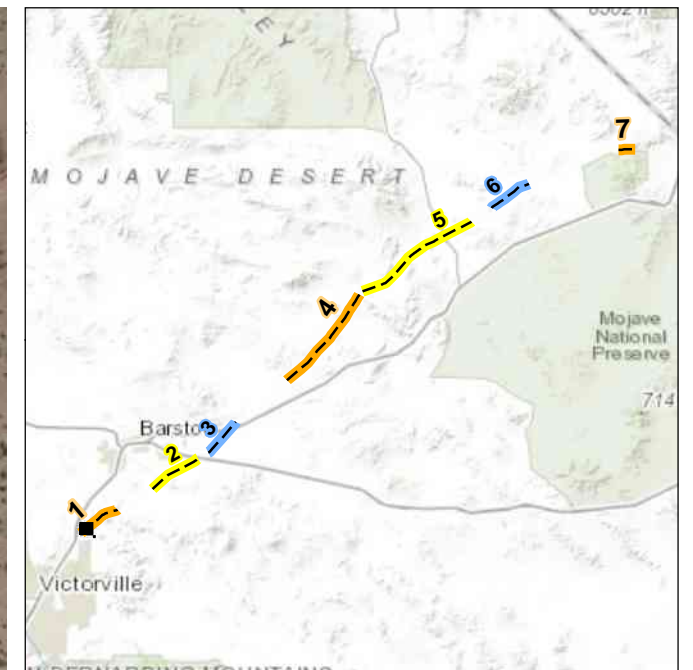
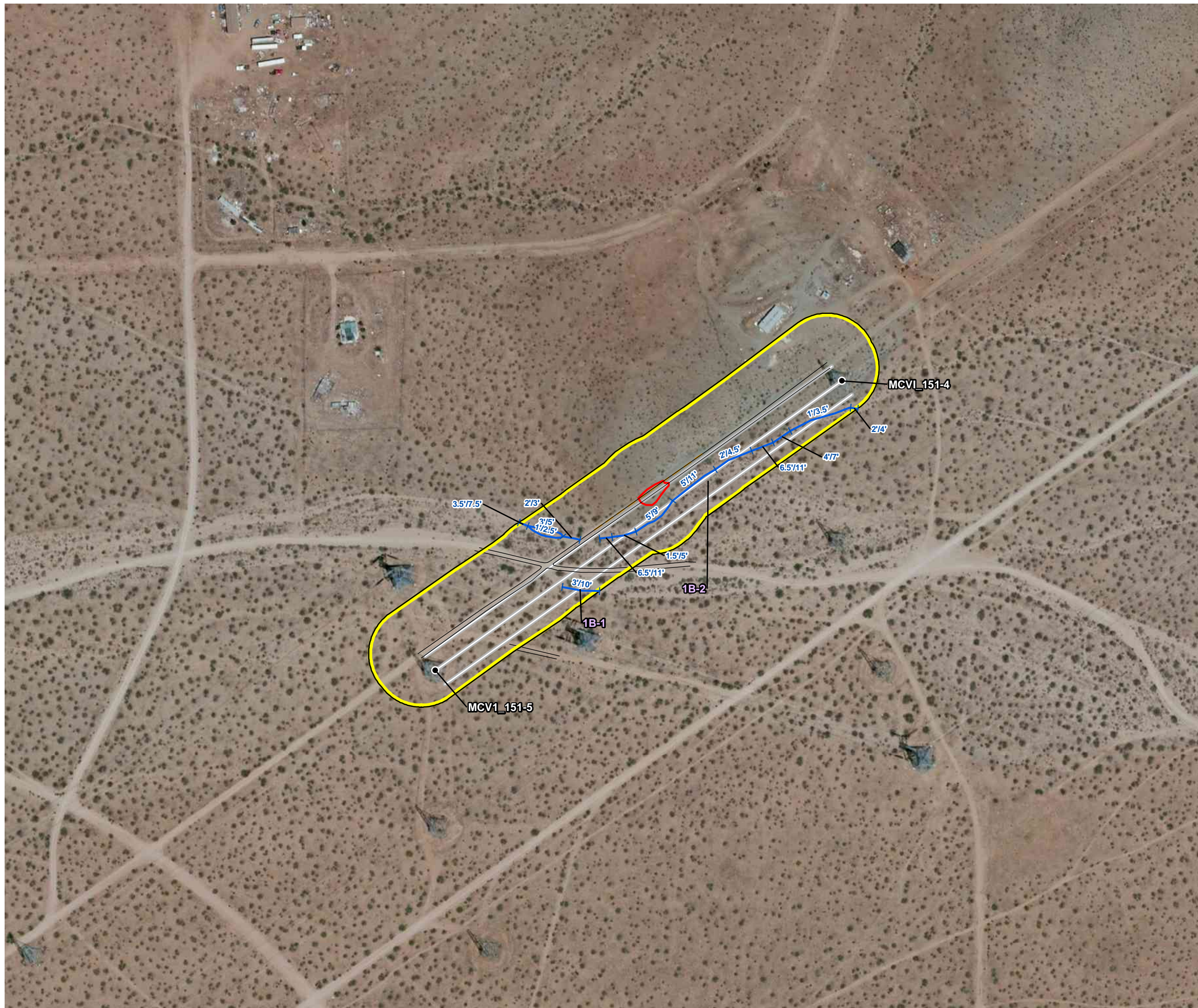
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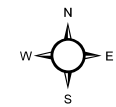
Exhibit 7
Project Impacts
Segment 1a

Path 46 Transmission Line Clearances Project


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- Biological Survey Area
- Project Features**
- Tower Location
- Access Roads
- Power Lines
- Potential Soil Spreading
- Compacted Soil Barricade
- Demolish
- Grading Limits
- Jurisdictional Resources**
- Centerline (OHWM/TOB width – feet)
- Ordinary High Water Mark (OHWM) Extent
- Top of Bank (TOB) Extent



Aerial Source: ESRI, NAIP 2014



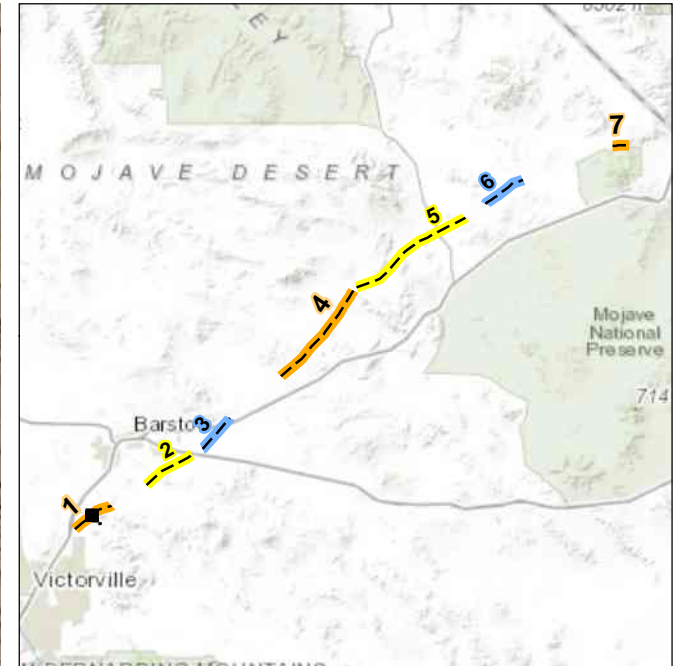
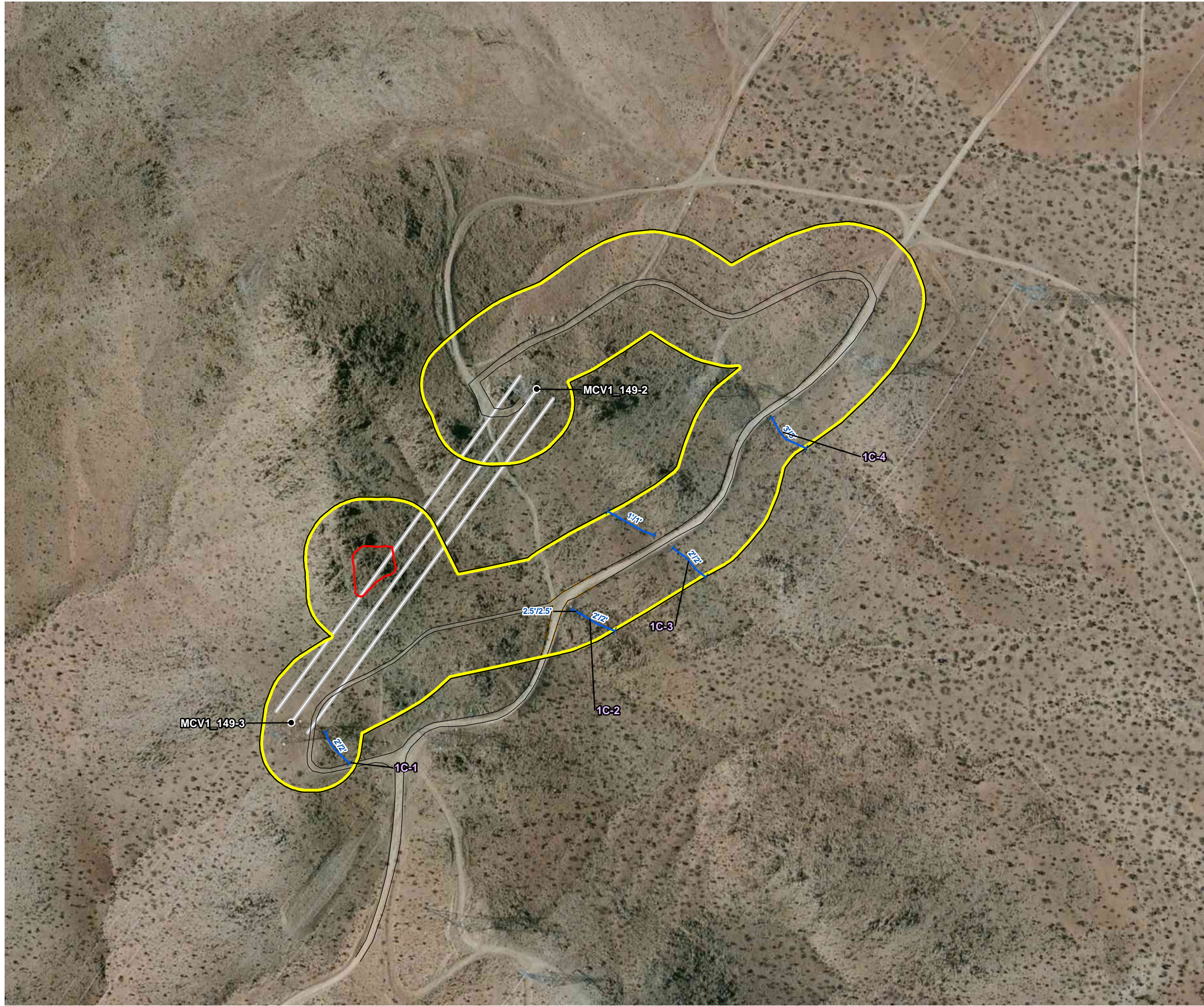
PSOMAS

Exhibit 7
Project Impacts
Segment 1b

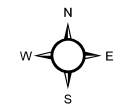
Path 46 Transmission Line Clearances Project

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- Biological Survey Area
- Project Features**
- Tower Location
- Access Roads
- Power Lines
- Potential Soil Spreading
- Compacted Soil Barricade
- - - Demolish
- ▭ Grading Limits
- Jurisdictional Resources**
- Centerline (OHWM/TOB width – feet)
- ▨ Ordinary High Water Mark (OHWM) Extent
- ▨ Top of Bank (TOB) Extent



Aerial Source: ESRI, NAIP 2014

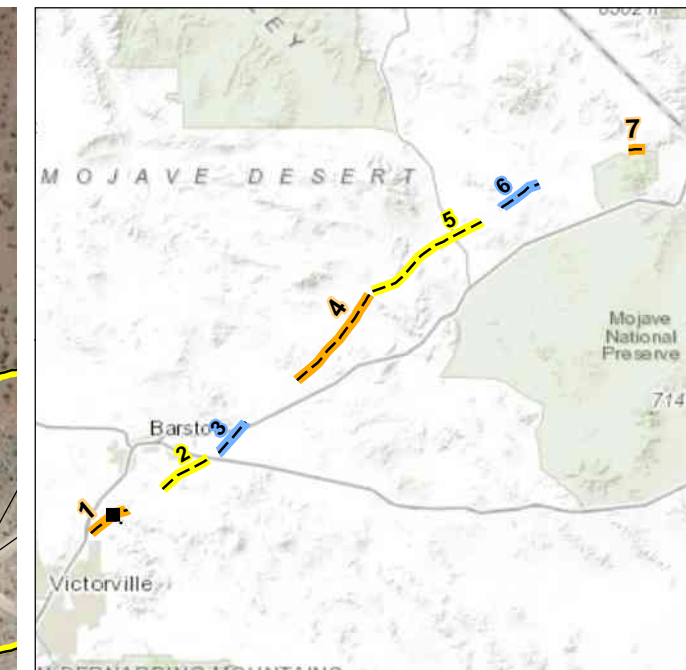
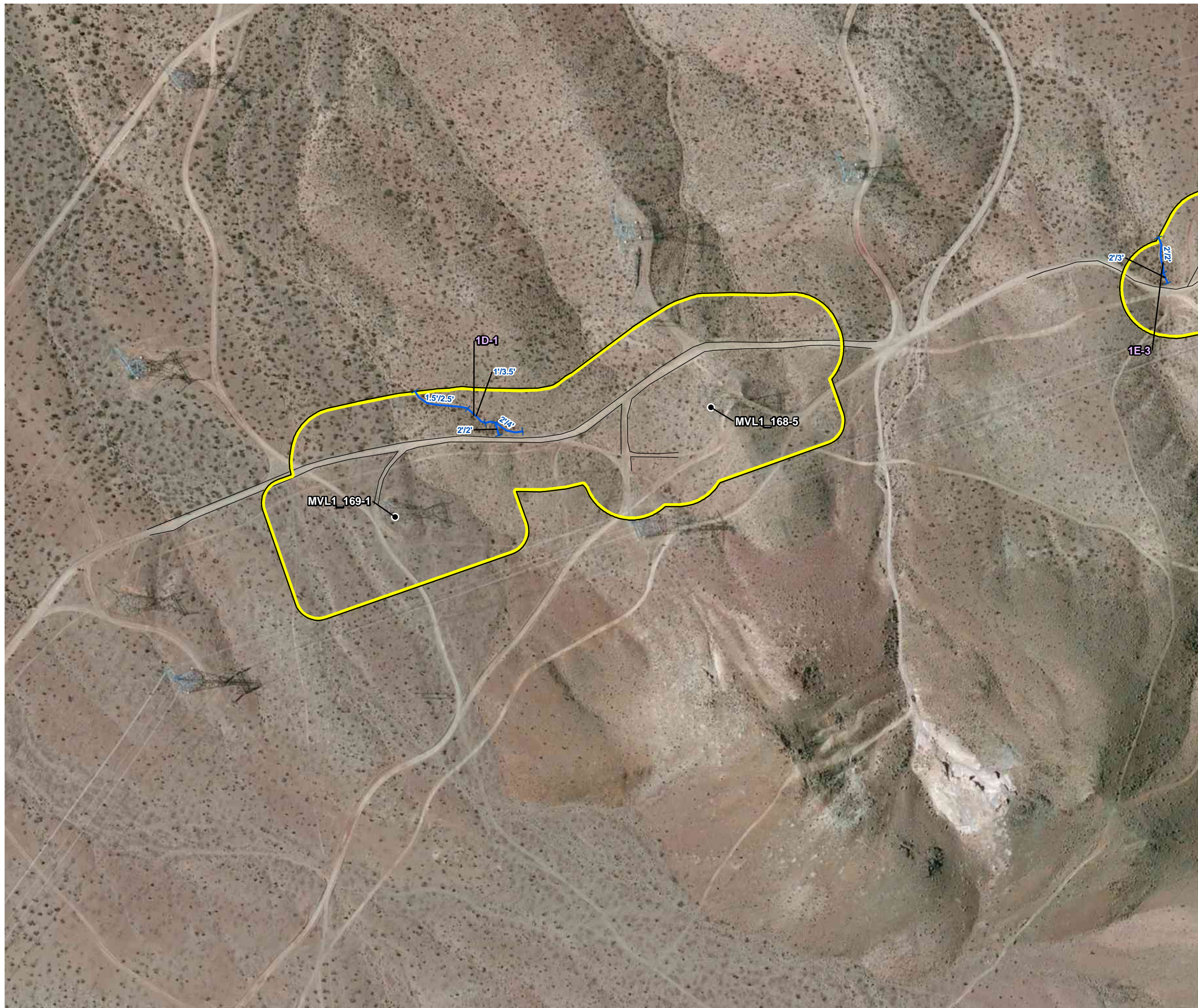


Exhibit 7 Project Impacts Segment 1c

Path 46 Transmission Line Clearances Project

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Biological Survey Area

Project Features

- Tower Location
- Access Roads
- Power Lines
- - - Potential Soil Spreading
- - - Compacted Soil Barricade
- - - Demolish
- - - Grading Limits

Jurisdictional Resources

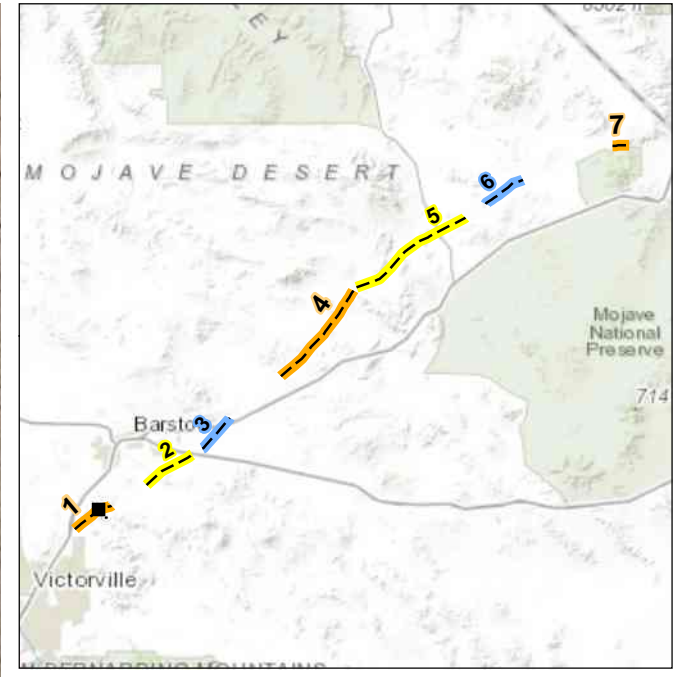
- Centerline (OHWM/TOB width – feet)
- ▨ Ordinary High Water Mark (OHWM) Extent
- ▨ Top of Bank (TOB) Extent

Aerial Source: ESRI, NAIP 2014

Exhibit 7
Project Impacts
Segment 1d
Path 46 Transmission Line Clearances Project

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Biological Survey Area

Project Features

- Tower Location
- Access Roads
- Power Lines
- - - Potential Soil Spreading
- - - Compacted Soil Barricade
- - - Demolish
- - - Grading Limits

Jurisdictional Resources

- Centerline (OHWM/TOB width – feet)
- ▨ Ordinary High Water Mark (OHWM) Extent
- ▨ Top of Bank (TOB) Extent

Scale: 200 100 0 200 Feet

Aerial Source: ESRI, NAIP 2014

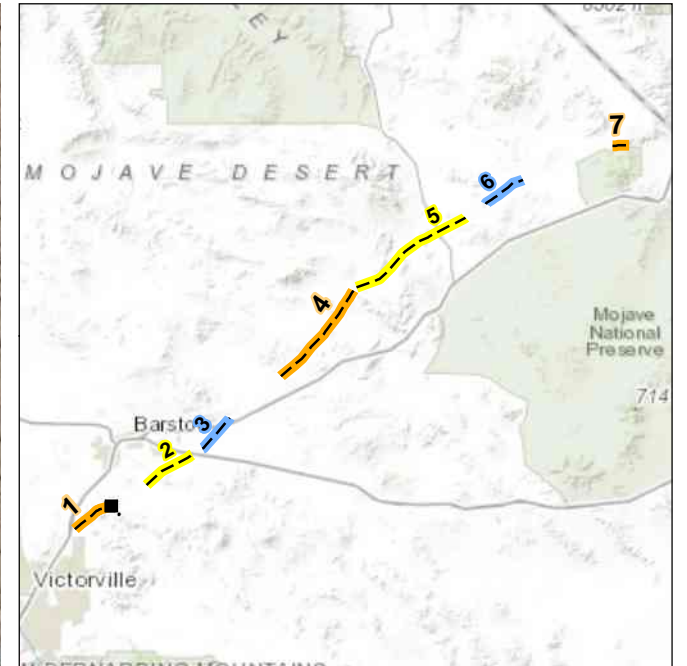
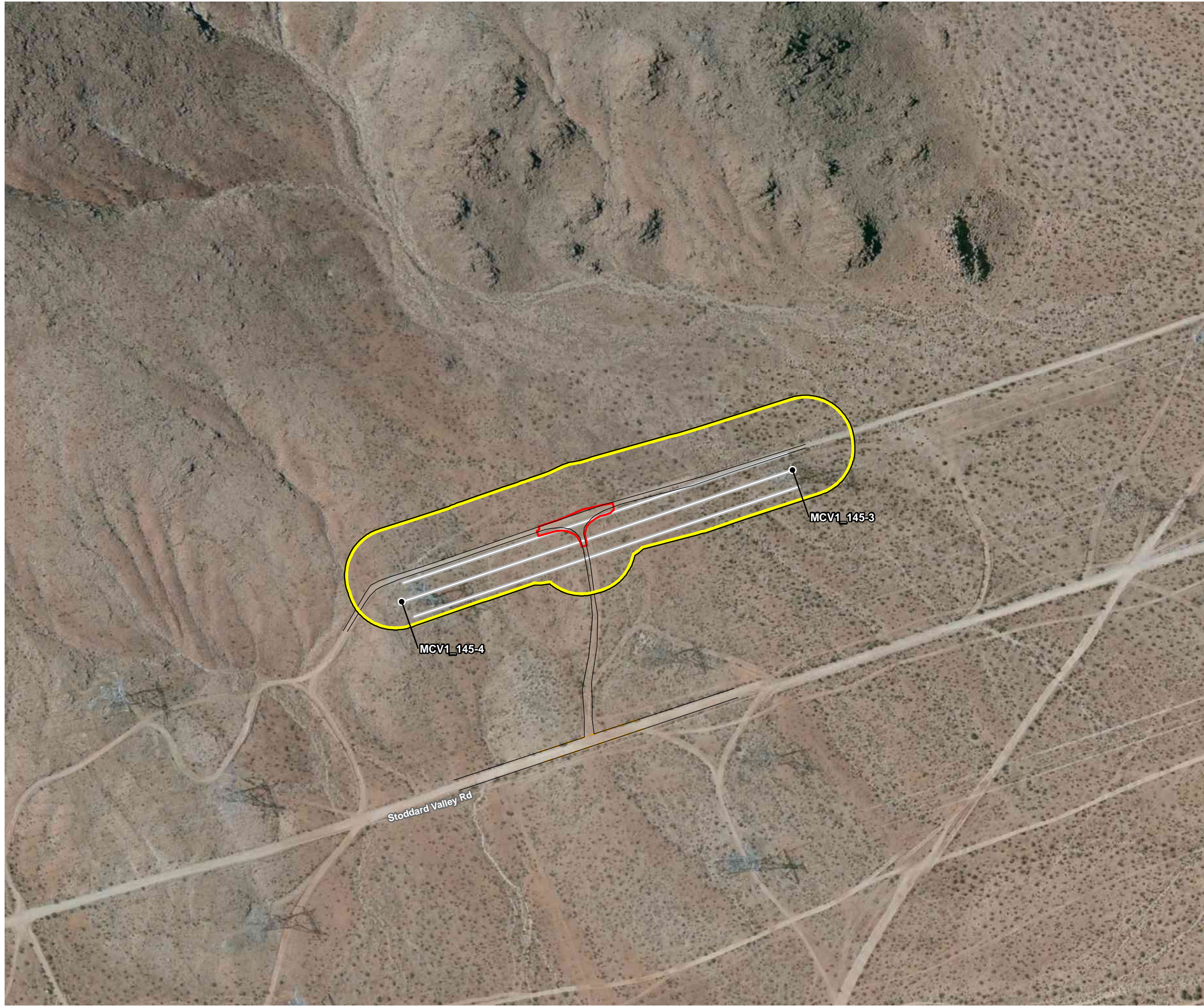
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Exhibit 7
Project Impacts
Segment 1e

Path 46 Transmission Line Clearances Project

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- Biological Survey Area
- Project Features**
- Tower Location
- Access Roads
- Power Lines
- - - Potential Soil Spreading
- - - Compacted Soil Barricade
- - - Demolish
- - - Grading Limits
- Jurisdictional Resources**
- Centerline (OHWM/TOB width – feet)
- ▨ Ordinary High Water Mark (OHWM) Extent
- ▨ Top of Bank (TOB) Extent



Aerial Source: ESRI, NAIP 2014

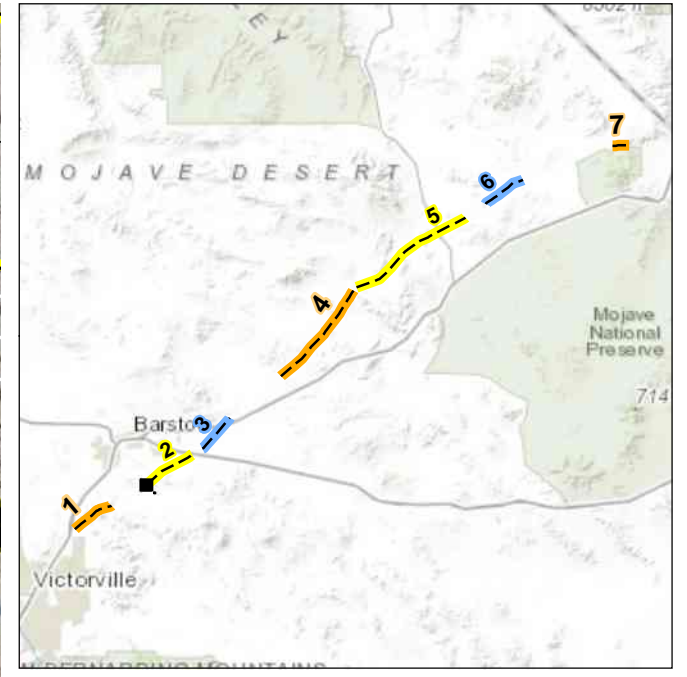
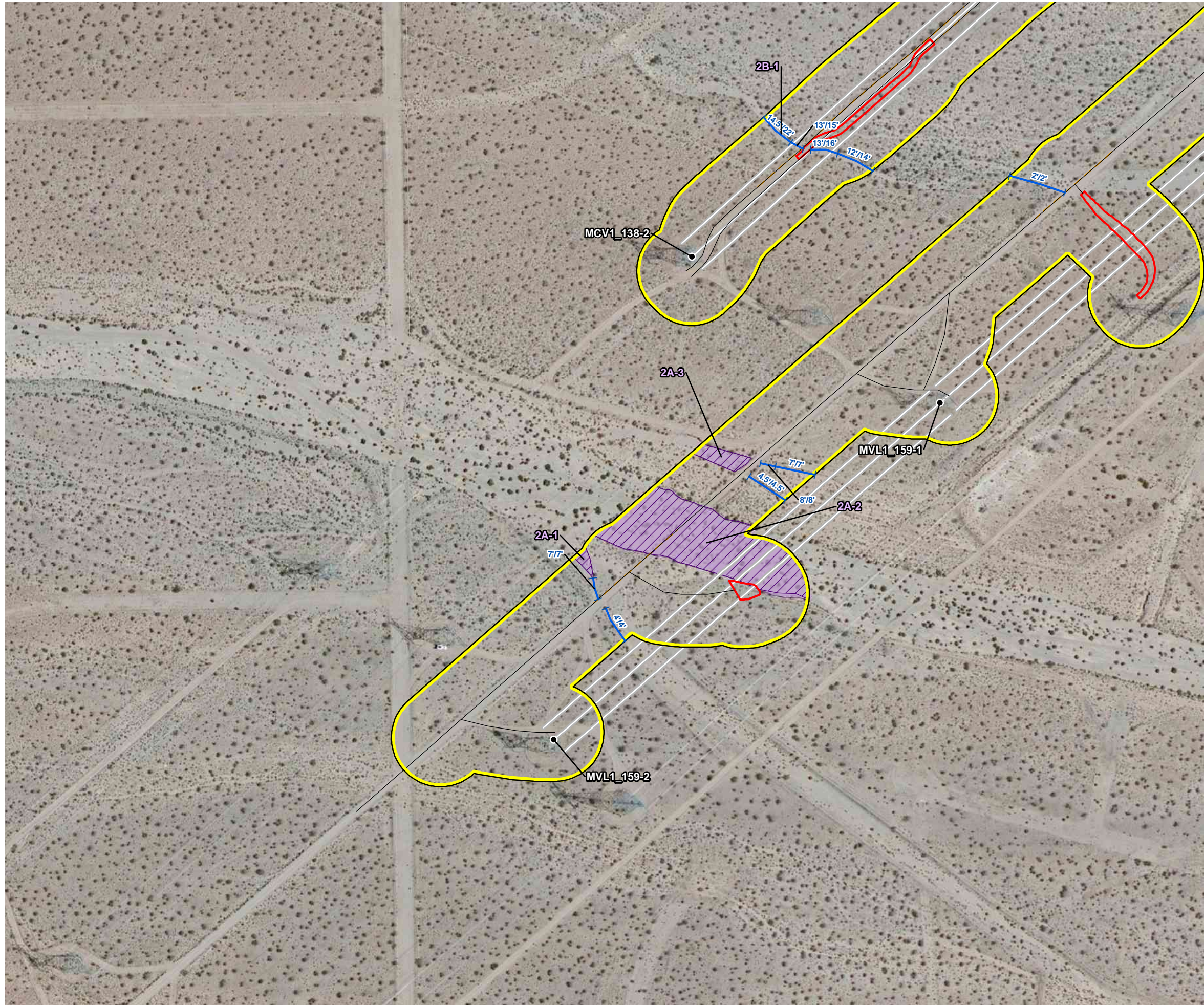


Exhibit 7 Project Impacts Segment 1f

Path 46 Transmission Line Clearances Project

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- Biological Survey Area
- Project Features**
- Tower Location
- Access Roads
- Power Lines
- Potential Soil Spreading
- Compacted Soil Barricade
- Demolish
- Grading Limits
- Jurisdictional Resources**
- Centerline (OHWM/TOB width – feet)
- Ordinary High Water Mark (OHWM) Extent
- Top of Bank (TOB) Extent



Aerial Source: ESRI, NAIP 2014

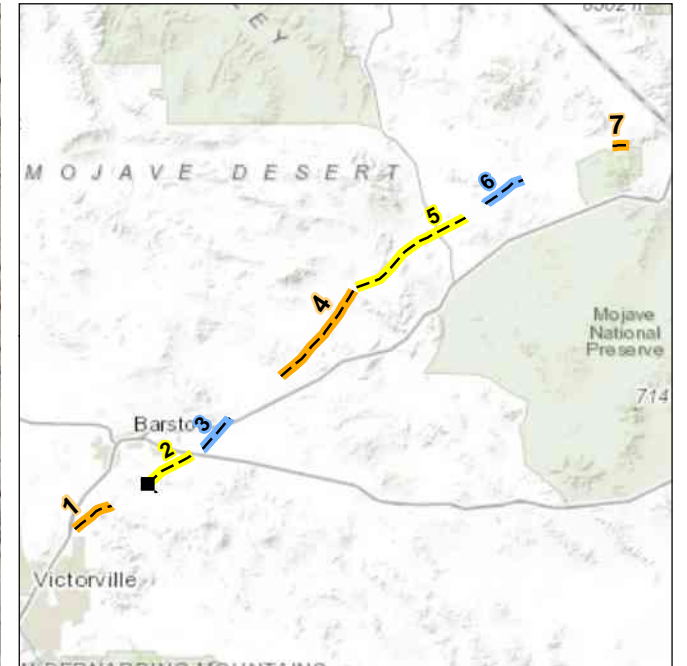
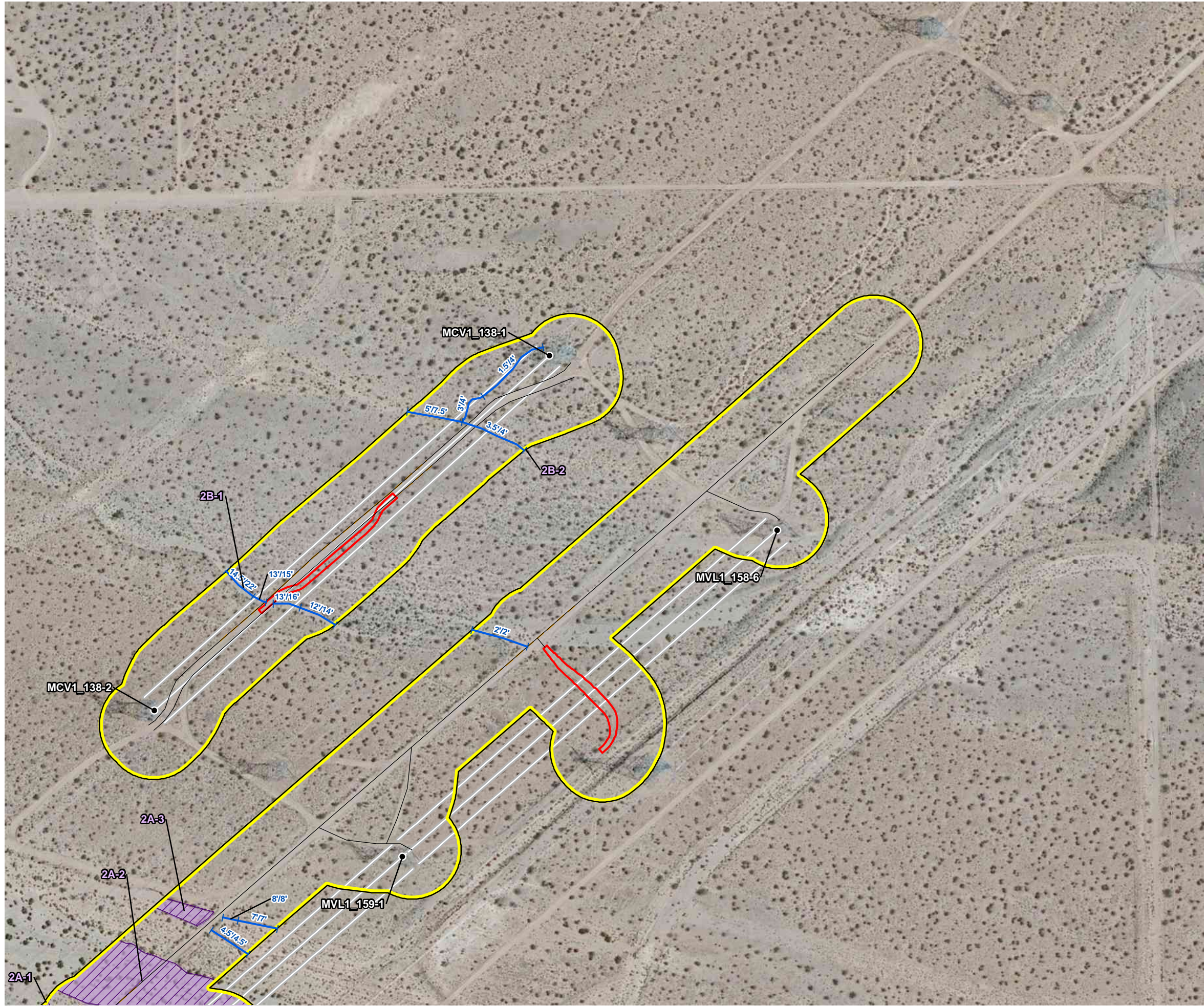


Exhibit 7 Project Impacts Segment 2a

Path 46 Transmission Line Clearances Project

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- Biological Survey Area
- Project Features**
- Tower Location
- Access Roads
- Power Lines
- Potential Soil Spreading
- Compacted Soil Barricade
- Demolish
- Grading Limits
- Jurisdictional Resources**
- Centerline (OHWM/TOB width – feet)
- Ordinary High Water Mark (OHWM) Extent
- Top of Bank (TOB) Extent



Aerial Source: ESRI, NAIP 2014



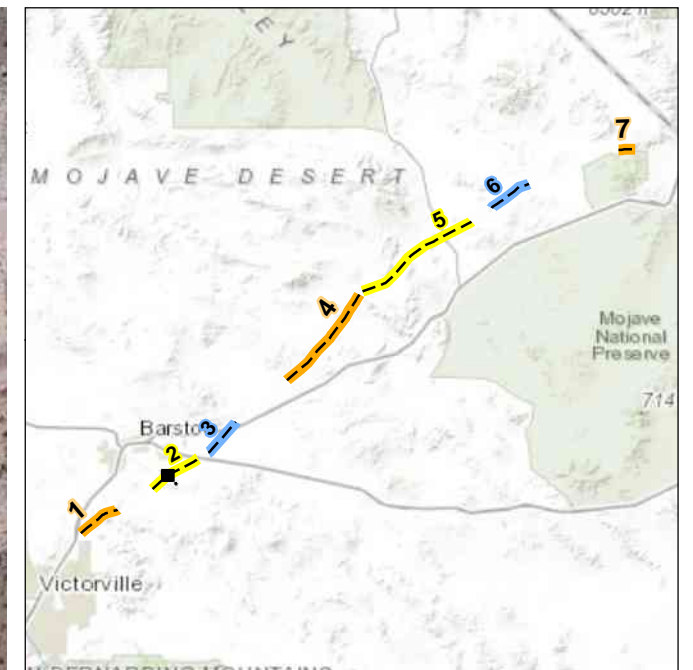
Exhibit 7 Project Impacts Segment 2b

Path 46 Transmission Line Clearances Project

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- Biological Survey Area
- Project Features**
- Tower Location
- Access Roads
- Power Lines
- Potential Soil Spreading
- Compacted Soil Barricade
- Demolish
- Grading Limits
- Jurisdictional Resources**
- Centerline (OHWM/TOB width – feet)
- Ordinary High Water Mark (OHWM) Extent
- Top of Bank (TOB) Extent



Aerial Source: ESRI, NAIP 2014



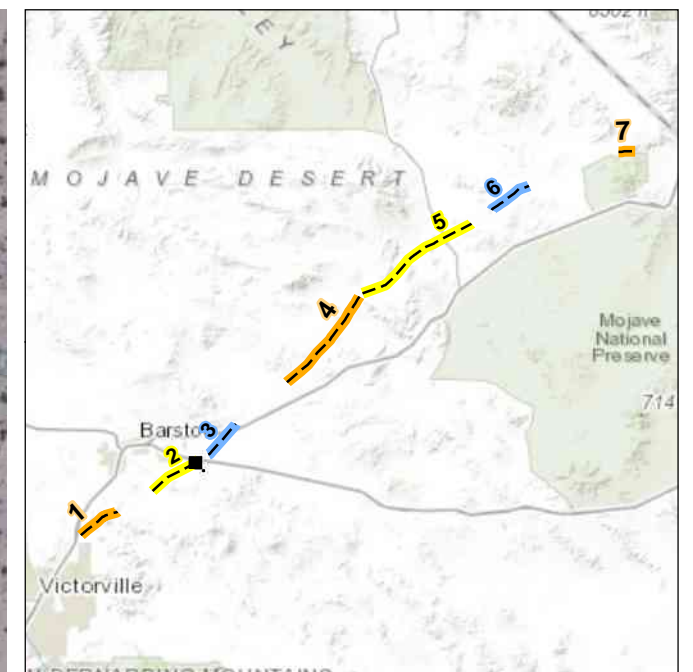
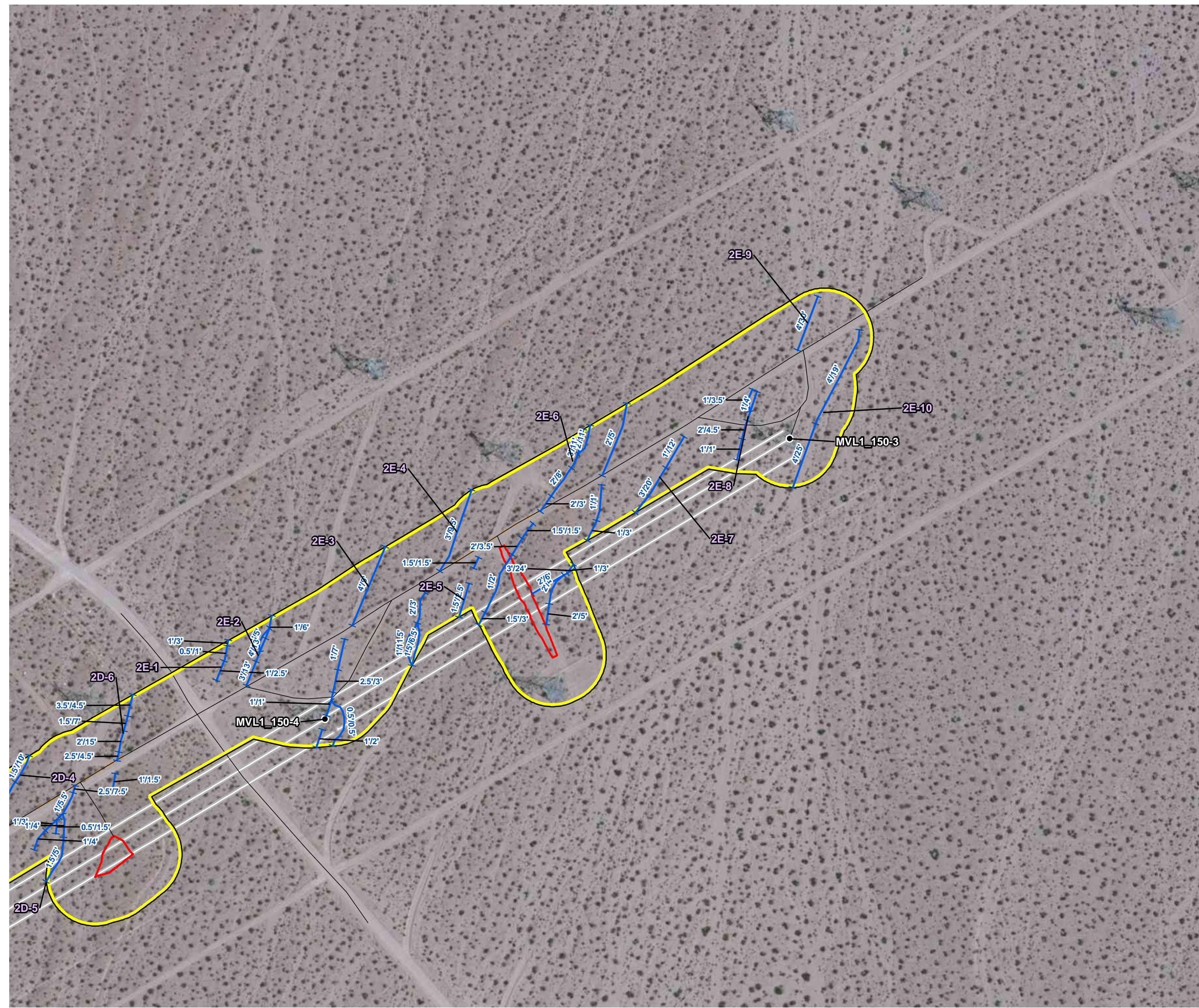
PSOMAS

Exhibit 7
Project Impacts
Segment 2c

Path 46 Transmission Line Clearances Project

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- Biological Survey Area
- Project Features**
 - Tower Location
 - Access Roads
 - Power Lines
 - Potential Soil Spreading
 - Compacted Soil Barricade
 - Demolish
 - Grading Limits
- Jurisdictional Resources**
 - Centerline (OHWM/TOB width – feet)
 - Ordinary High Water Mark (OHWM) Extent
 - Top of Bank (TOB) Extent



Aerial Source: ESRI, NAIP 2014



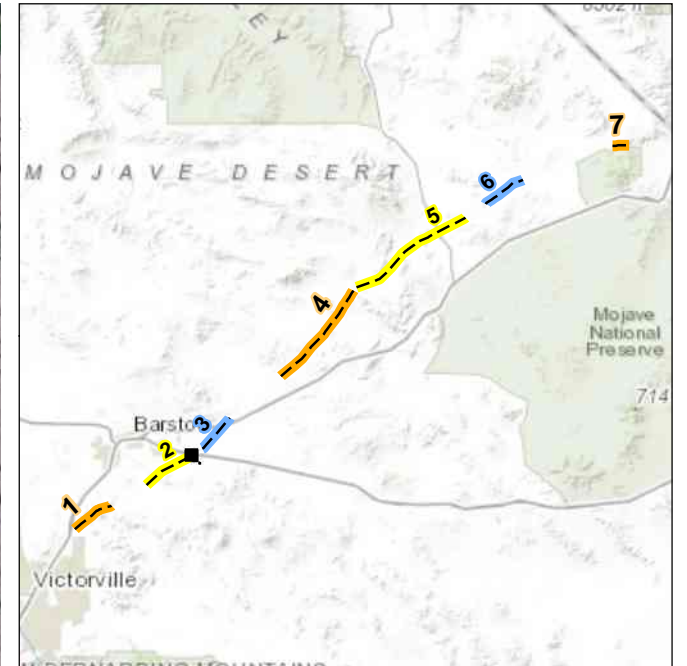
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








Exhibit 7
Project Impacts
Segment 2e

Path 46 Transmission Line Clearances Project

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-  Biological Survey Area
- Project Features**
-  Tower Location
-  Access Roads
-  Power Lines
-  Potential Soil Spreading
-  Compacted Soil Barricade
-  Demolish
-  Grading Limits
- Jurisdictional Resources**
-  Centerline (OHWM/TOB width – feet)
-  Ordinary High Water Mark (OHWM) Extent
-  Top of Bank (TOB) Extent



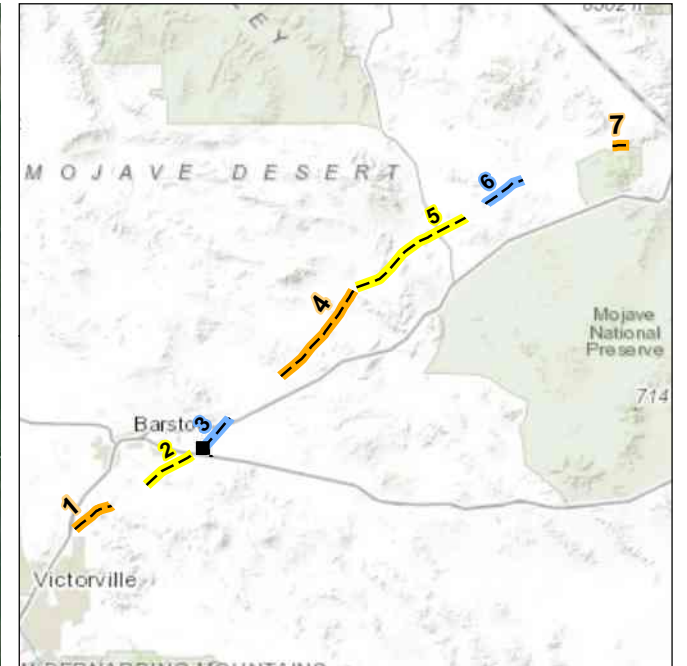
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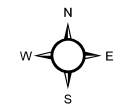
Exhibit 7 Project Impacts Segment 2f

Path 46 Transmission Line Clearances Project

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- Biological Survey Area
- Project Features**
- Tower Location
- Access Roads
- Power Lines
- Potential Soil Spreading
- Compacted Soil Barricade
- Demolish
- Grading Limits
- Jurisdictional Resources**
- Centerline (OHWM/TOB width – feet)
- Ordinary High Water Mark (OHWM) Extent
- Top of Bank (TOB) Extent



Aerial Source: ESRI, NAIP 2014

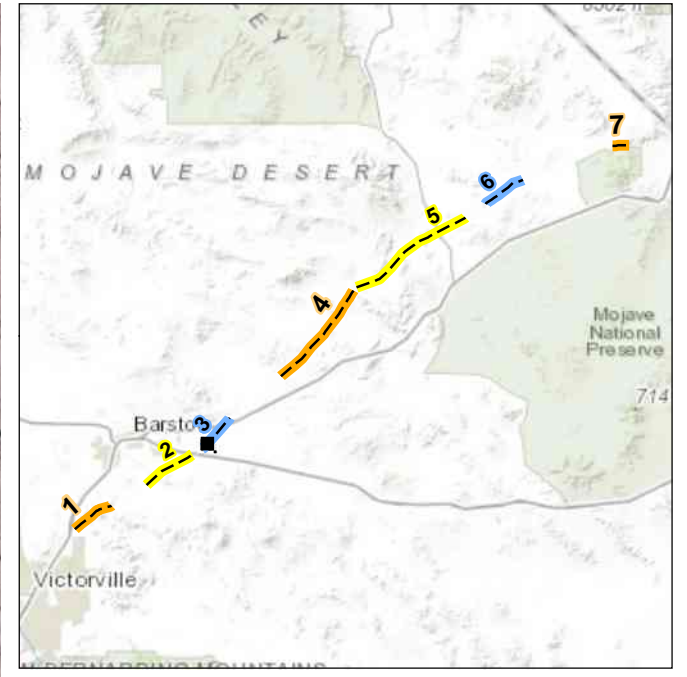
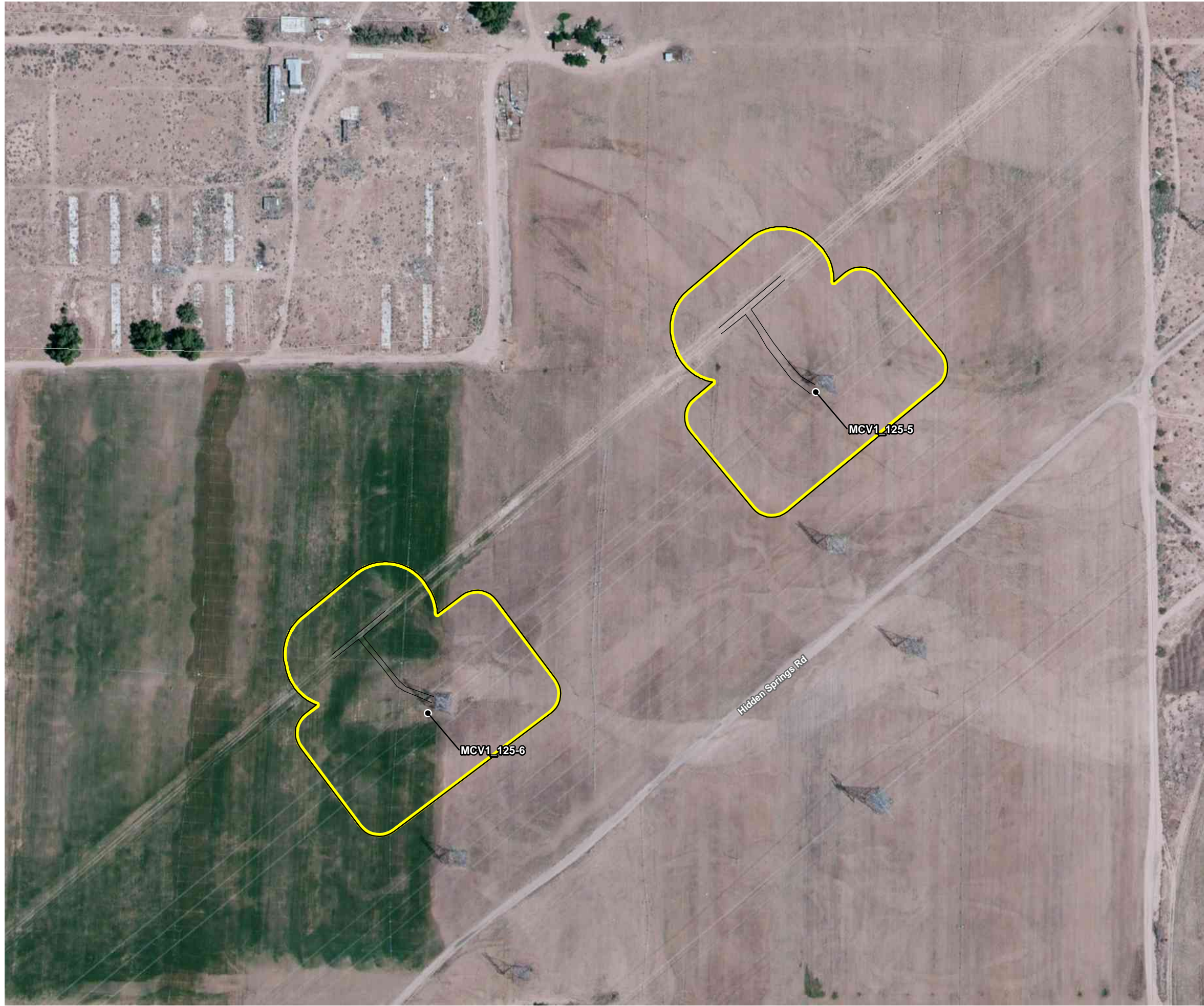


Exhibit 7 Project Impacts Segment 3a

Path 46 Transmission Line Clearances Project

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Biological Survey Area

Project Features

- Tower Location
- Access Roads
- Power Lines
- - - Potential Soil Spreading
- - - Compacted Soil Barricade
- - - Demolish
- - - Grading Limits

Jurisdictional Resources

- Centerline (OHWM/TOB width – feet)
- ▨ Ordinary High Water Mark (OHWM) Extent
- ▨ Top of Bank (TOB) Extent

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Feet

Aerial Source: ESRI, NAIP 2014



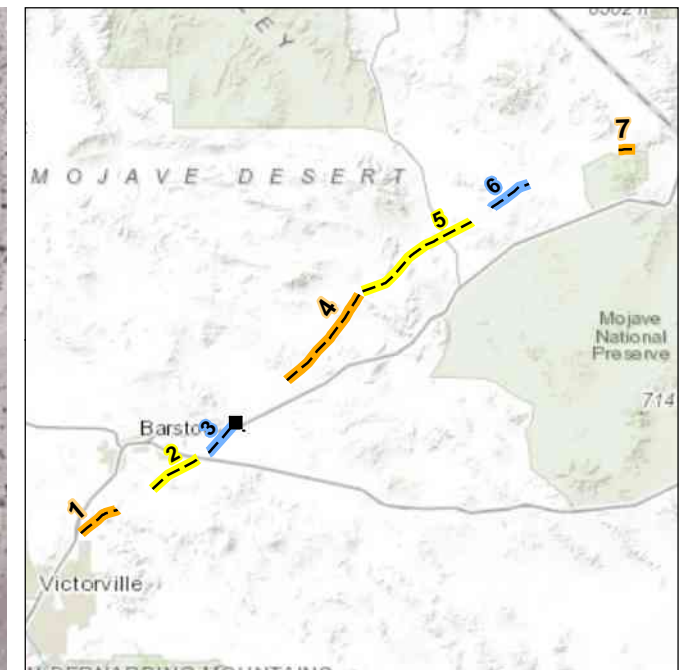
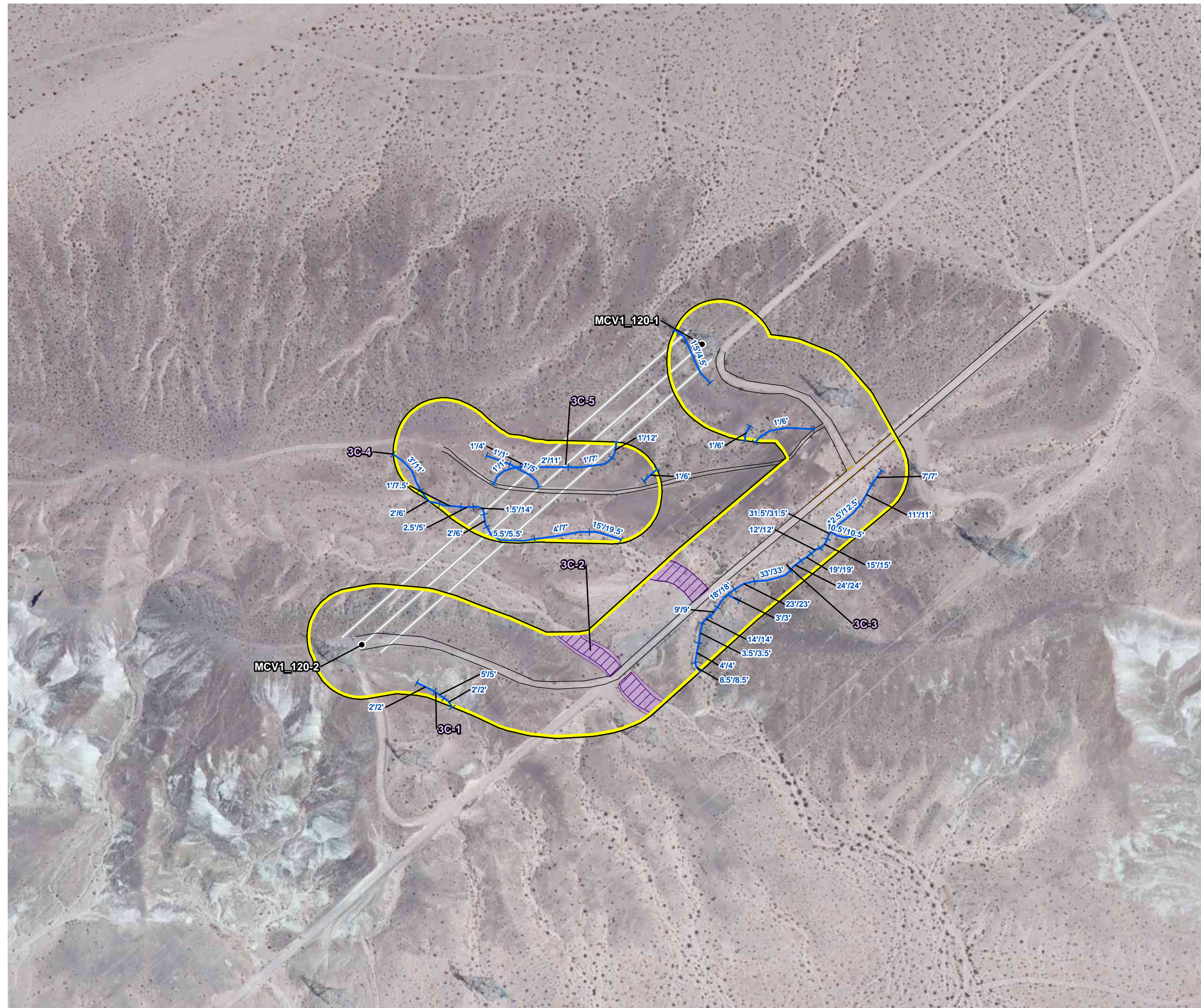
Exhibit 7
Project Impacts
Segment 3b

Path 46 Transmission Line Clearances Project

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- Biological Survey Area
- Project Features**
- Tower Location
- Access Roads
- Power Lines
- Potential Soil Spreading
- Compacted Soil Barricade
- Demolish
- Grading Limits
- Jurisdictional Resources**
- Centerline (OHWM/TOB width – feet)
- Ordinary High Water Mark (OHWM) Extent
- Top of Bank (TOB) Extent



Aerial Source: ESRI, NAIP 2014



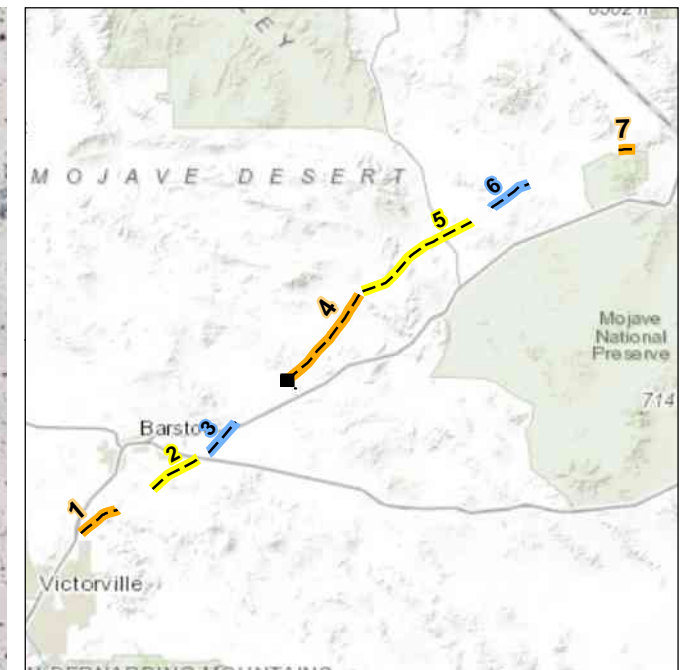
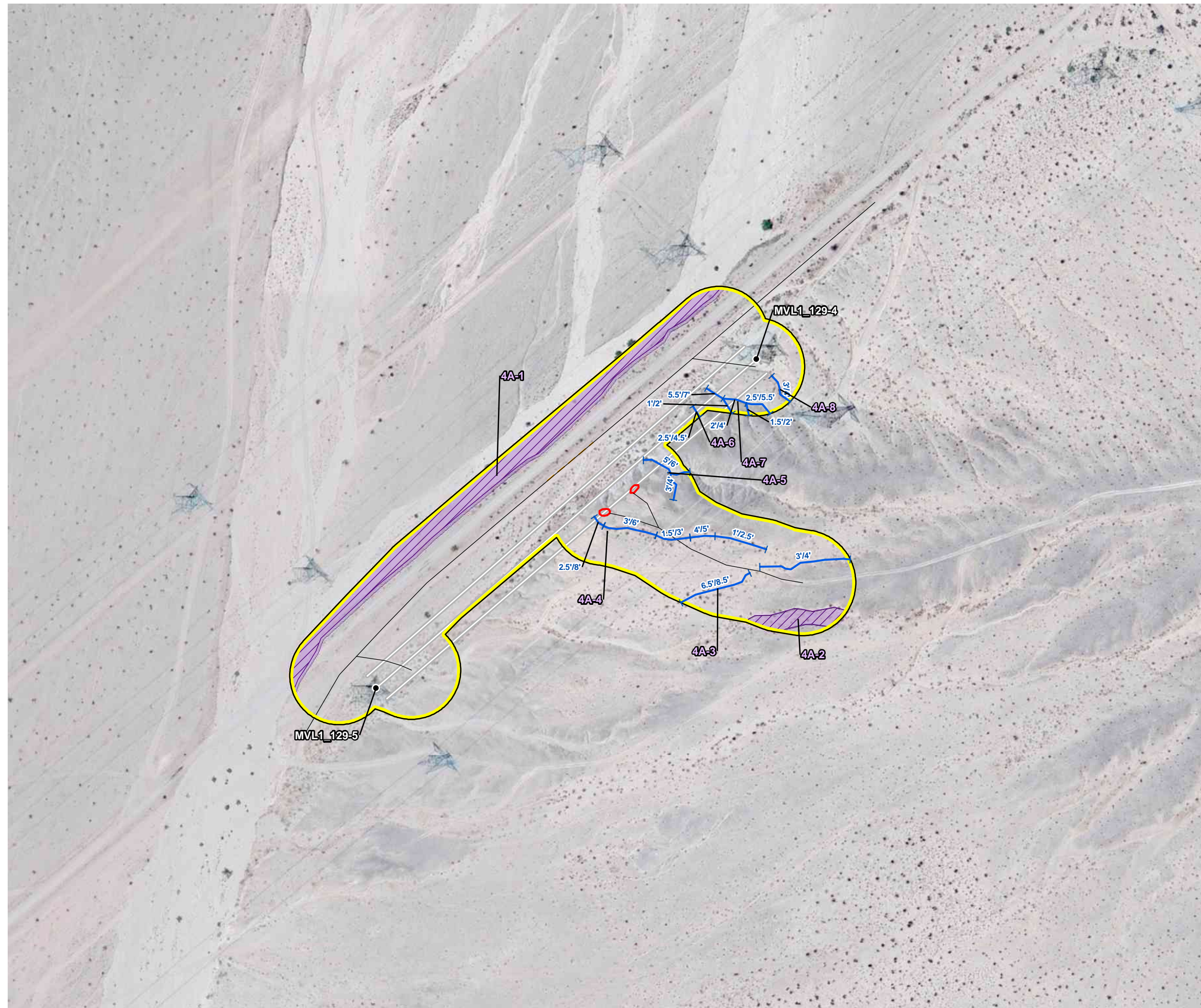
PSOMAS

Exhibit 7
Project Impacts
Segment 3c

Path 46 Transmission Line Clearances Project

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- Biological Survey Area
- Project Features**
- Tower Location
- Access Roads
- Power Lines
- Potential Soil Spreading
- Compacted Soil Barricade
- Demolish
- Grading Limits
- Jurisdictional Resources**
- Centerline (OHWM/TOB width – feet)
- Ordinary High Water Mark (OHWM) Extent
- Top of Bank (TOB) Extent



Aerial Source: ESRI, NAIP 2014

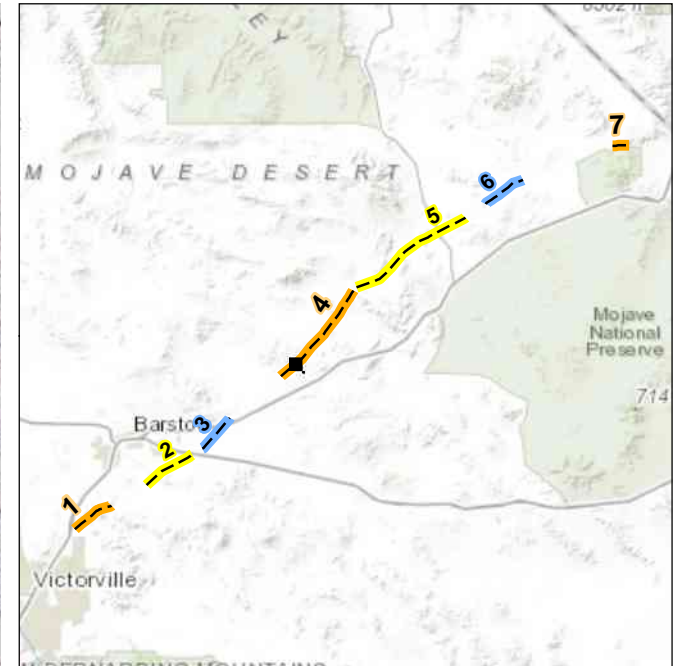


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Exhibit 7
Project Impacts
Segment 4a

Path 46 Transmission Line Clearances Project

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Biological Survey Area

Project Features

- Tower Location
- Access Roads
- Power Lines
- - - Potential Soil Spreading
- - - Compacted Soil Barricade
- - - Demolish
- - - Grading Limits

Jurisdictional Resources

- Centerline (OHWM/TOB width – feet)
- ▨ Ordinary High Water Mark (OHWM) Extent
- ▨ Top of Bank (TOB) Extent

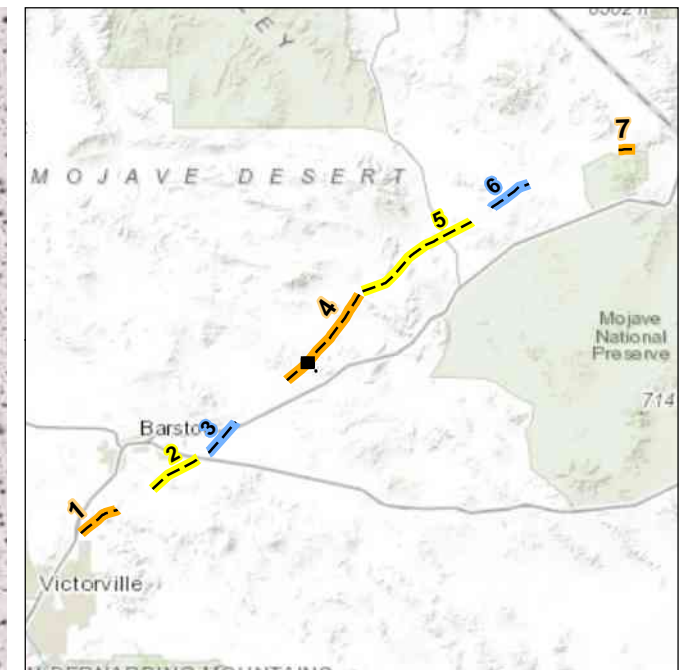
Aerial Source: ESRI, NAIP 2014

Exhibit 7
Project Impacts
Segment 4b
Path 46 Transmission Line Clearances Project

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- Biological Survey Area
- Project Features**
- Tower Location
- Access Roads
- Power Lines
- Potential Soil Spreading
- Compacted Soil Barricade
- Demolish
- Grading Limits
- Jurisdictional Resources**
- Centerline (OHWM/TOB width – feet)
- Ordinary High Water Mark (OHWM) Extent
- Top of Bank (TOB) Extent



Aerial Source: ESRI, NAIP 2014

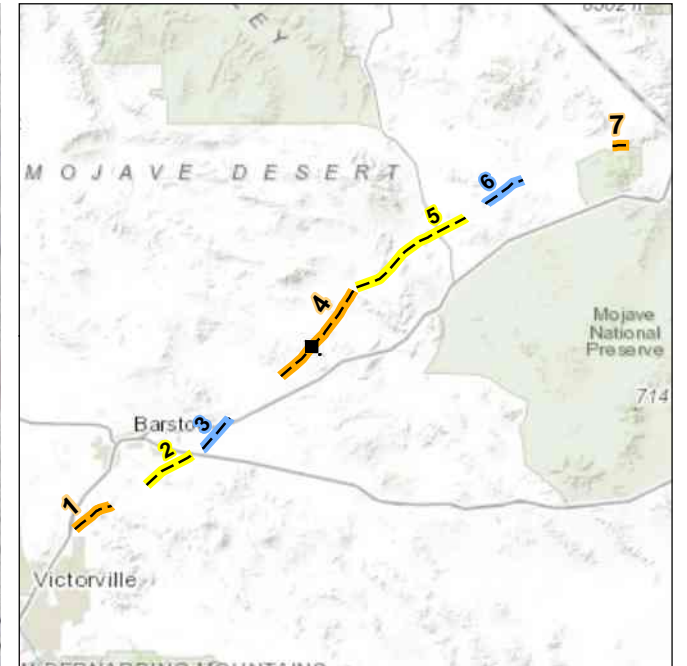
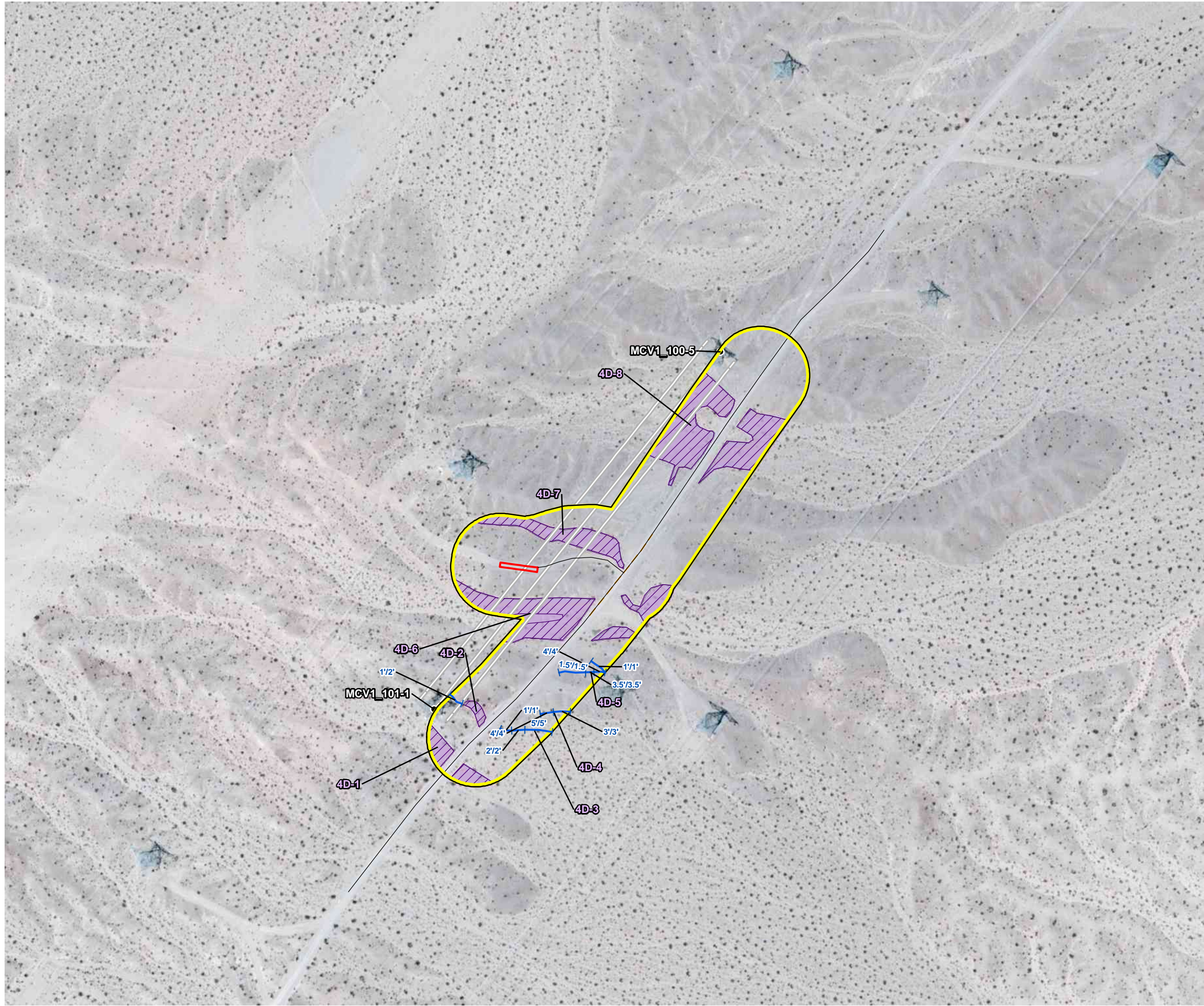


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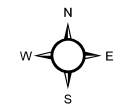
Exhibit 7
Project Impacts
Segment 4c

Path 46 Transmission Line Clearances Project

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- Biological Survey Area
- Project Features**
- Tower Location
- Access Roads
- Power Lines
- Potential Soil Spreading
- Compacted Soil Barricade
- - - Demolish
- ▭ Grading Limits
- Jurisdictional Resources**
- Centerline (OHWM/TOB width – feet)
- ▨ Ordinary High Water Mark (OHWM) Extent
- ▨ Top of Bank (TOB) Extent



Aerial Source: ESRI, NAIP 2014



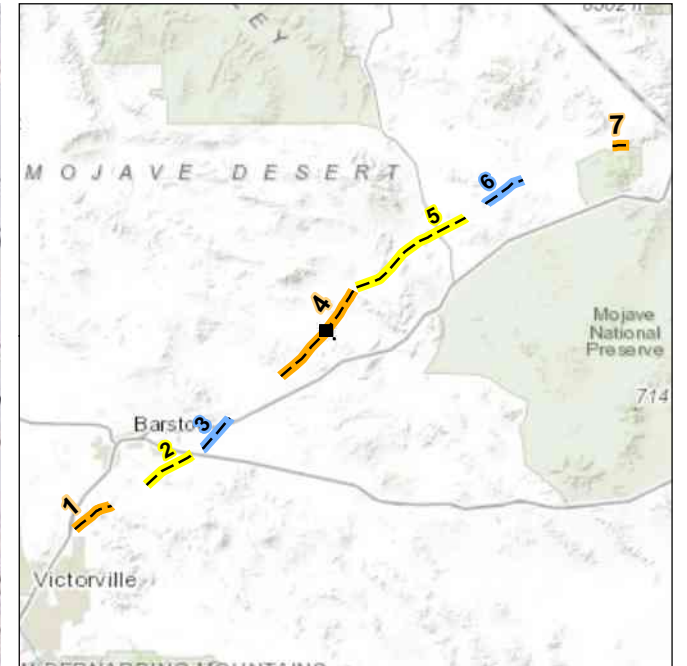
Exhibit 7 Project Impacts Segment 4d

Path 46 Transmission Line Clearances Project

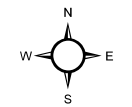
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- Biological Survey Area
- Project Features**
- Tower Location
- Access Roads
- Power Lines
- Potential Soil Spreading
- Compacted Soil Barricade
- Demolish
- Grading Limits
- Jurisdictional Resources**
- Centerline (OHWM/TOB width – feet)
- Ordinary High Water Mark (OHWM) Extent
- Top of Bank (TOB) Extent



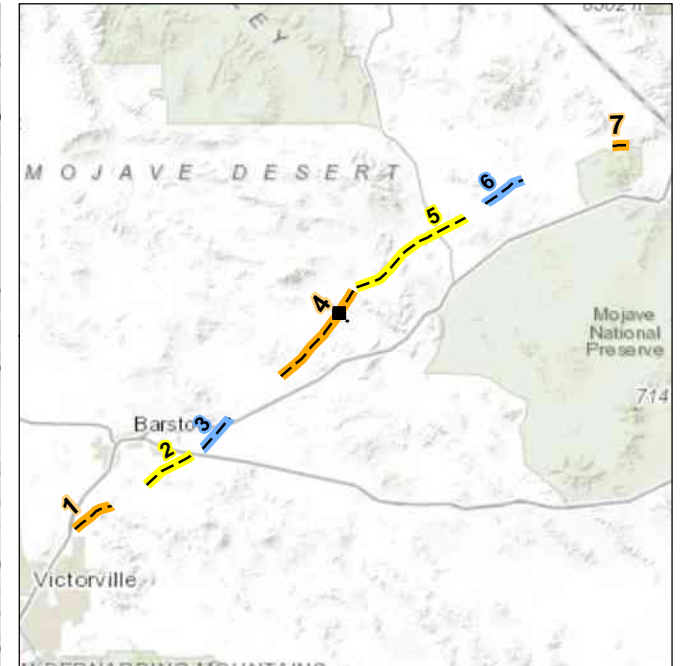
Aerial Source: ESRI, NAIP 2014



Exhibit 7
Project Impacts
Segment 4f

Path 46 Transmission Line Clearances Project

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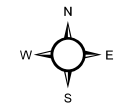
Biological Survey Area

Project Features

- Tower Location
- Access Roads
- Power Lines
- - - Potential Soil Spreading
- - - Compacted Soil Barricade
- - - Demolish
- ▭ Grading Limits

Jurisdictional Resources

- Centerline (OHWM/TOB width – feet)
- ▨ Ordinary High Water Mark (OHWM) Extent
- ▭ Top of Bank (TOB) Extent


 200 100 0 200 Feet

Aerial Source: ESRI, NAIP 2014

PSOMAS

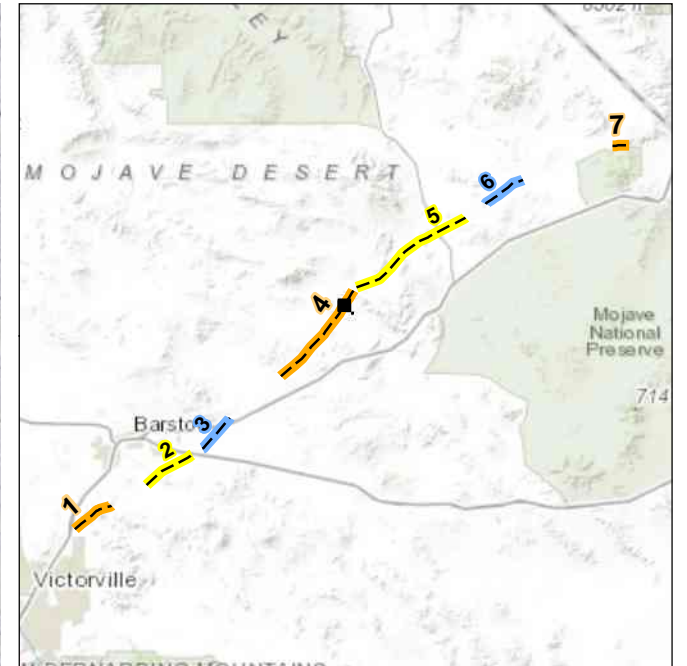
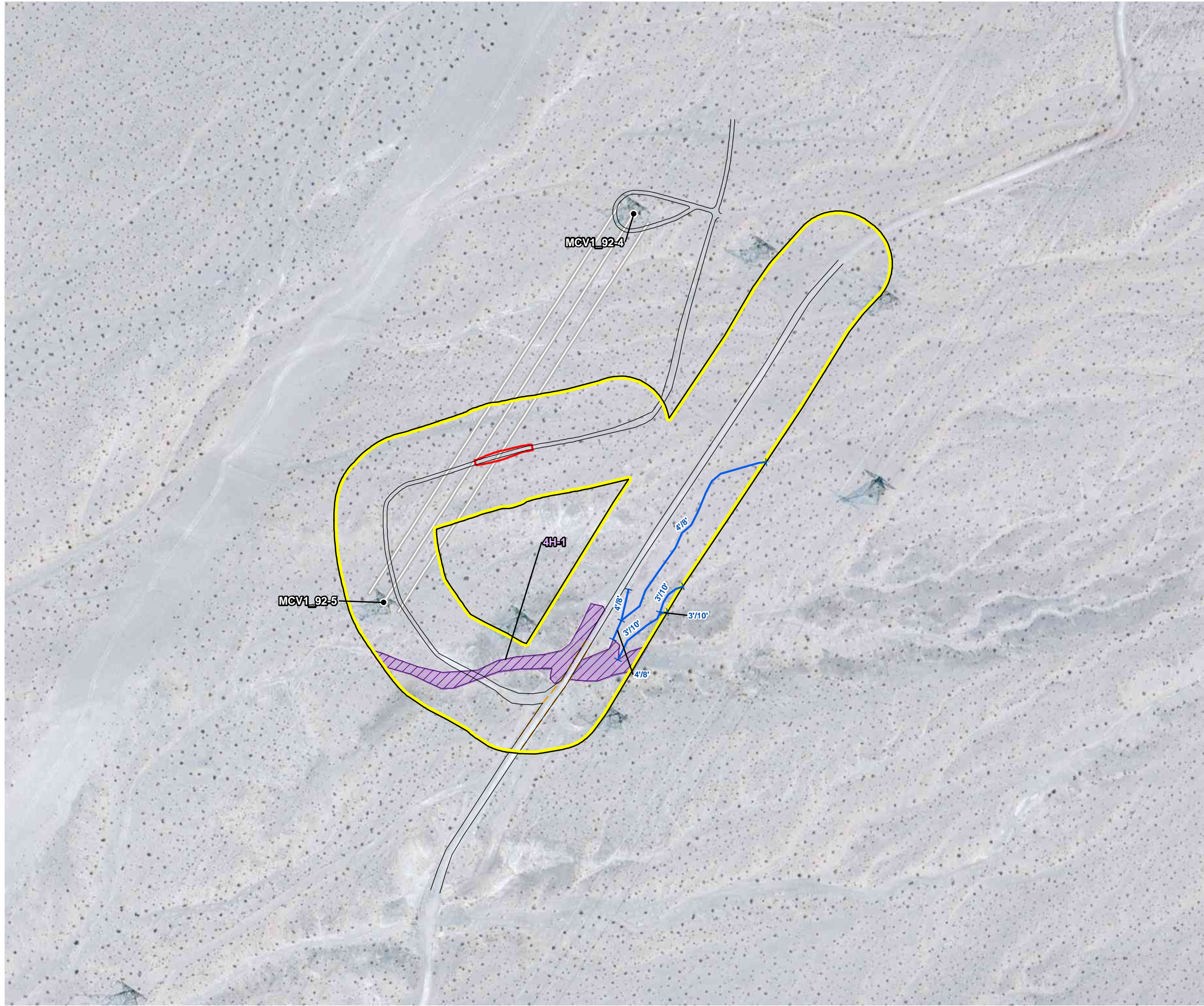
Exhibit 7
Project Impacts
Segment 4g

Path 46 Transmission Line Clearances Project

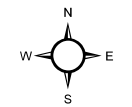
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- Biological Survey Area
- Project Features**
- Tower Location
- Access Roads
- Power Lines
- Potential Soil Spreading
- Compacted Soil Barricade
- Demolish
- Grading Limits
- Jurisdictional Resources**
- Centerline (OHWM/TOB width – feet)
- Ordinary High Water Mark (OHWM) Extent
- Top of Bank (TOB) Extent



Aerial Source: ESRI, NAIP 2014

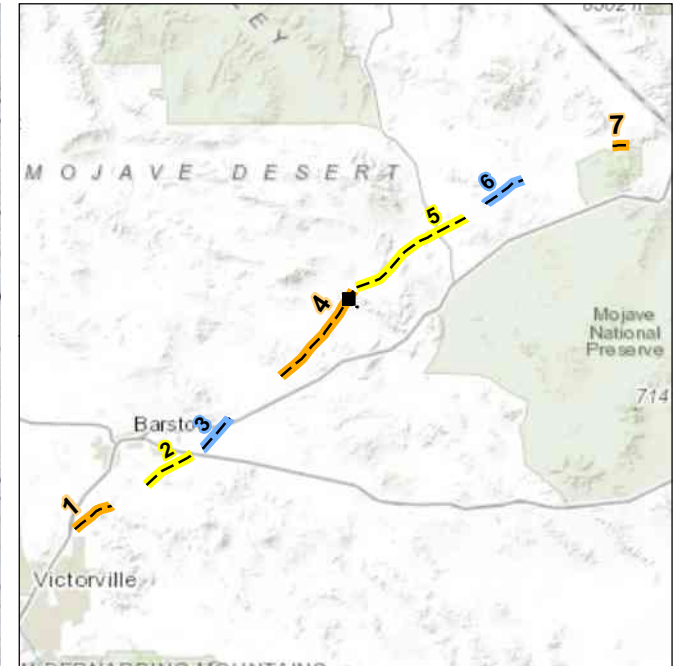
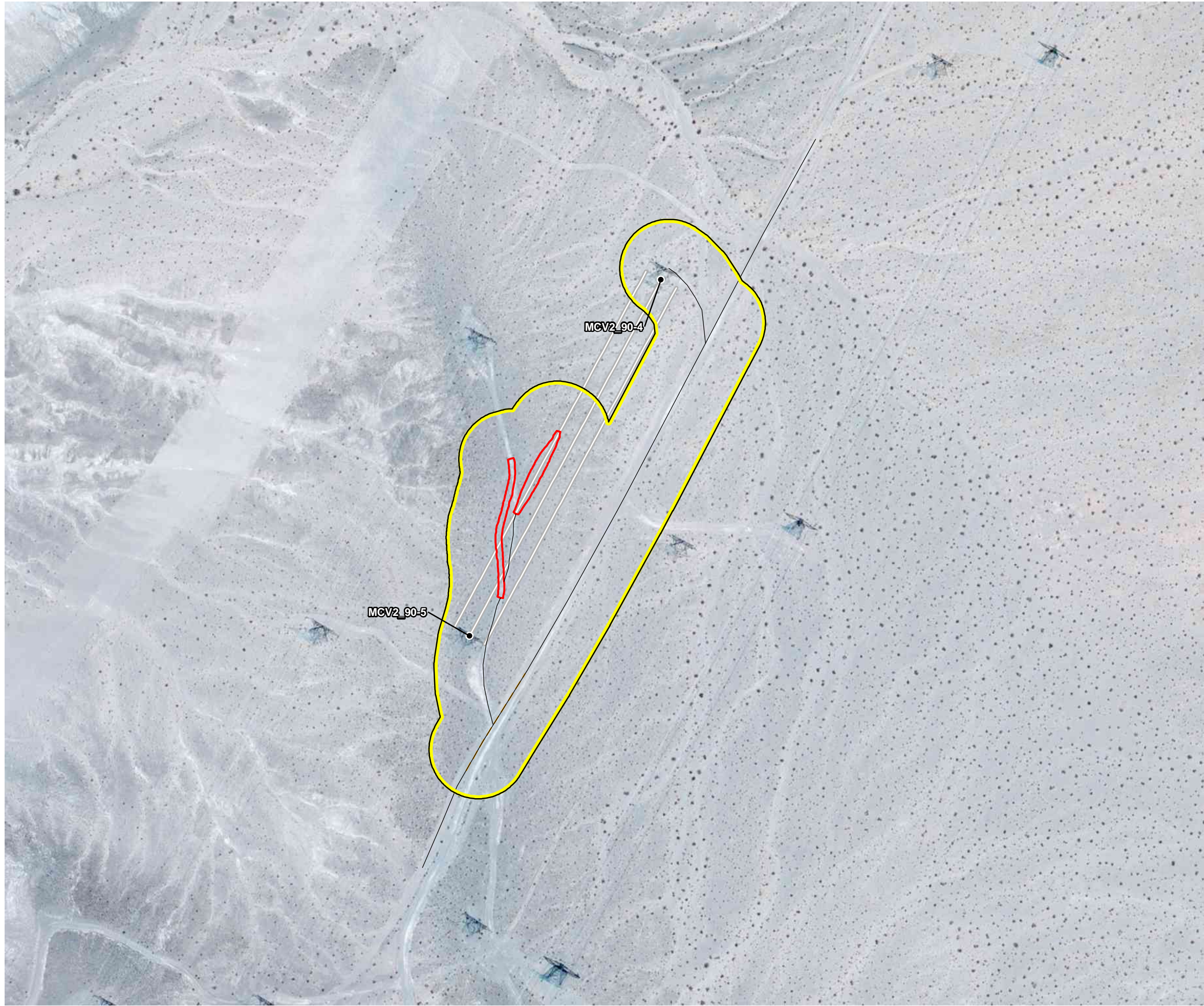


Exhibit 7
Project Impacts
Segment 4h

Path 46 Transmission Line Clearances Project

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Biological Survey Area

Project Features

- Tower Location
- Access Roads
- Power Lines
- - - Potential Soil Spreading
- - - Compacted Soil Barricade
- - - Demolish
- - - Grading Limits

Jurisdictional Resources

- Centerline (OHWM/TOB width – feet)
- ▨ Ordinary High Water Mark (OHWM) Extent
- ▨ Top of Bank (TOB) Extent

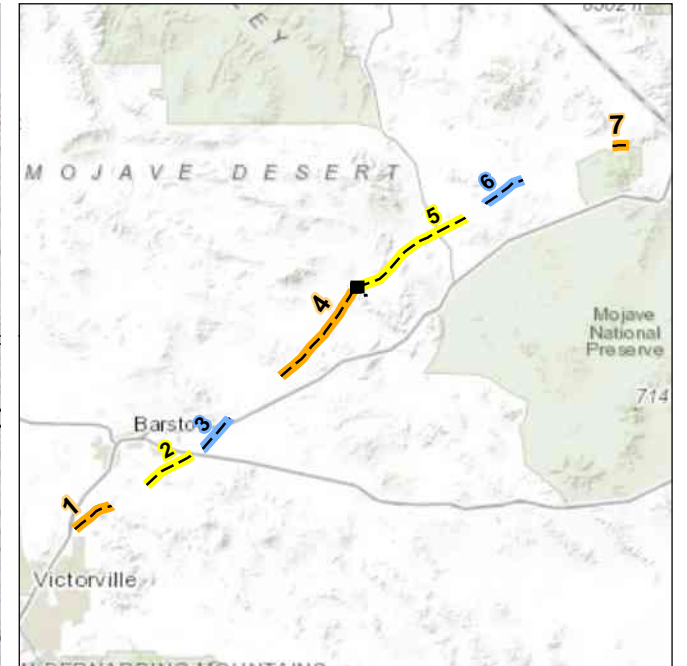
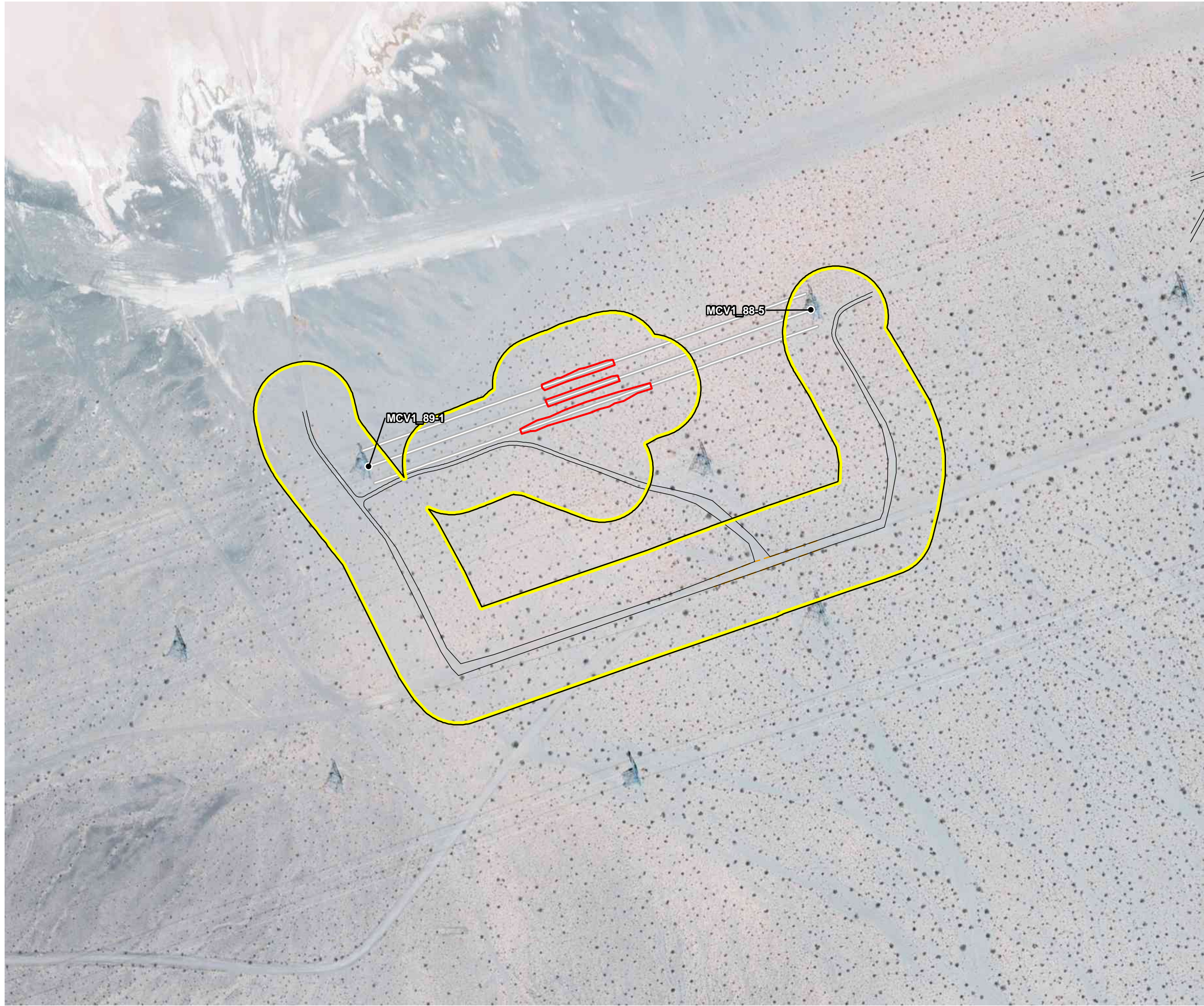
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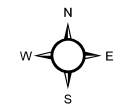
Exhibit 7
Project Impacts
Segment 4i

Path 46 Transmission Line Clearances Project

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- Biological Survey Area
- Project Features**
- Tower Location
- Access Roads
- Power Lines
- Potential Soil Spreading
- Compacted Soil Barricade
- Demolish
- Grading Limits
- Jurisdictional Resources**
- Centerline (OHWM/TOB width – feet)
- Ordinary High Water Mark (OHWM) Extent
- Top of Bank (TOB) Extent



Aerial Source: ESRI, NAIP 2014

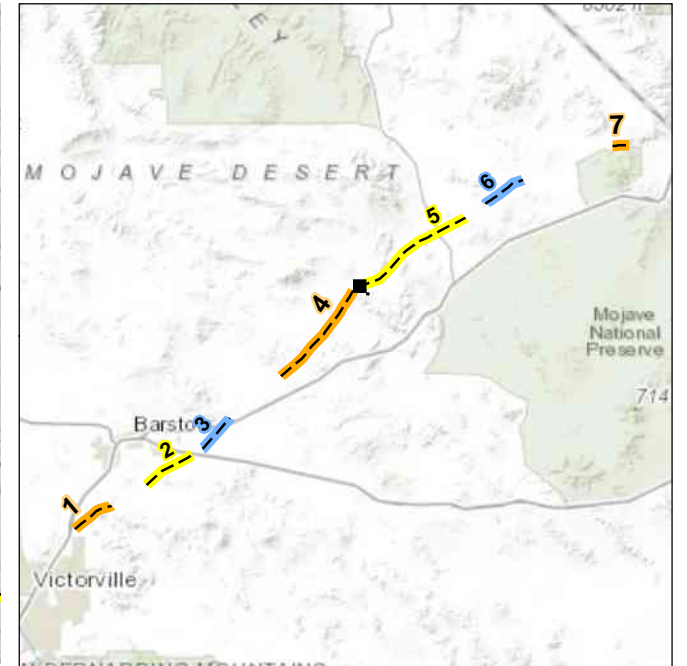
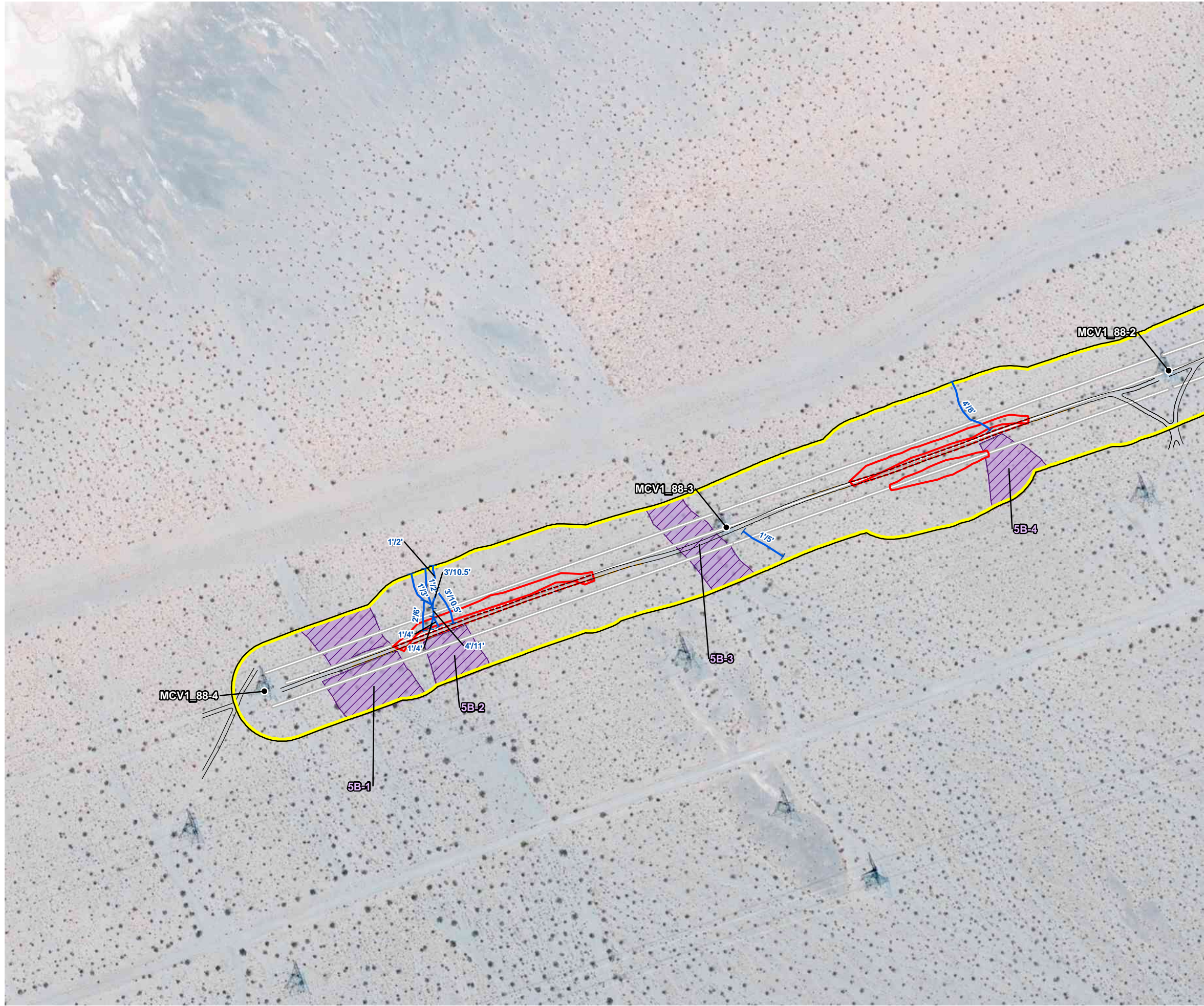


Exhibit 7 Project Impacts Segment 5a

Path 46 Transmission Line Clearances Project

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Biological Survey Area

Project Features

- Tower Location
- Access Roads
- Power Lines
- - - Potential Soil Spreading
- - - Compacted Soil Barricade
- - - Demolish
- - - Grading Limits

Jurisdictional Resources

- Centerline (OHWM/TOB width – feet)
- ▨ Ordinary High Water Mark (OHWM) Extent
- ▨ Top of Bank (TOB) Extent

200 100 0 200 Feet

Aerial Source: ESRI, NAIP 2014

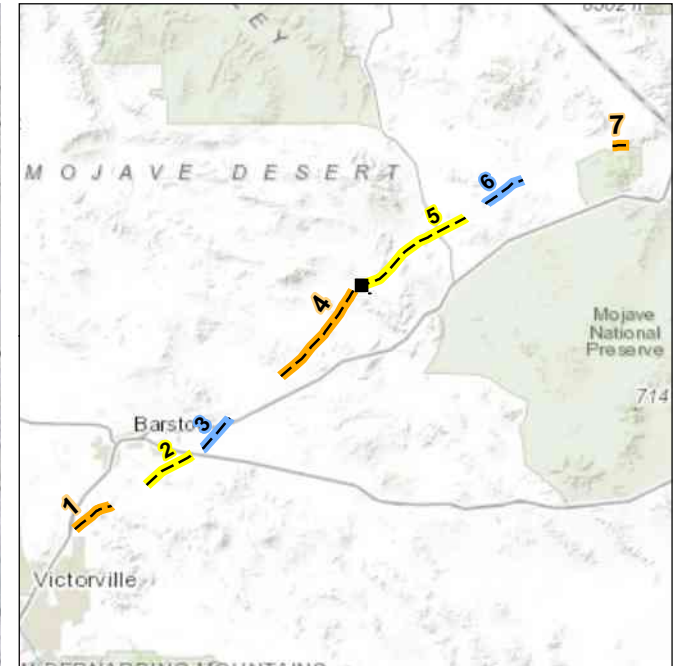
PSOMAS

Exhibit 7
Project Impacts
Segment 5b

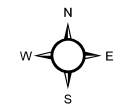
Path 46 Transmission Line Clearances Project

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- Biological Survey Area
- Project Features**
- Tower Location
- Access Roads
- Power Lines
- Potential Soil Spreading
- Compacted Soil Barricade
- Demolish
- Grading Limits
- Jurisdictional Resources**
- Centerline (OHWM/TOB width – feet)
- Ordinary High Water Mark (OHWM) Extent
- Top of Bank (TOB) Extent



Aerial Source: ESRI, NAIP 2014



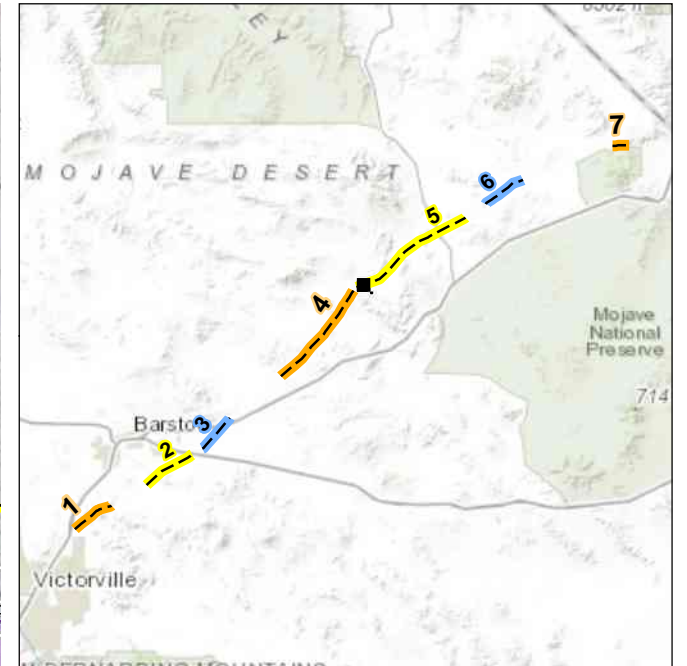
Exhibit 7 Project Impacts Segment 5c

Path 46 Transmission Line Clearances Project

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Biological Survey Area

Project Features

- Tower Location
- Access Roads
- Power Lines
- - - Potential Soil Spreading
- - - Compacted Soil Barricade
- - - Demolish
- ▭ Grading Limits

Jurisdictional Resources

- Centerline (OHWM/TOB width – feet)
- ▨ Ordinary High Water Mark (OHWM) Extent
- ▭ Top of Bank (TOB) Extent

N
W O E
S

200 100 0 200
Feet

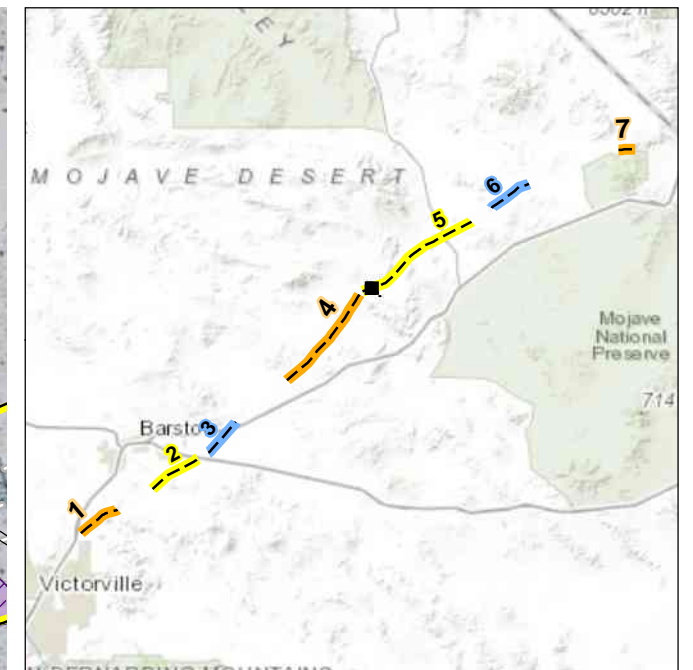
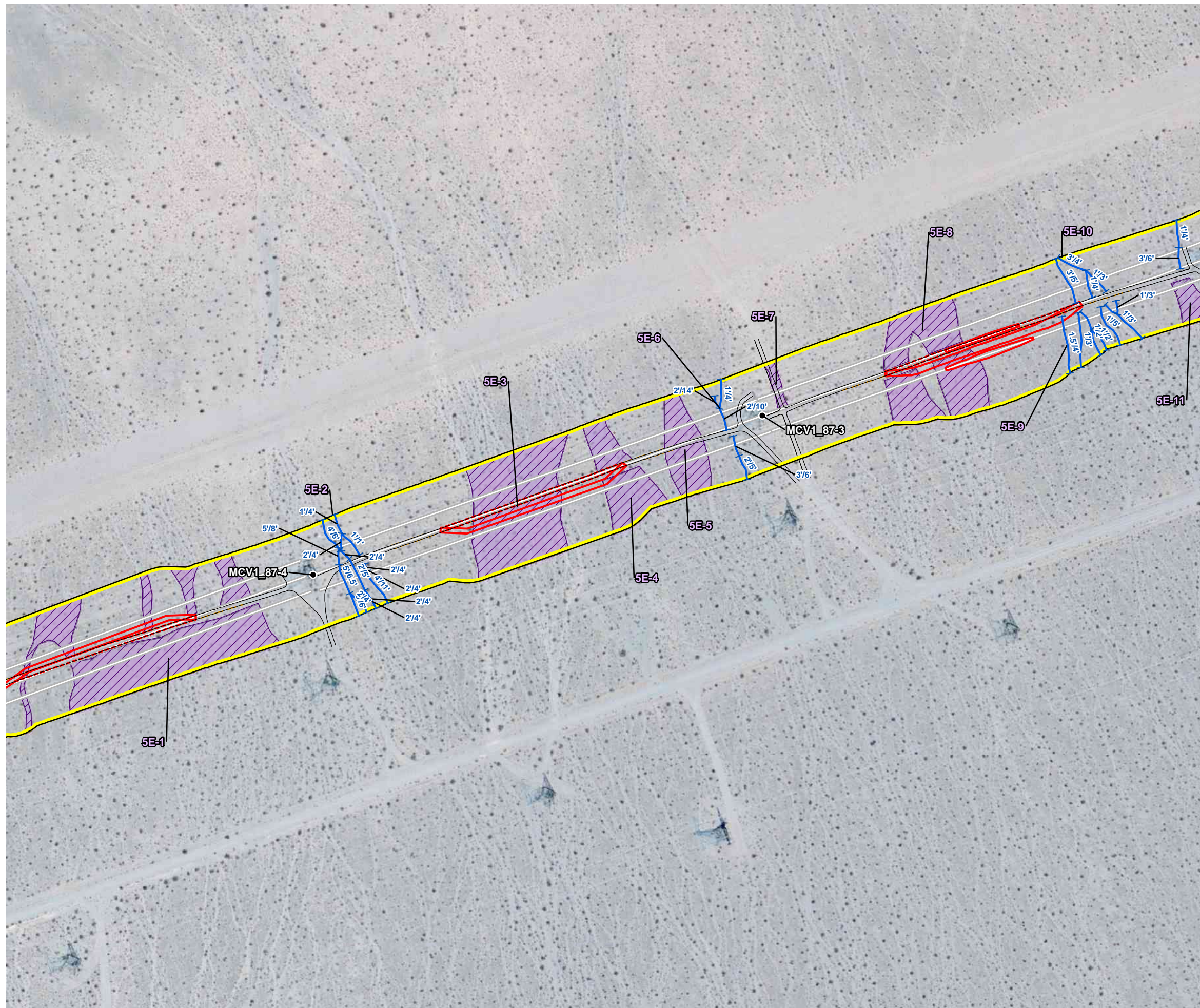
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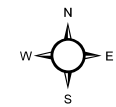
Exhibit 7
Project Impacts
Segment 5d

Path 46 Transmission Line Clearances Project


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- Biological Survey Area
- Project Features**
- Tower Location
- Access Roads
- Power Lines
- Potential Soil Spreading
- Compacted Soil Barricade
- Demolish
- Grading Limits
- Jurisdictional Resources**
- Centerline (OHWM/TOB width – feet)
- Ordinary High Water Mark (OHWM) Extent
- Top of Bank (TOB) Extent



Aerial Source: ESRI, NAIP 2014



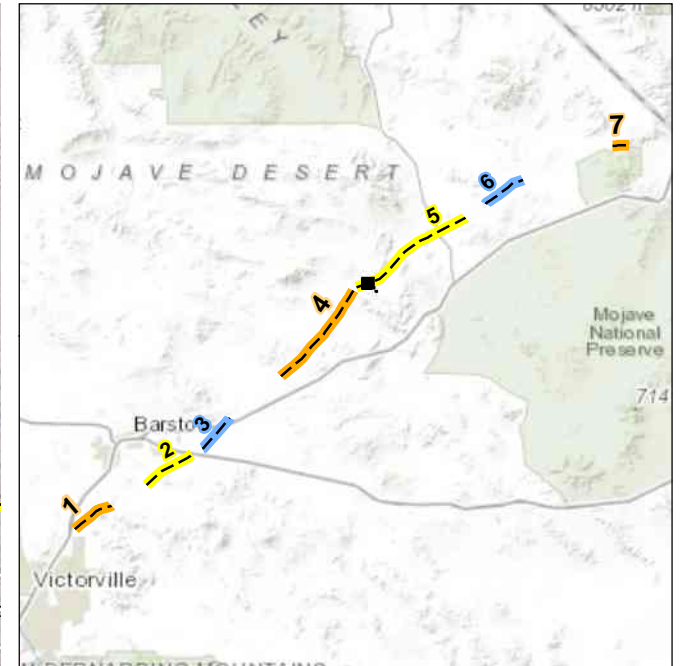
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Exhibit 7
Project Impacts
Segment 5e

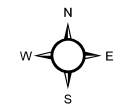
Path 46 Transmission Line Clearances Project

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- Biological Survey Area
- Project Features**
- Tower Location
- Access Roads
- Power Lines
- Potential Soil Spreading
- Compacted Soil Barricade
- Demolish
- Grading Limits
- Jurisdictional Resources**
- Centerline (OHWM/TOB width – feet)
- Ordinary High Water Mark (OHWM) Extent
- Top of Bank (TOB) Extent



Aerial Source: ESRI, NAIP 2014

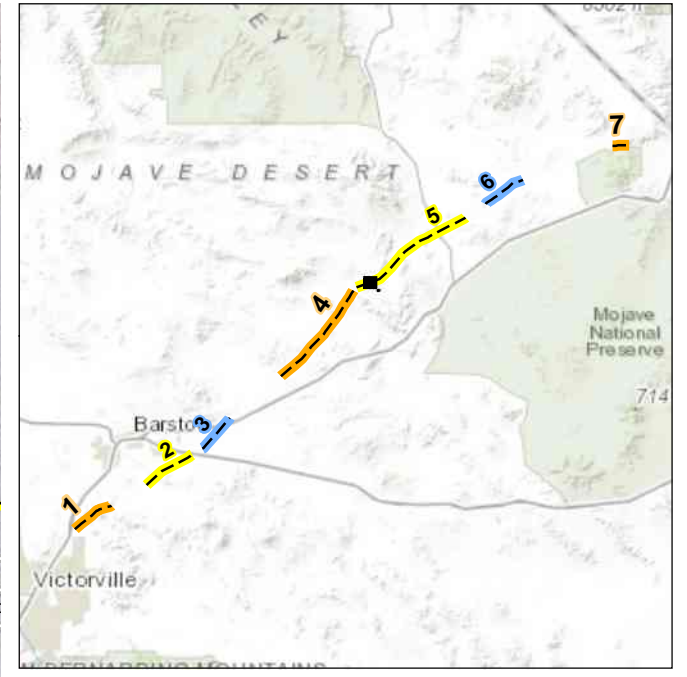


Exhibit 7 Project Impacts Segment 5f

Path 46 Transmission Line Clearances Project

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Biological Survey Area

Project Features

- Tower Location
- Access Roads
- Power Lines
- - - Potential Soil Spreading
- - - Compacted Soil Barricade
- - - Demolish
- - - Grading Limits

Jurisdictional Resources

- Centerline (OHWM/TOB width – feet)
- ▨ Ordinary High Water Mark (OHWM) Extent
- ▨ Top of Bank (TOB) Extent

200 100 0 200
 Feet

Aerial Source: ESRI, NAIP 2014

PSOMAS

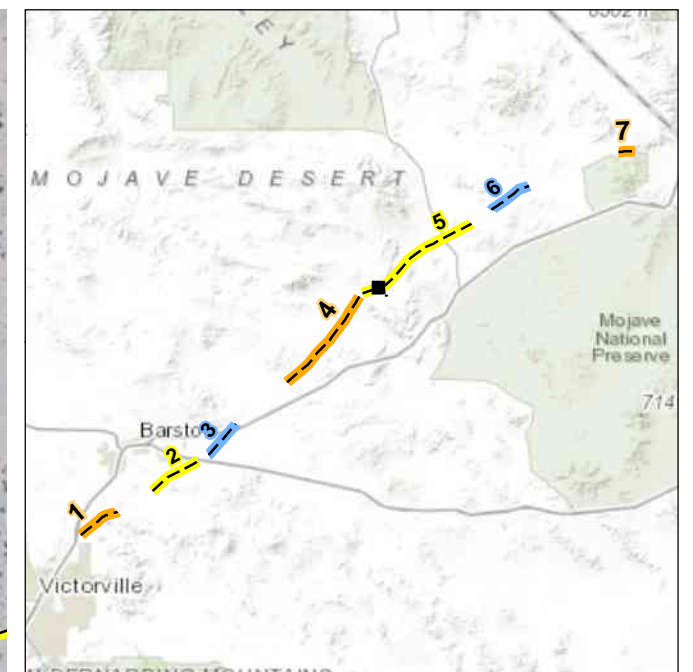
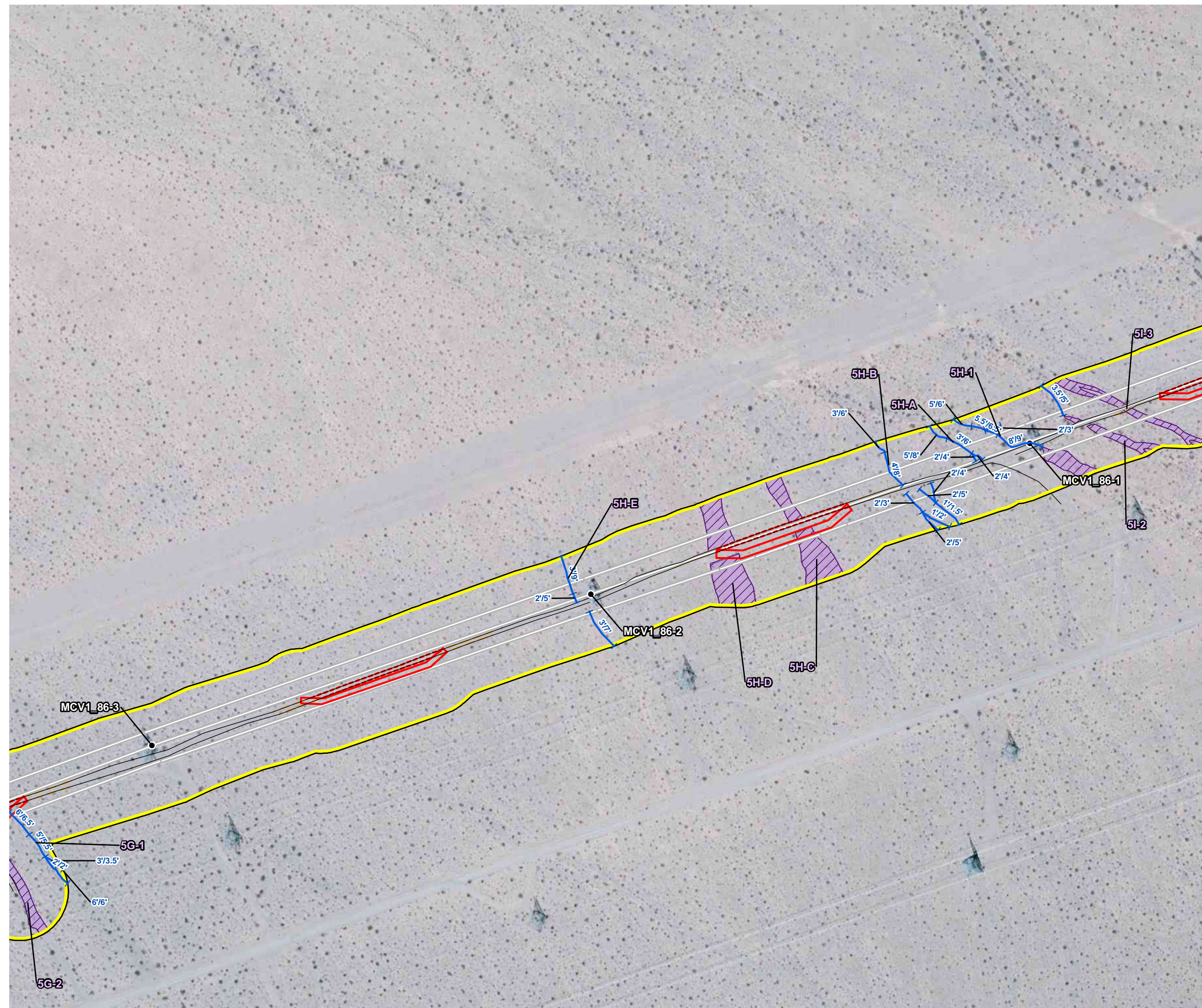
Exhibit 7
Project Impacts
Segment 5g

Path 46 Transmission Line Clearances Project

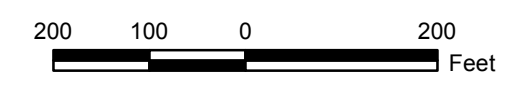
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- Biological Survey Area
- Project Features**
- Tower Location
- Access Roads
- Power Lines
- Potential Soil Spreading
- Compacted Soil Barricade
- Demolish
- Grading Limits
- Jurisdictional Resources**
- Centerline (OHWM/TOB width – feet)
- Ordinary High Water Mark (OHWM) Extent
- Top of Bank (TOB) Extent



Aerial Source: ESRI, NAIP 2014



PSOMAS

Exhibit 7

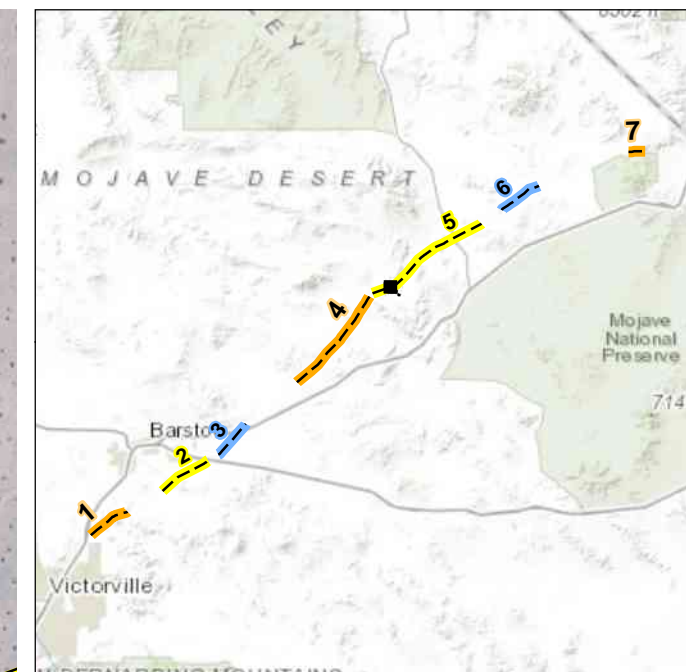
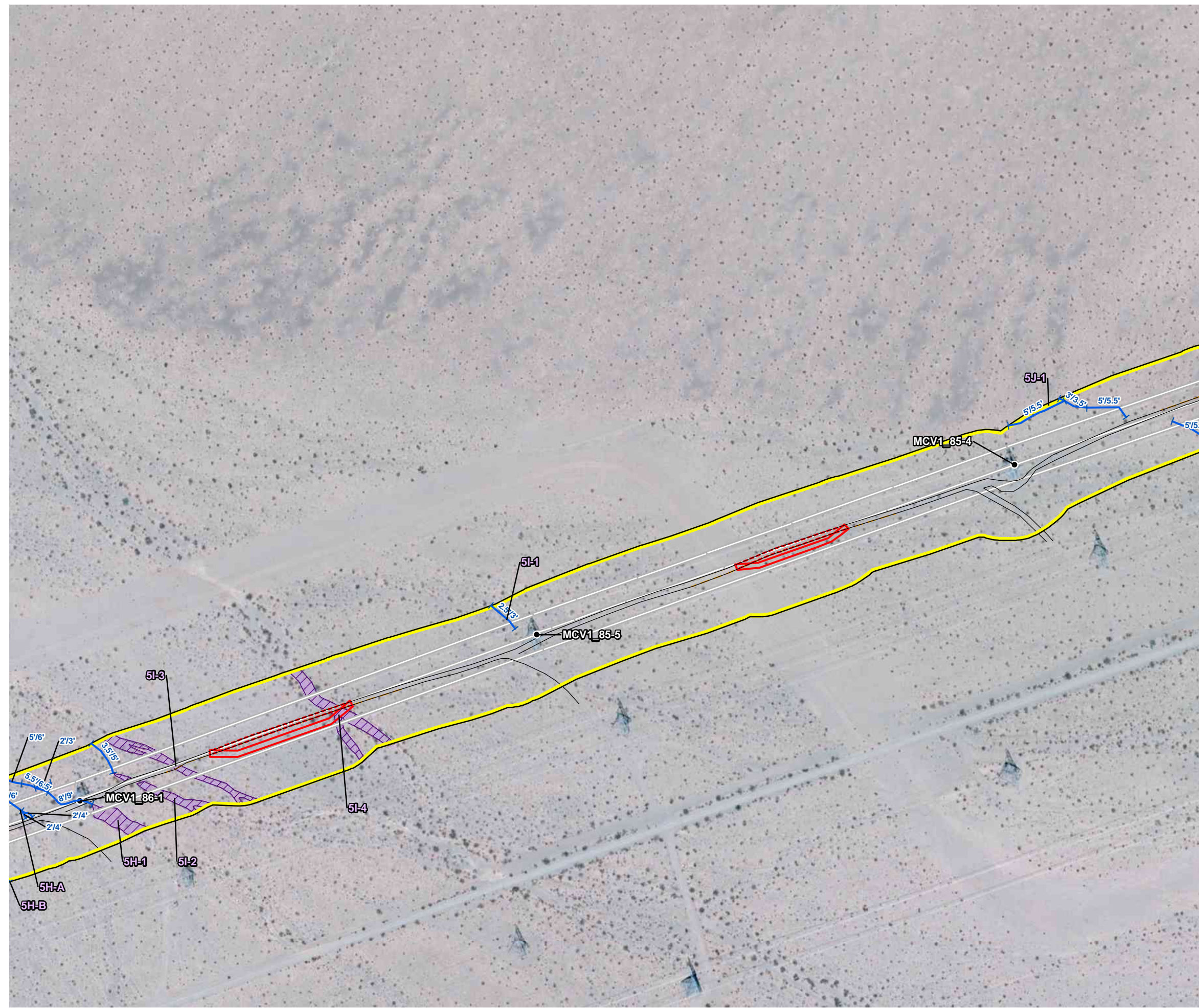
Project Impacts

Segment 5h

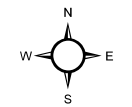
Path 46 Transmission Line Clearances Project

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- Biological Survey Area
- Project Features**
- Tower Location
- Access Roads
- Power Lines
- Potential Soil Spreading
- Compacted Soil Barricade
- Demolish
- Grading Limits
- Jurisdictional Resources**
- Centerline (OHWM/TOB width – feet)
- Ordinary High Water Mark (OHWM) Extent
- Top of Bank (TOB) Extent



Aerial Source: ESRI, NAIP 2014



PSOMAS

Exhibit 7

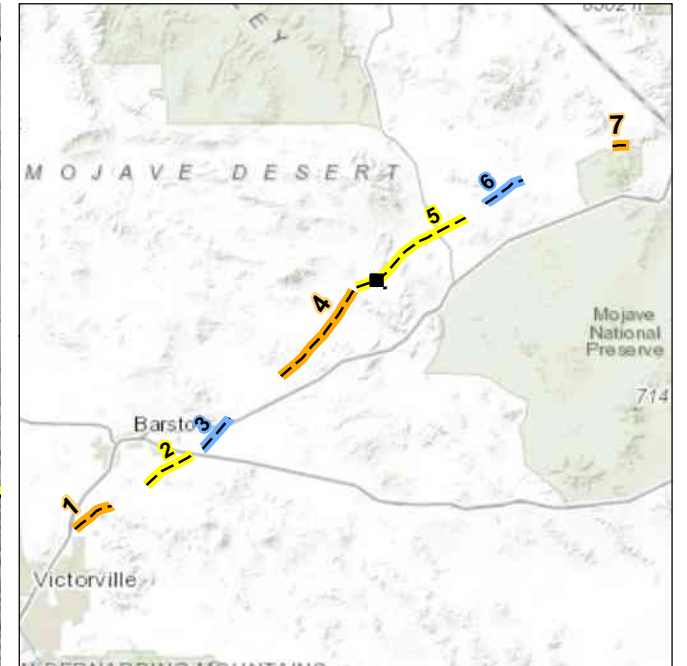
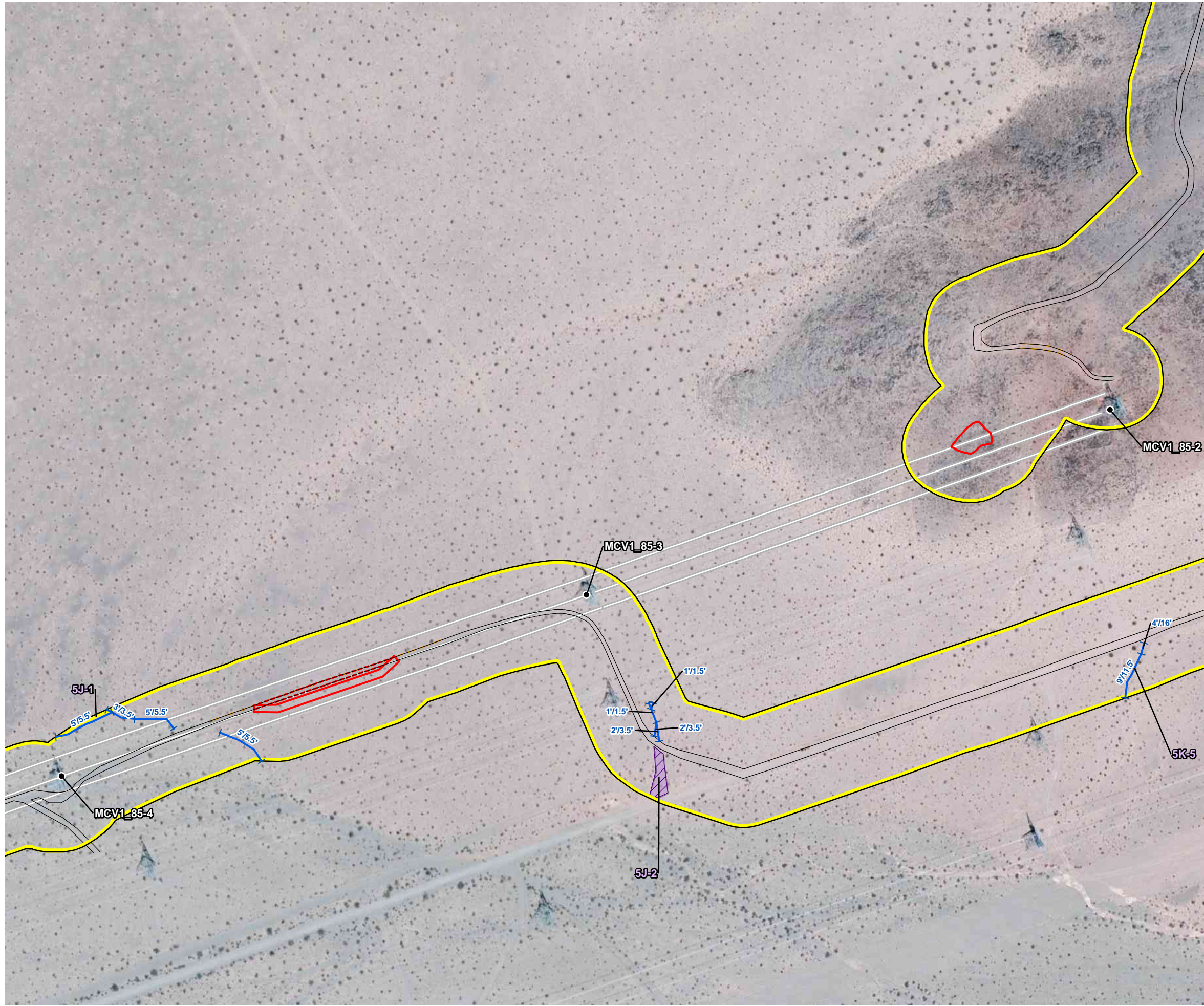
Project Impacts

Segment 5i

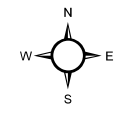
Path 46 Transmission Line Clearances Project

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- Biological Survey Area
- Project Features**
- Tower Location
- Access Roads
- Power Lines
- Potential Soil Spreading
- Compacted Soil Barricade
- Demolish
- Grading Limits
- Jurisdictional Resources**
- Centerline (OHWM/TOB width – feet)
- Ordinary High Water Mark (OHWM) Extent
- Top of Bank (TOB) Extent



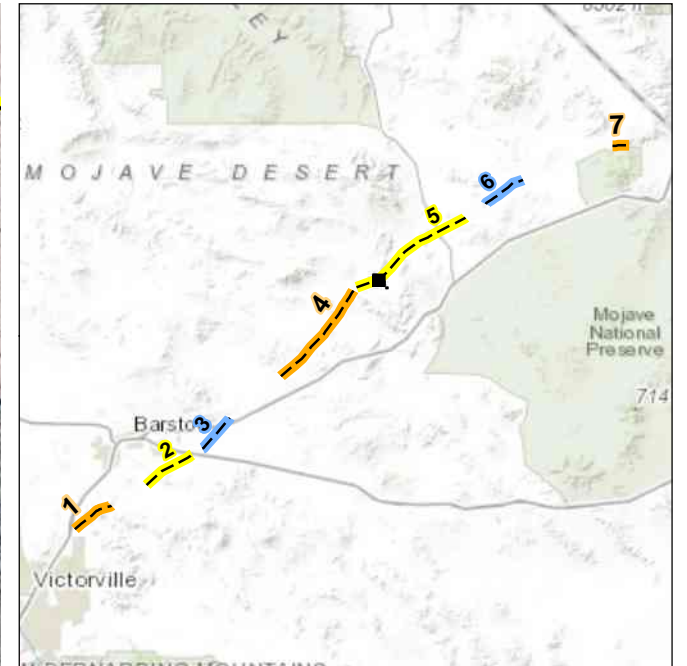
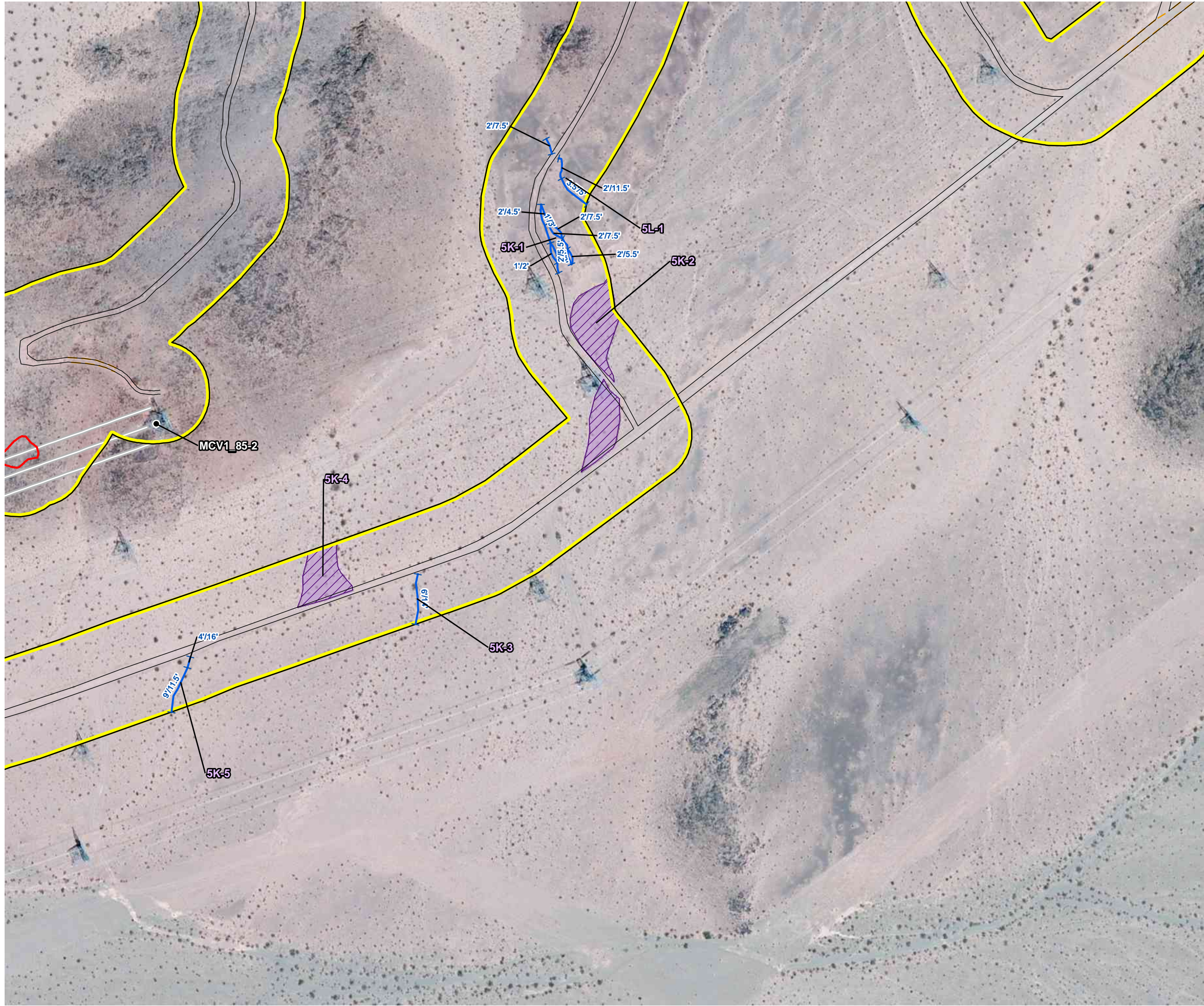
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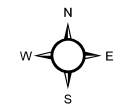
Exhibit 7 Project Impacts Segment 5j

Path 46 Transmission Line Clearances Project

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- Biological Survey Area
- Project Features**
- Tower Location
- Access Roads
- Power Lines
- Potential Soil Spreading
- Compacted Soil Barricade
- Demolish
- Grading Limits
- Jurisdictional Resources**
- Centerline (OHWM/TOB width – feet)
- Ordinary High Water Mark (OHWM) Extent
- Top of Bank (TOB) Extent



Aerial Source: ESRI, NAIP 2014



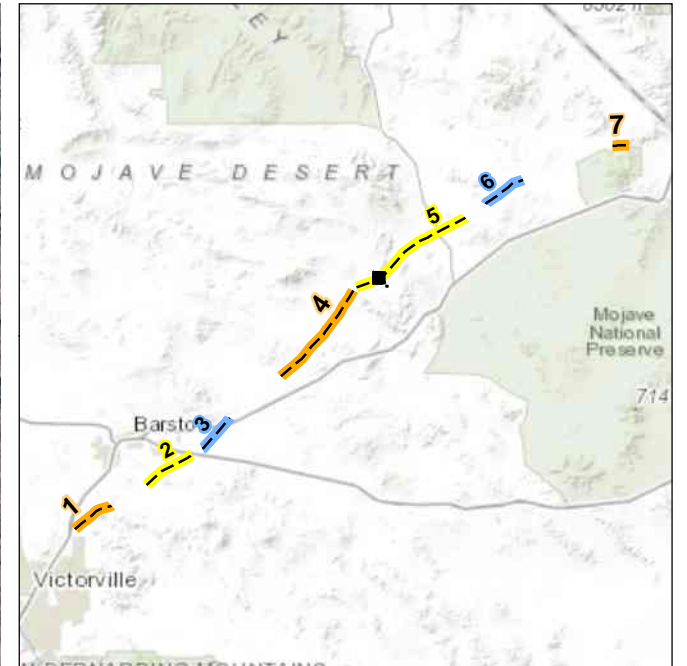
Exhibit 7 Project Impacts Segment 5k

Path 46 Transmission Line Clearances Project

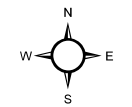
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- Biological Survey Area
- Project Features**
- Tower Location
- Access Roads
- Power Lines
- Potential Soil Spreading
- Compacted Soil Barricade
- Demolish
- Grading Limits
- Jurisdictional Resources**
- Centerline (OHWM/TOB width – feet)
- Ordinary High Water Mark (OHWM) Extent
- Top of Bank (TOB) Extent



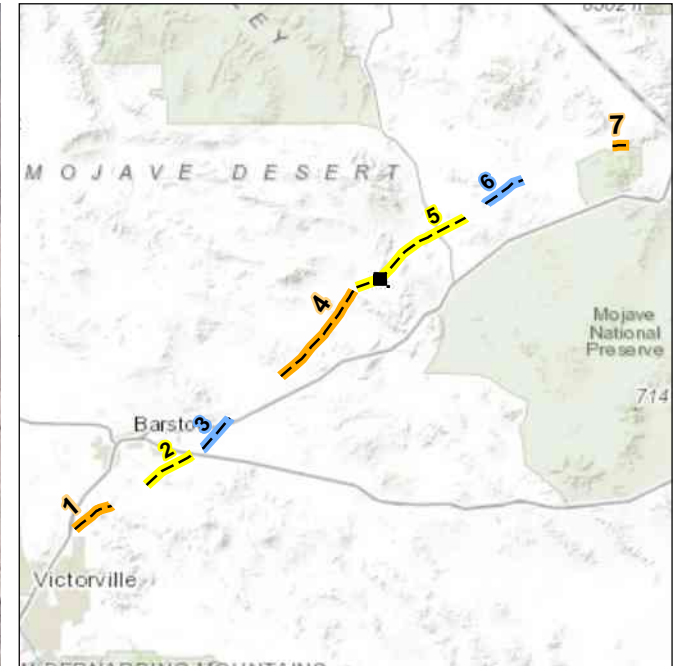
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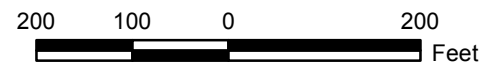
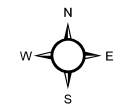
Exhibit 7 Project Impacts Segment 5I

Path 46 Transmission Line Clearances Project

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- Biological Survey Area
- Project Features**
- Tower Location
- Access Roads
- Power Lines
- Potential Soil Spreading
- Compacted Soil Barricade
- Demolish
- Grading Limits
- Jurisdictional Resources**
- Centerline (OHWM/TOB width – feet)
- Ordinary High Water Mark (OHWM) Extent
- Top of Bank (TOB) Extent



Aerial Source: ESRI, NAIP 2014



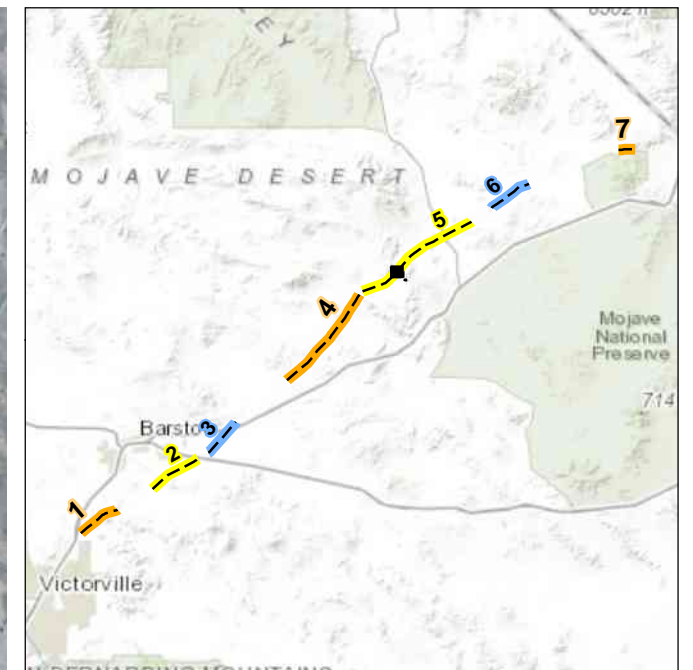
Exhibit 7 Project Impacts Segment 5m












Path 46 Transmission Line Clearances Project

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-  Biological Survey Area
- Project Features**
-  Tower Location
-  Access Roads
-  Power Lines
-  Potential Soil Spreading
-  Compacted Soil Barricade
-  Demolish
-  Grading Limits
- Jurisdictional Resources**
-  Centerline (OHWM/TOB width – feet)
-  Ordinary High Water Mark (OHWM) Extent
-  Top of Bank (TOB) Extent



Aerial Source: ESRI, NAIP 2014


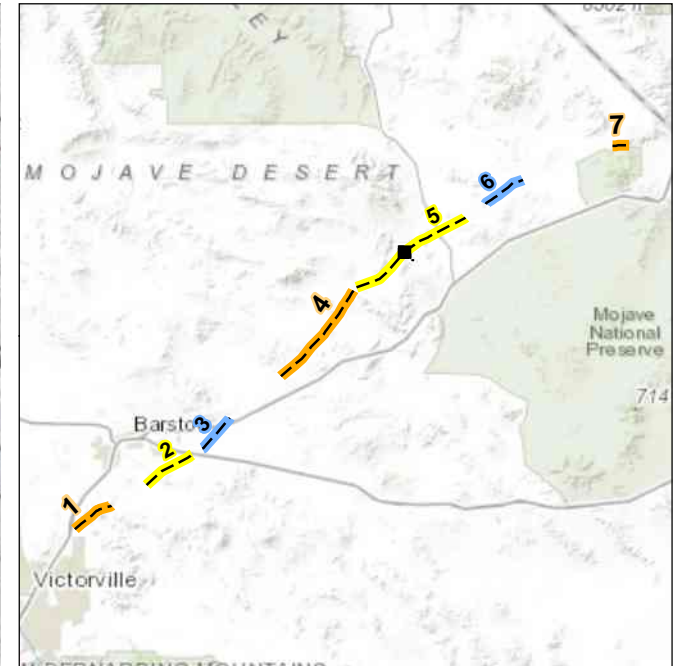


Exhibit 7
Project Impacts
Segment 5n

Path 46 Transmission Line Clearances Project

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Biological Survey Area


Project Features

- Tower Location
- Access Roads
- Power Lines
- - - Potential Soil Spreading
- - - Compacted Soil Barricade
- - - Demolish
- - - Grading Limits

Jurisdictional Resources

- Centerline (OHWM/TOB width – feet)
- ▨ Ordinary High Water Mark (OHWM) Extent
- ▨ Top of Bank (TOB) Extent

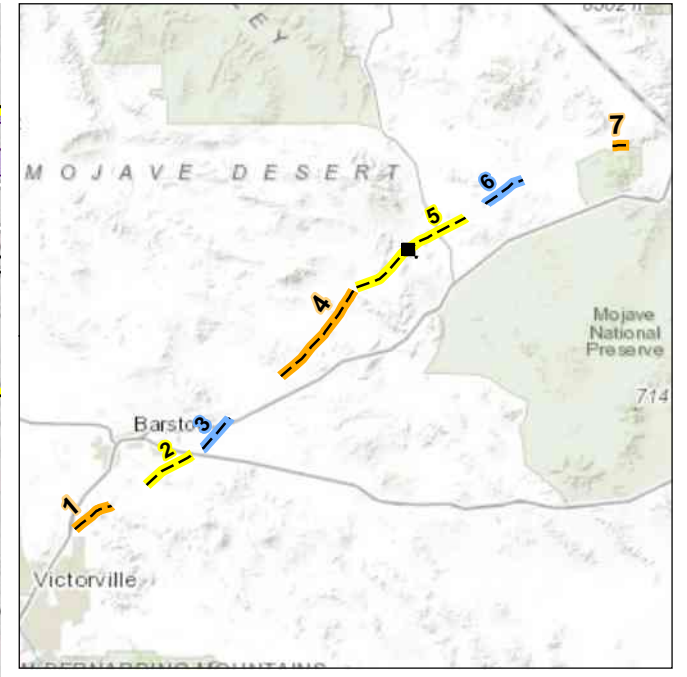
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Exhibit 7
Project Impacts
Segment 5o
Path 46 Transmission Line Clearances Project

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Biological Survey Area

Project Features

- Tower Location
- Access Roads
- Power Lines
- - - Potential Soil Spreading
- - - Compacted Soil Barricade
- - - Demolish
- - - Grading Limits

Jurisdictional Resources

- Centerline (OHWM/TOB width – feet)
- ▨ Ordinary High Water Mark (OHWM) Extent
- ▨ Top of Bank (TOB) Extent

N
W O E
S

200 100 0 200
Feet

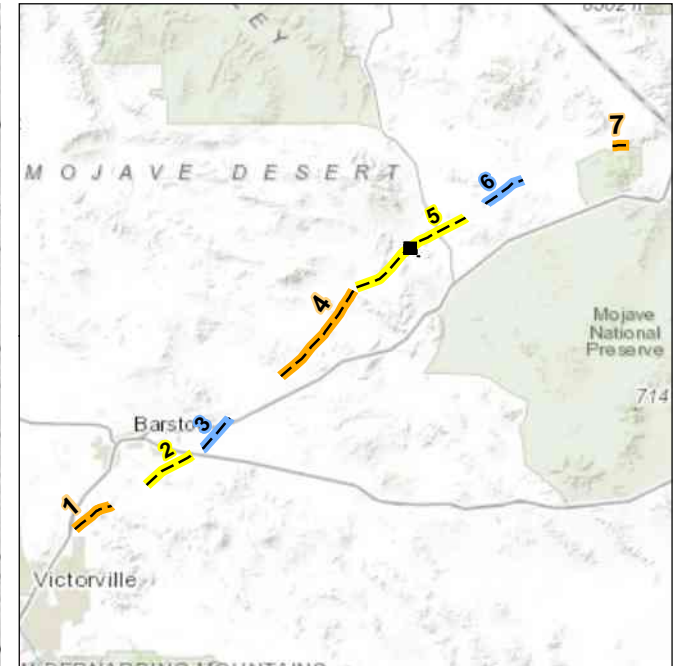
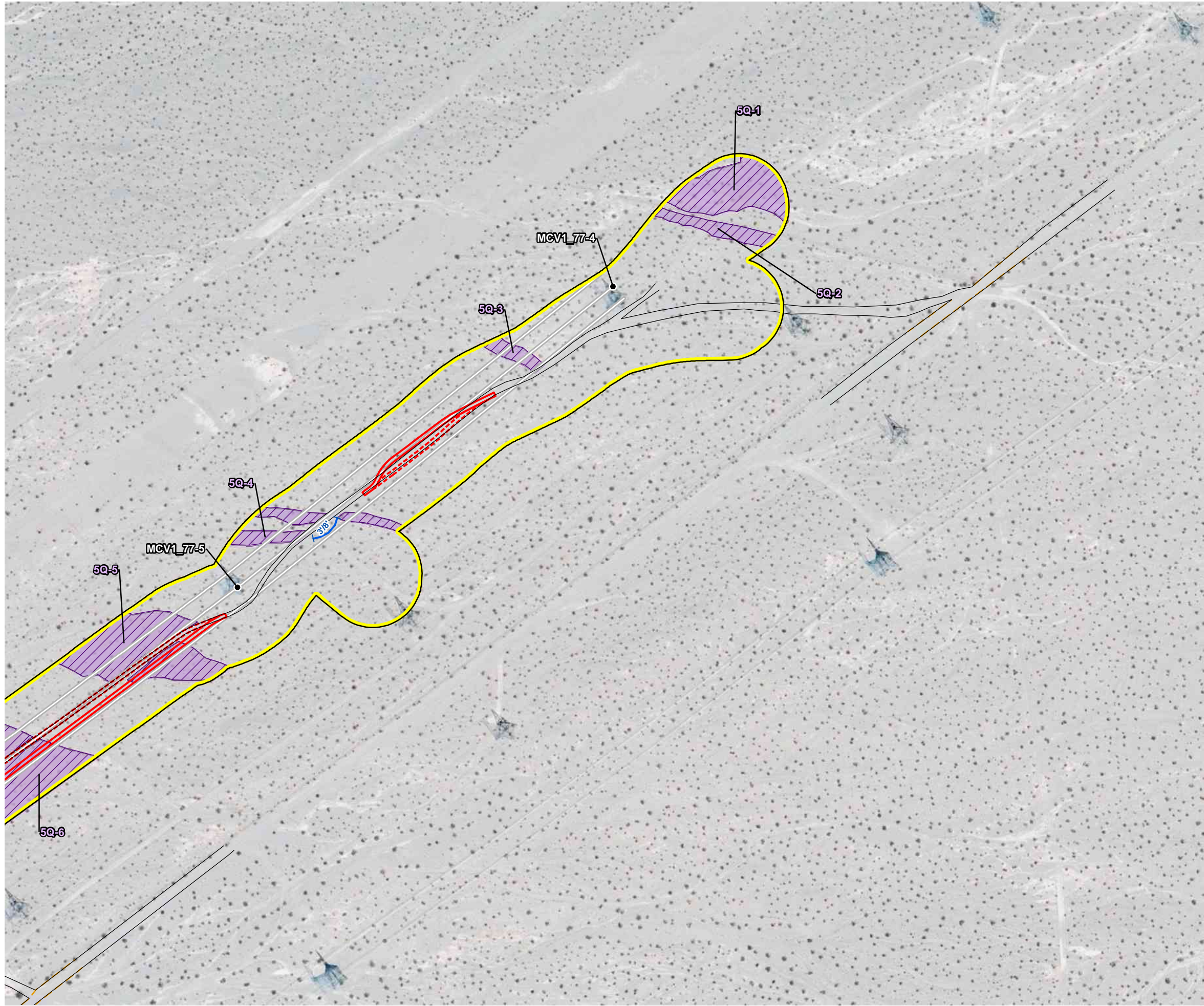
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PSOMAS

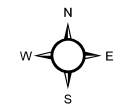
Exhibit 7
Project Impacts
Segment 5p

Path 46 Transmission Line Clearances Project

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- Biological Survey Area
- Project Features**
- Tower Location
- Access Roads
- Power Lines
- Potential Soil Spreading
- Compacted Soil Barricade
- Demolish
- Grading Limits
- Jurisdictional Resources**
- Centerline (OHWM/TOB width – feet)
- Ordinary High Water Mark (OHWM) Extent
- Top of Bank (TOB) Extent



Aerial Source: ESRI, NAIP 2014

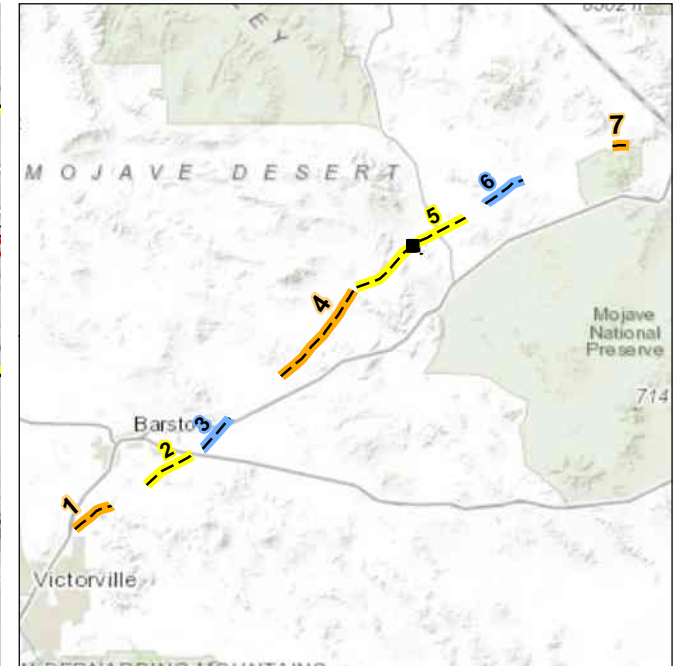
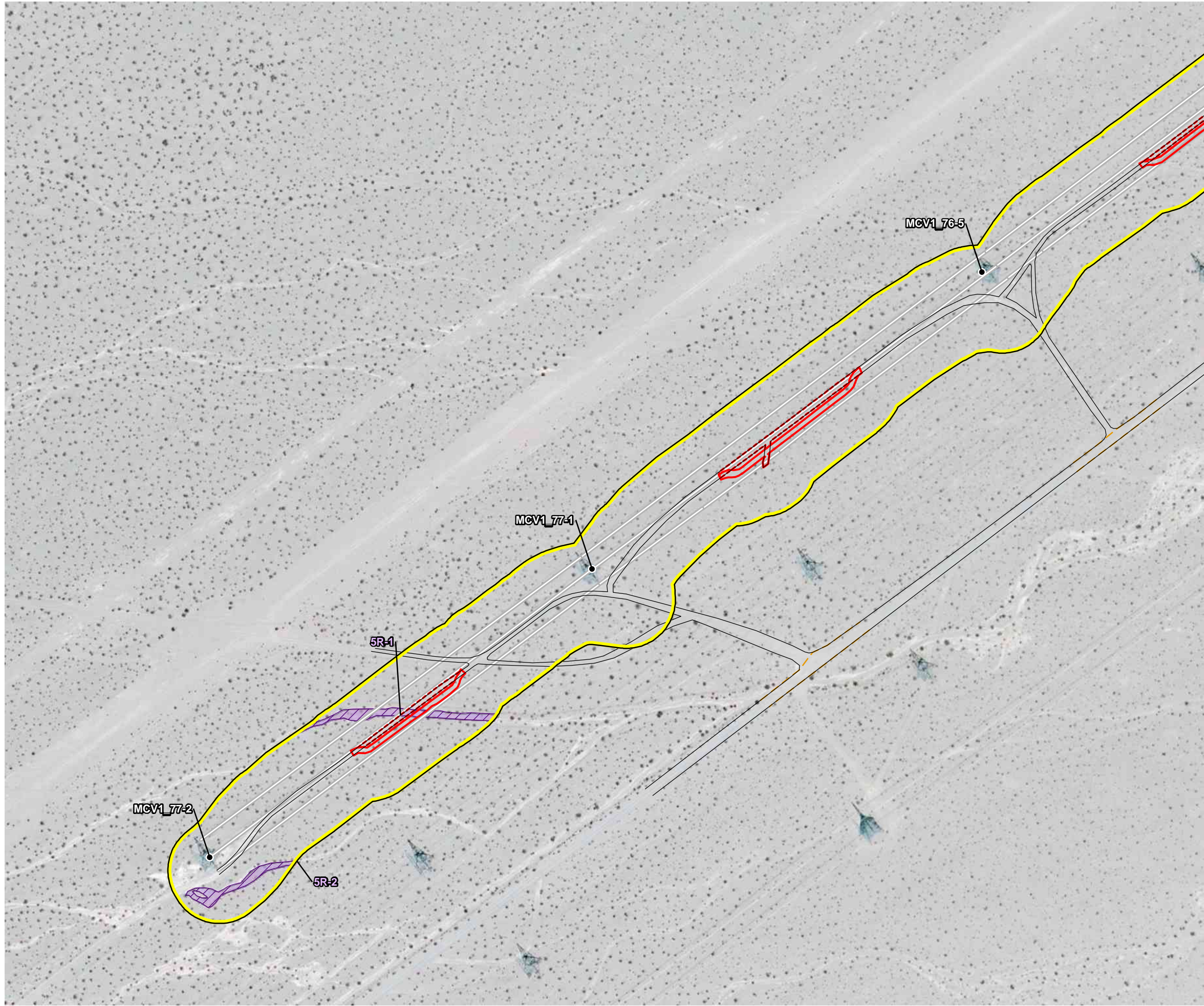


Exhibit 7 Project Impacts Segment 5q

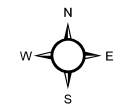
Path 46 Transmission Line Clearances Project

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- Biological Survey Area
- Project Features**
- Tower Location
- Access Roads
- Power Lines
- Potential Soil Spreading
- Compacted Soil Barricade
- Demolish
- Grading Limits
- Jurisdictional Resources**
- Centerline (OHWM/TOB width – feet)
- Ordinary High Water Mark (OHWM) Extent
- Top of Bank (TOB) Extent



Aerial Source: ESRI, NAIP 2014



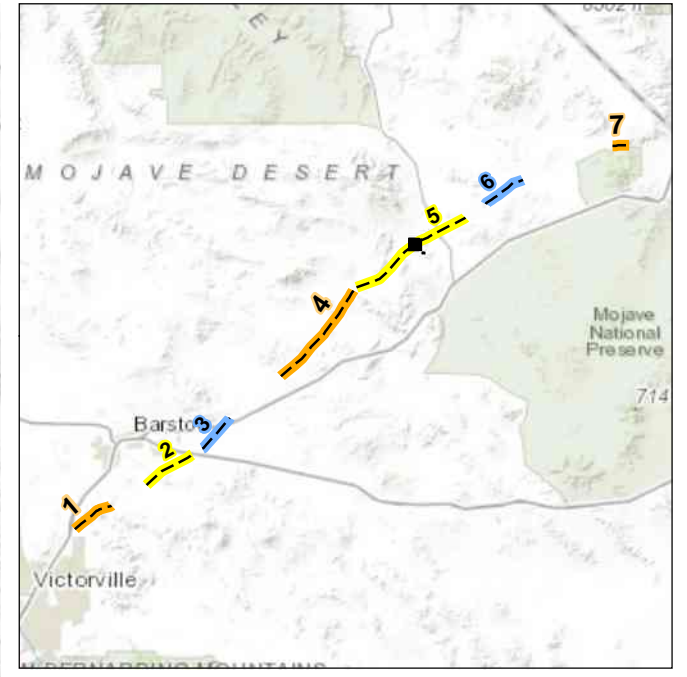
Exhibit 7 Project Impacts Segment 5r












Path 46 Transmission Line Clearances Project

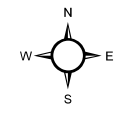
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-  Biological Survey Area
- Project Features**
-  Tower Location
-  Access Roads
-  Power Lines
-  Potential Soil Spreading
-  Compacted Soil Barricade
-  Demolish
-  Grading Limits
- Jurisdictional Resources**
-  Centerline (OHWM/TOB width – feet)
-  Ordinary High Water Mark (OHWM) Extent
-  Top of Bank (TOB) Extent



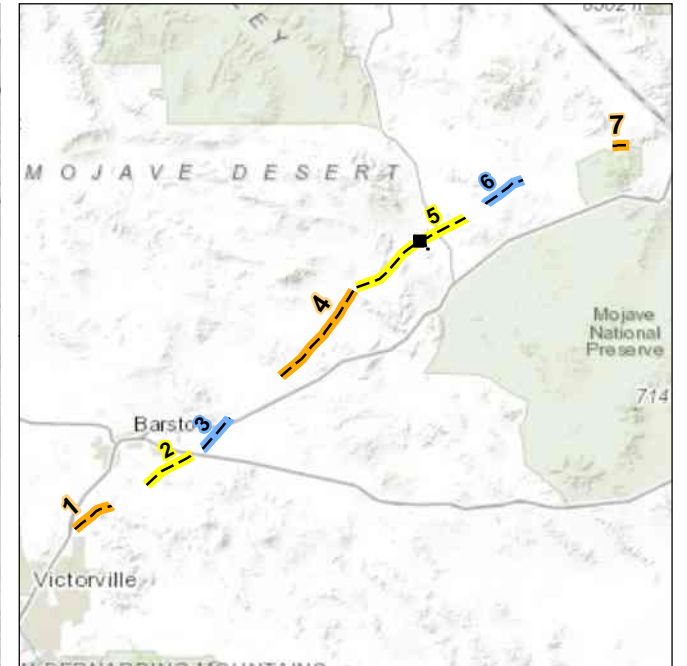
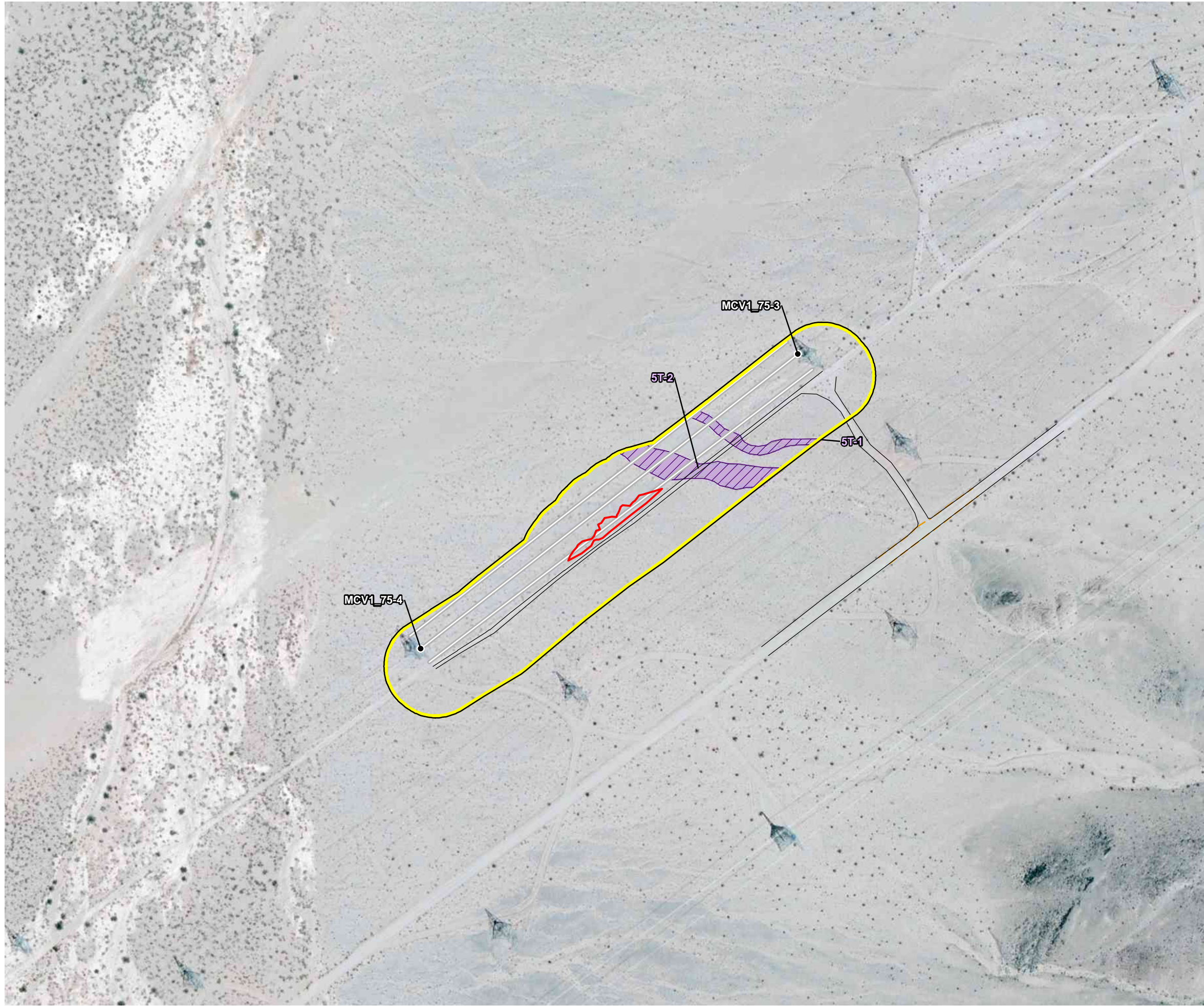
Aerial Source: ESRI, NAIP 2014



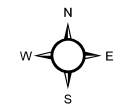
Exhibit 7 Project Impacts Segment 5s

Path 46 Transmission Line Clearances Project

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- Biological Survey Area
- Project Features**
- Tower Location
- Access Roads
- Power Lines
- Potential Soil Spreading
- Compacted Soil Barricade
- Demolish
- Grading Limits
- Jurisdictional Resources**
- Centerline (OHWM/TOB width – feet)
- Ordinary High Water Mark (OHWM) Extent
- Top of Bank (TOB) Extent



Aerial Source: ESRI, NAIP 2014



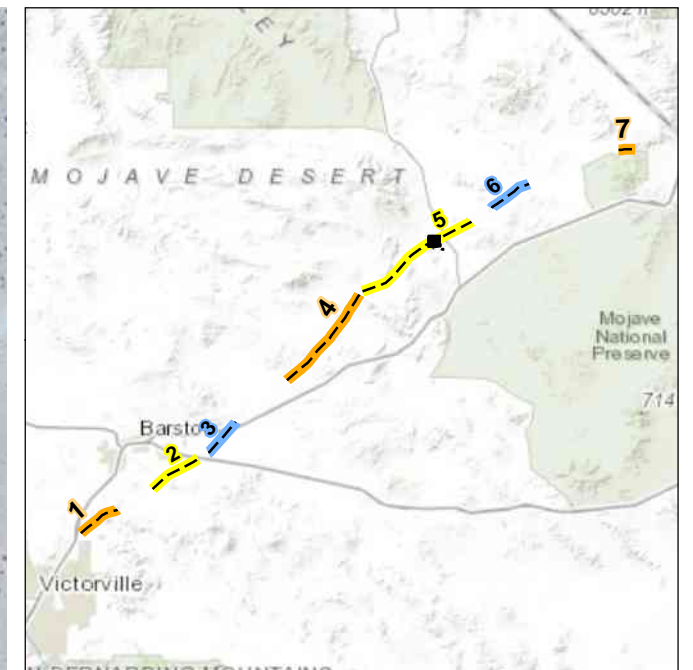
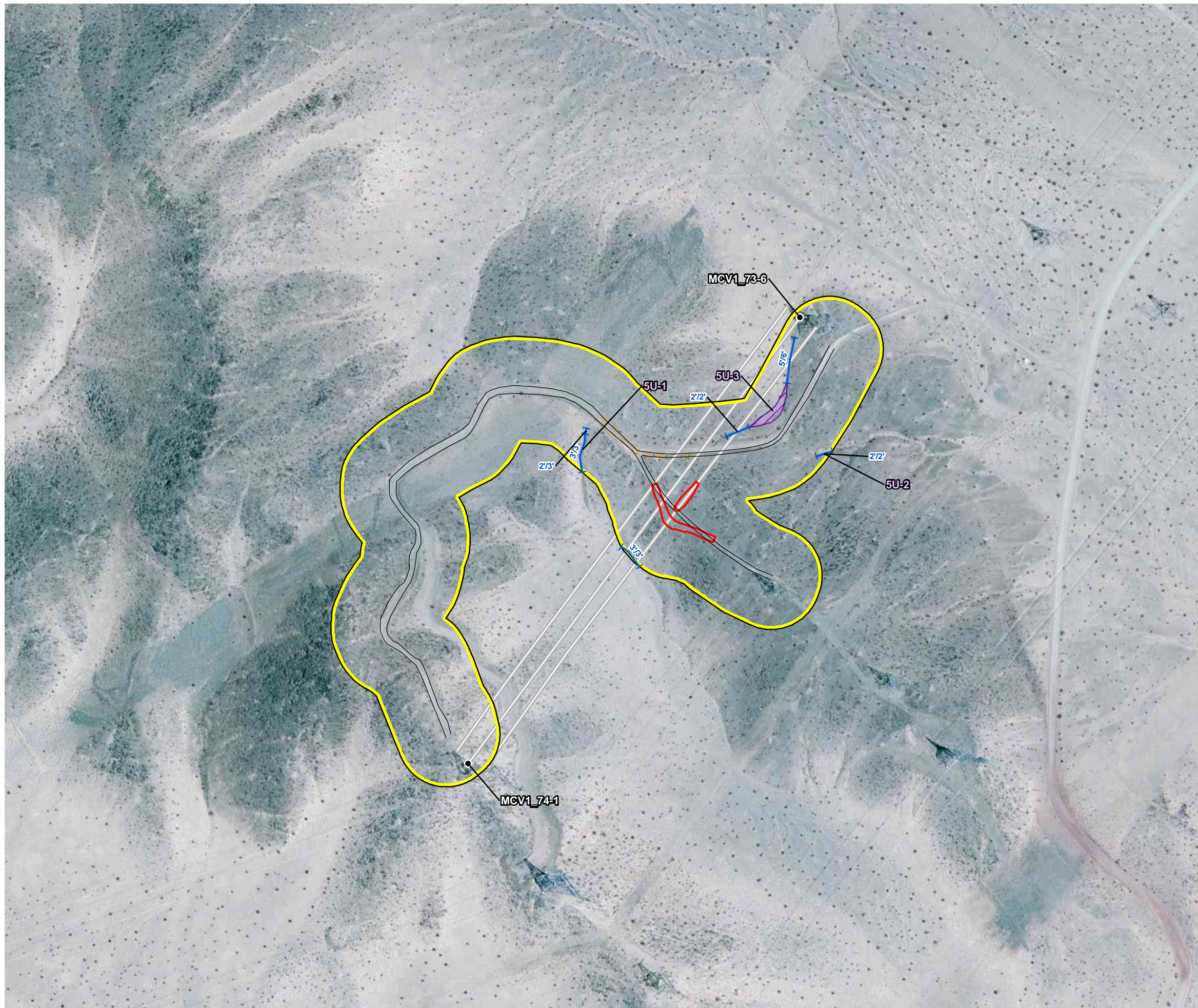
Exhibit 7 Project Impacts Segment 5t

Path 46 Transmission Line Clearances Project

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- Biological Survey Area
- Project Features**
- Tower Location
- Access Roads
- Power Lines
- Potential Soil Spreading
- Compacted Soil Barricade
- Demolish
- Grading Limits
- Jurisdictional Resources**
- Centerline (OHWM/TOB width – feet)
- Ordinary High Water Mark (OHWM) Extent
- Top of Bank (TOB) Extent



Aerial Source: ESRI, NAIP 2014

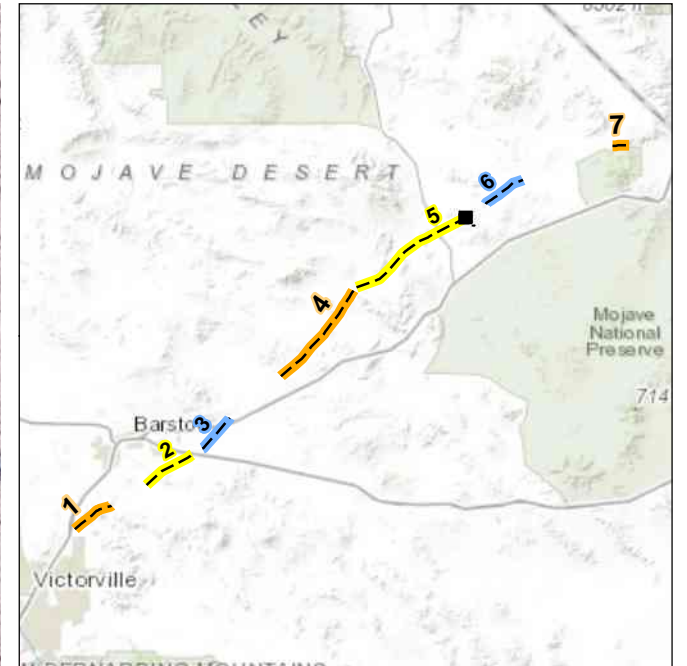
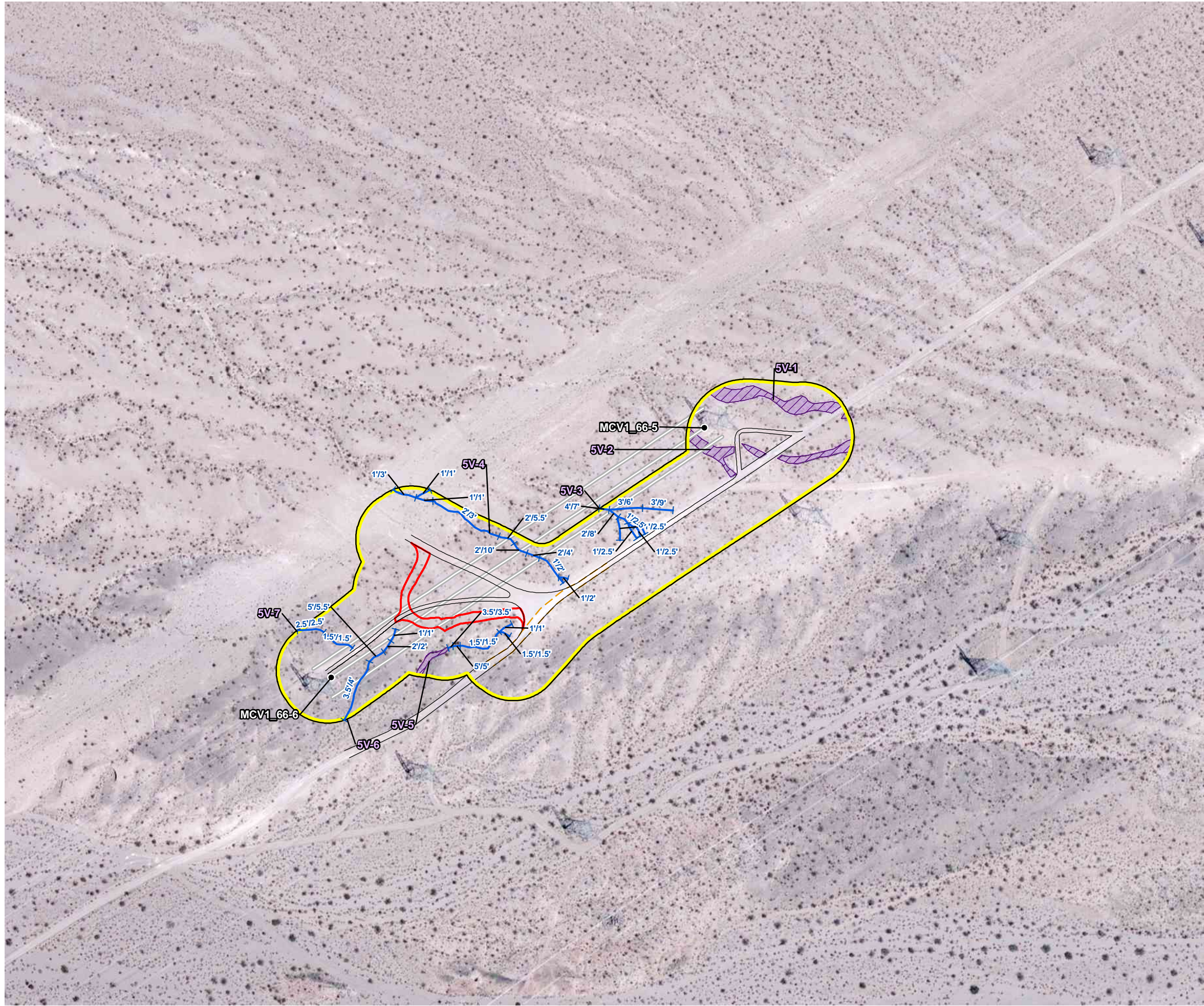


PSOMAS

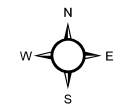
Exhibit 7
Project Impacts
Segment 5u

Path 46 Transmission Line Clearances Project

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- Biological Survey Area
- Project Features**
 - Tower Location
 - Access Roads
 - Power Lines
 - Potential Soil Spreading
 - - - Compacted Soil Barricade
 - - - Demolish
 - - - Grading Limits
- Jurisdictional Resources**
 - Centerline (OHWM/TOB width – feet)
 - ▨ Ordinary High Water Mark (OHWM) Extent
 - ▨ Top of Bank (TOB) Extent



Aerial Source: ESRI, NAIP 2014

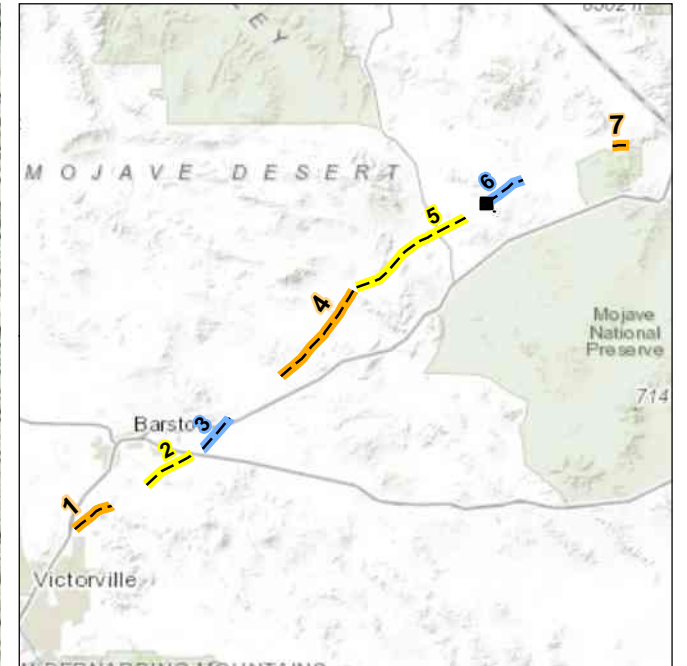
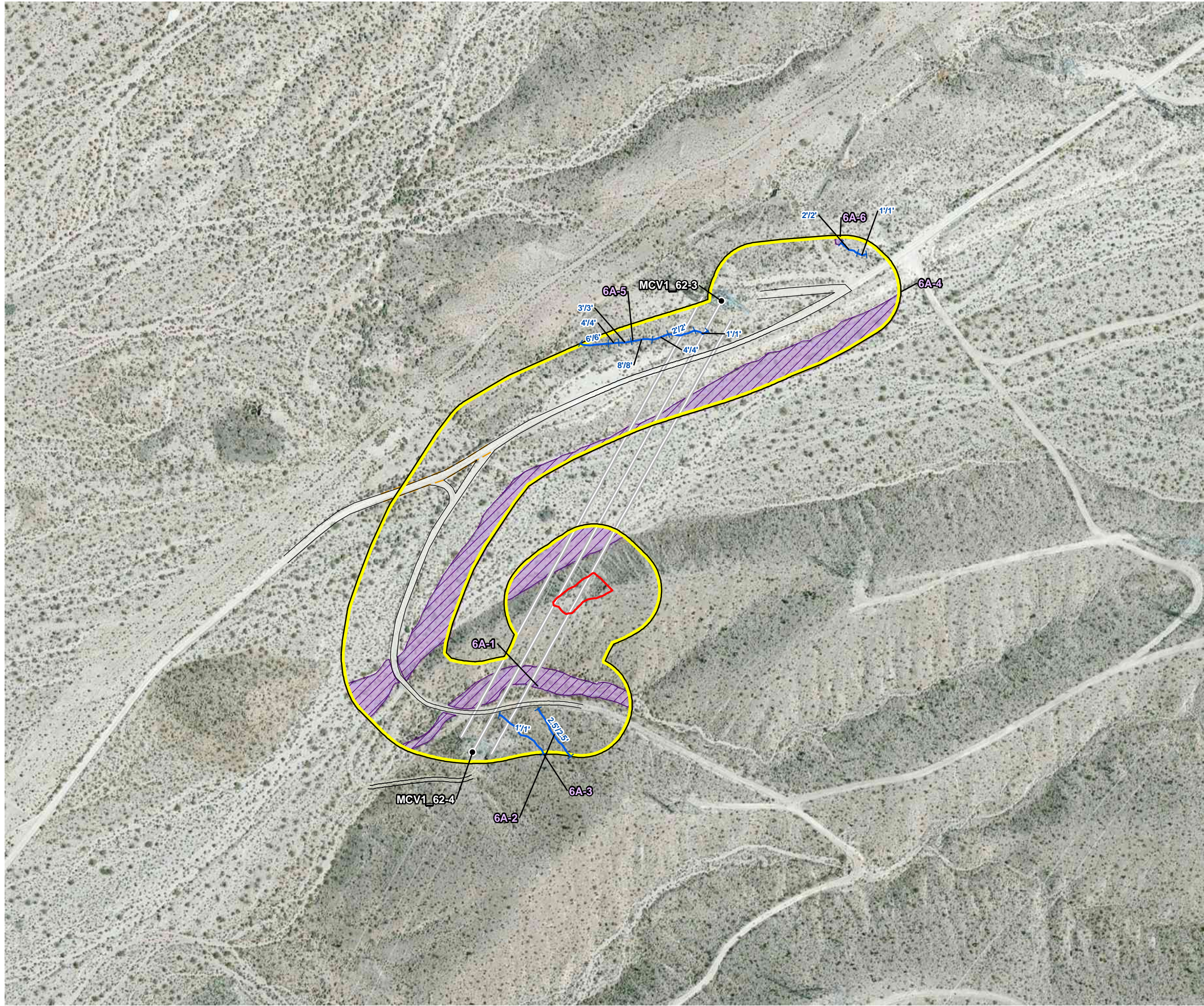


Exhibit 7 Project Impacts Segment 5v

Path 46 Transmission Line Clearances Project

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- Biological Survey Area
- Project Features**
- Tower Location
- Access Roads
- Power Lines
- Potential Soil Spreading
- Compacted Soil Barricade
- Demolish
- Grading Limits
- Jurisdictional Resources**
- Centerline (OHWM/TOB width – feet)
- Ordinary High Water Mark (OHWM) Extent
- Top of Bank (TOB) Extent



Aerial Source: ESRI, NAIP 2014

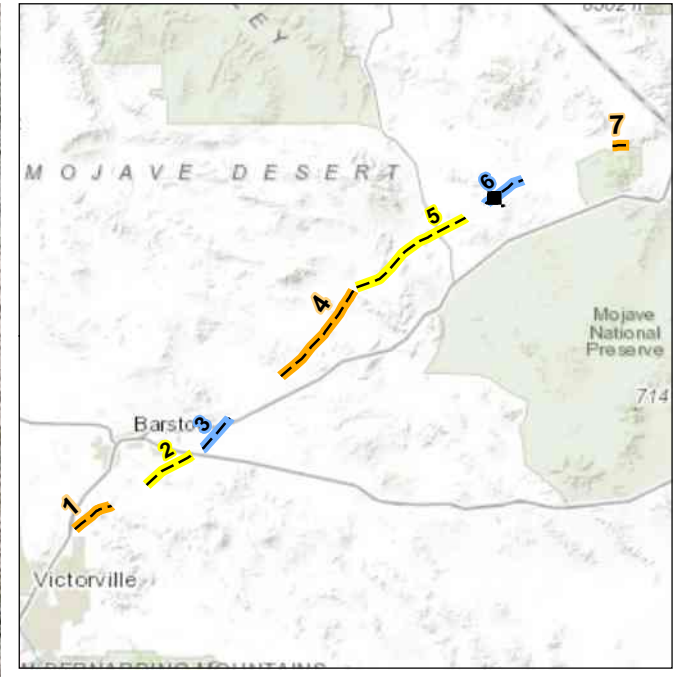
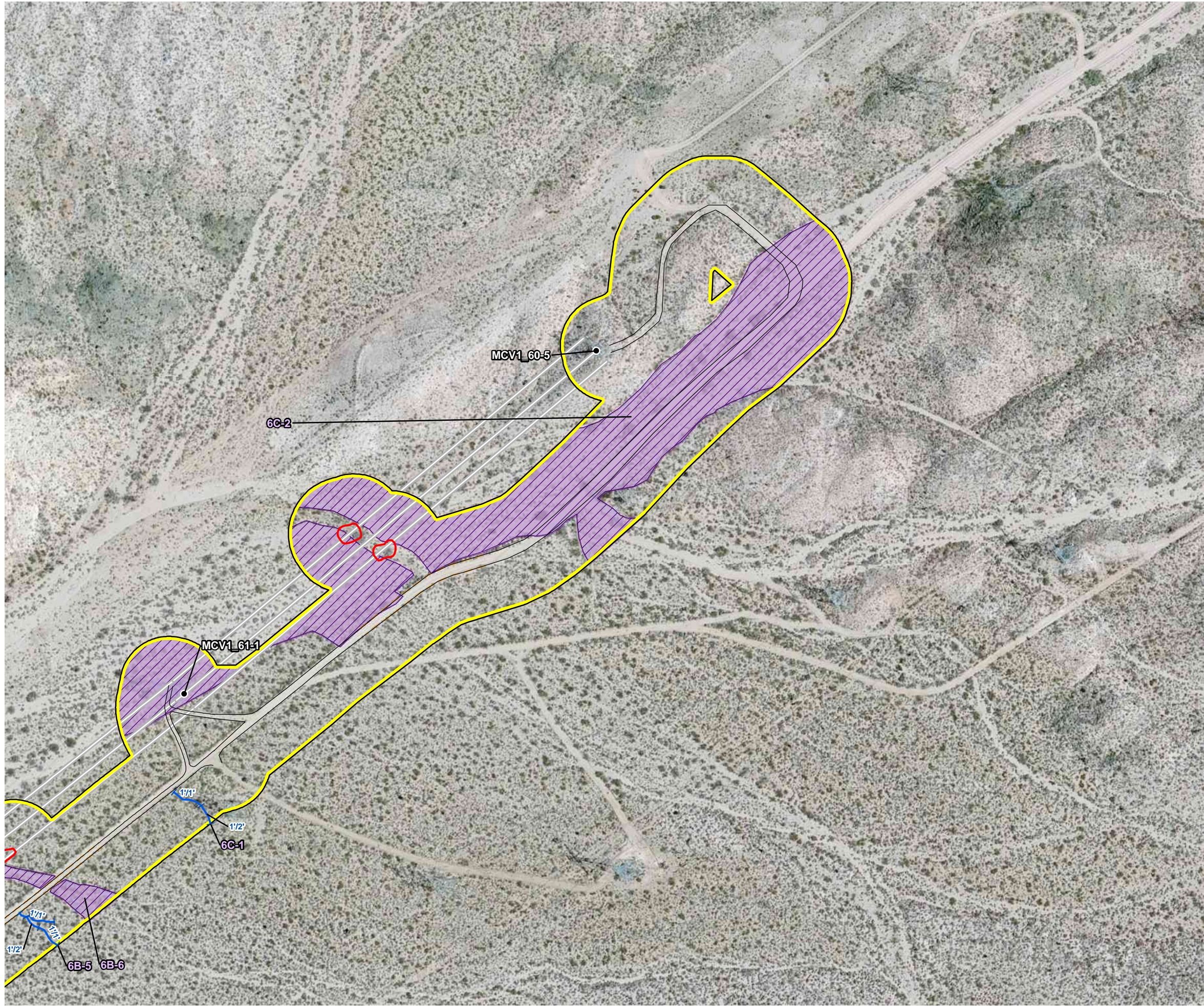


Exhibit 7 Project Impacts Segment 6a

Path 46 Transmission Line Clearances Project

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Biological Survey Area


Project Features

- Tower Location
- Access Roads
- Power Lines
- - - Potential Soil Spreading
- - - Compacted Soil Barricade
- - - Demolish
- - - Grading Limits

Jurisdictional Resources

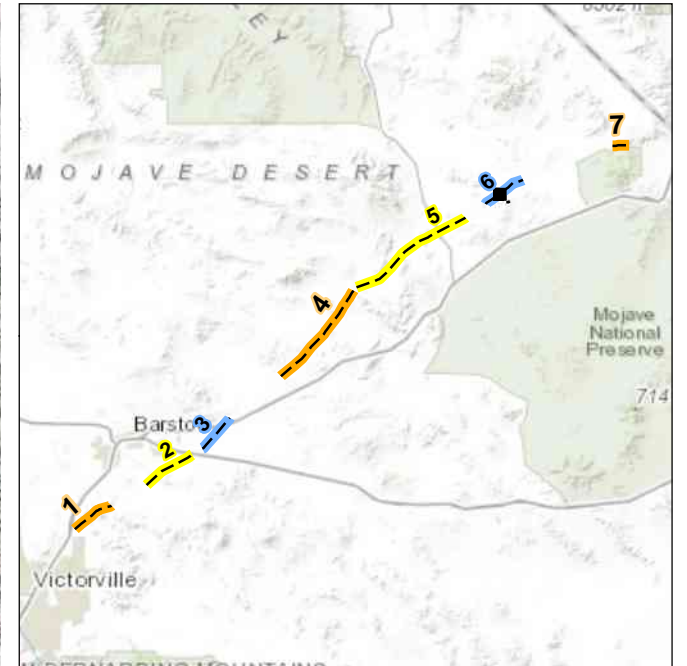
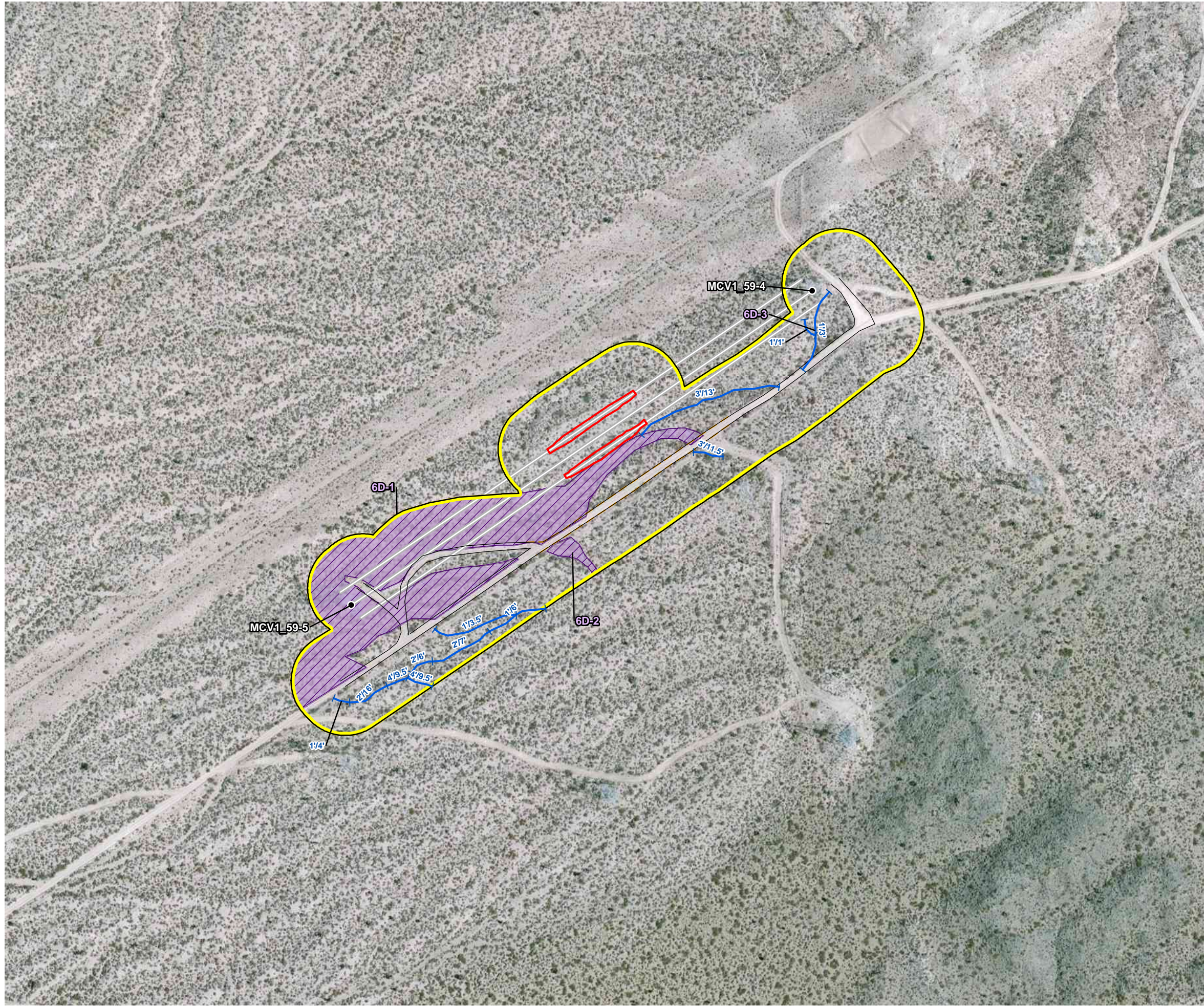
- Centerline (OHWM/TOB width – feet)
- ▨ Ordinary High Water Mark (OHWM) Extent
- Top of Bank (TOB) Extent

Aerial Source: ESRI, NAIP 2014


Exhibit 7
Project Impacts
Segment 6c
Path 46 Transmission Line Clearances Project

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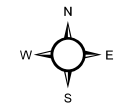
Biological Survey Area

Project Features

- Tower Location
- Access Roads
- Power Lines
- Potential Soil Spreading
- Compacted Soil Barricade
- - - Demolish
- ▭ Grading Limits

Jurisdictional Resources

- Centerline (OHWM/TOB width – feet)
- ▨ Ordinary High Water Mark (OHWM) Extent
- ▭ Top of Bank (TOB) Extent


 200 100 0 200 Feet

Aerial Source: ESRI, NAIP 2014

PSOMAS

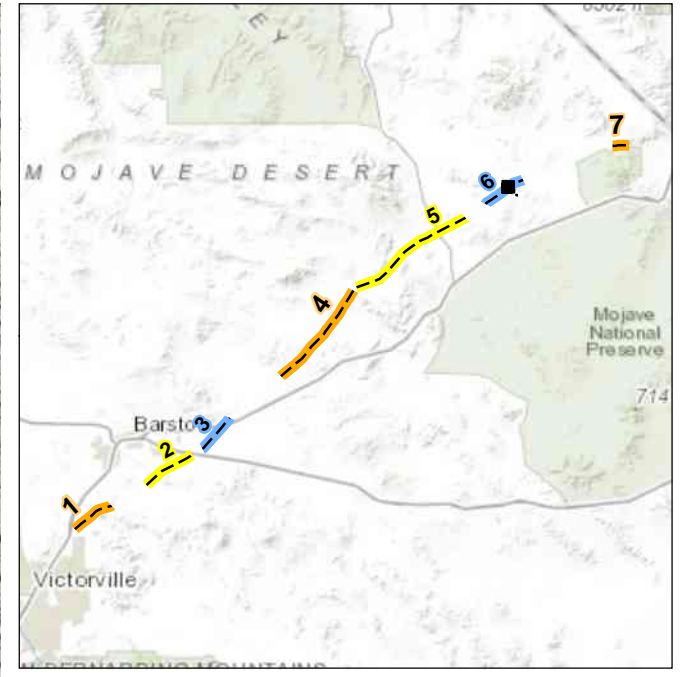
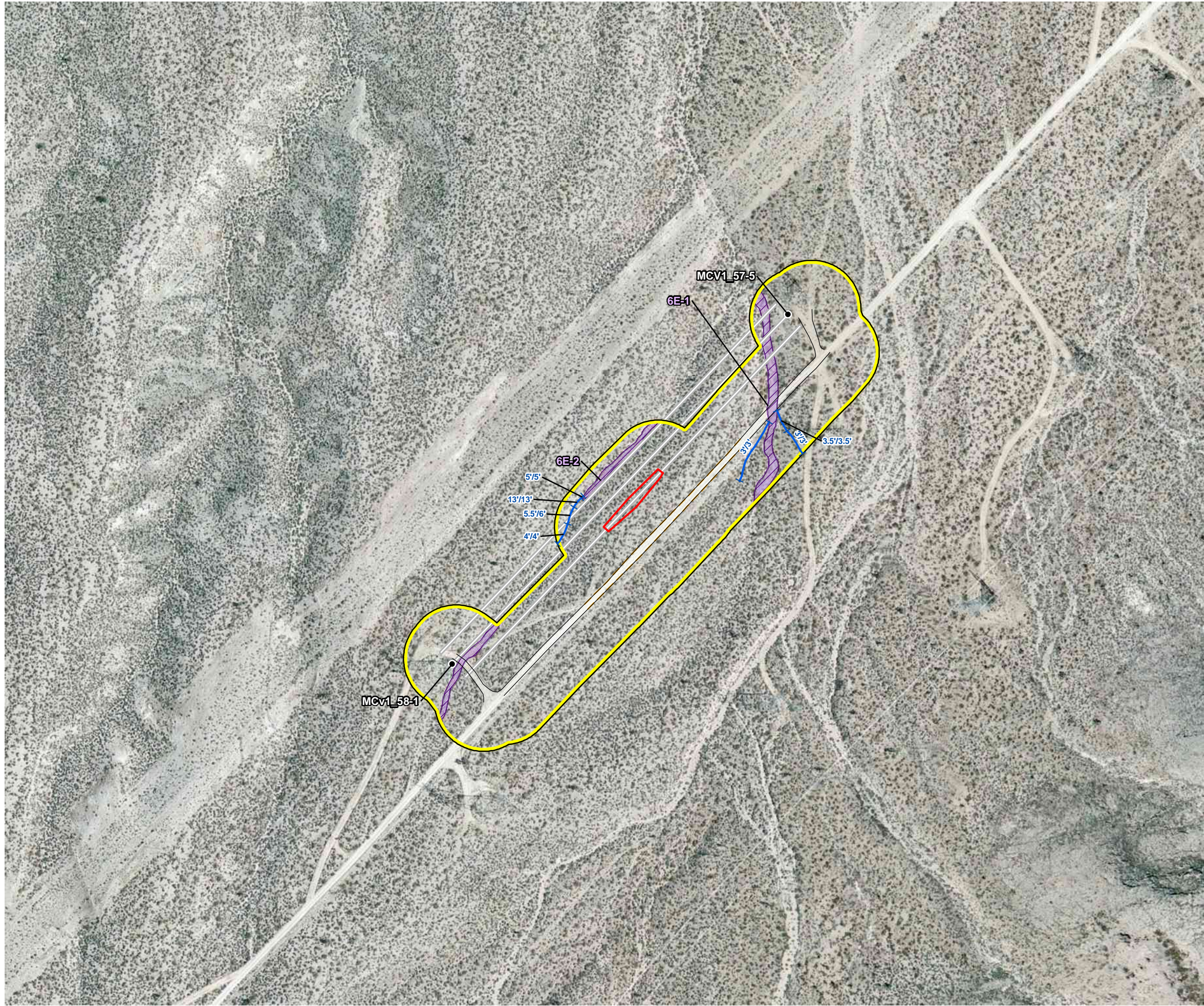
Exhibit 7
Project Impacts
Segment 6d

Path 46 Transmission Line Clearances Project

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Biological Survey Area

Project Features

- Tower Location
- Access Roads
- Power Lines
- - - Potential Soil Spreading
- - - Compacted Soil Barricade
- - - Demolish
- - - Grading Limits

Jurisdictional Resources

- Centerline (OHWM/TOB width – feet)
- ▨ Ordinary High Water Mark (OHWM) Extent
- ▨ Top of Bank (TOB) Extent

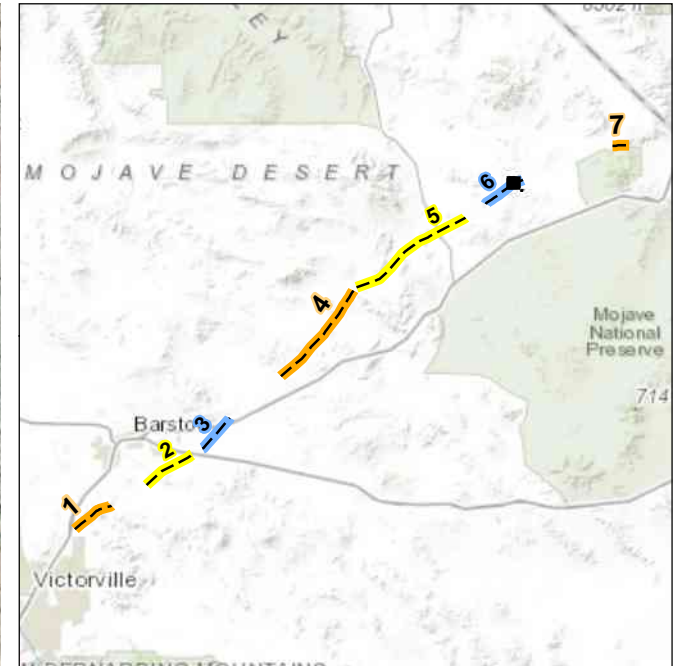
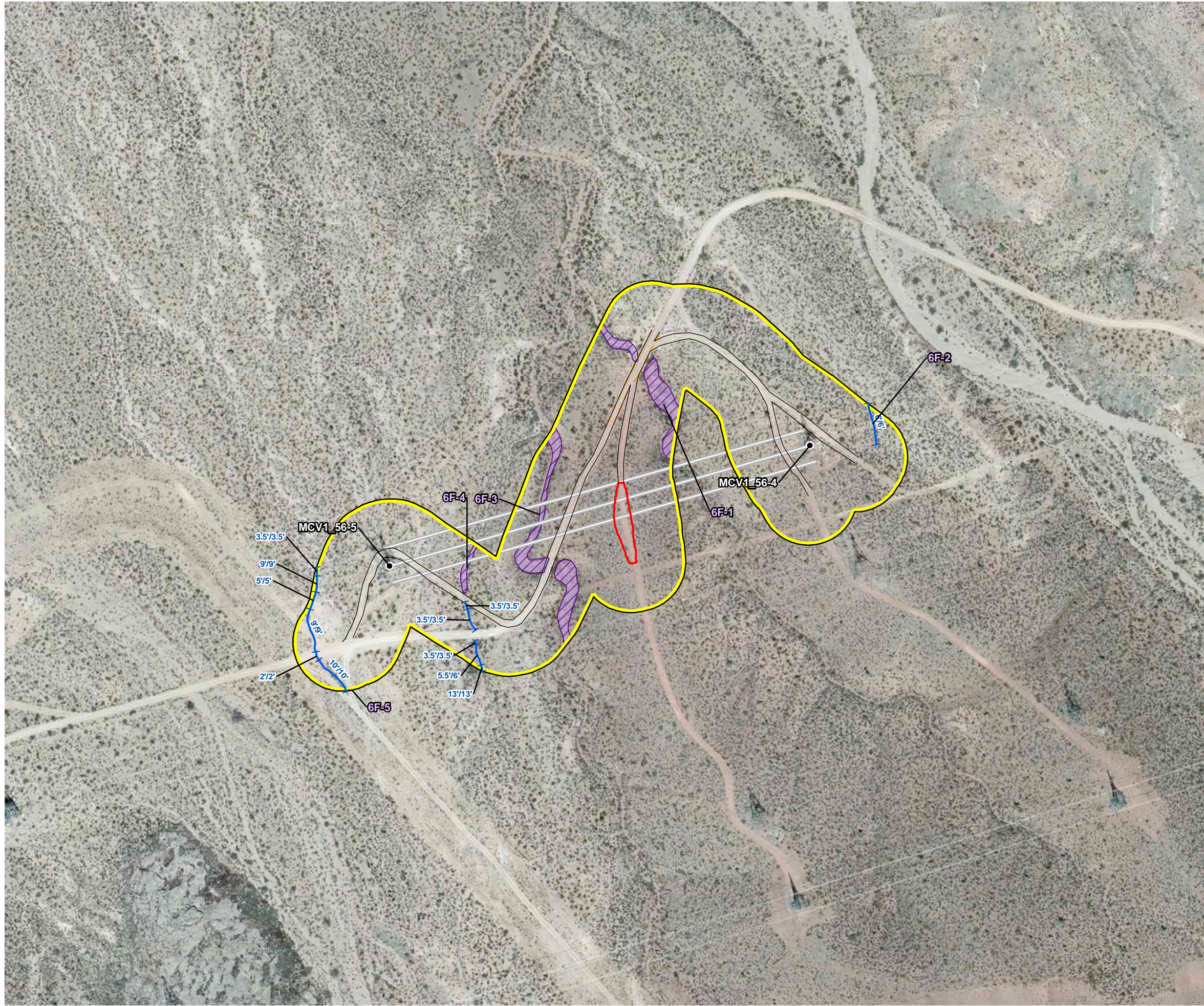
Aerial Source: ESRI, NAIP 2014



Exhibit 7
Project Impacts
Segment 6e

Path 46 Transmission Line Clearances Project

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Biological Survey Area

Project Features

- Tower Location
- Access Roads
- Power Lines
- - - Potential Soil Spreading
- - - Compacted Soil Barricade
- - - Demolish
- - - Grading Limits

Jurisdictional Resources

- Centerline (OHWM/TOB width – feet)
- ▨ Ordinary High Water Mark (OHWM) Extent
- ▨ Top of Bank (TOB) Extent

200 100 0 200 Feet

Aerial Source: ESRI, NAIP 2014

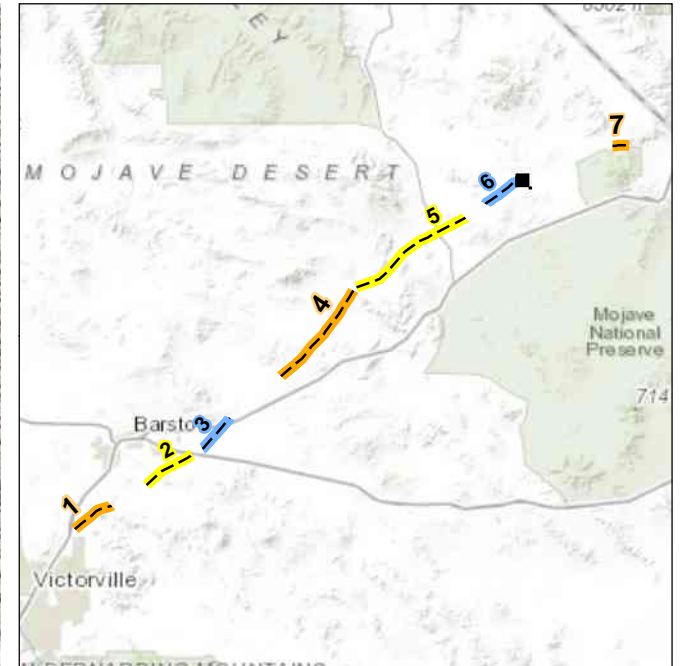
PSOMAS

Exhibit 7
Project Impacts
Segment 6f

Path 46 Transmission Line Clearances Project

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Biological Survey Area

Project Features

- Tower Location
- Access Roads
- Power Lines
- - - Potential Soil Spreading
- - - Compacted Soil Barricade
- - - Demolish
- - - Grading Limits

Jurisdictional Resources

- Centerline (OHWM/TOB width – feet)
- ▨ Ordinary High Water Mark (OHWM) Extent
- ▨ Top of Bank (TOB) Extent

North arrow and scale bar (0 to 200 feet).

Aerial Source: ESRI, NAIP 2014

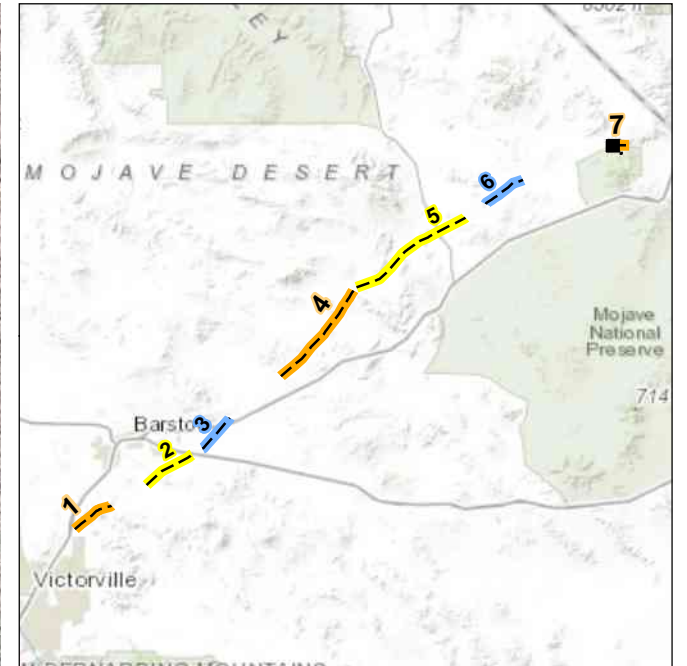
PSOMAS

Exhibit 7
Project Impacts
Segment 6g

Path 46 Transmission Line Clearances Project

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Biological Survey Area

Project Features

- Tower Location
- Access Roads
- Power Lines
- - - Potential Soil Spreading
- - - Compacted Soil Barricade
- - - Demolish
- - - Grading Limits

Jurisdictional Resources

- Centerline (OHWM/TOB width – feet)
- ▨ Ordinary High Water Mark (OHWM) Extent
- ▨ Top of Bank (TOB) Extent

Aerial Source: ESRI, NAIP 2014

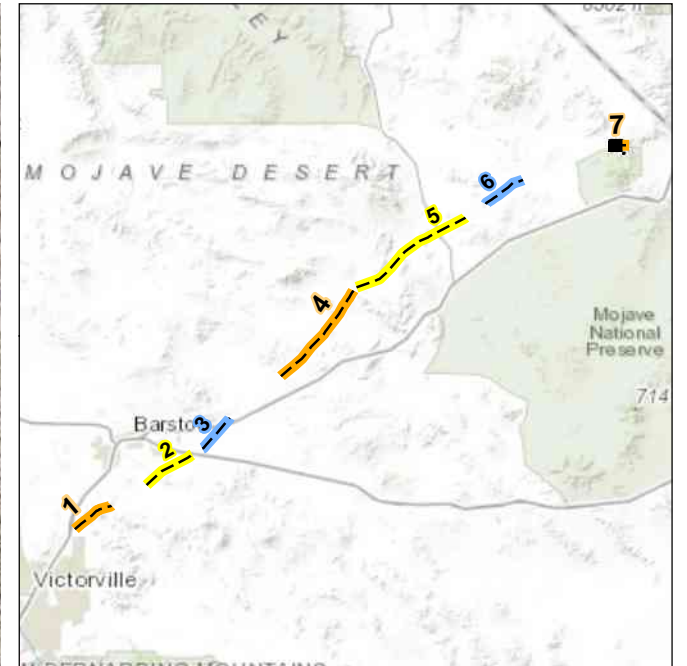


Exhibit 7 Project Impacts Segment 7a

Path 46 Transmission Line Clearances Project

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Biological Survey Area

Project Features

- Tower Location
- Access Roads
- Power Lines
- - - Potential Soil Spreading
- - - Compacted Soil Barricade
- - - Demolish
- ▭ Grading Limits

Jurisdictional Resources

- Centerline (OHWM/TOB width – feet)
- ▨ Ordinary High Water Mark (OHWM) Extent
- ▨ Top of Bank (TOB) Extent

Aerial Source: ESRI, NAIP 2014

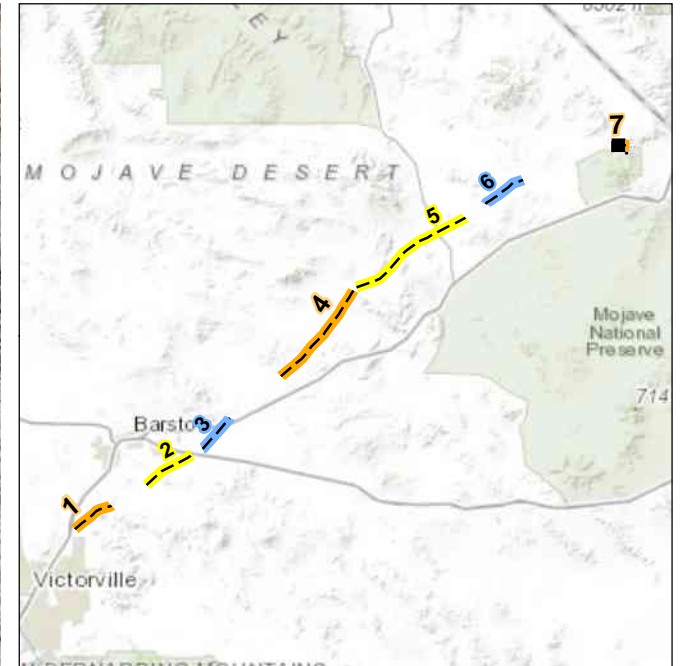
PSOMAS

Exhibit 7
Project Impacts
Segment 7b

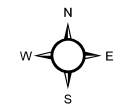
Path 46 Transmission Line Clearances Project

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- Biological Survey Area
- Project Features**
- Tower Location
- Access Roads
- Power Lines
- Potential Soil Spreading
- - - Compacted Soil Barricade
- - - Demolish
- ▭ Grading Limits
- Jurisdictional Resources**
- Centerline (OHWM/TOB width – feet)
- ▨ Ordinary High Water Mark (OHWM) Extent
- ▨ Top of Bank (TOB) Extent



Aerial Source: ESRI, NAIP 2014

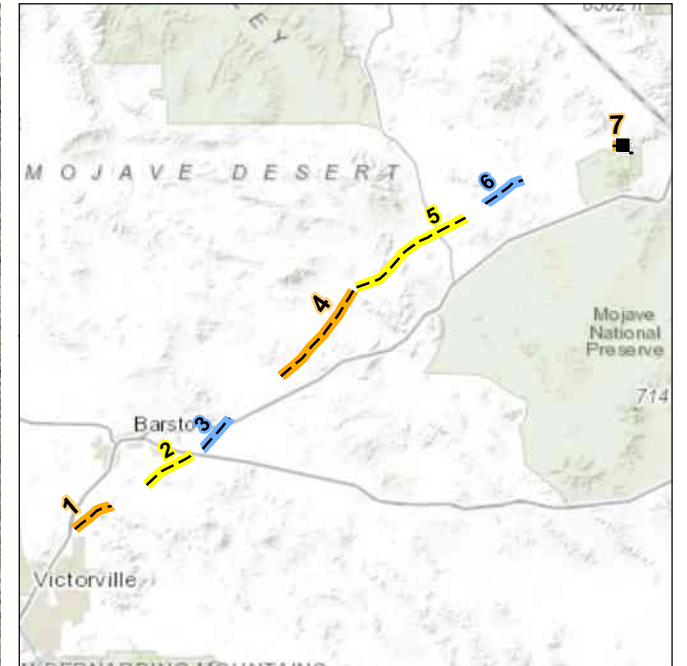
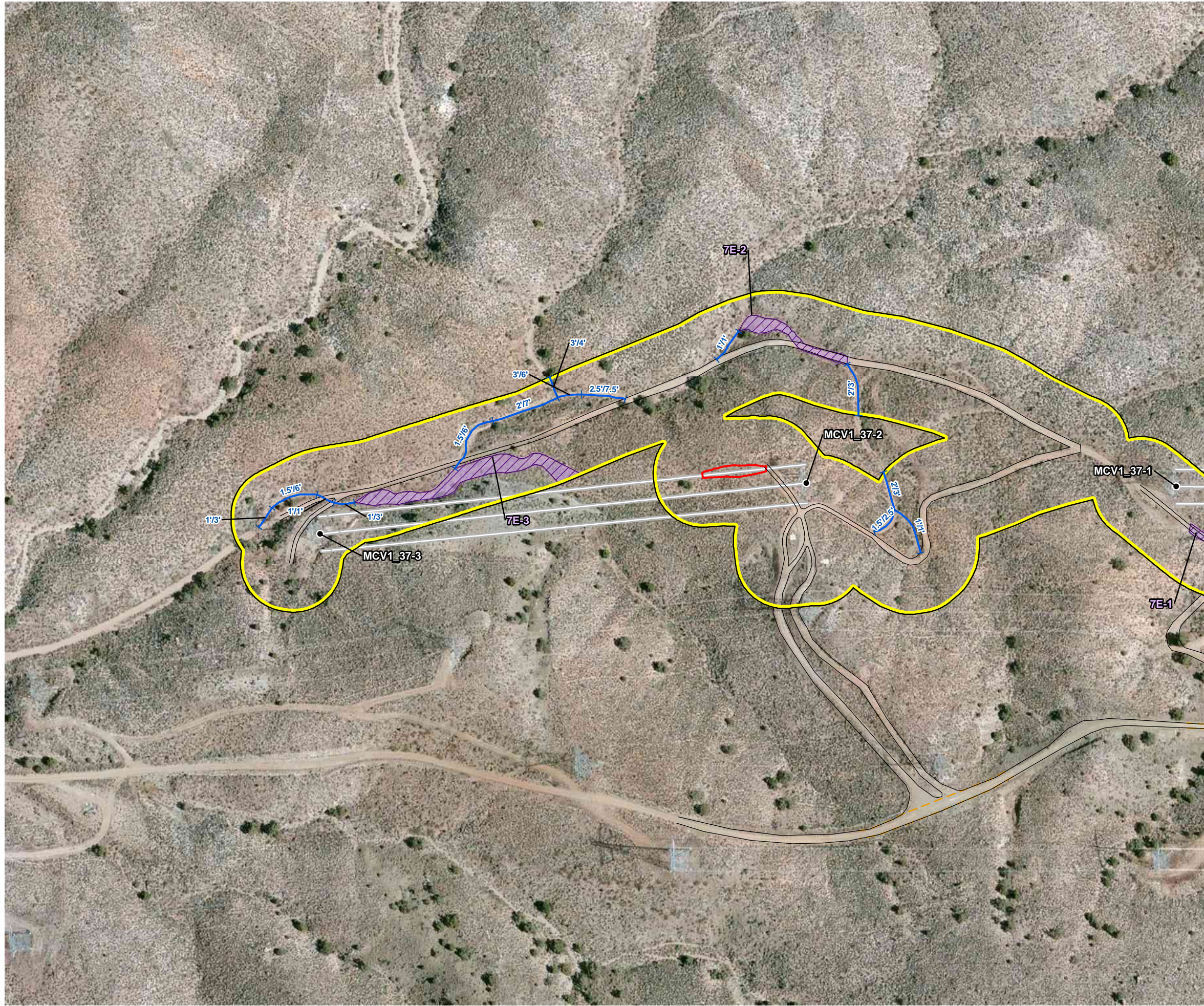


Exhibit 7 Project Impacts Segment 7c

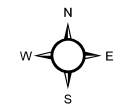
Path 46 Transmission Line Clearances Project

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- Biological Survey Area
- Project Features**
- Tower Location
- Access Roads
- Power Lines
- - - Potential Soil Spreading
- - - Compacted Soil Barricade
- - - Demolish
- - - Grading Limits
- Jurisdictional Resources**
- Centerline (OHWM/TOB width – feet)
- ▨ Ordinary High Water Mark (OHWM) Extent
- ▨ Top of Bank (TOB) Extent



Aerial Source: ESRI, NAIP 2014

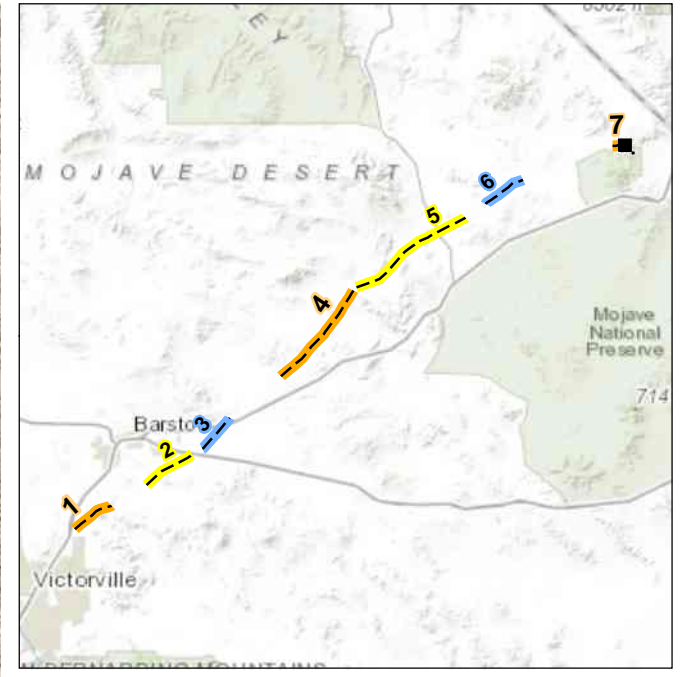
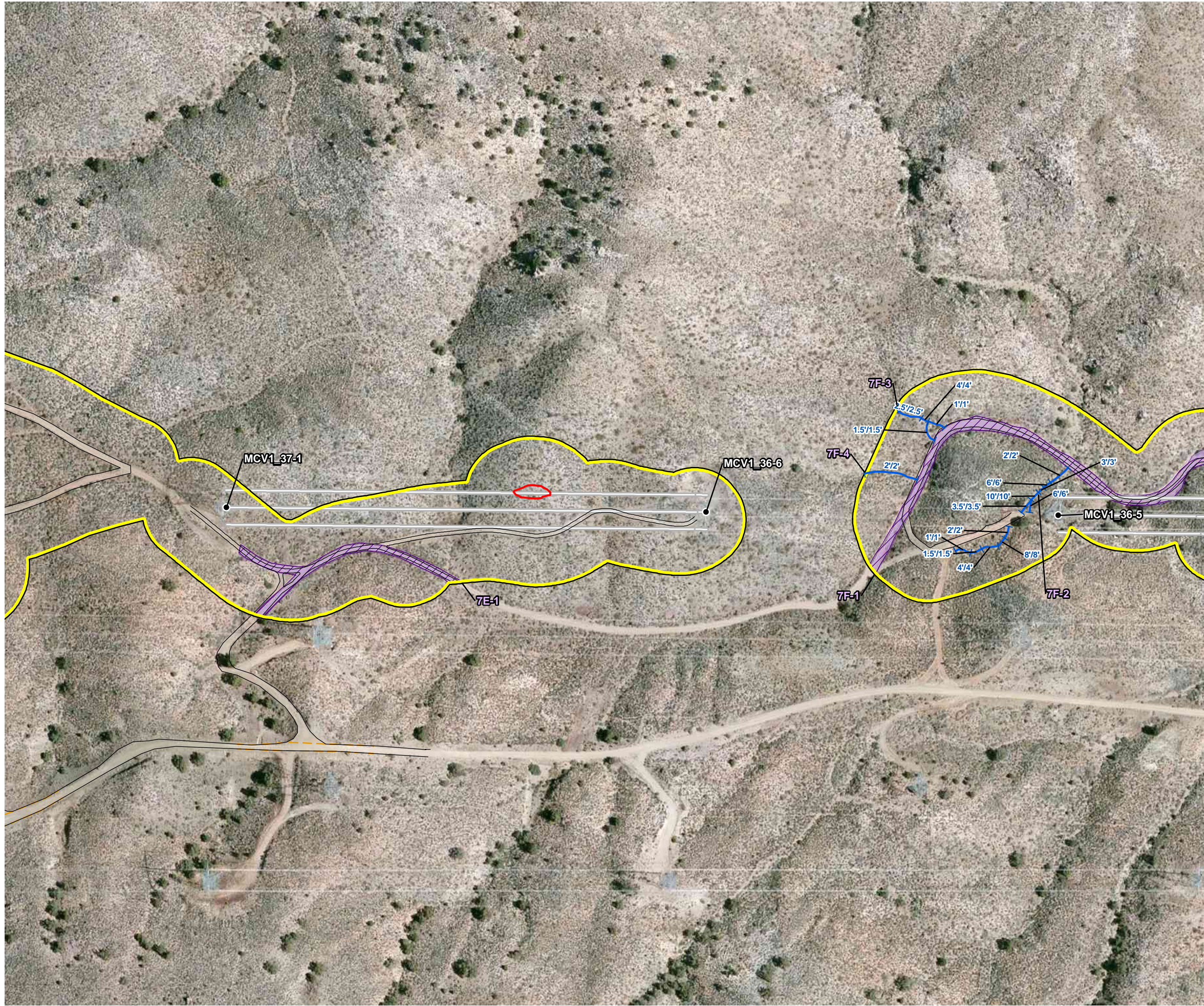


Exhibit 7 Project Impacts Segment 7d

Path 46 Transmission Line Clearances Project

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Biological Survey Area

Project Features

- Tower Location
- Access Roads
- Power Lines
- - - Potential Soil Spreading
- - - Compacted Soil Barricade
- - - Demolish
- - - Grading Limits

Jurisdictional Resources

- Centerline (OHWM/TOB width – feet)
- ▨ Ordinary High Water Mark (OHWM) Extent
- ▨ Top of Bank (TOB) Extent

N
W O E
S

200 100 0 200
Feet

Aerial Source: ESRI, NAIP 2014

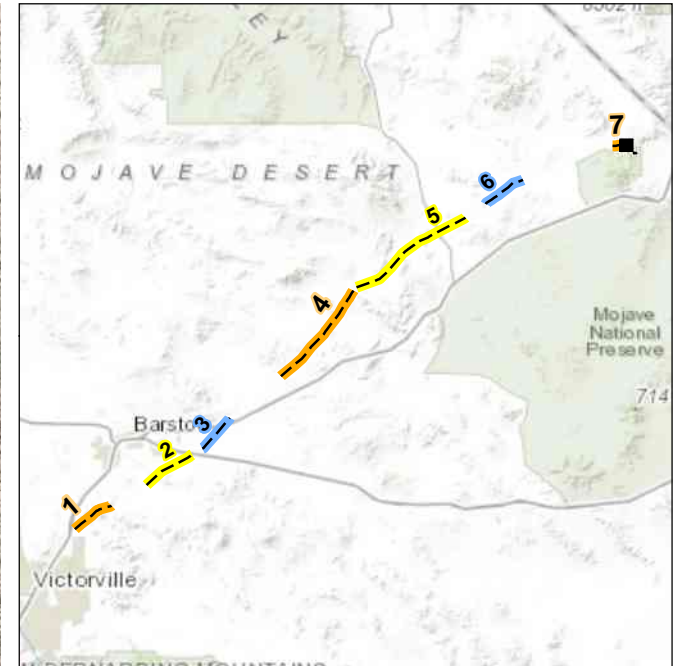
PSOMAS

Exhibit 7
Project Impacts
Segment 7e

Path 46 Transmission Line Clearances Project

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- Biological Survey Area
- Project Features**
 - Tower Location
 - Access Roads
 - Power Lines
 - - - Potential Soil Spreading
 - - - Compacted Soil Barricade
 - - - Demolish
 - - - Grading Limits
- Jurisdictional Resources**
 - Centerline (OHWM/TOB width – feet)
 - ▨ Ordinary High Water Mark (OHWM) Extent
 - ▨ Top of Bank (TOB) Extent



Aerial Source: ESRI, NAIP 2014

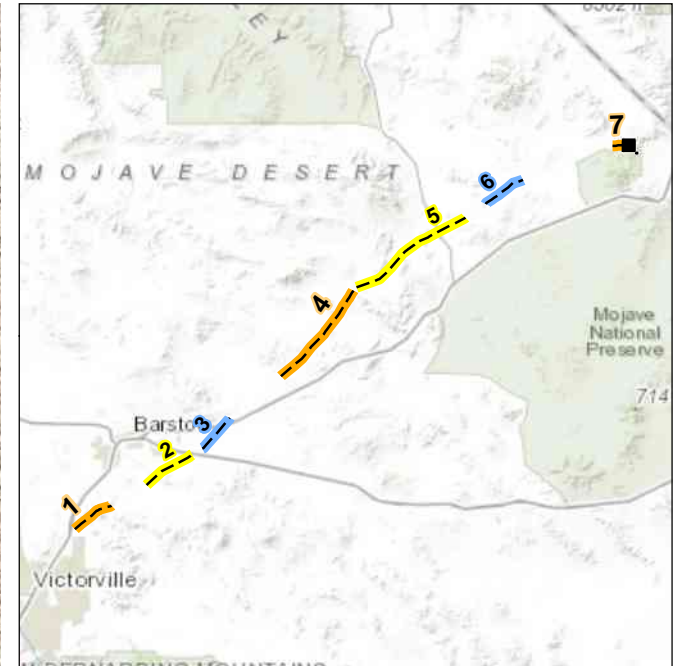
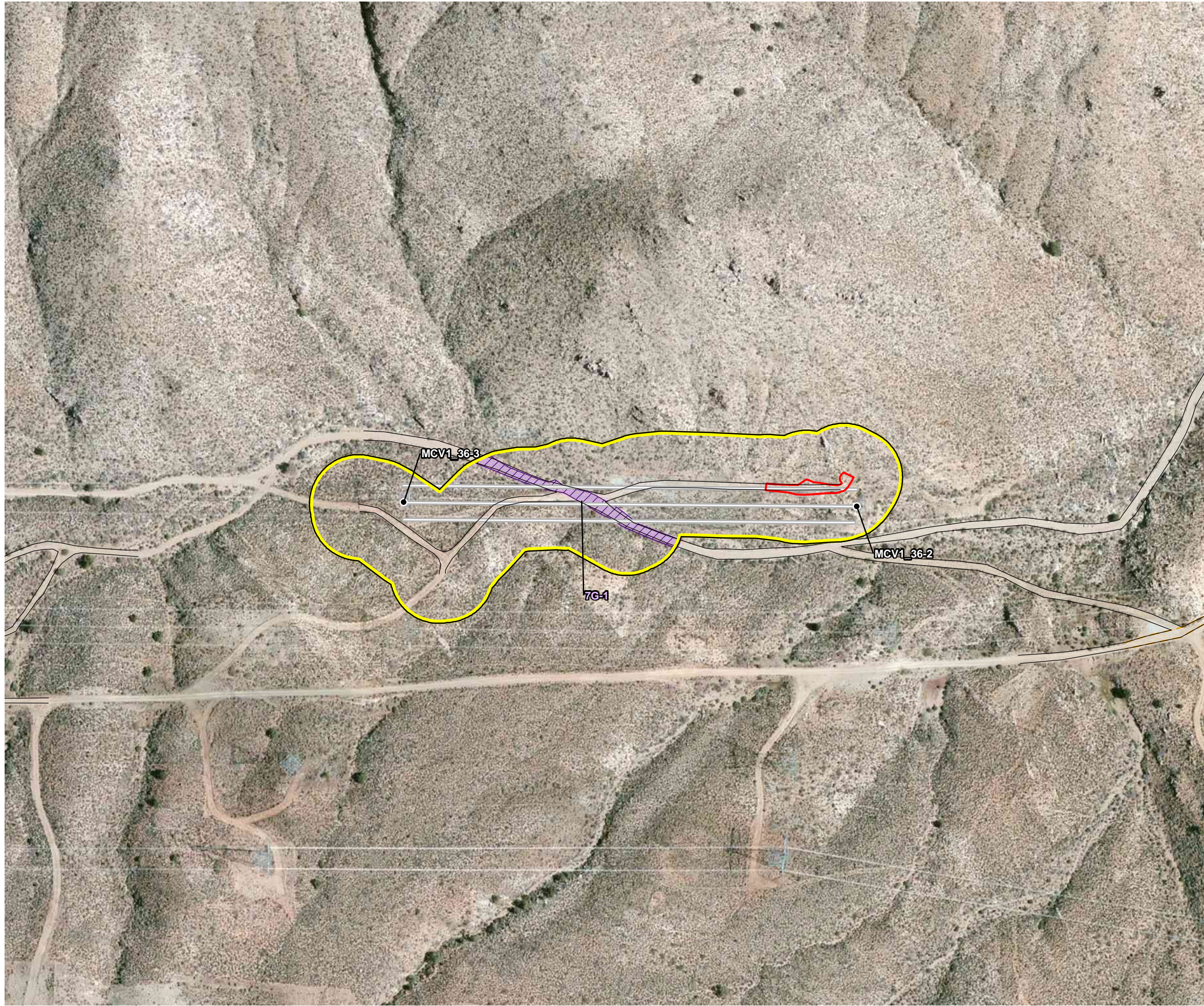


Exhibit 7 Project Impacts Segment 7f

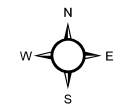
Path 46 Transmission Line Clearances Project

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- Biological Survey Area
- Project Features**
- Tower Location
- Access Roads
- Power Lines
- Potential Soil Spreading
- Compacted Soil Barricade
- Demolish
- Grading Limits
- Jurisdictional Resources**
- Centerline (OHWM/TOB width – feet)
- Ordinary High Water Mark (OHWM) Extent
- Top of Bank (TOB) Extent



Aerial Source: ESRI, NAIP 2014



Exhibit 7 Project Impacts Segment 7g

Path 46 Transmission Line Clearances Project

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