

Appendix B
Non Confidential Site Forms

UPDATE SHEET

Page 1 of 8

*Resource Name or #: (Assigned by recorder) Resource ID 13420, Los Angeles Department of Water and Power Boulder Lines 1, 2, and 3 (P-36-007694)

P1. Other Identifier: N/a

Continuation

Update

*P2e. Other Locational Data: UTM: 557467, 3900980; UTM: 557467, 3900980; UTM: 557467, 3900980

*P3a. Description:

(See continuation sheet.)

*P3b. Resource Attributes: HP11. Engineering structure

*P11. Report Citation:

ICF. 2020. XpressWest Passenger Train Project Built Environment Technical Report, San Bernardino County, California. November. (ICF 387.19). San Bernardino County, California. Prepared for Federal Railroad Administration, Washington DC.

*B10. Significance:

Applicable Criteria: A, C

PREVIOUS RECORDS

Previous investigations that have recorded portions of the line include ECOS (1986), Dames & Moore (1993); Archaeology Advisory Group (1995); Peak & Associates (1997); Earth Tech Inc (2001); Crawford Historic Services (2006); CRM Tech (2007); URS Corporation (2008); Statistical Research, Inc. (2011); ECORP (2011); Michael Brandman Associates (2011); ASM Affiliates (2011); ESA (2012); Chambers Group (2013); Dudek (2013); Far Western (2013); Pacific Legacy (2013); Chambers Group (2014); Caltrans District 8 (2017); Urbana Preservation & Planning, LLC (2018). In 1999, KEA Environmental prepared a NRHP registration form.

In general, the previous investigations describe the continuing significance of the Boulder Dam-Los Angeles Transmission Lines for their association with power delivery and growth in Los Angeles and as an achievement in high voltage power transmission that remained unsurpassed for many years. Dames & Moore's 1993 report applied the NRHP Criteria for Evaluation and determined that Boulder Lines 1, 2, and 3 were eligible as a linear district under Criteria A and C. The Dames & Moore report recorded occasional line transfers between towers and some tower relocations before 1970 as well as the alterations after 1970 noted in the Description section above. The Dames & Moore report categorized eligibility for the system's elements under historic contributing, historic noncontributing, and non-historic as follows while noting that overall, major components remained as originally built (Dames & Moore 1993:8-10). Historic contributing elements included Boulder Line 1; Boulder Line 2 for 22-miles between Boulder Switchyard and McCullough Switching Station and between Victorville and Receiving Station B/Century; and Boulder Line 3 for 22 miles between Boulder Switchyard and McCullough Switching Station, and the Victorville Switching Station. Historic non-contributing elements through alteration included Boulder Line 2 between McCullough and Victorville and Boulder Line 3 from McCullough to Receiving Station E/Toluca. Non-historic included the 1970 McCullough and Victorville switching stations; although these switching stations have reached 50 years of age, they are outside of the current project APE and have not been evaluated on the current update form. (See continuation sheet.)

P5b. Description of Photo: (View, date, etc.)

Segment 1, LADWP Boulder Lines 3, 2, and 1 (left to right), camera facing east, 4.5 miles northeast of Yermo at Interstate 15 10/30/2019



*B14. Evaluator: Stephanie Hodal, ICF

Date of Evaluation: 7/30/2020

Sketch Map



CONTINUATION SHEET

Page 2 of 8 * Resource Name or #: (Assigned by recorder) Resource ID 13420, Los Angeles Department of Water and Power Boulder Lines 1, 2, and 3 (P-36-007694)

* Recorded by: Stephanie Hodal, ICF

Continuation Update

* Date: 7/30/2020

*P3a. Description (continued):

This resource comprises two short segments (segments 1 and 2) of the Los Angeles Department of Water and Power (LADWP) Boulder Dam-Los Angeles Transmission Line comprising Boulder Lines 1, 2, and 3 and a related access road. The segments cross Interstate 15 in two locations: one northeast of Victorville and the other northeast of Yermo. The resource traverses a remote desert setting but for the few occasions at which historic-era towers border the freeway and support suspended transmission line above the lanes of traffic.

LADWP built the historic-era transmission system in two phases. The utility completed Boulder Lines 1 and 2 between 1933 and 1936. Boulder Line 3 was built from 1939 to 1940. Boulder Lines 1, 2, and 3 originally carried 287kV and ran as single-circuit towers from the switchyard at Boulder (now Hoover) Dam in Nevada to Victorville, California. Lines 1 and 2 continued south through the Cajon Pass to Upland where the two rows converged into a single row of double-circuit towers before continuing to Receiving Station B/Century in Los Angeles. Boulder Line 3 ran parallel to Boulder Lines 1 and 2 for much of the route from the dam into California. At Victorville, it diverted west and continued through the San Gabriel Mountains to Receiving Station E/Toluca in the San Fernando Valley. Between 1939 and 1993, LADWP revised substations, subdivided the transmission lines into new named segments, and upgraded the voltage on two of the lines. In 1993, the point of origin was diverted from the dam to a new substation in Mead, Nevada, slightly reducing the overall length of the overall transmission corridor. These changes altered some original towers and replaced some lines but did not affect the overall alignment, appearance, or integrity of the Boulder system (Van Wormer et al. 1999:10).

This documentation refers to the three lines as Boulder Line 1, Boulder Line 2, and Boulder Line 3. Currently, Boulder Line 1 comprises two segments known as Mead-Victorville Line 1 (287kV) and Victorville-Century Line 1 (287kV). Boulder Line 2 comprises three segments known as Mead-McCullough Line 2 (230kV), McCullough-Victorville Line 2 (500kV), and Victorville-Century Line 2 (287kV). Boulder Line 3 comprises four segments currently known as Mead-McCullough Line 1 (230kV), McCullough-Victorville Line 1 (500kV), Victorville-Adelanto Line 2 (500kV), and Adelanto-Toluca Line 1 (500kV). One named segment within each multi-segment line occupies the APE as follows: Mead-Victorville Line 1 (287kV) within Boulder Line 1, McCullough-Victorville Line 2 (500kV) within Boulder Line 2, and McCullough-Victorville Line 1 (500kV) within Boulder Line 3. The three line segments run parallel to each other through the APE at the segments recorded here. Segments 1 and 2 each contain six historic-era towers, related transmission lines, and a portion of access road.

The standard tower on Boulder Lines 1, 2, and 3 between Mead and Victorville features the historic-era skewed-base steel-lattice construction with an overall "Y" configuration carrying a single circuit. The towers stand approximately every 900 feet along the length of the transmission corridor with Boulder Lines 1 and 2 arrayed in two parallel rows with centerlines 265 feet apart. Typical towers for all three lines stand 109 feet high and carry a horizontal cross-arm at approximately 90 feet. The cross-arm carries three conductor cables for each circuit. Variations on this form address field conditions that might include the need for additional support, stability, or positioning to negotiate extreme angles. Boulder Line 1 is unaltered and continues to carry its original 287kV between Mead and Century. The McCullough-Victorville Line 2 segment of Boulder Line 2 was updated in 1980 to carry 500kV: the transmission line was replaced, and the original single-circuit towers were modified with rebuilt cross-arms to carry heavier equipment. The McCullough-Victorville Line 1 segment of Boulder Line 3 was similarly altered to carry 500kV in 1973.

The access road is an approximately fifteen-foot wide unpaved single-lane dirt road running adjacent to the transmission corridor for 200 miles from Upland, California to Mead, Nevada. Built to carry workers and materials during construction, it continues to act as the system's service road for monitoring and maintenance.

The resource crosses the APE at two locations:

Segment 1: Approximately 4.5 miles northeast of Yermo, California and 1 mile northeast of Minneola Road

APE North: 11S, 522761.38 mE/3864743.81 mN

APE South: 11S, 521820.81 mE/3863884.29 mN

Segment 2: Approximately 8.5 miles northeast of Victorville, California and .5 miles northeast of Dale Evans Parkway

APE North: 11S, 480773.03 mE/3834868.06 mN

APE South: 11S, 479859.62 mE/3833838.43 mN

*B10. Significance (continued):

The Los Angeles Department of Water and Power Boulder Lines 1, 2, and 3 are listed in the California Office of Historic Preservation Archaeological Determinations of Eligibility (published in 2012) with a status code of 2S2, associated with a Federal Highway

CONTINUATION SHEET

Page 3 of 8 * Resource Name or #: (Assigned by recorder) Resource ID 13420, Los Angeles Department of Water and Power
Boulder Lines 1, 2, and 3 (P-36-007694)

* Recorded by: Stephanie Hodal, ICF

Continuation Update

* Date: 7/30/2020

Administration determination dated December 1998 (ADOE-36-98-029-000; FHWA981013A). No site record returned in the records search matches the date of this FHWA determination.

The 1999 NRHP registration form completed by KEA Environmental determined that the Boulder Dam-Los Angeles Transmission Line (Lines 1 and 2 and access road) is significant under Criteria A and C. Under Criterion A it is significant for association with the construction of Boulder/Hoover Dam and the industrial, economic, and urban development of metropolitan Los Angeles from the mid-1930s through the 1940s. It is significant under Criterion C for unique engineering and structural characteristics within the context of point to point high-voltage power transmission in California between 1890 and 1936, as representative of the high level of achievement in point-to-point high voltage power transmission that remained unsurpassed for many years, and for design components unique to this transmission line. The period of significance is 1936 to 1953, capturing the period of construction, the years in which the line was the highest voltage point to point transmission line in the world, and the year in which hydroelectric power was superseded by steam-generated power in the city of Los Angeles.

The 1999 NRHP registration form documented contributing, non-contributing, and observed components applicable to the system's entire length. Contributing components in the APE for this project included the single circuit towers and line of Boulder Lines 1 and 2, and the adjacent access road; additional contributing components outside the APE included the operator's building and control house at Victorville, the oil house at Century Receiving Station B/Century, the double circuit towers for Boulder Lines 1 and 2, the Boulder Dam station, and yards at Victorville and Century. Non-contributing elements included the Silver Lake switching station (now demolished). Additional elements observed but not evaluated for the report included Boulder Line 3, new switching stations at Victorville and McCullough, towers that powered construction, and operator's housing at Victorville and Silverlake (now demolished).

The 1999 NRHP registration form asserts that, despite changes to Boulder Lines 1 and 2, their basic footprint continues to reflect the original layout; the vast majority of their towers remain in a recognizable state; Boulder Line 1 still uses distinctive HH cable and operates at the original 287.5kV; Line 2 even though operating at 500kV uses the same towers; and the system continues to use its original single/double circuit configuration. The report notes that Boulder Lines 1 and 2 retain all aspects of integrity. The registration form mentions character-defining features including HH cable, skewed single-circuit towers, and the route of the line.

The California State Historic Preservation Officer reviewed the 1999 NRHP registration form for the Boulder Dam-Los Angeles 287.5kV Transmission Line and signed it in June 2000, thus conferring concurrence on the evaluation of eligibility. However, the Keeper of the NRHP does not appear to have received, reviewed, or approved the determination does not appear to have been forwarded to the Keeper.

Subsequent investigators have also evaluated the transmission system to include Boulder Line 3, found eligible for NRHP listing under Criteria A and C for the same reasons articulated in the 1993 evaluation. SHPO concurred with a 2017 evaluation that found Line 3 through the San Gabriel Mountains eligible for NRHP listing as part of the larger Boulder Dam-Los Angeles transmission system (associated with P-19-150047).

INTEGRITY OF THE RECORDED SEGMENTS

The following considers the integrity of the recorded segments of the Boulder Dam-Los Angeles Transmission Line that cross the current project APE in order to determine if they retain adequate integrity and continue to convey the property's historic significance under NRHP Criteria A and C.

Segment 1 contains thirteen historic-era towers and associated transmission line for Boulder Lines 1, 2, and 3 and lengths of the access road. From southeast to northwest, Boulder Lines 1, 2, and 3 are the second, third, and fourth lines in a four-line crossing. Boulder Lines 1 and 2 each have four historic-era towers, two on the north and two on the south sides of Interstate 15, with associated transmission line; Boulder Line 3 has five historic-era towers with associated transmission line, three on the north and two on the south sides of Interstate 15. The historic-era access road occupies approximately 2,075 linear feet to the northeast and 1,525 feet to the southwest of Interstate 15 within Segment 1.

Segment 2 contains sixteen historic-era towers and associated transmission line for Boulder Lines 1, 2, and 3 and lengths of the access road. From southeast to northwest, Boulder Lines 1, 2, and 3 are the first, second, and third lines in a four-line crossing. Boulder Line 1 has six historic-era towers and associated transmission line, two to the northeast and four to the southwest of Interstate 15. Boulder Line 2 has five historic-era towers and associated transmission line, three to the northeast and two to the southwest of Interstate 15. Boulder Line 3 has five historic-era towers and associated transmission line, three to the northeast and two to the southwest. The historic-era access road occupies approximately 2,025 linear feet to the southwest and 2,225 linear feet to the northeast of Interstate 15 within Segment 2.

Boulder Lines 1, 2, and 3 at Segments 1 and 2 retain enough integrity to convey their historic significance under NRHP Criterion A and C.

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Page 4 of 8 * Resource Name or #: (Assigned by recorder) Resource ID 13420, Los Angeles Department of Water and Power Boulder Lines 1, 2, and 3 (P-36-007694)

* Recorded by: Stephanie Hodal, ICF

Continuation Update

* Date: 7/30/2020

Boulder 1, 2, 3 and the associated access road continue to occupy their original right of way and retain integrity of location. The lines and road continue to run through a remote desert landscape retaining integrity of setting and feeling. Integrity of design, materials and workmanship are also retained along most of the line. Alterations to the historic towers may include updated foundations, modified crossarms in the historic design and materials on Lines 2 and 3 to carry new 500kV, and the installation of updated transmission line; these alterations do not detract from the original design, function, or appearance. Most of the towers and the disposition of the line is intact; they continue to carry power in the original right-of-way on historic-era equipment or equipment using the historic-era design and express the system's original image and purpose. The single-lane dirt road retains integrity of design. Lastly, the line and road retain integrity of association because they possess enough original physical features to convey the historic and ongoing transmission of electricity across the desert from Boulder Dam to Southern California. The towers, transmission line, and access road within the APE at Segments 1 and 2 are contributing elements to the NRHP-eligible historic property.

The period of significance for Boulder Lines 1, 2, and 3, reflecting the property's significance under NRHP Criterion A and C, is 1936-1953. This period corresponds to the line's period of construction, powering of Boulder Dam, activation of power for delivery to Los Angeles, and role as the primary source of electrical power to Los Angeles. The line's character-defining features include its distinct linear alignment over more than two hundred miles in San Bernardino County; regular tower placement at 900-foot intervals linked by continuous transmission line within a 265-foot wide right of way; and a distinctive steel-lattice tower typology.

In conclusion, Boulder Lines 1, 2, and 3 continue to be significant for their association with the regional Hoover Dam hydroelectric system; industrial growth and development in California; and advances in transmission technology and construction. The recorded segments within the project APE retain integrity to the extent that they remain able to convey the resource's significance. Therefore, they are contributing segments to the NRHP-eligible resource. The current evaluation does not assess the integrity of any segments of the property located outside the project APE.

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CONTINUATION SHEET

Page 5 of 8 * Resource Name or #: (Assigned by recorder) Resource ID 13420, Los Angeles Department of Water and Power Boulder Lines 1, 2, and 3 (P-36-007694)

* Recorded by: Stephanie Hodal, ICF

Continuation Update

* Date: 7/30/2020

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CONTINUATION SHEET

Page 6 of 8 * Resource Name or #: (Assigned by recorder) Resource ID 13420, Los Angeles Department of Water and Power Boulder Lines 1, 2, and 3 (P-36-007694)

* Recorded by: Stephanie Hodal, ICF

* Date: 7/30/2020

Continuation Update



Segment 2, LADWP Boulder Lines 3, 2, and 1 (left to right), camera facing north, 8.5 miles northeast of Victorville, California and .5 miles northeast of Dale Evans Parkway at I-15

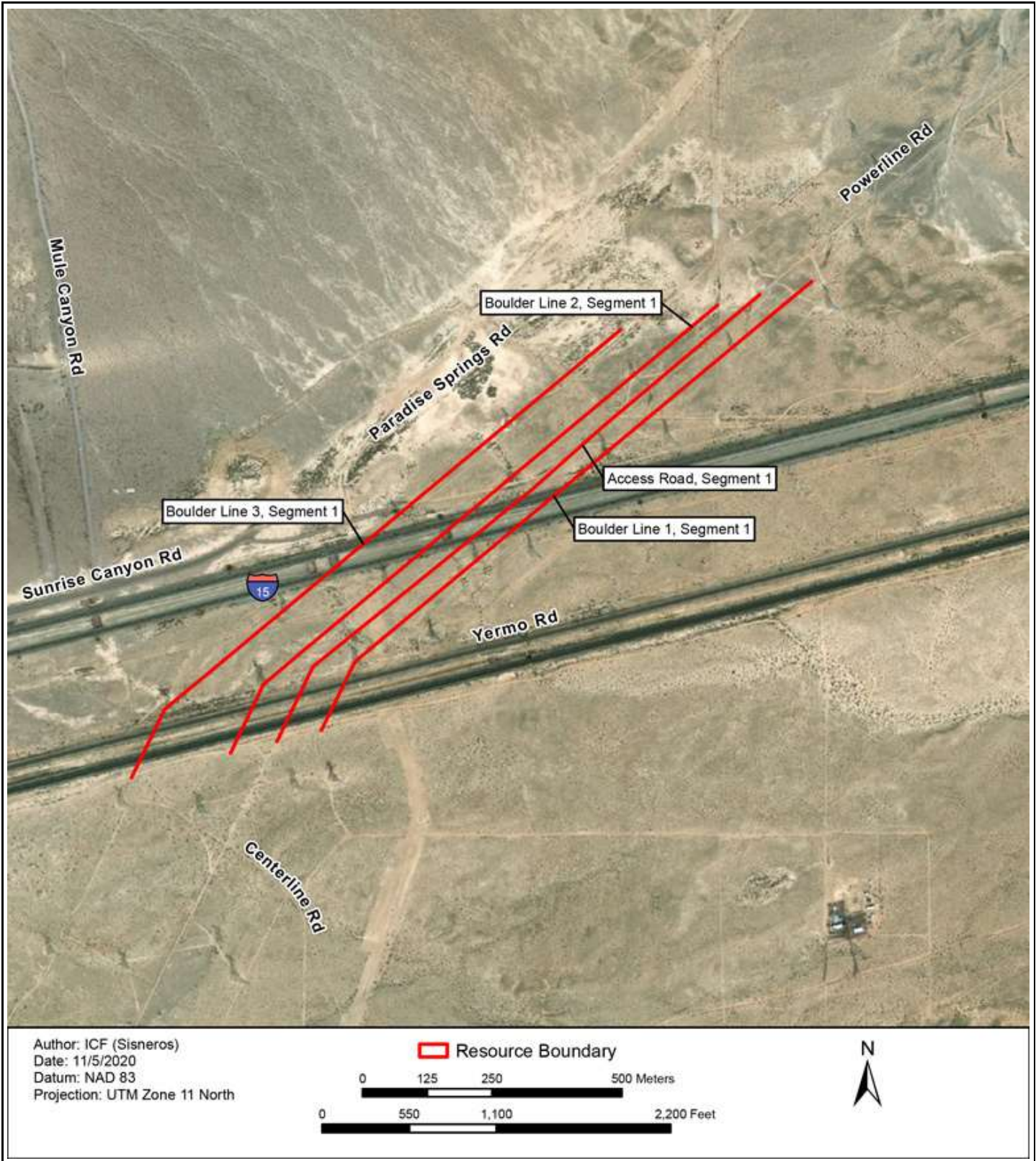


Access road (right) at Segment 2, camera facing northeast



Access road at Segment 1, camera facing southwest toward I-15

Sketch Map

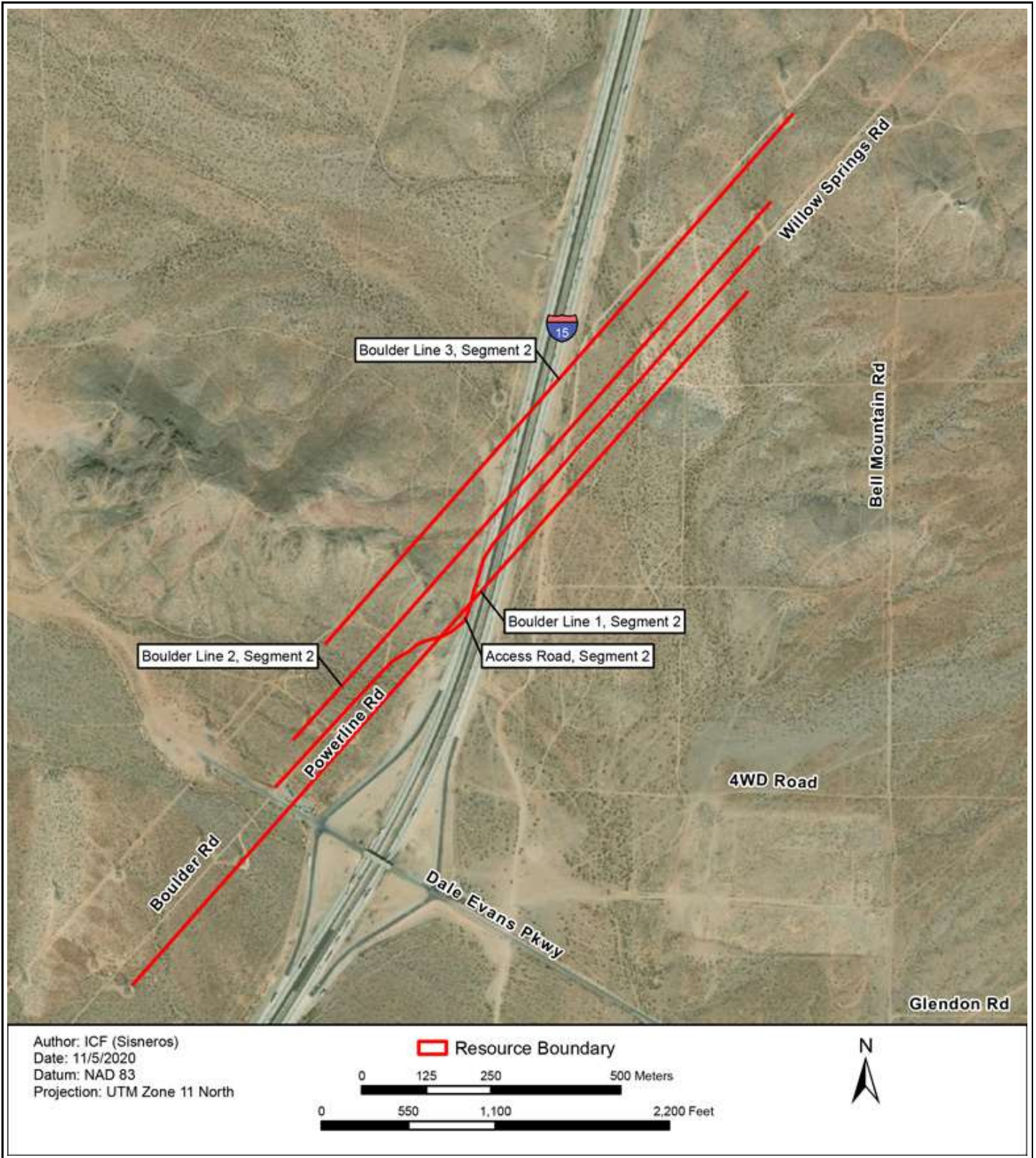


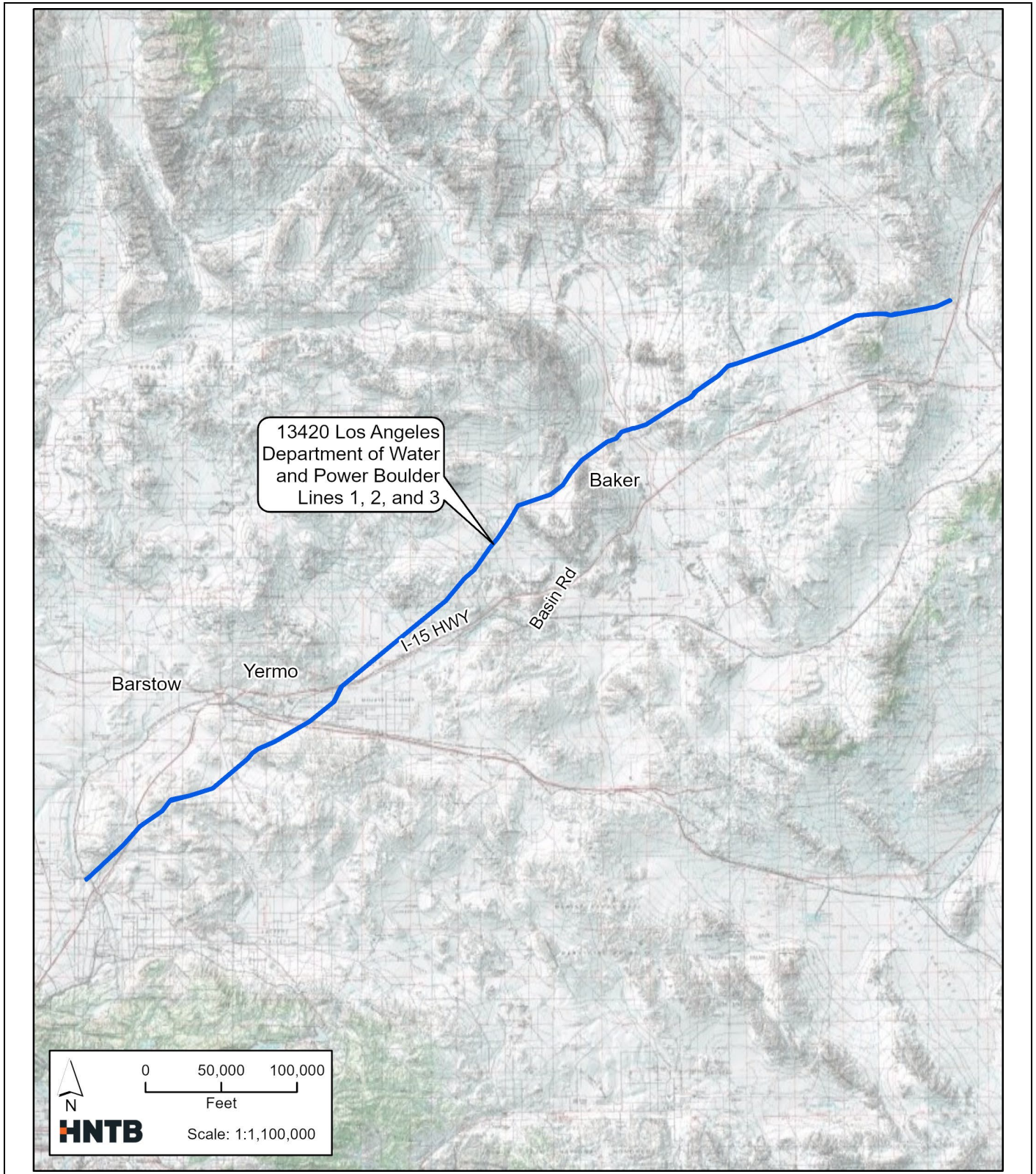
Sketch Map

Page 8 of 8 *Resource Name or #: (Assigned by recorder) Resource ID 13420, Los Angeles Department of Water and Power

*Drawn by: Mathew Sisneros

*Date of Map: 11/5/2020





UPDATE SHEET

Primary # P-36-010315

HR # _____

Trinomial CA-SBR-01031

NRHP Status Code(s) 2S2

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*Resource Name or #: (Assigned by recorder) Resource ID 13387, SCE Boulder Dam-San Bernardino Transmission Line (P-36-010315)

P1. Other Identifier: N/a

Continuation

Update

*P2e. Other Locational Data: UTM: 555177, 3879540

*P3a. Description:

(See continuation sheet.)

*P3b. Resource Attributes: HP11. Engineering structure

*P11. Report Citation:

ICF. 2020. XpressWest Passenger Train Project Built Environment Technical Report, San Bernardino County, California. November. (ICF 387.19). San Bernardino County, California. Prepared for Federal Railroad Administration, Washington DC.

*B10. Significance:

Applicable Criteria: A, C

PREVIOUS RECORDS

The Bureau of Land Management (BLM) determined the Boulder Dam-San Bernardino Transmission Line as eligible for listing on the National Register of Historic Places (NRHP) on October 14, 1993 under Criterion C as a "rare example of low-voltage long-distance electrical transmission." On October 21, 1993, the California State Historic Preservation Officer concurred with the BLM's determination and the supporting report of August 1993 (Above Ground Historic Resources, Class III Cultural Resource Inventory for the Los Angeles Department of Water and Power, Mead to Adelanto Transmission Line Project: Stateline and Baker Divisions) that determined the towers and transmission line as eligible under Criterion A for their association with Hoover Dam and assigned an OHP status code of 2S2 (individual property determined eligible for NR by a consensus through Section 106 process). The San Bernardino County Archaeological Determinations of Eligibility list reflects the transmission line's 2S2 status code associated with the BLM's 1993 determination of eligibility for listing in the NRHP (Bisson 1993; Powers 1993; Craigo 1993).

Other previous investigations that have recorded portions of the subject transmission line include Peak & Associates (1988); Archaeology Advisory Group (1989); William Self Associates (1997); Peak & Associates (1997); Hatheway & Associates (2006); Chambers Group, Inc. (2008); ECORP (2009); ECORP Consulting, Inc. (2010); Statistical Research Inc. (May 2011); Statistical Research Inc. (July 2011); CH2MHill (December 2012); Chambers Group, Inc. (January 2013); Far Western (April 2013); Pacific Legacy, Inc. (June 2013); Urbana Preservation & Planning (2014); Southern California Edison (2015); and L&L Environmental (2018). (See continuation sheet.)

P5b. Description of Photo: (View, date, etc.) Segment 4, east end. Type HD Tower (foreground, north side), camera facing north 3/3/2020



*B14. Evaluator: Stephanie Hodal, ICF

Date of Evaluation: 7/30/2020

Sketch Map



CONTINUATION SHEET

Page 2 of 13 * Resource Name or #: (Assigned by recorder) Resource ID 13387, SCE Boulder Dam-San Bernardino Transmission Line (P-36-010315)

* Recorded by: Stephanie Hodal, ICF

Continuation Update

* Date: 7/30/2020

*P3a. Description (continued):

This resource comprises five project segments (Segments 1, 2, 3, 4, and 5) within the 158-mile long historic-era alignment of the Boulder Dam-San Bernardino Transmission Line. The historic-era alignment runs through California from within Ivanpah Substation in San Bernardino County (north of Interstate 15 near the state line with Nevada) to Shandin Substation in the Hudson neighborhood of the City of San Bernardino. The historic-era alignment is divided into six administrative segments named according to SCE convention. Project segments 1 through 5 occupy the Ivanpah-Baker-Cool Water-Dunn Siding-Mountain Pass administrative segment, located between Ivanpah and Yermo, California. The original line continued east from Ivanpah to Boulder Dam but was modified in the 1970s and again in 2013. Thus, contemporary segments crossing the APE north of the Ivanpah substation and at Interstate 15 southwest of the state line below Primm are not of historic age and are not recorded or evaluated on the current update form.

Segment 1: Approximately 6.5 miles southwest of Primm, NV, at Ivanpah Substation

APE North: 11S 638938.96 mE/3934355.38 mN

APE South: 11S 638668.82 mE/3934089.67 mN

Segment 2: Approximately 16 miles northeast of Baker, CA between Halloran Springs Road and Halloran Summit Road

APE East: 11S 606914.29 mE 3917785.40 mN

APE West: 11S 605528.25 mE 3917317.42 mN

Segment 3: Approximately 8.5 miles northeast of Baker, CA and 3.5 miles southwest of Halloran Springs Road

APE East: 11S 595634.92 mE 3912542.78 mN

APE West: 11S 595290.53 mE 3912300.03 mN

Segment 4: Approximately 31 miles northeast of Yermo, CA, between Afton and Basin Roads

APE North: 11S. 562893.68 mE/3883578.46 mN

APE South: 11S. 561192.85 mE/3882573.14 mN

Segment 5: Approximately 18 – 23 miles northeast of Yermo, CA

APE North: 11S, 548993.93 mE/3877204.65 mN

APE South: 11S, 541335.40 mE/3873581.05 mN

Segment 1 is approximately 1250 feet long; it comprises approximately 750 feet with historic-era towers and line and approximately 500 feet with a contemporary tower and line. From southwest to northeast, the historic-era length enters the northwest quadrant of the APE at the Ivanpah substation; it contains two historic-era Type H steel-lattice towers and associated transmission line. This segment contains one contemporary tower and associated line completed in 2013.

Segment 2 is approximately .9 miles long. It parallels the north side of the interstate, running east/west. Segment 2 contains six historic-era towers and associated transmission line. These include five Type H towers and one Type A tower.

Segment 3 is approximately 1,400 feet long. It parallels the north side of the interstate, running northeast/southwest. Segment 3 contains two historic-era towers and associated transmission line. These include two Type H towers.

Segment 4 is approximately 1.5 miles long. From east to west, it crosses the interstate once, running north/south; it then parallels the south side of the highway for approximately one mile running east/west. Segment 4 contains seven historic-era steel-lattice single-circuit towers and associated transmission line. These include one Type HD dead-end tower, one Type AP dead-end tower, and five Type H towers.

Segment 5 is approximately 5.5 miles long. From east to west, it parallels the south side of the freeway for approximately 0.5 mile; it crosses the interstate and traveler rest areas, turning to parallel the north side of the freeway for approximately 4 miles; after bridging Field Road and its on/off ramps, it continues for approximately 0.75 mile before crossing southwest over the interstate. Segment 5 contains 37 historic-era steel-lattice single-circuit towers and associated transmission line. These include five Type A dead-end towers, 1 Type SW tower and 31 Type H towers.

*B10. Significance (continued):

The site records note the integrity of the original system (over 200 miles of towers and transmission line) and the importance of its association

CONTINUATION SHEET

Page 3 of 13 * Resource Name or #: (Assigned by recorder) Resource ID 13387, SCE Boulder Dam-San Bernardino Transmission Line (P-36-010315)

* Recorded by: Stephanie Hodal, ICF

Continuation Update

* Date: 7/30/2020

with Hoover Dam construction, hydroelectric technology, and development in the west. Further, they note that while aspects have been modified over time, these changes have not affected the overall integrity of the system. Reports before 1993 recorded portions of the system but did not apply the National Register Criteria for Evaluation or the California Register Criteria for designation.

More than ten years later, Hatheway & Associates noted that extreme ends of the transmission line had been altered by the demolition or off-line status of the original western-end electrical generating plant and the demolition of the eastern-end receiving stations and power distribution system. (Hatheway 2006:5). Chambers Group observed that some metal towers within their study area had been replaced by wooden H-frame towers but noted this altered a small portion of the overall resource and did not affect integrity. (Bodmer 2013.3) Urbana Preservation and Planning noted that modifications and updates had occurred since the 1993 affirmation of eligibility for the National Register of Historic Places and listing on the California Register of Historical Resources. They suggested a comprehensive and conclusive survey of towers at all modern-day segments to substantiate the current level of integrity (Tinsely-Becker 2014:2). Southern California Edison noted additional changes in 2015 such as substations added along the line after 1931; modifications to the alignment of the easternmost end of the line from Eldorado, Nevada to Boulder Dam in the 1980s; and rebuilding of the Eldorado-Ivanpah segment in 2013 that removed this segment from the NRHP eligible length. (Historic alignments and equipment now end at Ivanpah, located 67 miles west of Hoover Dam) (Williams 2015:1).

INTEGRITY OF RECORDED SEGMENTS

The following analysis considers the integrity of the recorded segments of the Boulder Dam-San Bernardino Transmission Line that cross the current project APE to determine if they retain adequate integrity and continue to convey the property's historic significance under NRHP Criteria A and C.

Segment 1 contains an approximately 750-foot long historic-era segment with two steel-lattice single-circuit Type H towers and associated transmission line that connects to an approximately 500-foot long contemporary segment with one modern tower and associated transmission line. Historic aerials and United States Geological Survey Maps (USGS) show that the towers and lines continue to occupy the original right of way and retain integrity of location. Most of the line from Victorville to Ivanpah, including this segment, traverses a remote desert landscape with occasional road crossings and retains integrity of setting. The two historic-era towers and associated transmission line are original or replicate the original prototype. Possible alterations at this location may include updated foundations or added guy wires however these do not replace or detract from expression of the original image, construction technique, technology, and function. Thus the two historic-era towers and associated transmission line retain integrity of design, materials and workmanship consistent with the historic alignment. However, the connected 500-foot length with a contemporary tower and line introduces a new technology and design to the segment. Thus the modern tower and associated transmission line do not retain integrity of design, materials, or workmanship. The segment continues to carry power in its original right-of-way however it uses a mix of original and new equipment, modifying the original appearance and technology of the system. The historic-era towers and associated transmission line express the original image and purpose of the system and retain integrity of feeling; the modern tower and associated transmission line no longer retain integrity of feeling. Lastly, the historic-era and modern towers and associated transmission line retain integrity of association because they possess enough original physical features to convey a relationship with the historic and ongoing transmission of electricity across the desert to Boulder Dam and from Boulder Dam to Southern California. The two historic-era towers and associated transmission line in Segment 1 are a contributing feature of the NRHP-eligible historic property; the single modern tower and associated transmission line are not a contributing feature of the NRHP-eligible historic property

Segment 2 contains six historic-era steel-lattice single-circuit towers and associated transmission line: five Type H towers and one Type A tower. Historic aerials and USGS Survey Maps show that the towers and lines continue to occupy the original right of way and retain integrity of location. Most of the line from Victorville to Ivanpah, including this segment, traverses a remote desert landscape with occasional road crossings and retains integrity of setting. The historic-era towers and associated transmission line are original or replicate the original prototype. Possible alterations at this location may include updated foundations or added guy wires however these do not replace or detract from expression of the original image, construction technique, technology, and function. Thus the historic-era towers and associated transmission line retain integrity of design, materials and workmanship consistent with the historic alignment. The segment continues to carry power in its original right-of-way on original equipment that expresses the original image and purpose of the system and retains integrity of feeling. Lastly, the historic-era towers and associated transmission line retain integrity of association because they possess enough original physical features to convey a relationship with the historic and ongoing transmission of electricity across the desert to Boulder Dam and from Boulder Dam to Southern California. The six historic-era towers and associated transmission line in Segment 2 are a contributing feature of the NRHP-eligible historic property.

Segment 3 contains two historic-era steel-lattice single-circuit Type H towers and associated transmission line. Historic aerials and USGS Survey Maps show that the towers and lines continue to occupy the original right of way and retain integrity of location. Most of the line from Victorville to Ivanpah, including this segment, traverses a remote desert landscape with occasional road crossings and retains integrity

CONTINUATION SHEET

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* Recorded by: Stephanie Hodal, ICF

Continuation Update

* Date: 7/30/2020

of setting. The two historic-era towers and associated transmission line are original or replicate the original prototype. Possible alterations at this location may include updated foundations or added guy wires however these do not replace or detract from expression of the original image, construction technique, technology, and function. Thus the two historic-era towers and associated transmission line retain integrity of design, materials and workmanship consistent with the historic alignment. The segment continues to carry power in its original right-of-way on original equipment that expresses the original image and purpose of the system and retains integrity of feeling. Lastly, the historic-era towers and associated transmission line retain integrity of association because they possess enough original physical features to convey a relationship with the historic and ongoing transmission of electricity across the desert to Boulder Dam and from Boulder Dam to Southern California. The two historic-era towers and associated transmission line in Segment 3 are a contributing feature of the NRHP-eligible historic property.

Segment 4 contains seven historic-era steel-lattice single-circuit towers and associated transmission line: one Type HD dead-end tower with guy wires, one Type AP dead end tower, and five Type H towers. Historic aerials and United States Geological Survey Maps (USGS) show that the towers and lines continue to occupy the original right of way and retain integrity of location. Most of the line from Victorville to State Line, including this segment, traverses a remote desert landscape with occasional road crossings and retains integrity of setting. The eight towers and line are from the historic era or replicate the original prototype and thus retain integrity of design, materials and workmanship consistent with the historic alignment. Alterations may include updated foundations and added guy wires on some towers; these do not replace or detract from expression of the original image, construction technique, technology, and function. The segment continues to carry power in its original right-of-way on original equipment that expresses the original image and purpose of the system and retains integrity of feeling. Lastly, the line retains integrity of association because it possesses enough original physical features to convey its relationship with the historic and ongoing transmission of electricity across the desert to Boulder Dam and from Boulder Dam to Southern California. Segment 4 is a contributing feature of the NRHP-eligible historic property.

Segment 5 contains 37 historic-era steel-lattice single-circuit towers, one contemporary pole, and associated transmission line: five Type A dead-end towers, one Type SW tower, 31 Type H towers, and one modern non-contributing H-frame cross-braced wood pole. Historic aerials and USGS maps show that the towers and lines continue to occupy the original right-of-way and retain integrity of location. Most of the line from Victorville to State Line, including this segment, traverses a remote desert landscape with occasional road crossings and retains integrity of setting. The 36 towers and line are from the historic era or replicate the original prototype and thus retain Integrity of design, materials and workmanship consistent with the historic alignment. Alterations may include updated foundations and added guy wires on some towers however these do not replace or detract from expression of the original image, construction technique, technology, and function. The non-contributing H-frame wood tower is not of age and does not reflect the original design, materials, or workmanship. Although it is in the property's historic alignment, it is a minor addition and does not detract from the integrity of the resource. The segment continues to carry power in its original right-of-way on original equipment that expresses the original image and purpose of the system and retains integrity of feeling. Lastly, the line retains integrity of association because it possesses enough original physical features to convey its relationship with the historic and ongoing transmission of electricity across the desert to Boulder Dam and from Boulder Dam to Southern California. Segment 5 is a contributing feature of the NRHP-eligible historic property.

In conclusion, the two historic-era towers and associated transmission line in Segment 1 retain integrity to the extent that they remain able to convey the resource's significance. Segments 2, 3, 4, and 5 retain integrity to the extent that they remain able to convey the resource's significance. Therefore, the two historic-era towers in Segment 1, and all of Segments 2, 3, 4, and 5 are contributing segments of the NRHP-eligible resource.

The period of significance for the Boulder Dam-San Bernardino Transmission Line, reflecting its significance under NRHP Criterion A and C, is 1930-1937. This period corresponds to the line's date of construction, powering of Boulder Dam, and subsequent reversal of power for delivery to Los Angeles. The line's character-defining features include its distinct linear alignment over long distance; regular tower placement at 750-foot intervals linked by continuous transmission line; and a steel-lattice tower typology with eight distinct designs. The original boundary was San Bernardino to Boulder Dam. As of 2013, the historic segments terminate approximately 750 feet inside the substation at Ivanpah.

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Continuation Update

* Date: 7/30/2020

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Transmission Line (P-36-010315)

* Recorded by: Stephanie Hodal, ICF

Continuation Update

* Date: 7/30/2020

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* Recorded by: Stephanie Hodal, ICF

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Segment 1, east end. Historic-era Type H Towers (contributing) approaching from southwest toward contemporary equipment (non-contributing) located to the northeast (background), camera facing southeast from Colosseum Road



Segment 4, east end, south side. Type AP dead-end tower, camera facing east



Segment 4, east end, south side. Standard Type H tower, camera facing southwest



Segment 5, east end, south side. H-frame cross-braced wood pole (foreground, non-contributing), Type A dead-end tower (middle ground, right), Type H tower (background left), camera facing northeast

CONTINUATION SHEET

Page 8 of 13 * Resource Name or #: (Assigned by recorder) Resource ID 13387, SCE Boulder Dam-San Bernardino Transmission Line (P-36-010315)

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Continuation Update

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Segment 5, east end, north side. Type A dead-end tower (right), Type SW Tower (left), camera facing west



Segment 5 at Field Road, north side. Type A dead-end tower (right, foreground), Type H tower (right, background), camera facing northeast



Segment 5 at Field Road, north side. Type A dead-end tower (left, foreground), Type H tower (left, background), camera facing southwest



Segment 5, west end. Type H tower (foreground, south side), Type A dead-end tower (left, north side), Type H tower (background right, north side), camera facing north

Sketch Map

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*Drawn by: Mathew Sisneros

*Date of Map: 11/5/2020

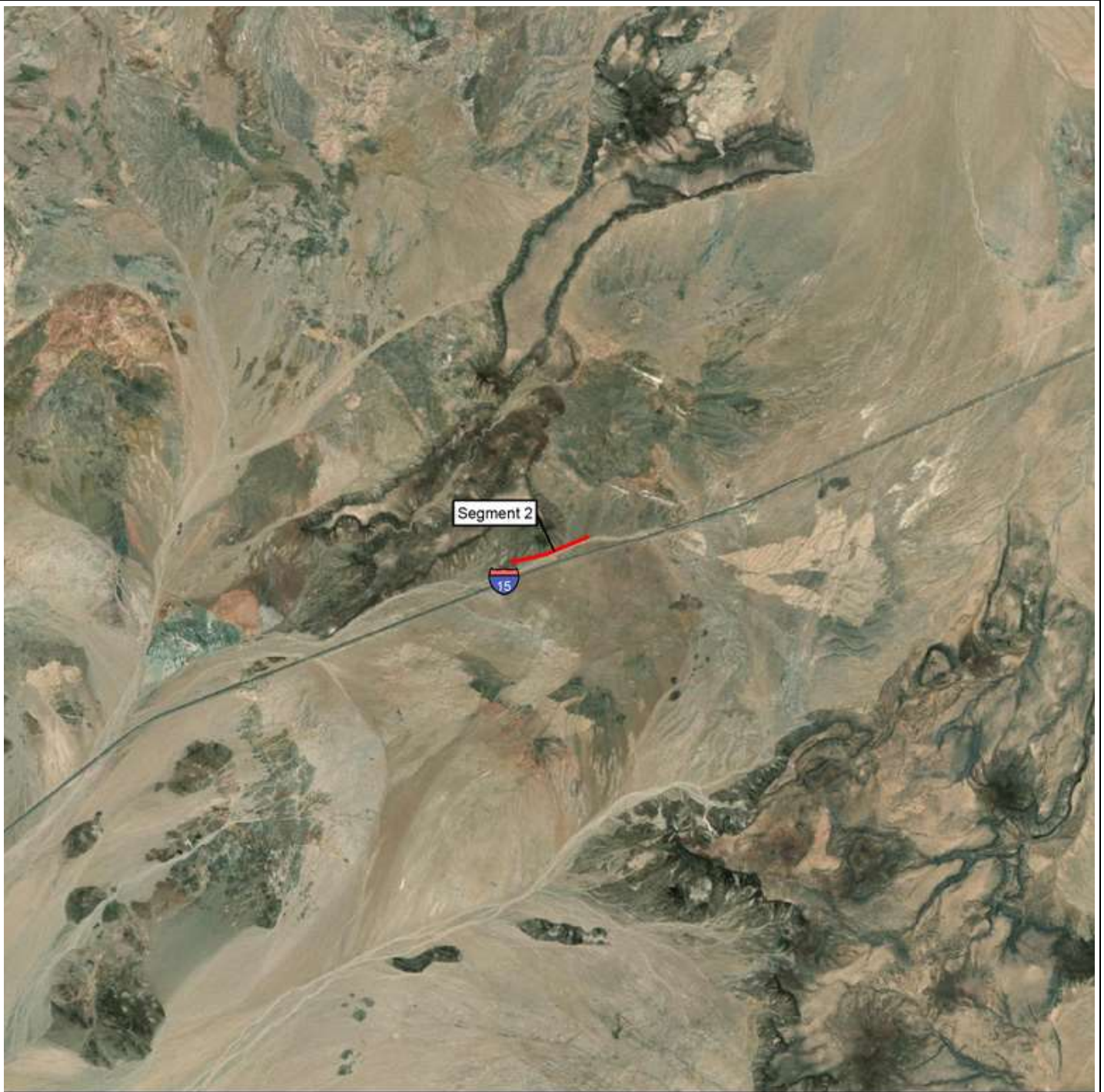


Sketch Map

Page 10 of 13 *Resource Name or #: (Assigned by recorder) Resource ID 13387, SCE Boulder Dam-San Bernardino Transmi

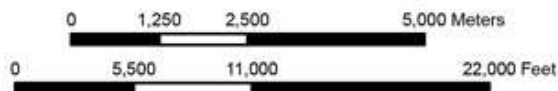
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*Date of Map: 11/5/2020



Author: ICF (Sisneros)
Date: 11/5/2020
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Projection: UTM Zone 11 North

 Resource Boundary

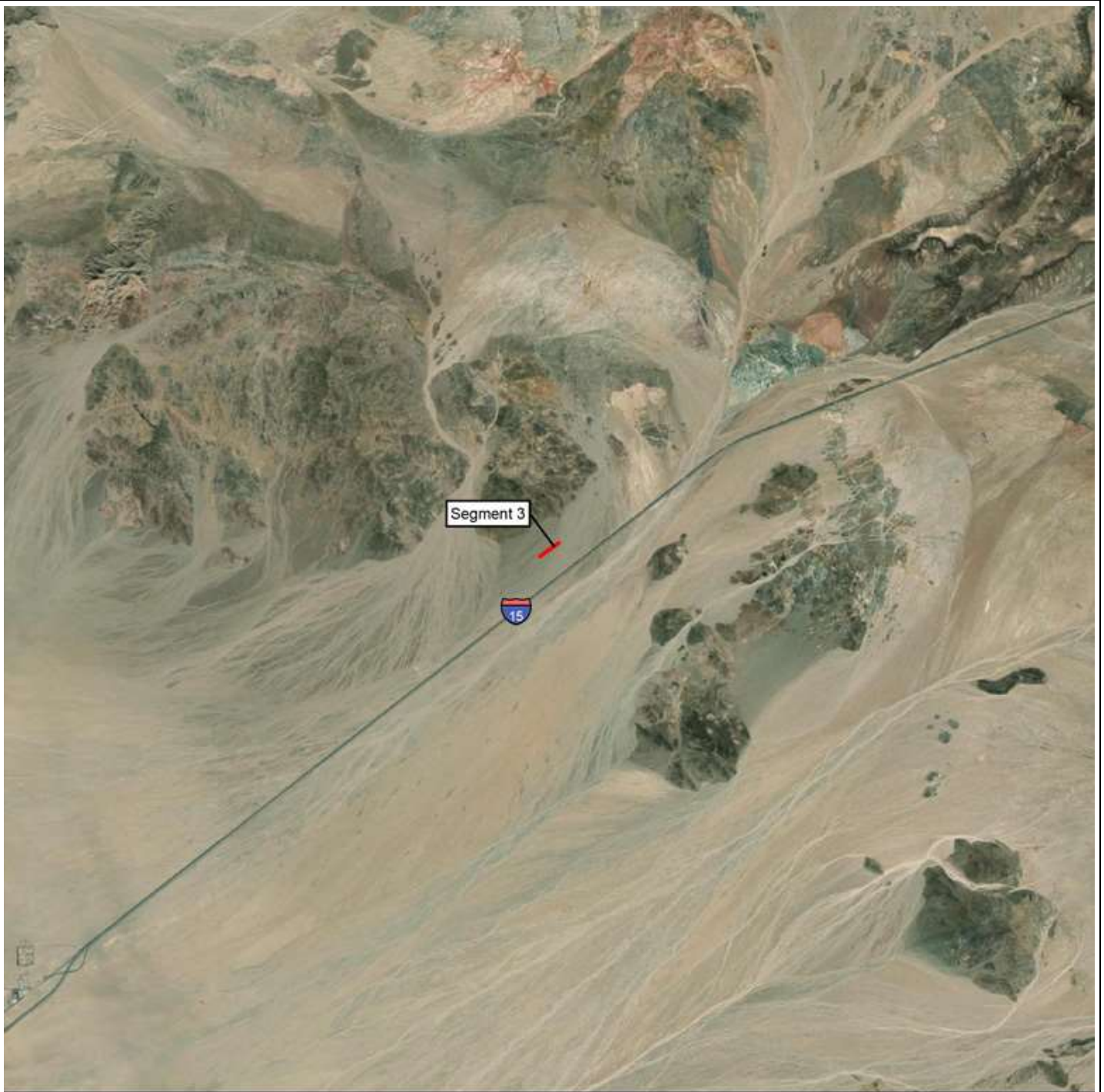


Sketch Map


Page 11 of 13 *Resource Name or #: (Assigned by recorder) Resource ID 13387, SCE Boulder Dam-San Bernardino Transmi

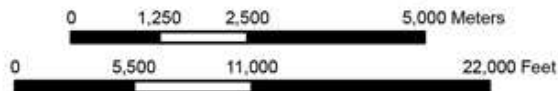
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*Date of Map: 11/5/2020



Author: ICF (Sisneros)
Date: 11/5/2020
Datum: NAD 83
Projection: UTM Zone 11 North

 Resource Boundary



Sketch Map

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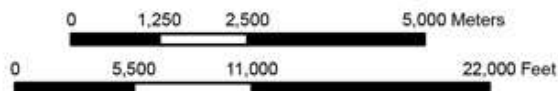
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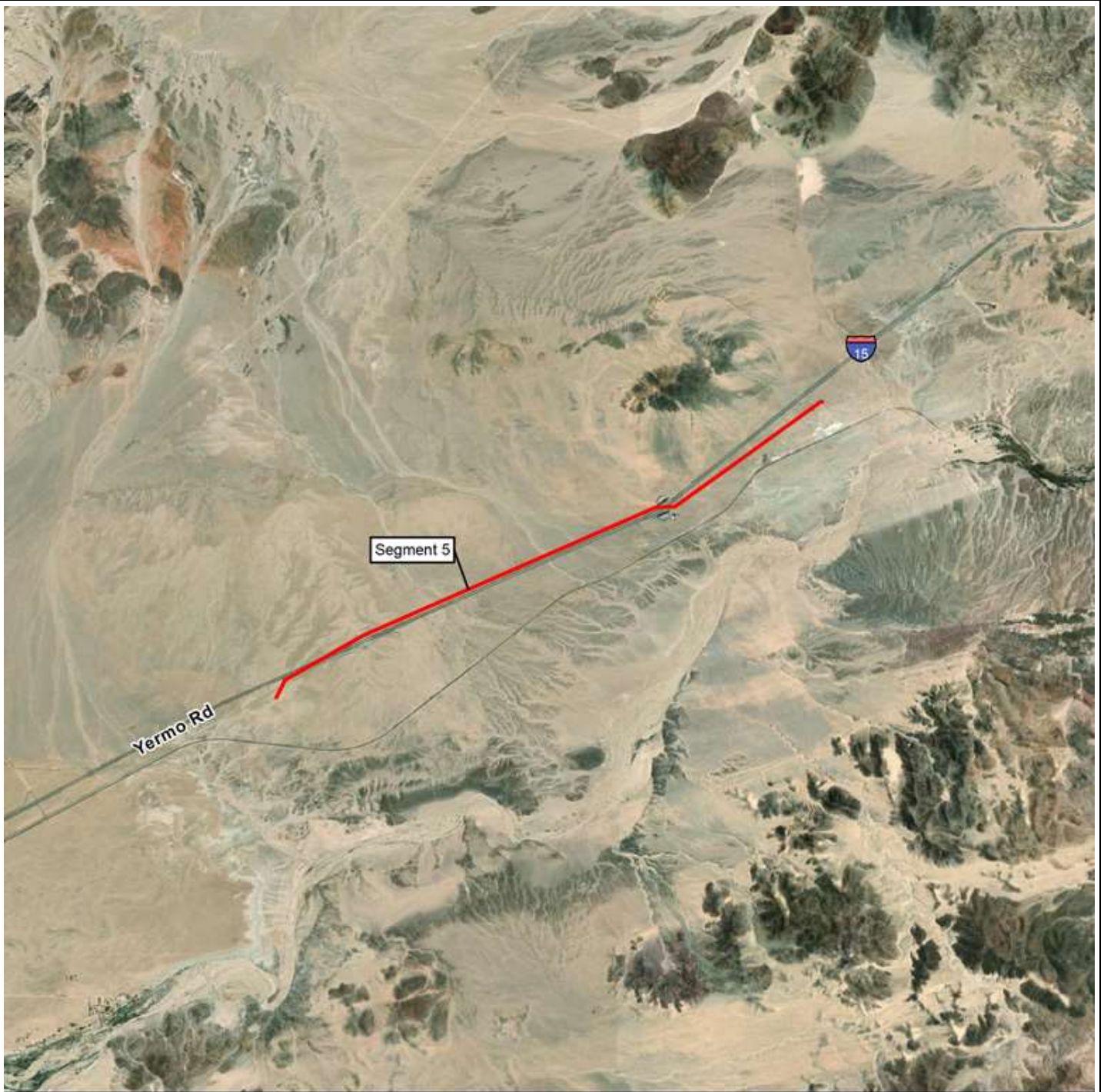


Sketch Map


Page 13 of 13 *Resource Name or #: (Assigned by recorder) Resource ID 13387, SCE Boulder Dam-San Bernardino Transmi

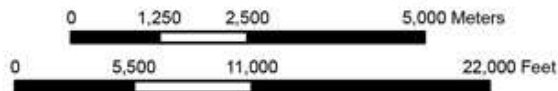
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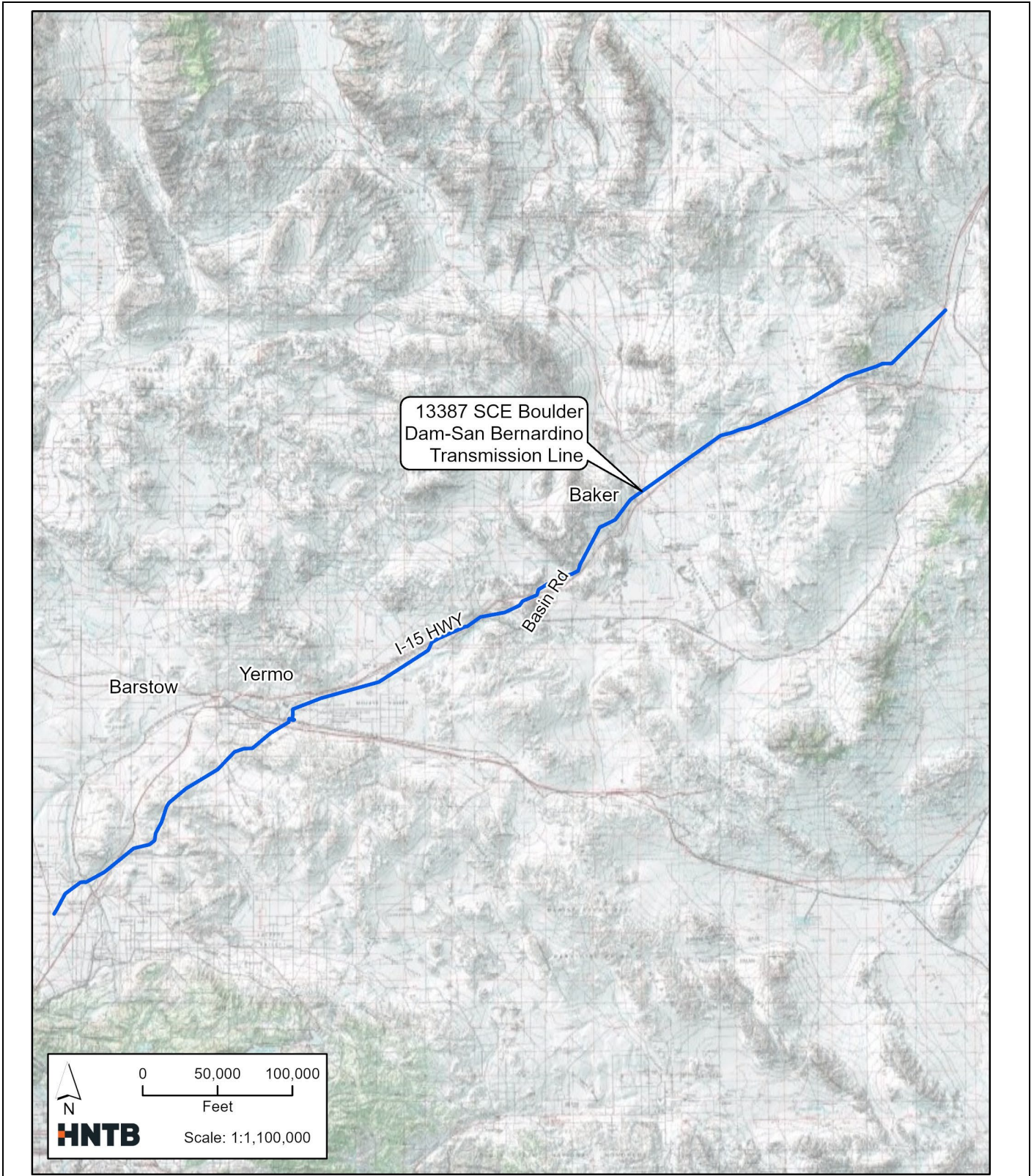
*Date of Map: 11/5/2020



Author: ICF (Sisneros)
Date: 11/5/2020
Datum: NAD 83
Projection: UTM Zone 11 North

 Resource Boundary





Other Resource #:



NEVADA
**STATE HISTORIC
PRESERVATION OFFICE**

Architectural Resource Assessment (ARA) Form

| | | | |
|-------------------|------------|--------------------------|-----------------|
| For SHPO Use Only | | SHPO Concurrence?: Y / N | Date: |
| Survey Date | 03/04/2020 | Recorded By | Stephanie Hodal |
| | | Agency Report # | |

1. Property Type

| | | | | | | | |
|----------|--------------------------|-----------|-------------------------------------|--------|--------------------------|-------------------------------------|--------------------------|
| Building | <input type="checkbox"/> | Structure | <input checked="" type="checkbox"/> | Object | <input type="checkbox"/> | Landscape (non-archaeological site) | <input type="checkbox"/> |
|----------|--------------------------|-----------|-------------------------------------|--------|--------------------------|-------------------------------------|--------------------------|

2. Property Overview and Location

| | | | | | | | |
|--|----------------------------------|--|---------------------------------------|---|-----------------------------------|--|---------|
| Street Address | N/A | | | | | | |
| City, Zip | | | | | | | |
| County | Clark | | | | | | |
| Assessor's Parcel # | Multiple | | | Subdivision Name | N/A | | |
| UTM Location (NAD 83, UTM Zone 11 North) | | Easting: | | 646138 | | Northing: | 3943180 |
| USGS Info | Township: | Range | Section: | USGS 7.5' Quad Date: | | Ivanpah Lake () | |
| Ownership | Private <input type="checkbox"/> | Public-Local <input checked="" type="checkbox"/> | Public-State <input type="checkbox"/> | Public-Federal <input type="checkbox"/> | Multiple <input type="checkbox"/> | | |
| Should the property's location be kept confidential? | | | | Yes <input type="checkbox"/> | | No <input checked="" type="checkbox"/> | |

3. Architectural Information

(Insert primary photograph below.)

| | | |
|-------------------------|------------------------------|--|
| Construction Date | 1933-1936 | |
| Architectural Style | N/A | |
| Architectural Type | N/A | |
| Roof Form | N/A | |
| Roof Materials | N/A | |
| Exterior Wall Materials | N/A | |
| Foundation Materials | N/A | |
| Window Materials | N/A | |
| Window Type | N/A | |
| Accessory Resources? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| | Number?: | |



Los Angeles Bureau of Power and Light Boulder Line 1 (fore

4. NRHP Eligibility - Existing Listings, District, & Potential Districts

| | | | | | |
|--|------------------------------|--|---|------------------------------|--|
| Is the property listed in the National Register? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | If yes, provide: | Date Listed: | |
| | | | | NRIS #: | |
| Contributing to a listed historic district? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | If yes, provide: | NRIS #: | |
| | | | Name: | | |
| | | | Date Listed: | | |
| If no, is there a potential district? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | If so, is the potential district eligible for the NRHP? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| | | | If so, is this resource contributing? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| District Name: | | | | SHPO #: | |

Note: A resource that is contributing to a National Register-eligible district is considered eligible for the National Register for the purposes of project review, even though the resource itself may not be individually eligible.

Other Resource #:

5. NRHP Eligibility - Individual*If not already listed, complete the information below:*

| | | | | | | |
|--|--|---|---|--------------------------------------|----------------------------------|---|
| Eligible Under: | Criterion A <input checked="" type="checkbox"/> | Criterion B <input type="checkbox"/> | Criterion C <input checked="" type="checkbox"/> | Criterion D <input type="checkbox"/> | | |
| | Not Eligible <input type="checkbox"/> | Unevaluated <input type="checkbox"/> | | | | |
| Area(s) of Significance | Community Planning; Engineering | | | | | |
| Period(s) of Significance | 1936-1953 | | | | | |
| Integrity – Does the resource possess integrity in all or some of the 7 aspects? | | | | | | |
| Location <input checked="" type="checkbox"/> | Design <input checked="" type="checkbox"/> | Materials <input checked="" type="checkbox"/> | Workmanship <input checked="" type="checkbox"/> | Setting <input type="checkbox"/> | Feeling <input type="checkbox"/> | Association <input checked="" type="checkbox"/> |
| General Integrity: | Intact <input checked="" type="checkbox"/> | Altered <input type="checkbox"/> | Moved <input type="checkbox"/> | Date(s): N/A | | |
| Threats to Resource: | Ongoing maintenance | | | | | |
| Historic Name | Los Angeles Bureau of Power and Light Boulder Line 1 | | | | | |
| Current/Common Name | Los Angeles Bureau of Power and Light Boulder Line I | | | | | |
| Historic/Original Owner | Los Angeles Department of Water and Power | | | | | |
| Current Owner | Los Angeles Department of Water and Power | | | | | |
| Current Owner Address | 111 N. Hope Street, Los Angeles, CA 90012 | | | | | |
| Historic Building Use | Electricity Transmission | | | | | |
| Current Building Use | Electricity Transmission | | | | | |
| Architect/Engineer/Designer | Ezra F. Scattergood | | | | | |
| Builder/Contractor | Los Angeles Bureau Of Power And Light | | | | | |

6. Narrative Eligibility Justification

Provide a detailed explanation of the resource's eligibility for the National Register, including supporting historic information, methods for evaluation under the four criteria, discussion of the seven aspects of integrity, and conclusions about eligibility.

This ARA form [update to 26CK6238] considers the integrity of the recorded segment of Boulder Dam-Los Angeles Transmission Line, Boulder Line 1, that crosses the project APE in order to assess its contributing status to the NRHP-eligible property which is significant under NRHP Criteria A and C. Overall, the towers and line within the subject segment retain sufficient integrity to convey the historic significance of the Boulder Dam-Los Angeles Transmission Line, Boulder Line 1, under NRHP Criteria A and C.

PREVIOUS RECORDS

The first recordation of portions of the subject transmission line was carried out by Lynda Blair of the Harry Reid Center for Environmental Studies who originally recorded Los Angeles Department of Water and Power (LADWP) Boulder Line 1 in 1994 as one of "Eighteen Historic Lines Originating at Hoover Dam," which also included the LADWP Boulder Dam Lines 2 and 3 (site record 26CK5180). Blair characterized the 18 transmission lines, dating to between 1931 and 1952, as linear features that "may be considered as contributing members of a yet-undefined National Register Historic District." However, Blair recommended the system as not eligible for listing in the NRHP due to a "substantial degree of systemic physical change to most components and each powerline structure" but did not include a detailed discussion of the transmission lines' integrity. (Blair 1994)

In 2001, Kurt Schweigert and Teela Labrum of ACRE evaluated the segment of Boulder Line 1 between the Hoover Substation independently of its two sibling transmission lines, and the Nevada State Historic Preservation Office assigned the LADWP Boulder Line 1 a new resource number, 26CK6238. Schweigert and Labrum reported that LADWP Boulder Dam Lines 1-3 were previously found eligible for NRHP listing in 1994 with SHPO concurrence, which appears to report Blair's findings inaccurately. Schweigert and Labrum recommended the LADWP Boulder Lines 1-3 as eligible for NRHP listing under Criteria A and C, with 1936 as its period of significance in their investigation carried out for the Federal Highway Administration (FHWA). (Schweigert and Labrum 2001)

FHWA determined the LABPL Transmission Line 1 as eligible for listing on the National Register of Historic Places (NRHP) in September 2002. On November 21, 2002, the Nevada State Historic Preservation officer concurred with FHWA's determination and supporting report (Final Report – Volume 1: Boulder City/ U.S. 93 Corridor Study Historic Structures Survey) that determined Line 1 eligible under Criteria A and C (FHWA 2002; Badrica 2002).

In 2003, Christina Kelly of the Harry Reid Center for Environmental Studies updated the 26CK5180 site record,

Other Resource #:

specifically addressing the segments of the LADWP Boulder Dam Lines 1-3 between Hoover Dam and the Boulder City Tap. The 2003 evaluation reported that LADWP Boulder Lines 1-3 were among six transmission lines that Associated Cultural Resource Experts recommended as eligible for NRHP listing in 1999; however, Kelly reported that SHPO did not review the 1999 evaluation. The 2003 evaluation by Kelly recommended the recorded segments as not eligible for NRHP eligibility due to alterations that have diminished their integrity. (Kelly 2003)

J. Trudell of EDAW, Inc. updated 26CK5180 in 2007 and stated the segment of the LADWP Boulder Dam Lines 1-2 crossing Interstate 15 north of Primm—a similar segment as exists in the current project APE—may have sufficient integrity “to retain its historic character and convey its period of significance under the NRHP criteria” that Blair and Kelly previously identified. However, Trudell did not provide a NRHP evaluation of the transmission lines. (Trudell 2007)

Allen Estes of William Self Associates, Inc. updated 26CK6238 in 2008 to record a segment of LADWP Boulder Line 1, located approximately 3 miles east of the current project APE. William White of Statistical Research Inc. updated 26CK6238 in 2011 to record a segment of LADWP Boulder Line 1, located approximately two miles northeast of the current project APE. Both Estes and White concurred with the 2001 Schweigert and Labrum evaluation that LADWP Boulder Dam Lines 1-3 are eligible for NRHP listing under Criterion A and Criterion C. (Estes 2008; White 2011).

INTEGRITY OF PORTIONS WITHIN THE APE

Overall, the subject segment within Boulder Line 1 retains sufficient integrity to convey its historic purpose and significance and contributes to Boulder Line 1. Its tower locations may have been adjusted to accommodate the width of Interstate 15, but it maintains its historic-era design and alignment, complementary relationship to Boulder Lines 2 and 3, and overall linear position within the longer Boulder Line 1. Thus, it retains integrity of location. Its towers and crossarms continue to be of or in the design of the historic era and the line continues to carry 287kV. Therefore, the segment retains integrity of design. The historic-era towers and crossarms retain integrity of materials and workmanship using the same steel lattice structure; possible upgrades to line and insulators may reduce the integrity of materials and even though these altered elements use similar materials arrayed in the same position and proportion. Integrity of setting and feeling is reduced within the immediate subject segment by the presence of Interstate 15; however, the segment originates in and returns to the resource’s overall isolated desert setting outside the APE. Boulder Line 1 retains integrity of association as it possesses enough historic physical features to convey its association with historic events, primarily the early-20th century construction of the Boulder Dam hydroelectric system and the transmission of power to develop Los Angeles. In conclusion, the segment within the project APE retains integrity to the extent it remains able to convey the resource’s significance. Therefore, it is a contributing segment to the NRHP- eligible resource. The current evaluation does not assess the integrity of any segments of the resource located outside the project APE.

7. Narrative Architectural Description

Provide a detailed description of the resource, including all character defining features, potential construction methods, potential alterations (both historic and non-historic), and any accessory resources.

Boulder Line 1 comprises two segments running from a starting point at Mead substation in the Eldorado Valley south of Boulder City, Nevada to an end point at Receiving Station B/Century in Los Angeles. The segments, both carrying 287kV, are Mead-Victorville Line 1 and Victorville-Century Line 1. In Nevada, the line runs from Mead to the Nevada-California state Line southwest of Primm, Nevada. The subject segment is contained within the Mead-Victorville Line 1 segment. At the project APE, Boulder Line 1 is the first line on the south in a group of four crossing lines. It is an approximately 3,000-foot length comprising three historic-era steel-lattice narrow-waist skewed-base single-circuit towers and associated transmission line, two on the west and one on the east of Interstate 15. The segment is located approximately one mile north of the California/Nevada state line.

UTMs are as follows for the recorded segment:

West terminus: 11S, 645710.47 mE/3943115.90 mN.

East terminus: 11S, 646613.23 mE/3943234.16 mN

8. References

List references used to research and evaluate the individual property.

Baldrice, Alice M. November 21, 2002. Letter in regard to Eligibility of the Los Angeles Bureau of Power and Light Transmission Lines No. 1, 2, and 3. Department of Cultural Affairs, Nevada State Historic Preservation Office, Carson City, Nevada. Prepared for Ted P. Bendure, U. S. Department of Transportation, Federal Highway Administration, Nevada Division, Carson City, Nevada.

Other Resource #:

Barlak, William. 2020. Personal Communication (E-mail) between Stephanie Hodal, Architectural Historian, ICF, and William Barlak, Power Engineering Manager (retired), Los Angeles Department of Water and Power, Los Angeles, CA. March 11-31.

Blair, Lynda. 1994. Eighteen Historic Transmission Lines Originating at Hoover Dam. Site record 26CK5180. Harry Reid Center for Environmental Studies.

Clay, Vickie. 2009. Intermountain Antiquities Computer System Site Form. Site record 26CK5180 Update.

Electrotechnik. 2019. Single Circuit and Double Circuit Transmission Lines. Available: <https://www.electrotechnik.net/2011/11/single-circuit-and-double-circuit.html>. Accessed November 19, 2019.

Estes, Allen. 2008. Los Angeles Bureau of Power and Light Boulder Line 3. Intermountain Antiquities Computer System Site Form. Site record 26CK6238 Update.

Federal Highway Administration. 2002. "Final Report – Volume 1: Boulder City/ U.S. 93 Corridor Study Historic Structures Survey."

Kelly, Christina. 2003. Eighteen Historic Transmission Lines Originating at Hoover Dam. Site record 26CK5180 update. Harry Reid Center for Environmental Studies.

Powers, David. 1993. "Above Ground Historic Resources. In Class III Cultural Resource Inventory for Los Angeles Department of Water and Power - Mead to Adelanto Transmission Line Project: Stateline and Baker Divisions." Prepared for Department of Water and Power, City of Los Angeles by Dames and Moore, San Diego.

Scattergood, E. F. 1935. "Engineering Features of the Boulder Dam-Los Angeles Lines." Electrical Engineering. May. Available: <https://waterandpower.org/museum/Boulder%20Dam-Los%20Angeles.pdf>. Accessed November 6, 2019.

Schweigert, Kurt and Teela Labrum. 2001. Los Angeles Bureau of Power and Light Boulder Line 1. Nevada State Historic Preservation Office Historic Resources Inventory Form. Site record 26CK6238.

Transmission Design Manual. 1991." Transmission Design Manual data on tower relocations and replacements." On file Los Angeles Department of Water and Power.

Trudell, J. 2007. Intermountain Antiquities Computer System Site Form. Site record 26CK5180 Update.

U.S. Energy Information Administration. 2019. California State Energy Profile. Available: <https://www.eia.gov/state/?sid=CA>. Accessed November 18, 2019.

Van Wormer, Stephen and Christy Dolan. 1999. "National Register of Historic Places Registration Form for the Boulder Dam-Los Angeles 287.5kV Transmission Line." Prepared by KEA Environmental. On file at the San Bernardino Archaeological Information Center, San Bernardino County Museum, Redlands, CA.

Water and Power Associates. 2019a. Construction of Hoover Dam. Available: https://waterandpower.org/Construction_of_Hoover_Dam.html. Accessed November 6, 2019.

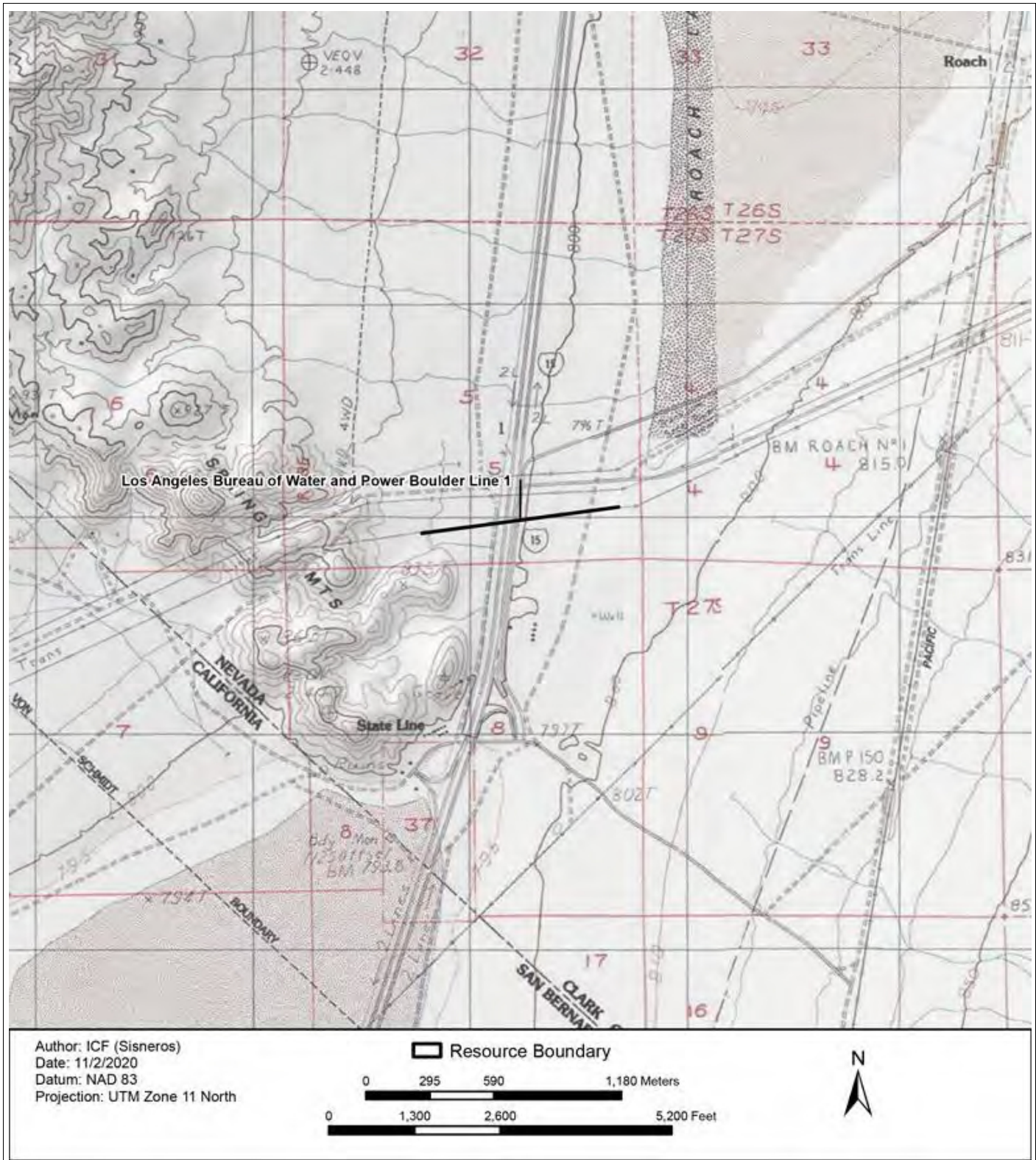
Water and Power Associates. 2019b. Early Power Transmission. Available: https://waterandpower.org/museum/Early_Power_Transmission.html. Accessed November 6, 2019.

White, William. 2011. "Los Angeles Bureau of Power and Light Boulder Line 1." Nevada IMACS Site Form. Site record 26CK6238 Update.

Other Resource #:

9. Area Location Map

Use a USGS quadrangle map at large extent to show general area of resource.



Other Resource #:

9. Site Plan Map

Use aerial imagery, drafting software, or a hand-drawn sketch (to scale) showing, at minimum, building/structure footprints and relationship to associated features. Attach extra maps if needed.



Other Resource #:

11. Photographs

Include as many photographs as needed to accurately depict the resource.



Elevation: South

Direction Facing: North

Photographer: Margaret Roderick

Date: 3/4/2020

Other Resource #:



Architectural Resource Assessment (ARA) Form

| | | |
|-------------------|--------------------------|-----------------|
| For SHPO Use Only | SHPO Concurrence?: Y / N | Date: |
| Survey Date | 03/04/2020 | Recorded By |
| Stephanie Hodal | | Agency Report # |

1. Property Type

| | | | | | | | |
|----------|--------------------------|-----------|-------------------------------------|--------|--------------------------|-------------------------------------|--------------------------|
| Building | <input type="checkbox"/> | Structure | <input checked="" type="checkbox"/> | Object | <input type="checkbox"/> | Landscape (non-archaeological site) | <input type="checkbox"/> |
|----------|--------------------------|-----------|-------------------------------------|--------|--------------------------|-------------------------------------|--------------------------|

2. Property Overview and Location

| | | | | | | | | |
|--|-----------|--------------------------|--------------|-------------------------------------|--------------|--------------------------|----------------|-------------------------------------|
| Street Address | N/A | | | | | | | |
| City, Zip | | | | | | | | |
| County | Clark | | | | | | | |
| Assessor's Parcel # | Multiple | | | Subdivision Name | N/A | | | |
| UTM Location (NAD 83, UTM Zone 11 North) | Easting: | | 646162 | | Northing: | 3943311 | | |
| USGS Info | Township: | Range | Section: | USGS 7.5' Quad | Date: | Ivanpah Lake () | | |
| Ownership | Private | <input type="checkbox"/> | Public-Local | <input checked="" type="checkbox"/> | Public-State | <input type="checkbox"/> | Public-Federal | <input type="checkbox"/> |
| | Multiple | <input type="checkbox"/> | | | | | | |
| Should the property's location be kept confidential? | Yes | | | <input type="checkbox"/> | No | | | <input checked="" type="checkbox"/> |

3. Architectural Information

(Insert primary photograph below.)

| | | |
|-------------------------|-----------|-------------------------------------|
| Construction Date | 1933-1936 | |
| Architectural Style | N/A | |
| Architectural Type | N/A | |
| Roof Form | N/A | |
| Roof Materials | N/A | |
| Exterior Wall Materials | N/A | |
| Foundation Materials | N/A | |
| Window Materials | N/A | |
| Window Type | N/A | |
| Accessory Resources? | Yes | <input type="checkbox"/> |
| | No | <input checked="" type="checkbox"/> |
| | Number?: | |



Los Angeles Bureau of Power and Light Boulder Line 2 (mid

4. NRHP Eligibility - Existing Listings, District, & Potential Districts

| | | | | | | | |
|--|-----|--------------------------|----|-------------------------------------|---|--------------|-------------------------------------|
| Is the property listed in the National Register? | Yes | <input type="checkbox"/> | No | <input checked="" type="checkbox"/> | If yes, provide: | Date Listed: | |
| | | | | | | NRIS #: | |
| Contributing to a listed historic district? | Yes | <input type="checkbox"/> | No | <input checked="" type="checkbox"/> | If yes, provide: | NRIS #: | |
| | | | | | Name: | | |
| | | | | | Date Listed: | | |
| If no, is there a potential district? | Yes | <input type="checkbox"/> | No | <input checked="" type="checkbox"/> | If so, is the potential district eligible for the NRHP? | Yes | <input type="checkbox"/> |
| | | | | | | No | <input checked="" type="checkbox"/> |
| | | | | | If so, is this resource contributing? | Yes | <input type="checkbox"/> |
| | | | | | | No | <input checked="" type="checkbox"/> |
| District Name: | | | | | | SHPO #: | |

Note: A resource that is contributing to a National Register-eligible district is considered eligible for the National Register for the purposes of project review, even though the resource itself may not be individually eligible.

Other Resource #:

5. NRHP Eligibility - Individual*If not already listed, complete the information below:*

| | | | | |
|--|---|---|---|--------------------------------------|
| Eligible Under: | Criterion A <input checked="" type="checkbox"/> | Criterion B <input type="checkbox"/> | Criterion C <input checked="" type="checkbox"/> | Criterion D <input type="checkbox"/> |
| | Not Eligible <input type="checkbox"/> | Unevaluated <input type="checkbox"/> | | |
| Area(s) of Significance | Community Planning; Engineering | | | |
| Period(s) of Significance | 1936-1953 | | | |
| Integrity – Does the resource possess integrity in all or some of the 7 aspects? | | | | |
| Location <input checked="" type="checkbox"/> | Design <input checked="" type="checkbox"/> | Materials <input checked="" type="checkbox"/> | Workmanship <input checked="" type="checkbox"/> | Setting <input type="checkbox"/> |
| | Feeling <input type="checkbox"/> | Association <input checked="" type="checkbox"/> | | |
| General Integrity: | Intact <input checked="" type="checkbox"/> | Altered <input type="checkbox"/> | Moved <input type="checkbox"/> | Date(s): N/A |
| Threats to Resource: | Ongoing maintenance | | | |
| Historic Name | Los Angeles Bureau of Power and Light Boulder Line 2 | | | |
| Current/Common Name | Los Angeles Bureau of Power and Light Boulder Line II | | | |
| Historic/Original Owner | 111 Hope Street, Los Angeles, CA 90012 | | | |
| Current Owner | Los Angeles Department of Water and Power | | | |
| Current Owner Address | Los Angeles Department of Water and Power | | | |
| Historic Building Use | Electricity Transmission | | | |
| Current Building Use | Electricity Transmission | | | |
| Architect/Engineer/Designer | Ezra F. Scattergood | | | |
| Builder/Contractor | Los Angeles Bureau Of Power And Light | | | |

6. Narrative Eligibility Justification

Provide a detailed explanation of the resource's eligibility for the National Register, including supporting historic information, methods for evaluation under the four criteria, discussion of the seven aspects of integrity, and conclusions about eligibility.

This ARA form [update to 26CK6237] considers the integrity of the recorded segment of Boulder Dam-Los Angeles Transmission Line, Boulder Line 2 that crosses the project APE in order to assess its contributing status to the NRHP-eligible property, which is significant under NRHP Criteria A and C. Overall, the towers and line within the subject segment retain sufficient integrity to convey the historic significance of the Boulder Dam-Los Angeles Transmission, Boulder Line 3 under NRHP Criteria A and C.

The Federal Highway Administration (FHWA) determined the LABPL Transmission Line 2 as eligible for listing on the National Register of Historic Places (NRHP) in September 2002. On November 21, 2002, the Nevada State Historic Preservation officer concurred with FHWA's determination and supporting report (Final Report – Volume 1: Boulder City/ U.S. 93 Corridor Study Historic Structures Survey) that determined Line 2 eligible under Criteria A and C (FHWA 2002; Baldrice 2002).

PREVIOUS RECORDS

The first recordation of portions of the subject transmission line was carried out by Lynda Blair of the Harry Reid Center for Environmental Studies who originally recorded Los Angeles Department of Water and Power (LADWP) Boulder Line 2 in 1994 as one of "Eighteen Historic Lines Originating at Hoover Dam," which also included the LADWP Boulder Dam Lines 1 and 3 (site record 26CK5180). Blair characterized the 18 transmission lines, dating to between 1931 and 1952, as linear features that "may be considered as contributing members of a yet-undefined National Register Historic District." However, Blair recommended the system as not eligible for listing in the NRHP due to a "substantial degree of systemic physical change to most components and each powerline structure" but did not include a detailed discussion of the transmission lines' integrity. (Blair 1994)

In 2001, Kurt Schweigert and Teela Labrum of ACRE evaluated an 11-mile segment of Boulder Line 2 passing through the incorporated area of Boulder City, Nevada from Hoover Dam to a point southwest of Boulder City (site record 26CK6237). Schweigert and Labrum determined the LABPL Boulder Line 2 as eligible for NRHP listing under Criteria A and C with 1936 as the period of significance in their investigation carried out for the Federal Highway Administration (FHWA) (Schweigert and Labrum 2001). FHWA determined the LABPL Transmission Line 2 as eligible for listing on the National Register of Historic Places (NRHP) in September 2002. On November 21, 2002, the Nevada State Historic Preservation Officer concurred with FHWA's determination and supporting report (Final Report – Volume 1: Boulder City/ U.S. 93 Corridor Study Historic Structures Survey) that determined Line 2 eligible under

Other Resource #:

Criteria A and C (FHWA 2002; Baldriga 2002).

In 2003, Christina Kelly of the Harry Reid Center for Environmental Studies updated site record 26CK5180, which specifically addressed the segments of the LADWP Boulder Dam Lines 1-3 between Hoover Dam and the Boulder City Tap. The 2003 evaluation reported that LADWP Boulder Lines 1-3 were among six transmission lines that Associated Cultural Resource Experts recommended as eligible for NRHP listing in 1999; however, Kelly reported that SHPO did not review the 1999 evaluation. The 2003 evaluation by Kelly recommended the recorded segments as not eligible for NRHP eligibility due to alterations that have diminished their integrity (Kelly 2003).

J. Trudell of EDAW, Inc. updated 26CK5180 in 2007 and stated the segment of the LADWP Boulder Dam Lines 1-2 crossing Interstate 15 north of Primm—a similar segment as exists in the current project APE—may have sufficient integrity “to retain its historic character and convey its period of significance under the NRHP criteria” that Blair and Kelly previously identified. However, Trudell did not provide a NRHP evaluation of the transmission lines (Trudell 2007).

In 2008, Eric Strother of William Self Associates, Inc. evaluated a segment of Boulder Line 2 passing 2.27 miles north of the California-Nevada state Line at Primm, Nevada. This was an update to the 2001 Schweigert and Labrum report under 26CK6237. William Self Associates concurred with the 2001 Schweigert and Labrum determination that the site is eligible under Criterion A and C of the NRHP. (Strother 2008).

In 2011, William White of Statistical Research, Inc., evaluated a 3 -6/10 mile segment of Boulder Line 2 from McCullough-Victorville Line 2 tower 20-1 to tower 23-3. This was an update to the William Self Associates report under 26CK6237. Statistical Research concurred with the 2001 Schweigert and Labrum and the 2008 Strother determination that the site is eligible under Criterion A and C of the NRHP (White 2011).

Other subsequent evaluations contained in 26CK5180 refer to other transmission lines associated with the original 18-line district that Blair recorded in 1994, including the Southern California Edison (SCE) Boulder Dam Line, which is unrelated to the LADWP Boulder Lines 1-3 and does not enter the current project APE in Nevada.

INTEGRITY OF PORTIONS WITHIN THE APE

Overall, the subject segment within Boulder Line 2 retains sufficient integrity to convey its historic purpose and significance and contributes to Boulder Line 2. Its tower locations may have been adjusted to accommodate the width of Interstate 15, but it maintains its historic-era design and alignment, complementary relationship to Boulder Lines 1 and 3, and overall linear position within the longer Boulder Line 2. Thus, it retains integrity of location. Its towers and crossarms continue to be of or in the design of the historic era. Therefore, the segment retains integrity of design. The historic-era towers and possibly modified crossarms retain integrity of materials and workmanship using the same steel lattice structure; possible upgrades to line and insulators may slightly reduce the integrity of materials however these altered elements use similar materials arrayed in the same position and proportion and thus retain integrity of materials. Integrity of setting and feeling is reduced within the immediate subject segment by the presence of Interstate 15 however the segment originates in and returns to the resource’s overall isolated desert setting outside the APE. Boulder Line 2 retains integrity of association as it possesses enough historic physical features to convey its association with historic events, primarily the early-20th century construction of the Boulder Dam hydroelectric system and the transmission of power to develop Los Angeles. In conclusion, the segment within the project APE retains integrity to the extent it remains able to convey the resource’s significance. Therefore, it is a contributing segment to the NRHP- eligible resource. The current evaluation does not assess the integrity of any segments of the resource located outside the project APE.

7. Narrative Architectural Description

Provide a detailed description of the resource, including all character defining features, potential construction methods, potential alterations (both historic and non-historic), and any accessory resources.

Boulder Line 2 comprises three segments running from a starting point at Mead substation in the Eldorado Valley south of Boulder City, Nevada to an end point at Receiving Station B/Century in Los Angeles. The segments are Mead-McCullough Line 2 (230kV), McCullough-Victorville Line 2 (500kV) and Victorville-Century Line 1 (287kV). In Nevada, the line runs from Mead to the Nevada-California state Line southwest of Primm, Nevada. The subject segment is located within the McCullough-Victorville Line 2 segment. At the project APE, Boulder Line 2 is the second line from the south in a group of four crossing lines. It is an approximately 3,125-foot length running east-west including four historic-era steel-lattice narrow-waist skewed-base single-circuit towers and associated transmission line. Two towers are sited to the west and two towers to the east of Interstate 15. This segment is located approximately one mile north of the California/Nevada state line.

UTMs are as follows for the recorded segment:

Other Resource #:

West terminus: 11S, 645685.72 mE/3943254.68 mN
 East terminus: 11S, 646629.30 mE/3943315.73 mN

8. References

List references used to research and evaluate the individual property.

Baldrice, Alice M. November 21, 2002. Letter in regard to Eligibility of the Los Angeles Bureau of Power and Light Transmission Lines No. 1, 2, and 3. Department of Cultural Affairs, Nevada State Historic Preservation Office, Carson City, Nevada. Prepared for Ted P. Bendure, U. S. Department of Transportation, Federal Highway Administration, Nevada Division, Carson City, Nevada.

Barlak, William. 2020. Personal Communication (E-mail) between Stephanie Hodal, Architectural Historian, ICF, and William Barlak, Power Engineering Manager (retired), Los Angeles Department of Water and Power, Los Angeles, CA. March 11-31.

Blair, Lynda. 1994. Eighteen Historic Transmission Lines Originating at Hoover Dam. Site record 26CK5180. Harry Reid Center for Environmental Studies.

Electrotechnik. 2019. Single Circuit and Double Circuit Transmission Lines. Available: <https://www.electrotechnik.net/2011/11/single-circuit-and-double-circuit.html>. Accessed November 19, 2019.

Federal Highway Administration. 2002. "Final Report – Volume 1: Boulder City/ U.S. 93 Corridor Study Historic Structures Survey."

Kelly, Christina. 2003. Eighteen Historic Transmission Lines Originating at Hoover Dam. Site record 26CK5180 update. Harry Reid Center for Environmental Studies.

Powers, David. 1993. "Above Ground Historic Resources. In Class III Cultural Resource Inventory for Los Angeles Department of Water and Power - Mead to Adelanto Transmission Line Project: Stateline and Baker Divisions." Prepared for Department of Water and Power, City of Los Angeles by Dames and Moore, San Diego.

Scattergood, E. F. 1935. "Engineering Features of the Boulder Dam-Los Angeles Lines." Electrical Engineering. May. Available: <https://waterandpower.org/museum/Boulder%20Dam-Los%20Angeles.pdf>. Accessed November 6, 2019.

Schweigert, Kurt and Teela Labrum. 2001. "Boulder City/U.S. 93 Corridor Study Historic Structures Survey. Site Record 26CK6237. ACRE.

Strother, Eric. Los Angeles Bureau of Power and Light Boulder Line 2. Site record 26CK6237 update. William Self Associates.

Transmission Design Manual. 1991. "Transmission Design Manual data on tower relocations and replacements." On file Los Angeles Department of Water and Power.

Trudell, J. 2007. Intermountain Antiquities Computer System Site Form. Site record 26CK5180 Update.

U.S. Energy Information Administration. 2019. California State Energy Profile. Available: <https://www.eia.gov/state/?sid=CA>. Accessed November 18, 2019.

Van Wormer, Stephen and Christy Dolan. 1999. "National Register of Historic Places Registration Form for the Boulder Dam-Los Angeles 287.5kV Transmission Line." Prepared by KEA Environmental. On file at the San Bernardino Archaeological Information Center, San Bernardino County Museum, Redlands, CA

Water and Power Associates. 2019a. Construction of Hoover Dam. Available: https://waterandpower.org/Construction_of_Hoover_Dam.html. Accessed November 6, 2019.

———. 2019b. Early Power Transmission. Available: https://waterandpower.org/museum/Early_Power_Transmission.html. Accessed November 6, 2019

White, William. Los Angeles Bureau of Power and Light Boulder Line 2. Site record 26CK6237 update. Statistical Research Inc.

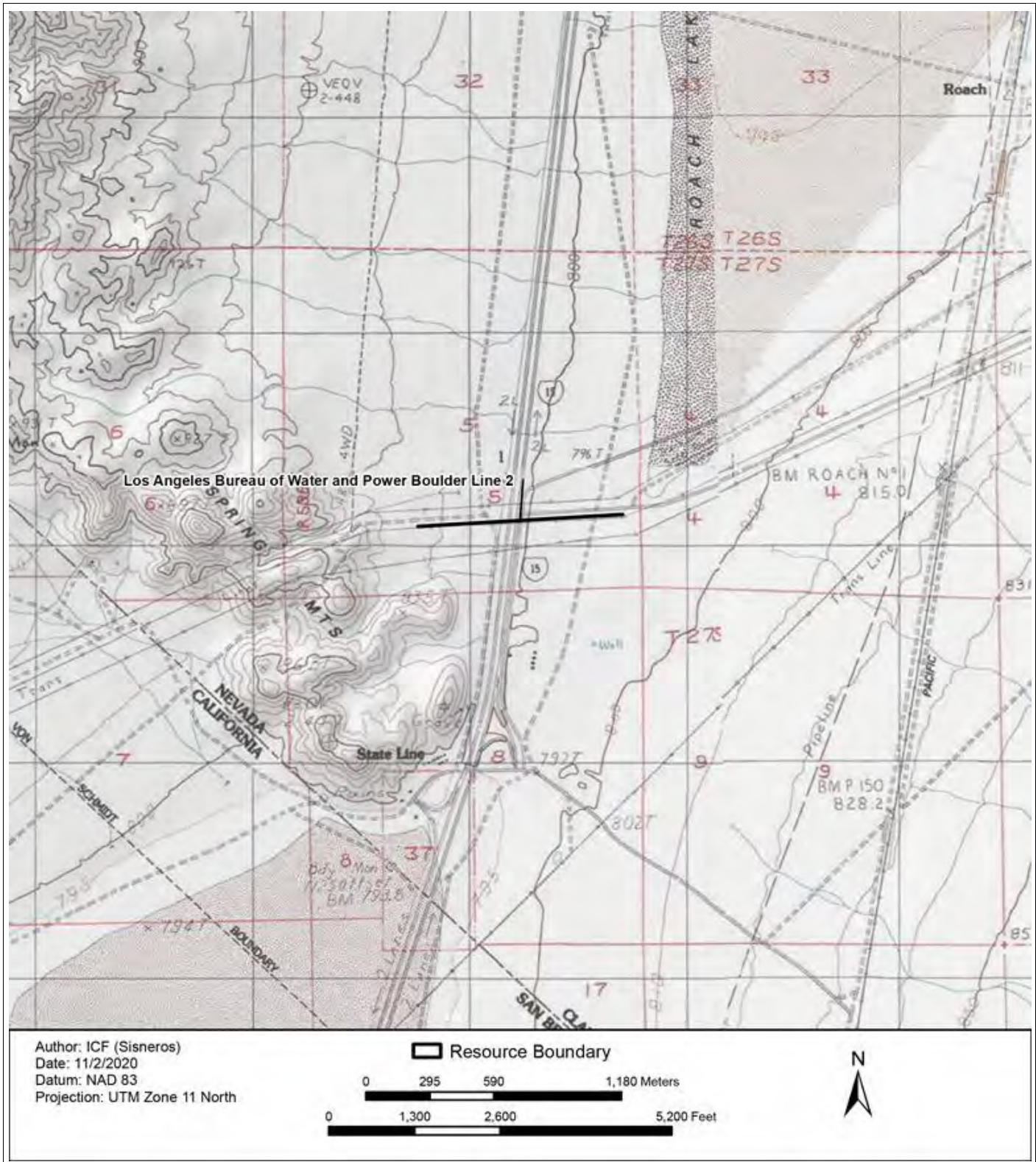
SHPO Resource #: CK6237
Other Resource #:

Rev. 2017

Other Resource #:

9. Area Location Map

Use a USGS quadrangle map at large extent to show general area of resource.



Other Resource #:

9. Site Plan Map

Use aerial imagery, drafting software, or a hand-drawn sketch (to scale) showing, at minimum, building/structure footprints and relationship to associated features. Attach extra maps if needed.



Other Resource #:

11. Photographs

Include as many photographs as needed to accurately depict the resource.



Elevation: Northwest

Direction Facing:
Southeast

Photographer: Margaret Roderick

Date: 3/4/2020

Other Resource #:



NEVADA
**STATE HISTORIC
PRESERVATION OFFICE**

Architectural Resource Assessment (ARA) Form

| | | | | | |
|-------------------|------------|--------------------------|-----------------|-------|-----------------|
| For SHPO Use Only | | SHPO Concurrence?: Y / N | | Date: | |
| Survey Date | 03/04/2020 | Recorded By | Stephanie Hodal | | Agency Report # |

1. Property Type

| | | | | | | | |
|----------|--------------------------|-----------|-------------------------------------|--------|--------------------------|-------------------------------------|--------------------------|
| Building | <input type="checkbox"/> | Structure | <input checked="" type="checkbox"/> | Object | <input type="checkbox"/> | Landscape (non-archaeological site) | <input type="checkbox"/> |
|----------|--------------------------|-----------|-------------------------------------|--------|--------------------------|-------------------------------------|--------------------------|

2. Property Overview and Location

| | | | | | | | |
|--|----------------------------------|--|---------------------------------------|---|-----------------------------------|--|--|
| Street Address | | N/A | | | | | |
| City, Zip | | | | | | | |
| County | | Clark | | | | | |
| Assessor's Parcel # | | Multiple | | Subdivision Name | | N/A | |
| UTM Location (NAD 83, UTM Zone 11 North) | | | | Easting: 646208 | | Northing: 3943397 | |
| USGS Info | Township: | Range | Section: | USGS 7.5' Quad Date: | | Ivanpah Lake () | |
| Ownership | Private <input type="checkbox"/> | Public-Local <input checked="" type="checkbox"/> | Public-State <input type="checkbox"/> | Public-Federal <input type="checkbox"/> | Multiple <input type="checkbox"/> | | |
| Should the property's location be kept confidential? | | | | Yes <input type="checkbox"/> | | No <input checked="" type="checkbox"/> | |

3. Architectural Information

(Insert primary photograph below.)

| | | |
|-------------------------|------------------------------|--|
| Construction Date | 1939-1940 | |
| Architectural Style | N/A | |
| Architectural Type | N/A | |
| Roof Form | N/A | |
| Roof Materials | N/A | |
| Exterior Wall Materials | N/A | |
| Foundation Materials | N/A | |
| Window Materials | N/A | |
| Window Type | N/A | |
| Accessory Resources? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| Number?: | | |



Los Angeles Department of Water and Power, Boulder Line

| | | |
|--|-------------------------------------|-------------------------------|
| Condition of Resource(s)? | | |
| Good | <input checked="" type="checkbox"/> | Fair <input type="checkbox"/> |
| Poor | <input type="checkbox"/> | |
| Explanation: No signs of physical deterioration of the tower or wires. | | |

4. NRHP Eligibility - Existing Listings, District, & Potential Districts

| | | | | | |
|--|------------------------------|--|---|------------------------------|--|
| Is the property listed in the National Register? | | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | If yes, provide: | Date Listed: |
| | | | | | NRIS #: |
| Contributing to a listed historic district? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | If yes, provide: | Name: | NRIS #: |
| | | | | Date Listed: | |
| If no, is there a potential district? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | If so, is the potential district eligible for the NRHP? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| | | | If so, is this resource contributing? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| District Name: | | | | SHPO #: | |

Note: A resource that is contributing to a National Register-eligible district is considered eligible for the National Register for the purposes of project review, even though the resource itself may not be individually eligible.

Other Resource #:

5. NRHP Eligibility - Individual*If not already listed, complete the information below:*

| | | | | |
|--|---|---|---|--------------------------------------|
| Eligible Under: | Criterion A <input checked="" type="checkbox"/> | Criterion B <input type="checkbox"/> | Criterion C <input checked="" type="checkbox"/> | Criterion D <input type="checkbox"/> |
| | Not Eligible <input type="checkbox"/> | Unevaluated <input type="checkbox"/> | | |
| Area(s) of Significance | Community Planning; Engineering | | | |
| Period(s) of Significance | 1940 – 1953 | | | |
| Integrity – Does the resource possess integrity in all or some of the 7 aspects? | | | | |
| Location <input checked="" type="checkbox"/> | Design <input checked="" type="checkbox"/> | Materials <input checked="" type="checkbox"/> | Workmanship <input checked="" type="checkbox"/> | Setting <input type="checkbox"/> |
| | Feeling <input type="checkbox"/> | Association <input checked="" type="checkbox"/> | | |
| General Integrity: | Intact <input checked="" type="checkbox"/> | Altered <input type="checkbox"/> | Moved <input type="checkbox"/> | Date(s): N/A |
| Threats to Resource: | Ongoing maintenance | | | |
| Historic Name | Boulder Dam-Los Angeles Transmission Line, Boulder Line 3 | | | |
| Current/Common Name | Los Angeles Department of Water and Power Boulder Line 3 | | | |
| Historic/Original Owner | 111 Hope Street, Los Angeles, CA 90012 | | | |
| Current Owner | Los Angeles Department of Water and Power | | | |
| Current Owner Address | Los Angeles Department of Water and Power | | | |
| Historic Building Use | Electricity Transmission | | | |
| Current Building Use | Electricity Transmission | | | |
| Architect/Engineer/Designer | Ezra F. Scattergood | | | |
| Builder/Contractor | Los Angeles Bureau Of Power And Light | | | |

6. Narrative Eligibility Justification

Provide a detailed explanation of the resource's eligibility for the National Register, including supporting historic information, methods for evaluation under the four criteria, discussion of the seven aspects of integrity, and conclusions about eligibility.

This ARA form [update to 26CK6242] considers the integrity of the recorded segment of Boulder Dam-Los Angeles Transmission Line, Boulder Line 3 that crosses the project APE in order to assess its continued contributing status to the NRHP-eligible property, which is significant under NRHP Criteria A and C.

Overall, the towers and line within the subject segment retain sufficient integrity to convey the historic significance of the Boulder Dam-Los Angeles Transmission Line, Boulder Line 3 under NRHP Criteria A and C.

PREVIOUS RECORDS

The first recordation of portions of the subject transmission line was carried out by Lynda Blair of the Harry Reid Center for Environmental Studies who originally recorded Los Angeles Department of Water and Power (LADWP) Boulder Line 3 in 1994 as one of "Eighteen Historic Lines Originating at Hoover Dam," which also included the LADWP Boulder Dam Lines 1 and 2 (site record 26CK5180). Blair characterized the 18 transmission lines, dating to between 1931 and 1952, as linear features that "may be considered as contributing members of a yet-undefined National Register Historic District." However, Blair recommended the system as not eligible for listing in the NRHP due to a "substantial degree of systemic physical change to most components and each powerline structure" but did not include a detailed discussion of the transmission lines' integrity (Blair 1994).

In 2001, Kurt Schweigert and Teela Labrum of ACRE evaluated the segment of Boulder Line III between the Hoover Substation independently of its two sibling transmission lines, and the Nevada State Historic Preservation Office assigned the LADWP Boulder Line 3 a new resource number, 26CK6242. Schweigert and Labrum reported that LADWP Boulder Dam Lines 1-3 were previously found eligible for NRHP listing in 1994 with SHPO concurrence, which appears to report Blair's findings inaccurately. Schweigert and Labrum recommended LADWP Boulder Line 3 as eligible for NRHP listing under Criteria A and C, with 1940-1955 as its period of significance in their investigation carried out for the Federal Highway Administration (FHWA) (Schweigert and Labrum 2001).

FHWA determined the LABPL Transmission Line 3 as eligible for listing on the National Register of Historic Places (NRHP) in September 2002. On November 21, 2002, the Nevada State Historic Preservation officer concurred with FHWA's determination and supporting report (Final Report – Volume 1: Boulder City/ U.S. 93 Corridor Study Historic Structures Survey) that determined Line 3 eligible under Criteria A and C (FHWA 2002; Baldrice 2002).

Other Resource #:

In 2003, Christina Kelly of the Harry Reid Center for Environmental Studies updated the 26CK5180 site record, specifically addressing the segments of the LADWP Boulder Dam Lines 1-3 between Hoover Dam and the Boulder City Tap. The 2003 evaluation reported that LADWP Boulder Lines 1-3 were among six transmission lines that Associated Cultural Resource Experts recommended as eligible for NRHP listing in 1999; however, Kelly reported that SHPO did not review the 1999 evaluation. The 2003 evaluation by Kelly recommended the recorded segments as not eligible for NRHP eligibility due to alterations that have diminished their integrity (Kelly 2003).

Allen Estes of William Self Associates, Inc. updated 26CK6242 in 2008 to record a segment of LADWP Boulder Line III, located approximately 3 miles east of the current project APE. Estes concurred with the 2001 Schweigert and Labrum evaluation that LADWP Boulder Dam Line 3 is eligible for NRHP listing under Criterion A and Criterion C (Estes 2008).

INTEGRITY OF PORTIONS WITHIN THE APE

Overall, the subject segment within Boulder Line 3 retains sufficient integrity to convey its historic purpose and significance and contributes to Boulder Line 3. Its tower location may have been adjusted to accommodate the width of Interstate 15, but it maintains its historic-era design and alignment, complementary relationship to Boulder Lines 1 and 2, and overall linear position within the longer Boulder Line 3. Thus, it retains integrity of location. Its towers appear to be of or in the design of the historic era while its upgraded crossarms and line are in the same position and retain the same relative proportion and appearance as historic-era equipment. Therefore, the segment retains integrity of design. The historic-era towers retain integrity of materials and workmanship using the same steel lattice structure; upgrades to line, insulator, and crossarms reduce the integrity of materials and workmanship even though these altered elements use similar materials arrayed in the same position and proportion. Integrity of setting and feeling is reduced within the immediate subject segment by the presence of Interstate 15 however the segment originates in and returns to the resource's overall isolated desert setting outside the APE. Boulder Line 3 retains integrity of association as it possesses enough historic physical features to convey its association with historic events, primarily the early-20th century construction of the Boulder Dam hydroelectric system and the transmission of power to develop Los Angeles. In conclusion, the segment within the project APE retains integrity to the extent it remains able to convey the resource's significance. Therefore, it is a contributing segment to the NRHP-eligible resource. The current evaluation does not assess the integrity of any segments of the resource located outside the project APE.

7. Narrative Architectural Description

Provide a detailed description of the resource, including all character defining features, potential construction methods, potential alterations (both historic and non-historic), and any accessory resources.

Boulder Line 3 runs from Mead, Nevada to an endpoint at Receiving Station E/Toluca in the San Fernando Valley. It comprises four segments currently called Mead -McCullough Line 1 (230kV), McCullough-Victorville Line 1 (500kV), Victorville-Adelanto Line 2 (500kV), and Adelanto-Toluca 1 (500kV). In Nevada, the line runs from Mead substation in the El Dorado Valley south of Boulder City to the Nevada-California state line southwest of Primm, Nevada. The subject segment is contained within the McCullough-Victorville Line 1 segment. At the project APE, Boulder Line 3 is the second line from the north in a group of four crossing lines. It is approximately 3,225 feet in length and includes four historic-era steel-lattice narrow-waist skewed-base single-circuit towers and associated transmission line running east-west with two towers to the west and two towers to the east side of Interstate 15. This segment is located approximately one mile north of the California/Nevada state line.

UTMs are as follows for the recorded segment:

West terminus: 11S, 645701.14 mE / 3943351.18 mN

East terminus: 11S, 646668.85 mE / 3943455.04 mN

8. References

List references used to research and evaluate the individual property.

Baldrice, Alice M. November 21, 2002. Letter in regard to Eligibility of the Los Angeles Bureau of Power and Light Transmission Lines No. 1, 2, and 3. Department of Cultural Affairs, Nevada State Historic Preservation Office, Carson City, Nevada. Prepared for Ted P. Bendure, U. S. Department of Transportation, Federal Highway Administration, Nevada Division, Carson City, Nevada.

Barlak, William. 2020. Personal Communication (E-mail) between Stephanie Hodal, Architectural Historian, ICF, and William Barlak, Power Engineering Manager (retired), Los Angeles Department of Water and Power, Los Angeles, CA. March 11-31.

Other Resource #:

Blair, Lynda. 1994. Eighteen Historic Transmission Lines Originating at Hoover Dam. Site record 26CK5180. Harry Reid Center for Environmental Studies.

Electrotechnik. 2019. Single Circuit and Double Circuit Transmission Lines. Available: <https://www.electrotechnik.net/2011/11/single-circuit-and-double-circuit.html>. Accessed November 19, 2019.

Estes, Allen. 2008. Los Angeles Bureau of Power and Light Boulder Line 3. Intermountain Antiquities Computer System Site Form. Site record 26CK6242 Update.

Federal Highway Administration. 2002. "Final Report – Volume 1: Boulder City/ U.S. 93 Corridor Study Historic Structures Survey."

Kelly, Christina. 2003. Eighteen Historic Transmission Lines Originating at Hoover Dam. Site record 26CK5180 update. Harry Reid Center for Environmental Studies.

Powers, David. 1993. Above Ground Historic Resources. In Class III Cultural Resource Inventory for Los Angeles Department of Water and Power - Mead to Adelanto Transmission Line Project: Stateline and Baker Divisions. Prepared for Department of Water and Power, City of Los Angeles by Dames and Moore, San Diego.

Scattergood, E. F. 1935. "Engineering Features of the Boulder Dam-Los Angeles Lines." Electrical Engineering. May. Available: <https://waterandpower.org/museum/Boulder%20Dam-Los%20Angeles.pdf>. Accessed November 6, 2019.

Schweigert, Kurt and Teela Labrum. 2001. Los Angeles Bureau of Power and Light Boulder Line 3. Nevada State Historic Preservation Office Historic Resources Inventory Form. Site record 26CK6242.

Transmission Design Manual. 1991. Transmission Design Manual data on tower relocations and replacements." On file Los Angeles Department of Water and Power.

U.S. Energy Information Administration. 2019. California State Energy Profile. Available: <https://www.eia.gov/state/?sid=CA>. Accessed November 18, 2019.

Van Wormer, Stephen and Christy Dolan. 1999. "National Register of Historic Places Registration Form for the Boulder Dam-Los Angeles 287.5kV Transmission Line." Prepared by KEA Environmental. On file at the San Bernardino Archaeological Information Center, San Bernardino County Museum, Redlands, CA.

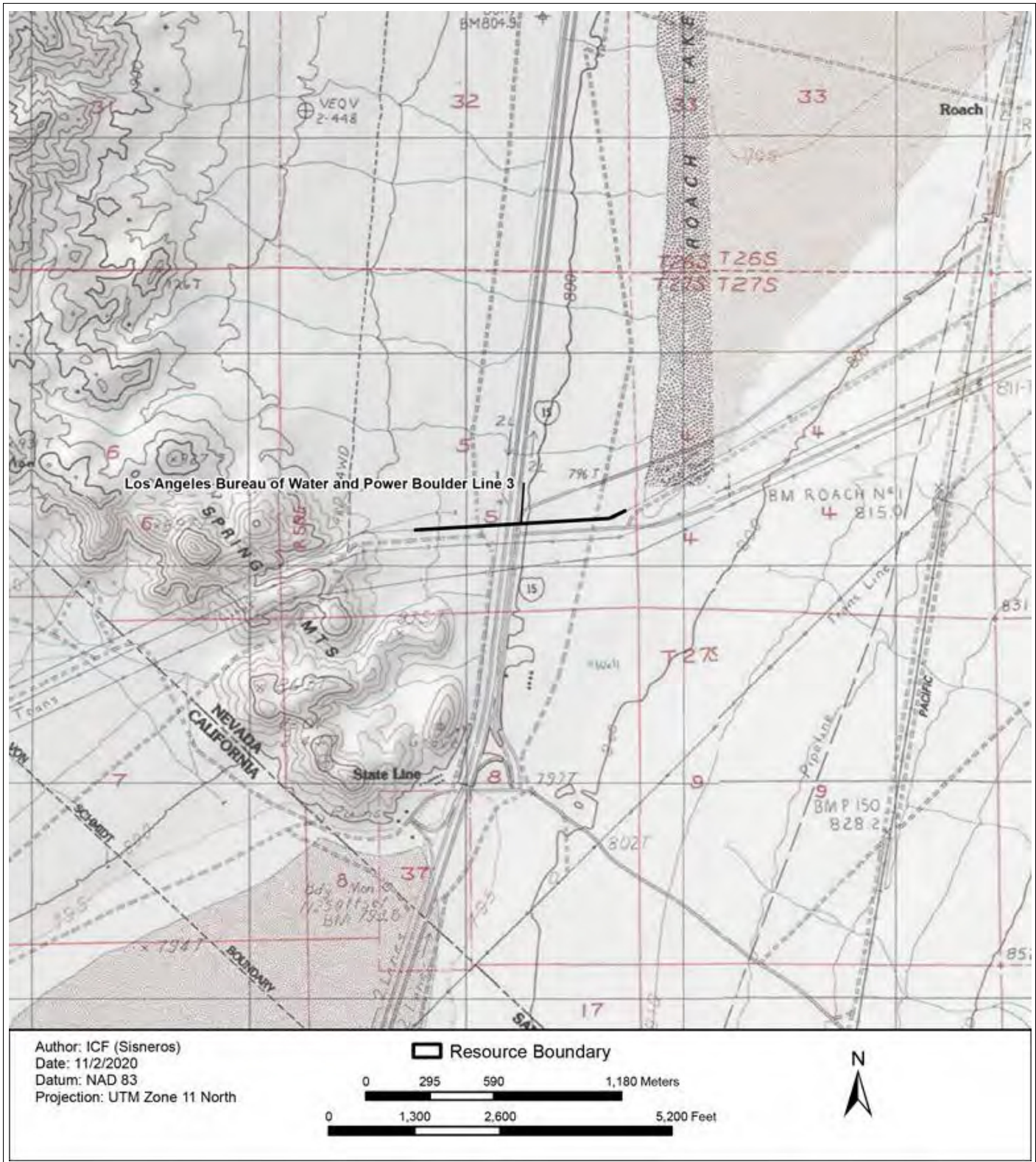
Water and Power Associates. 2019a. Construction of Hoover Dam. Available: https://waterandpower.org/Construction_of_Hoover_Dam.html. Accessed November 6, 2019.

Water and Power Associates. 2019b. Early Power Transmission. Available: https://waterandpower.org/museum/Early_Power_Transmission.html. Accessed November 6, 2019.

Other Resource #:

9. Area Location Map

Use a USGS quadrangle map at large extent to show general area of resource.



Other Resource #:

9. Site Plan Map

Use aerial imagery, drafting software, or a hand-drawn sketch (to scale) showing, at minimum, building/structure footprints and relationship to associated features. Attach extra maps if needed.



Other Resource #:

11. Photographs

Include as many photographs as needed to accurately depict the resource.



Elevation: Northwest

Direction Facing:
Southeast

Photographer: Margaret Roderick

Date: 3/4/2020

Other Resource #:



Architectural Resource Assessment (ARA) Form

| | | |
|-------------------|--------------------------|-----------------|
| For SHPO Use Only | SHPO Concurrence?: Y / N | Date: |
| Survey Date | 09/23/2020 | Recorded By |
| Andrew Bursan | | Agency Report # |

1. Property Type

| | | | | | | | |
|----------|--------------------------|-----------|-------------------------------------|--------|--------------------------|-------------------------------------|--------------------------|
| Building | <input type="checkbox"/> | Structure | <input checked="" type="checkbox"/> | Object | <input type="checkbox"/> | Landscape (non-archaeological site) | <input type="checkbox"/> |
|----------|--------------------------|-----------|-------------------------------------|--------|--------------------------|-------------------------------------|--------------------------|

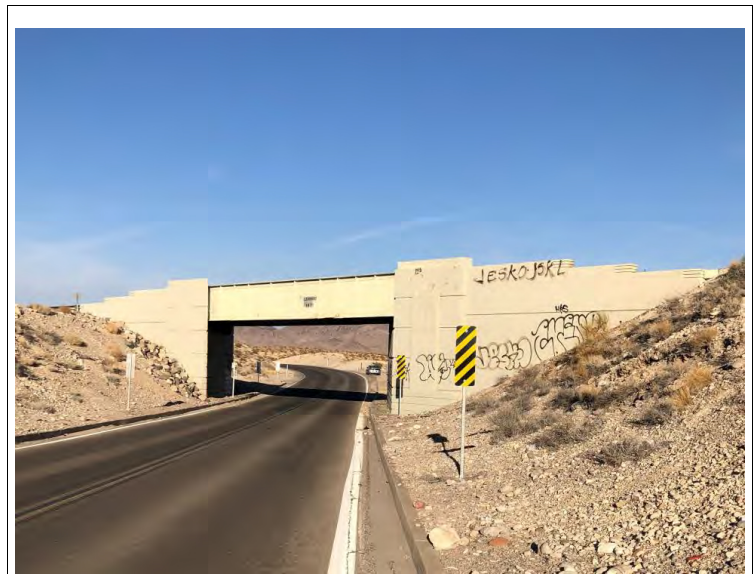
2. Property Overview and Location

| | | | | | | | | |
|--|---------------------------------------|--------------------------|--------------|--------------------------|--------------|-------------------------------------|----------------------|-------------------------------------|
| Street Address | Las Vegas Boulevard, Milepost CI-3.84 | | | | | | | |
| City, Zip | | | | | | | | |
| County | Clark | | | | | | | |
| Assessor's Parcel # | 20431099002 | | | Subdivision Name | N/A | | | |
| UTM Location (NAD 83, UTM Zone 11 North) | Easting: | | 654427 | | Northing: | 3965605 | | |
| USGS Info | Township: | 24S | Range | 60E | Section: | 31 | USGS 7.5' Quad Date: | |
| Jean () | | | | | | | | |
| Ownership | Private | <input type="checkbox"/> | Public-Local | <input type="checkbox"/> | Public-State | <input checked="" type="checkbox"/> | Public-Federal | |
| | | | | | | | Multiple | <input type="checkbox"/> |
| Should the property's location be kept confidential? | | | | Yes | | <input type="checkbox"/> | No | <input checked="" type="checkbox"/> |

3. Architectural Information

(Insert primary photograph below.)

| | | |
|-------------------------|--------------------|-------------------------------------|
| Construction Date | 1937 | |
| Architectural Style | Streamline Moderne | |
| Architectural Type | N/A | |
| Roof Form | N/A | |
| Roof Materials | N/A | |
| Exterior Wall Materials | N/A | |
| Foundation Materials | N/A | |
| Window Materials | N/A | |
| Window Type | N/A | |
| Accessory Resources? | Yes | <input type="checkbox"/> |
| | No | <input checked="" type="checkbox"/> |
| Number?: N/A | | |



Viewed facing east

| | | | | | |
|---|-------------------------------------|------|--------------------------|------|--------------------------|
| Condition of Resource(s)? | | | | | |
| Good | <input checked="" type="checkbox"/> | Fair | <input type="checkbox"/> | Poor | <input type="checkbox"/> |
| Explanation: Some graffiti and chipped paint present on concrete abutments of the bridge, but otherwise it remains in good condition. | | | | | |

4. NRHP Eligibility - Existing Listings, District, & Potential Districts

| | | | | | | |
|--|-----|--------------------------|----|-------------------------------------|---|---------------------------------------|
| Is the property listed in the National Register? | Yes | <input type="checkbox"/> | No | <input checked="" type="checkbox"/> | If yes, provide: | Date Listed: |
| | | | | | | NRIS #: |
| Contributing to a listed historic district? | Yes | <input type="checkbox"/> | No | <input checked="" type="checkbox"/> | If yes, provide: | NRIS #: |
| | | | | | | Name: |
| | | | | | | Date Listed: |
| If no, is there a potential district? | Yes | <input type="checkbox"/> | No | <input checked="" type="checkbox"/> | If so, is the potential district eligible for the NRHP? | Yes |
| | | | | | | <input type="checkbox"/> |
| | | | | | | No |
| | | | | | | <input checked="" type="checkbox"/> |
| | | | | | | If so, is this resource contributing? |
| | | | | | | Yes |
| | | | | | | <input type="checkbox"/> |
| | | | | | | No |
| | | | | | | <input checked="" type="checkbox"/> |
| District Name: | | | | | | SHPO #: |

Note: A resource that is contributing to a National Register-eligible district is considered eligible for the National Register for the purposes of project review, even though the resource itself may not be individually eligible.

Other Resource #:

5. NRHP Eligibility - Individual*If not already listed, complete the information below:*

| | | | | | | |
|--|---|---|---|---|---|---|
| Eligible Under: | Criterion A <input type="checkbox"/> | Criterion B <input type="checkbox"/> | Criterion C <input checked="" type="checkbox"/> | Criterion D <input type="checkbox"/> | | |
| | Not Eligible <input type="checkbox"/> | Unevaluated <input type="checkbox"/> | | | | |
| Area(s) of Significance | Architecture/Design | | | | | |
| Period(s) of Significance | 1937 | | | | | |
| Integrity – Does the resource possess integrity in all or some of the 7 aspects? | | | | | | |
| Location <input checked="" type="checkbox"/> | Design <input checked="" type="checkbox"/> | Materials <input checked="" type="checkbox"/> | Workmanship <input checked="" type="checkbox"/> | Setting <input checked="" type="checkbox"/> | Feeling <input checked="" type="checkbox"/> | Association <input checked="" type="checkbox"/> |
| General Integrity: | Intact <input checked="" type="checkbox"/> | Altered <input type="checkbox"/> | Moved <input type="checkbox"/> | Date(s): N/A | | |
| Threats to Resource: | None known | | | | | |
| Historic Name | Jean Underpass | | | | | |
| Current/Common Name | Jean Underpass, Bridge Number G-322 | | | | | |
| Historic/Original Owner | Nevada Department of Transportation | | | | | |
| Current Owner | Nevada Department of Transportation | | | | | |
| Current Owner Address | 1263 S. Stewart Street, Carson City, NV 89720 | | | | | |
| Historic Building Use | Railroad Bridge | | | | | |
| Current Building Use | Railroad Bridge | | | | | |
| Architect/Engineer/Designer | Unknown | | | | | |
| Builder/Contractor | Unknown | | | | | |

6. Narrative Eligibility Justification

Provide a detailed explanation of the resource's eligibility for the National Register, including supporting historic information, methods for evaluation under the four criteria, discussion of the seven aspects of integrity, and conclusions about eligibility.

In March of 2003, P.S Preservation Services determined that the subject Jean Underpass (Bridge Number G-322) was eligible for the National Register of Historic Places (NRHP) under Criterion C as a fine representation of Streamline Moderne architecture as applied to a typically utilitarian railroad bridge in a remote location. The bridge also provides a direct connection to public works of the Great Depression and a design program unique to the era. The boundaries of the resource include the bridge itself and supporting abutments. At the time of the 2003 survey, the bridge was determined to have good integrity and be in good condition.

The ICF survey of the Jean Underpass in October of 2020 determined that it maintains a high level of integrity and with very little change since the original 2003 evaluation. Character defining features such as the steel girder, abutments, pilaster features, and decorative scoring typical of Streamline Modern design remain completely intact and clearly visible. Although October 2020 photos show some graffiti and chipped paint on concrete abutments, this would be easily removed with a repaint of the bridge and has no impact on character defining features. The Jean Underpass represents a highly intact Great Depression era design not commonly found at such remote locations. In conclusion, the Jean Underpass (Bridge Number G-322) is individually eligible for listing in the NRHP under Criterion C.

7. Narrative Architectural Description

Provide a detailed description of the resource, including all character defining features, potential construction methods, potential alterations (both historic and non-historic), and any accessory resources.

The Jean Underpass is a railroad bridge which spans over Las Vegas Boulevard (known historically as the Old Arrowhead Trail Highway and US Highway 91) at milepost 3.84 to the south of Las Vegas and to the northeast of the community of Jean in Nevada. Union Pacific Railroad tracks top a 32-foot-long riveted steel girder bridge span. Streamline Moderne styled concrete backfill abutments support the bridge and feature pylon features on a surface of horizontal scoring. Scoring lines adorn pylon features and flanking vertical elements, including the bridge sidewalls with stepped parapet features. The bridge retains a high degree of integrity and remains in good condition beyond some graffiti and chipped paint.

8. References

List references used to research and evaluate the individual property.

SHPO Resource #: S581

Rev. 2017

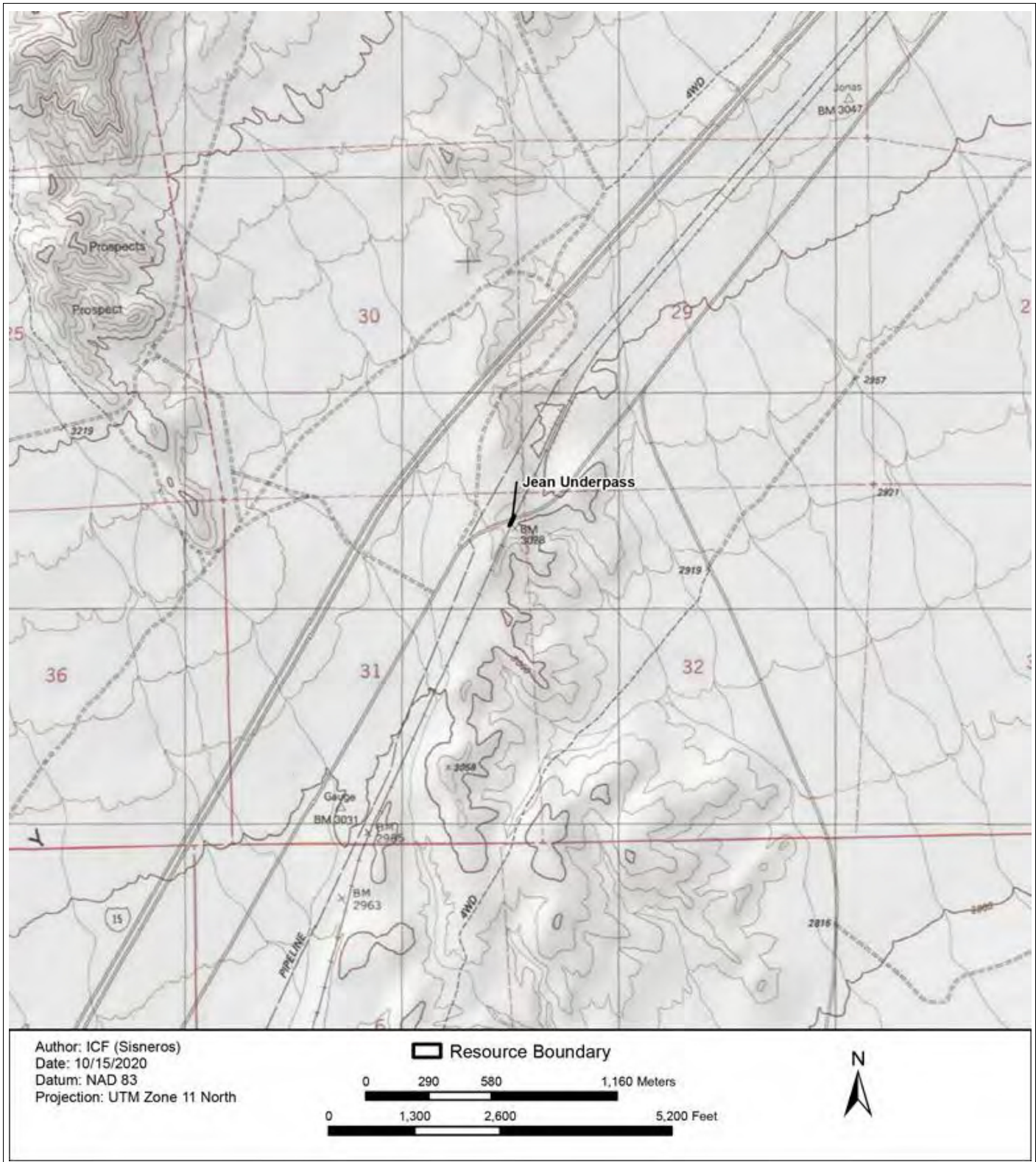
Other Resource #:

P.S. Preservation Services, Nevada Bridge Survey Update, Nevada Historic Resource Inventory Form, Resource #S581, March 2003

Other Resource #:

9. Area Location Map

Use a USGS quadrangle map at large extent to show general area of resource.



Other Resource #:

9. Site Plan Map

Use aerial imagery, drafting software, or a hand-drawn sketch (to scale) showing, at minimum, building/structure footprints and relationship to associated features. Attach extra maps if needed.



Other Resource #:

11. Photographs

Include as many photographs as needed to accurately depict the resource.



Elevation: West

Direction Facing: East

Photographer: Daniel Paul

Date:
10/5/2020



Elevation: East

Direction Facing:
Southwest

Photographer: Daniel Paul

Date:
10/5/2020