

September 28, 2020

Mr. John Forsythe
Project Manager
Aspen Environmental Group
235 Montgomery Street, Suite 640
San Francisco, CA 94104

Dear Mr. Forsythe:

Subject: Comments on the Notice of Preparation for the Ivanpah-Control Project

Thank you for the opportunity to respond to California Utilities Commission's (CPUC) Notice of Preparation (NOP) for the Ivanpah-Control Project (Project). The Project proponent, Southern California Edison (SCE), proposes to rebuild components of its existing 115 kilovolt transmission lines that extend over 358 miles between the existing SCE Control and Haiwee Substations in Inyo County, the Inyokern Substation in Kern County, and the Kramer, Tortilla, Coolwater, and Ivanpah Substations in San Bernardino County. The primary objective is to comply with the CPUC's General Order 95 requirement, and to correct conductor clearance problems along this transmission line.

From preliminary review of the NOP, the Los Angeles Department of Water and Power (LADWP) submits comments pertaining to project areas that cross LADWP right-of-way or activity which affects LADWP's operation (see enclosure). Many of the comments have also been previously provided to the Bureau of Land Management for their consideration as part of their environmental review of the project under the National Environmental Policy Act.

If you have any questions, please contact Ms. Nancy Chung, of my staff at 213-367-0404 or email at Nancy.Chung@ladwp.com. Also, please add Ms. Chung to your direct mailing or emailing list for any future notices regarding this project.

Sincerely,

Digitally signed by Nadia Parker
Nadia Parker
Date: 2020.09.25 12:46:27 -07'00'

Charles C. Holloway
Manager of Environmental Planning and Assessment

NC:aeh
Enclosure
c: Ms. Nancy Chung

LADWP Comments:

- LADWP will need a list of all Material Yards proposed to be located on City of Los Angeles land. Are these proposed Material Yards located within existing rights of way or will temporary construction easements (TCEs) be required? If TCEs are required, a proposal should be submitted to LADWP as soon as possible.
- A new right of way alignment, at least where it crosses LADWP property, should be identified and presented to the LADWP for evaluation and discussion at the earliest possible stage.
- Future iterations of the POD need to identify where the IC Project proposes to cross LADWP transmission and distribution lines and the Los Angeles Aqueduct rights of way on federal land. LADWP has existing rights of way on BLM and federal lands that need to be protected. Consent agreements at such crossings should be a condition and component of any new rights of way granted by BLM or federal agencies.
- Provide a more detailed schedule for the projects when it is developed. (In reference to Segment 1 of the project.)
- Provide 45 days advance notice of project work in a locality and provide general drawings of work to be performed so that we can assess any potential impacts on our facilities and operations. (In reference to Segment 1 of the project)
- For structure that cross our Aqueduct or tributaries, especially those requiring mats, bridges or other proposed protection, please send us drawings of those proposed structures for review. (In reference to Segment 1 of the project.)
- Flag and avoid rare plants along the construction route where possible. Please coordinate with BLM to see shape file provided by LADWP to BLM for the location of these rare plants.
- SCE referenced herein shall pertain to its employees, agents, consultants, contractors, officers, patrons, invitees of SCE, or any other SCE affiliated entities.
- The information provided to date is inadequate for properly reviewing the proposed project. LADWP therefore reserves the right to comment until detailed information is provided regarding the proposed SCE project as it affects LADWP's transmission lines. The more detailed information shall include dimensioned plans of all existing and proposed improvements, property lines, clearances of all improvements from LADWP and Pacific Direct Current Intertie (PDCI) towers, including grading, roadway, and utility plans illustrating impacts to the LADWP/PDCI Transmission Line Right of Way (TLRW). The LADWP TLRW shall be clearly defined with SCE's proposed improvements.
- Provide electronic PLS CADD files for LADWP's Transmission Engineering's review to determine adherence to California Public Utilities Commission (CPUC) General Order No. 95 clearance requirements.

- Please note, this response does not include all responses from LADWP's Transmission Engineering Group's nor Transmission Construction and Maintenance review of SCE's Ivanpah Control Project. (These sections may provide additional input in future rounds of review.)

Conditions:

- SCE shall acknowledge that LADWP and PDCI TLRW are an integral component of the transmission line system which provides electric power to the City of Los Angeles and other local communities. Their use is under the jurisdiction of North American Electric Reliability Corporation (NERC), an organization of the Federal Energy Regulatory Commission (FERC). Safety and protection of critical facilities are primary factors used to evaluate secondary land use proposals. The rights of way serve as platforms for access, construction, maintenance, facility expansion, and emergency operations. Therefore, the proposed use may from time to time be subject to temporary disruption caused by such operations.
- No grading, improvements, or construction activities of any kind whatsoever will be allowed without written approval of LADWP.
- An area of at least 100 feet around the base of each transmission tower must remain open and unobstructed for necessary operation and maintenance activities. Setbacks of 300-feet around specific dead-end transmission tower bases may be required.
- No equipment shall be allowed to set up directly under LADWP and PDCI transmission lines.
- No equipment over 14 feet high shall be used near LADWP and PDCI transmission lines without written permission of LADWP. Equipment higher than 14 feet will require submittal of a Conductor Survey to LADWP's Transmission Engineering Group to ensure clearances meet the CPUC General Order No. 95.
- California Code of Regulations, Title 8, Section 2700 defines "qualified electrical workers" as "a qualified person who by reason of a minimum of two (2) years of training and experience with high-voltage circuits and equipment and who has demonstrated by performance familiarity with the work to be performed and the hazards involved." At all times during installation and/or maintenance of any improvement authorized within the LADWP and PDCI TLRW, SCE shall have at least one (1) qualified electrical worker on site to observe and ensure the said work complies with California Occupational Safety and Health Administration (Cal-OSHA) safety protocols or Occupational Safety and Health Administration (OSHA) equivalent.
- Utilities within the proposed excavation sites shall be notified of impending work. SCE shall be responsible for coordinating the relocation of utilities, if any, within the project boundaries. Before commencing any excavations, contact Underground Service Alert (a.k.a DigAlert).
- All ground elevations are to remain unchanged from existing conditions after construction associated with the SCE proposed improvements is completed. Cut and fill

slopes inside LADWP and PDCI TLRW steeper than 2 horizontal to 1 vertical require retaining structures or geotechnical report approval.

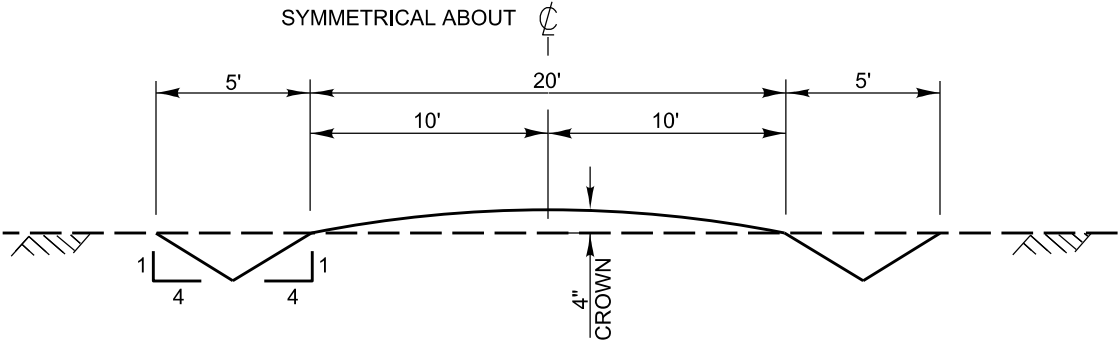
]Note: Grading activity resulting in a vertical clearance between the ground and the transmission line conductor elevation less than 35 feet or as noted in the CPUC General Order 95 within the LADWP and PDCI TLRW is unacceptable.

- Ground cover for all below ground utilities shall not be less than four feet.
- A permanent, unobstructed 20-foot-wide roadway, accessible at all times by LADWP maintenance personnel, shall be provided and maintained. The roadway must remain open and unobstructed, excluded from any watering and kept as dry as possible at all times. See the **Access Road Design Criteria attached**.
- Additional conditions may be required following review of final detailed site plans, grading/draining plans, etc.
- **Standard Conditions for Construction** shall apply. **See attached**.
- This reply shall in no way be construed as an approval of this project.

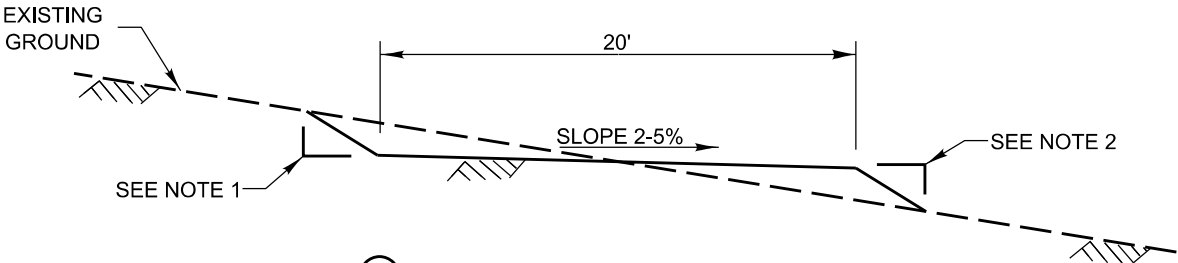
ACCESS ROAD DESIGN CRITERIA

1. When grading activity affects the Transmission Line access roads, the Contractor shall replace the affected access roads using the following access road design criteria. Typical Road Sections are illustrated in Attachment.
2. The access road right-of-way width shall be 50 feet minimum.
3. The access road drivable width shall be 20 feet minimum, and increased on curves by a distance equal to 400 divided by the radius of curve. Additional 2 feet on either side of the road shall be provided for berms and ditches, as detailed in the attached Typical Road Sections.
4. The minimum centerline radius of curves shall be 50 feet.
5. The vertical alignment grades shall be limited to 10 percent or paved at a maximum of 15 percent.
6. Roads entirely located on fills or with cross sections showing more than 30 percent fill along the drivable width of the road require paving.
7. Intersections or driveways shall have a minimum sight distance of 300 feet in either direction along the public street.
8. The Contractor shall provide a commercial driveway at locations where the replaced access roads terminate at, or cross public roads.
9. The Contractor shall provide lockable gates on LADWP property or easement at locations where access roads terminate or cross public roads.

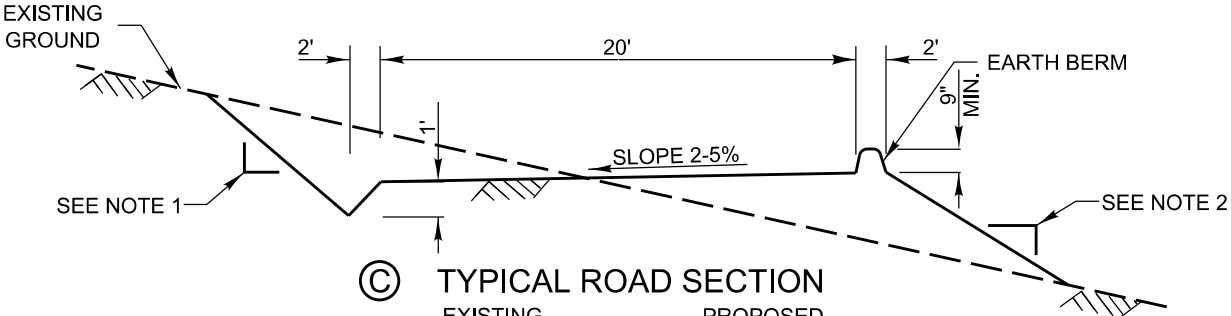
LOS ANGELES DEPARTMENT OF WATER AND POWER TRANSMISSION LINE ACCESS ROAD DETAILS



(A) TYPICAL ROAD SECTION
 EXISTING CROSS SLOPE $\leq 5\%$ PROPOSED ROAD GRADE $\leq 10\%$
 10-15% (PAVEMENT REQUIRED)



(B) TYPICAL ROAD SECTION
 EXISTING CROSS SLOPE 5-15% PROPOSED ROAD GRADE $\leq 10\%$
 10-15% (PAVEMENT REQUIRED)



(C) TYPICAL ROAD SECTION
 EXISTING CROSS SLOPE 15-50% PROPOSED ROAD GRADE $\leq 10\%$
 10-15% (PAVEMENT REQUIRED)

NOTES:

1. CUT SLOPE SHALL NOT EXCEED THE FOLLOWING:
 - A. 2 HORIZONTAL TO 1 VERTICAL IN LOOSE OR UNSTABLE MATERIAL.
 - B. 1 HORIZONTAL TO 1 VERTICAL IN COMPACTED MATERIAL.
 - C. 1/2 HORIZONTAL TO 1 VERTICAL IN SOLID ROCK.
2. ALL FILL SLOPES SHALL BE 2 HORIZONTAL TO 1 VERTICAL OR FLATTER.
3. WHERE SOLID ROCK IS ENCOUNTERED THE 4" CROWN AND, OR SIDE DITCHES MAY BE ELIMINATED WHERE DIRECTED BY THE ENGINEER.

STANDARD CONDITIONS FOR CONSTRUCTION

1. Energized transmission lines can produce electrical effects including, but not limited to, induced voltages and currents in persons and objects. Licensee hereby acknowledges a duty to conduct activities in such manner that will not expose persons to injury or property to damage from such effects.
2. The Los Angeles Department of Water and Power (LADWP) personnel shall have access to the right of way at all times.
3. Unauthorized parking of vehicles or equipment shall not be allowed on the right of way at any time.
4. Unauthorized storage of equipment or material shall not be allowed on the right of way at any time.
5. Fueling of vehicles or equipment shall not be allowed on the right of way at any time.
6. Patrol roads and/or the ground surfaces of the right of way shall be restored by the Licensee to original conditions, or better.
7. All trash, debris, waste, and excess earth shall be removed from the right of way upon completion of the project, or the LADWP may do so at the sole risk and expense of the Licensee.
8. All cut and fill slopes within the right of way shall contain adequate berms, benches, and interceptor terraces. Revegetation measures shall also be provided for dust and erosion control protection of the right of way.
9. All paving, driveways, bridges, crossings, and substructures located within the right of way shall be designed to withstand the American Association of State Highway and Transportation Officials' vehicular loading H20-44 or HL-93. The design shall also comply with applicable design standards.
10. The location of underground pipelines and conduits shall be marked at all points where they cross the boundaries of the right of way and at all locations where they change direction within the right of way. The markings shall be visible and identifiable metal post markers for underground pipelines. Utility markers flush with surface may be used on pavement.
- 11A. General Grounding Condition

All aboveground metal structures including, but not limited to, pipes, drainage devices, fences, and bridge structures located within or adjoining the right of way shall be properly grounded, and shall be insulated from any fencing or other conductive materials located outside of the right of way. For safety of personnel and equipment, all equipment and structures shall be grounded in accordance with State of California Code of Regulations, Title 8, Section 2941, and National Electric Code, Article 250.

11B. Grounding Condition for Cellular Facilities on Towers

All aboveground metal structures including, but not limited to, pipes, drainage devices, fences, and bridge structures located within or adjoining the right of way shall be properly grounded, and shall be insulated from any fencing or other conductive materials located outside of the right of way. For safety of personnel and equipment, all equipment and structures shall be grounded in accordance with American National Standards Institute of Electrical and Electronics Engineers Standard 487-latest edition, IEEE Guide for Safety in AC Substation Grounding.

12. Licensee shall neither hold the LADWP liable for nor seek indemnity from the LADWP for any damage to the Licensee's project due to future construction or reconstruction by the LADWP within the right of way.

13. Fires and burning of materials is not allowed on the right of way.

14. Licensee shall control dust by dust-abatement procedures approved by the LADWP, such as the application of a dust palliative or water.

15. The right of way contains high-voltage electrical conductors; therefore, the Licensee shall utilize only such equipment, material, and construction techniques that are permitted under applicable safety ordinances and statutes, including the following: State of California Code of Regulations, Title 8, Industrial Relations, Chapter 4, Division of Industrial Safety, Subchapter 5, Electrical Safety Orders; and California Public Utilities Commission, General Order No. 95, Rules for Overhead Electric Line Construction.

16. Licensee is hereby notified that grounding wires may be buried in the right of way; therefore, the Licensee shall notify the LADWP's Transmission Construction and Maintenance Business Group at (818) 771-5014, or (818) 771-5076, at least 48 hours prior to the start of any construction activities in the right of way.

17A. Vehicle Parking

An area within 50 feet around the base of each tower must remain open and unobstructed for maintenance and emergencies, including periodic washing of insulators by high-pressure water spray. Clearances of 100 feet may be required under circumstances where access is limited.

17B. Trucking Operations and Storage Operations

An area within 50 feet around the base of each tower must remain open and unobstructed for maintenance and emergencies, including periodic washing of insulators by high-pressure water spray. Clearances of 100 feet may be required under circumstances where access is limited.

17C. Permanent Structures

An area within 100 feet on all sides of each tower shall remain open and unobstructed for maintenance and emergencies, including periodic washing of insulators by high-pressure water spray.

18. Detailed plans for any grading, paving, and construction work within the right of way shall be submitted for approval to the Real Estate Services, 221 N. Figueroa St., Suite 1600, Los Angeles, California 90012, no later than 45 days prior to the start of any grading, paving, or construction work. Notwithstanding any other notices given by Licensee required herein, Licensee shall notify the LADWP's Transmission Construction and Maintenance Business Group at (818) 771-5014, or (818) 771-5076, no earlier than 14 days and no later than two days prior to the start of any grading, paving, or construction work.
19. "As Constructed" drawings showing all plans and profiles of the Licensee's project shall be furnished to the Real Estate Services, 221 N. Figueroa St., Suite 1600, Los Angeles, California 90012, within five days after completion of Licensee's project.
20. In the event that construction within the right of way is determined upon inspection by the LADWP to be unsafe or hazardous to the LADWP facilities, the LADWP may assign a line patrol mechanic at the Licensee's expense.
21. If the LADWP determines at any time during construction that the Licensee's efforts are hazardous or detrimental to the LADWP facilities, the LADWP shall have the right to immediately terminate said construction.
- 22A. All concentrated surface water which is draining away from the permitted activity shall be directed to an approved storm drain system where accessible, or otherwise restored to sheet flow before being released within or from the right of way.
- 22B. Drainage from the paved portions of the right of way shall not enter the unpaved area under the towers. Drainage diversions such as curbs shall be used on three sides of each tower. The open side of each tower shall be the lowest elevation side to allow storm water which falls under the tower to drain. The area under the towers shall be manually graded to sheet flow out from under the towers.
- 22C. Ponding or flooding conditions within the right of way shall not be allowed, especially around the transmission towers. All drainage shall flow off of the right of way.
- 22D. Licensee shall comply with all Los Angeles County Municipal Storm Water Permit and Standard Urban Storm Water Mitigation Plan requirements.
- 23A. Fills, including backfills, shall be in horizontal, uniform layers not to exceed six inches in thickness before compaction, then compacted to 90 percent relative compaction in accordance with the American Society for Testing and Materials D1557.
- 23B. The top two inches to six inches of the concrete footings of the towers shall remain exposed and not covered over by any fill from grading operations.
- 23C. Licensee shall provide the LADWP with one copy each of the compaction report and a Certificate of Compacted Fill, for clean fill compaction within the LADWP's right of way in accordance with the American Society for Testing and Materials D1557, approved by a geotechnical engineer licensed in the State of California.
24. A surety bond in the amount to be determined by the LADWP shall be supplied by the Licensee to assure restoration of the LADWP's right of way and facilities, and compliance with all conditions herein.

25. The Licensee shall obtain and pay for all permits and licenses required for performance of the work and shall comply with all laws, ordinances, rules, orders, or regulations including, but not limited to, those of any agencies, departments, districts, or commissions of the State, County, or City having jurisdiction thereover.
26. The term "construction", as used herein, refers only to that construction incidental to the maintenance or repair of the existing (requested facility) and shall not be construed to mean permission to construct any additional (requested facility).
27. Signs shall not exceed four feet wide by eight feet long, shall not exceed a height of 12 feet, shall be constructed of noncombustible materials, and shall be installed manually at, and parallel with, the right of way boundary.
28. Remote-controlled gates, or lock boxes containing the device or key for opening the remote-controlled gates, shall be capable of being interlocked with an LADWP padlock to allow access to the right of way by the LADWP. Licensee shall contact LADWP's Transmission Construction and Maintenance Business Group at (818) 771-5014, or (818) 771-5076, to coordinate the installation of an LADWP padlock.
29. Licensee's cathodic protection system, if any, shall have a design that does not cause corrosion to LADWP facilities. A detailed design of the Licensee's cathodic protection system shall be submitted for approval to the Real Estate Services, 221 N. Figueroa St., Suite 1600, Los Angeles, California 90012, no later than 45 days prior to the start of construction or installation of the cathodic protection system.
- 30A. Licensee shall install K-rails at a distance of ten feet from each side of the tower base for protection of towers. A distance of five feet from the tower base may be acceptable in locations where the patrol roads would be obstructed.
- 30B. Licensee shall install removable pipe bollards, spaced four feet apart, and at a distance of ten feet from each side of the tower base for protection of towers. A distance of five feet from the tower base may be acceptable in locations where the patrol roads would be obstructed.
- 31A. Licensee shall provide and maintain a minimum 20-foot wide transition ramp for the patrol roads from the pavement to the ground surface. The ramp shall not exceed a slope of ten percent.
- 31B. Licensee shall provide and maintain a minimum 20-foot wide driveway and gate at all locations where the (road/street) crosses the LADWP's patrol roads. The designed gates must be capable of being interlocked with an LADWP padlock to allow access to the right of way by the LADWP.
32. Licensee shall post a sign on the entrance gate to the right of way, or in a visible location inside the entrance gate, identifying the contact person's name and telephone number for the prompt moving of (vehicles/trucks/trailers/containers) at times of LADWP maintenance or emergency activities, or any other event that (vehicles/trucks/trailers/containers) must be moved. In emergency conditions, the LADWP reserves all rights at any time to move or tow (vehicles/trucks/trailers/containers) out of specific areas for any transmission operation or maintenance purposes.