

**PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA**

RAIL SAFETY DIVISION  
RAIL TRANSIT SAFETY BRANCH

Resolution ST-254  
December 5, 2024

**RESOLUTION**

RESOLUTION GRANTING THE ORANGE COUNTY  
TRANSPORTATION AUTHORITY A VARIANCE FROM GENERAL  
ORDER 95, SECTION III, TABLE 1, CASE 8, COLUMN B AND  
SECTION VIII, RULE 84.4-D4 CONDUCTORS PASSING SUPPLY  
POLES AND UNATTACHED THERETO.

**SUMMARY**

This resolution approves the Orange County Transportation Authority's request to deviate from the clearance requirements of General Order 95, Section III, Table 1, Case 8, Column B and Section VIII, Rule 84.4-D4, to permit the installation of 41 overhead catenary system poles with reduced clearance to pre-existing communication lines provided that the communication lines remain protected by a cable protection barrier, on the Orange County Streetcar system project currently under construction. The deviation will allow the installation of 41 overhead catenary system poles closer to telecommunications facilities on nearby poles than is allowed by General Order 95, without compromising safety.

**BACKGROUND**

The Orange County Transportation Authority (OCTA) is the county transportation commission, responsible for planning, funding, and implementing transit and other capital transportation projects within Orange County. OCTA is constructing a streetcar system consisting of 4.15 miles of track between the Santa Ana Regional Transportation Center in the city of Santa Ana and a new streetcar station to be located at the Harbor Boulevard/Westminster Avenue intersection

in the City of Garden Grove. It will be a new electrified rail service with a 750 Volt overhead catenary system (OCS). Revenue service date is currently targeted for August 2025. As noted in Commission Resolution ST-191, approving the Safety Certification Plan for the system, it will be known as the Orange County Streetcar (OC Streetcar) system.

The west half of the project is in the former Pacific Electric Railway (PE) right-of-way (ROW). The PE ROW does not have existing overhead utilities running parallel to or within the ROW.

The east half of the project runs in mixed traffic lanes on Santa Ana Blvd, 4th Street, and Mortimer Street. Santa Ana Boulevard, outside of the downtown underground utility district, has existing overhead utilities on both sides of the street in and above the narrow grassy strip between the street curb and sidewalk on the west side of the street. Both the existing utilities poles and OCS poles need to be located within that space between the street curb and sidewalk.

Commission General Order 95 (GO 95) provides rules for Overhead Electric Line Construction.

By letter dated July 25, 2024, OCTA requested a deviation from the requirements of GO 95, Section III, Table 1, Case 8, Column B and from Section VIII, Rule 84.4-D4, Conductors Passing Supply Poles and Unattached Thereto, which require 22.5 inches of separation between existing communications cables and the OCS poles for the OC Streetcar Project (15 inches of separation if the OCS pole is within 10 feet of the pole on which the communications cables are supported).

OCTA advertised the OC Streetcar Project for Construction in December 2017 believing the design was fully compliant with CPUC General Orders. However, in late 2020, it came to OCTA's attention that there is a clearance issue between the communications cables attached to the existing utility poles and the planned OCS pole locations within the narrow strip in the eastern segment of the OC Streetcar Project along Santa Ana Boulevard.

When OCTA brought the issue to the Rail Safety Division's Rail Transit Safety Branch (RTSB), RTSB contacted the CPUC's Safety and Enforcement Division's

Electric Safety and Reliability Branch (ESRB) to consult and referred OCTA to discuss potential acceptable mitigations with ERSB. Staff requested that OCTA measure the height and position of the existing overhead (OH) electrical and communication wires and offsets to their OCS poles throughout the corridor. OCTA confirmed that 41 OCS poles do not comply with the above noted GO 95 clearance requirements.

In the affected portion of the project, OCS poles will be holding the span wires that lead and meetup in the middle of the street, holding the contact wire that supplies power to the streetcar at a height of 19.5-feet. GO 95, Section VIII, Rule 84.4-D4 considers clearance as being the distance from the centerline of the OCS pole to the passing communication wire. The current clearances for the noncompliant OCS poles from the communication wires range from 22-inches down to 0-inches with no mitigations, with the average being about 10-inches. 14 poles have a clearance of 5-inches or less. As a partial mitigation and to achieve more separation with the 14 poles that have a clearance of 5-inches and less, OCTA is raking (adding a slight tilt) the poles away from the communication wires. The final clearance of the raked OCS poles will not be known until all wires have been placed to apply tension. The choice of only raking those specific locations was decided based on the evaluation that at greater distances the raking would have little effect.

## **DISCUSSION**

### **OCTA Proposed Solution**

OCTA investigated options to modify the existing OH lines or proposed OCS to comply with GO 95. OCTA met with Southern California Edison (SCE), which owns the OH electrical lines and the majority of the wooden utility poles in conflict. AT&T also owns a portion of the poles. OCTA also met with AT&T and other the communication companies that have cables on these poles; they are Crown Castle, Verizon, and Time Warner-Spectrum-Charter (TWSC), to discuss the available options. There are no other utilities using these poles. OCTA concluded after those consultation meetings that it was not feasible to install cantilever arms on the wood poles to push the communications wires further

away from the OCS poles without overloading the existing wood poles, and that it would be cost and schedule prohibitive to replace the existing wood poles or to underground the existing overhead utilities.

OCTA then analyzed the intent of the unmet GO 95 requirements and assessed whether reasonable mitigations were available to accomplish the intent of assuring separation of the communications lines from OCTA's facilities. After discussions with RTSB and ESRB staff and the utility companies, OCTA identified a protective sleeve that would cover the communications cables in areas with insufficient clearances. The protective sleeve is nonconductive, easy to install, would not add significant weight to pole loads, and is a product already in use in the industry by utility companies at other locations. Additionally, OCTA would cover the costs of any engineering assessments, the sleeve and other materials, and installation.

RTSB requested that OCTA obtain written concurrence from each of the affected utility companies stating that they support the installation of a protective sleeve over their wires as a GO 95 variance request mitigation measure. The utility companies requested that OCTA identify who owns each existing communications wire, specify the protective sleeve product, address electrical isolation and durability from abrasion and exposure, determine the dead load and wind load, and explain how it would be installed and removed for maintenance. OCTA compiled this requested information and subsequently met with the affected utility companies.

The affected telecommunication companies and SCE have agreed to the proposed sleeve mitigation measure proposed by OCTA. OCTA has provided evidence of the utility companies' support in its variance request. Additionally, since the utility companies accepted the proposed sleeve protection as mitigation measure, the installation work commenced during summer of 2022. The protective sleeves have already been installed by each facility owner at most affected pole locations.

## **CPUC Staff Analysis**

RTSB Staff have worked with OCTA and the ESRB Staff to assist OCTA with identifying potential solutions to the clearance issues identified as construction commenced in the OC Streetcar project. The OCS poles were placed by OC Streetcar designers within the available space between the existing SCE poles supporting electric and other utility facilities and the street curb along Santa Ana Boulevard, without recognizing the insufficient clearance between the OCS poles and communications cables attached to the nearby utility poles. When the GO 95 clearance conflict was identified, it was clear that there simply was insufficient space to accommodate the OC Streetcar OCS poles between the SCE poles and the curb while meeting the GO 95 clearance.

OCTA evaluated the possibility of replacing the poles in the conflict areas to allow a greater clearance between the poles or placement of pole crossarms on new poles to achieve compliant clearances, however the cost of and timeline involved in such a solution was prohibitive, and not within the OC Streetcar project budget. OCTA needed to identify other potential solutions.

In researching and evaluating potential solutions, OCTA met with the ESRB Staff to discuss potential alternatives or mitigations to reduced clearances that might be acceptable and supported by Commission Staff. OCTA also met with SCE and the affected communications companies to discuss the problem and potential solutions or mitigations they might recommend.

Discussions focused on clearing some conflict locations by relocating some of the lines up or down on the poles. This allowed some of the conflict locations to achieve clearance compliance. However, the consensus that developed for the remaining locations was that the best solution is for the communications companies to install insulating protective sleeves over their cables in the locations where the proximity of the OCS poles failed to meet the GO 95 clearances. Such a condition would require a variance request for the reduced clearance but would not create an unsafe condition. Each utility company has done/will do the necessary work, with OCTA paying all costs. SCE has reviewed the final designs and concurs with the proposed solution and final plans.

RTSB agrees with the proposed protective sleeve mitigation and finds no evidence indicating safety is compromised by the granting of this variance to GO 95 clearance requirements as outlined above. RTSB has shared the draft Resolution to approve this variance with ESRB. ESRB discussed the proposed mitigation plan with OCTA and RTSB and agrees that based on the data submitted by OCTA, as well as field visits and inspections conducted by RTSB and ESRB staff, there was no evidence to suggest that safety would be compromised by the OCTA's proposed mitigation plan. However, to prevent any unsafe conditions from occurring in the future due to the proposed mitigation plan not performing as expected, Staff recommends at least one inspection of the protective sleeves be performed annually by OCTA to assure ongoing functionality.

### **NOTICE**

On October 31, 2024, this Resolution was published on the Commission's Daily Calendar.

### **COMMENTS**

The draft resolution of the Rail Safety Division in this matter was mailed in accordance with Section 311 of the Public Utilities Code and Rule 14.2(d)(1) of the Commission's Rules of Practice and Procedure.

No comments were received.

### **FINDINGS**

1. By letter dated July 25, 2024, OCTA requested authority to deviate from the requirements of GO 95, Section III, Table 1, Case 8, Column B and Section VIII, Rule 84.4-D4 Conductors Passing Supply Poles and Unattached Thereto.
2. This request for deviation is only for the identified 41 OCS poles that are being installed as part of the new Orange County Streetcar system. The

identified pole locations are as follows: 1W/130, 1W/126, 1W/122, 1W/120, 1W/114, 1W/112, 1W/110, 1W/101, 1W/107, 1W/99, 1W/95, 1W/93, 1W/91, 1W/86, 1W/85, 1W/84, 1W/83, 1W/82, 1W/81, 1W/80, 1W/79, 1W/78, 1W/77, 1W/74, 1W/73, 1W/72, 1W/65, 1E/18, 1E/20, 1E/20A, 1E/21, 1E/22, 1E/24, 1E/26, 1E/31, 1E/33, 1E/36, 1E/37, 1E/42, 1E/44, 1E/45.

3. OCTA proposes to mitigate any hazards of deviating from GO 95, Section III, Table 1, Case 8, Column B and Section VIII, Rule 84.4-D4 by utilizing a protective sleeve over the communication wires in areas where its poles are not in compliance with GO 95 clearance requirements.
4. There is no evidence to suggest that granting this request for a variance from GO 95, Section III, Table 1, Case 8, Column B and Section VIII, Rule 84.4-D4 along OCTA's proposed alternative would adversely affect the level of safety of the existing utilities facilities or OCTA's OC Streetcar system than is provided under the current rule.
5. The OCTA request and this Resolution were sent to ESRB for review. ESRB has reviewed the resolution and agrees with RTSB's recommendation.

**THEREFORE, IT IS ORDERED THAT:**

1. The Orange County Transportation Authority (OCTA) is granted authority for the 41 identified already-installed Overhead Catenary System (OCS) poles to deviate from the clearance requirement of General Order 95, Section III, Table 1, Case 8, Column B and Section VIII, Rule 84.4-D4, allowing the 41 identified existing OCS poles be built with reduced clearance to nearby overhead communications lines so long as all affected communications lines are equipped with a cable protective sleeve which the affected utility companies agreed upon.
2. The OCTA shall submit for Rail Transit Safety Branch (RTSB) Staff review and approval a Standard Operating Procedure specifying the procedures to periodically inspect that the protective sleeves remain properly installed and in working condition, once the OC Streetcar system goes into revenue

service. The procedures must specify notification of RTSB if inspections yield findings or anomalies in the protective sleeve mitigations.

3. If a communication company is to replace the cable (or add new communication facilities), this variance request would no longer apply to that communication company's cable(s) at the pole location(s) indicated, because the communication company would be required to comply with the current rules per GO 95, Rule 32.1.
4. The OCTA shall continue to comply with GO 95, Section III, Rule 31.4, Cooperation to Avoid Conflicts, when contemplating changes to their current OCS design.
5. This resolution is effective today.

I certify that this resolution was adopted by the Public Utilities Commission at its regular meeting held on December 5, 2024. The following Commissioners voting favorably thereon:

/s/ Rachel Peterson

RACHEL PETERSON  
Executive Director

ALICE REYNOLDS  
President  
DARCIE L. HOUCK  
JOHN REYNOLDS  
KAREN DOUGLAS  
MATTHEW BAKER  
Commissioners