

PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

SAFETY AND ENFORCEMENT DIVISION  
UTILITIES SAFETY BRANCH

RESOLUTION SU-37  
Date: October 5, 1995

**R E S O L U T I O N**

RESOLUTION SU-37. ORDER TO ALLOW ICF KAISER ENGINEERING AND CONSTRUCTION GROUP TO USE AMERICAN RAILWAY ENGINEERING ASSOCIATION, 1995 MANUAL FOR RAILWAY ENGINEERING, CHAPTER 33, PART 2, CHART 2, FOR ITS EIS/EIR OF CALTRAIN PENINSULA COMMUTER SERVICE'S SAN FRANCISCO DOWNTOWN EXTENSION.

SUMMARY

1. By letter of June 6, 1995, ICF Kaiser Engineering and Construction Group (Kaiser) requests that the Commission allow the use of American Railway Engineering Association (AREA), 1995 Manual for Railway Engineering, Chapter 33, Part 2, Chart 2, Electrical Clearances to Overbridges and Tunnels, for its Caltrain San Francisco Downtown Station Relocation's Environmental Impact State/Environmental Impact Report (EIS/EIR) project. The Commission's General Order No. (G.O.) 95, Table 1, Case No. 9, Column C, does not provide clearance requirements for trolley contact, feeder and span wires greater than 5kV DC. Kaiser anticipates the use of electrically powered locomotives tentatively assumed to be between 12.5kV to 25kV AC. Until specific clearances for 12.5kV to 25kV AC trolley lines are developed for G.O. 95, Kaiser would be allowed to use the specified AREA clearances for its EIS/EIR project.

2. This Resolution approves Kaiser's request.

BACKGROUND

1. G.O. 95, Table 1, Case No. 9, Column C, requires a vertical separation of 3 inches between trolley contact wires of up to 5kV and the overhead line structures upon which they are supported (such as tunnels).

2. AREA, Chapter 33, Part 2, Chart 2, provides electrical passing and static air clearances in tunnels to grounded structures for various nominal system voltages ranging between 0.75kV to 50kV AC. The nature of these AREA clearances are equivalent to G.O. 95, Table 1, Case No. 9, Column C; however, G.O. 95, Table 1 does not specify clearances for trolley contact wires above 5kV.

### DISCUSSION

1. Kaiser has been retained by the Peninsula Corridor Joint Powers Board to prepare an EIS/EIR for a 1.5 mile extension of Caltrain's Peninsula Commuter Service. The extension would be from the intersection of Seventh and Berry Street, in San Francisco, to downtown San Francisco. The extension would be underground and terminate either at the intersection of Market and Beale Street (with a connecting mezzanine to the BART/Muni Metro Embarcadero station), or the Transbay Terminal. Kaiser's EIS/EIR will consist of preliminary drawings to study alignments and establish construction costs for this extension.

2. Presently, Caltrain's Peninsula Commuter Service uses diesel fueled locomotives; however, there is a strong possibility that they will be replaced by electrically powered locomotives. The power supply of the locomotives would be between 12.5kV to 25kV AC. Kaiser would like to incorporate the vertical clearances required for electric locomotives in tunnels in its EIS/EIR. The Commission's G.O. 95, Table 1, for trolley contact, feeder and span wires only provides clearances for up to 5kV DC.

3. Kaiser has proposed the use of AREA, 1995 Manual for Railway Engineering, Chapter 33, Part 2, Chart 2 clearances for its EIS/EIR. The Commission's Utilities Safety Branch (USB) is in the process of requesting the G.O. 95/128 Rules Committee to develop new trolley wire clearances for AC voltages up to 25kV. Caltrain's Peninsula Commuter Service will use these new G.O. 95 clearances if it converts to an electric system.

### FINDINGS

1. The staff of the USB has reviewed Kaiser's proposal and concurred with the request.

2. The AREA clearances will only be used for preliminary drawings to study alignments and establish construction costs of Caltrain's San Francisco Downtown Station extension.

3. The USB will request the G.O. 95/128 Rules Committee to develop trolley wire clearances for voltages up to 25kV AC.

THEREFORE, IT IS ORDERED THAT:

1. Kaiser may use AREA, 1995 Manual for Railway Engineering, Chapter 33, Part 2, Chart 2, for its Caltrain San Francisco Station Relocation EIS/EIR project.
2. Caltrain's Peninsula Commuter Service will use G.O. 95 trolley wire clearances for up to 25kV AC, when they are developed by the G.O. 95/128 Rules Committee, should it decide to convert to an electric system.
3. This Resolution is effective today.

I hereby certify that this Resolution was adopted by the Public Utilities Commission at its regular meeting on October 5, 1995. The following Commissioners approved it:



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WESLEY M. FRANKLIN  
Acting Executive Director

DANIEL Wm. FESSLER  
President  
P. GREGORY CONLON  
JESSIE J. KNIGHT, Jr.  
HENRY M. DUQUE  
Commissioners

I abstain.

/s/ JOSIAH L. NEEPER  
Commissioner