


Memorandum

*Making Conservation
a California Way of Life*

To: DEPUTY DISTRICT DIRECTORS, Design
DEPUTY DISTRICT DIRECTORS, Traffic Operations
DEPUTY DISTRICT DIRECTORS, Construction
DEPUTY DISTRICT DIRECTORS, Right of Way Land Surveys

Date: January 27, 2021

From: 
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Subject: THREE-DIMENSIONAL (3-D) UTILITY DATABASE IMPLEMENTATION

Retention and retrieval of utility information is a vital component in the development and construction of many projects. This information is valuable for coordinating with the utility owner to verify location of its active and inactive utilities, designs around utility locations, construction staging, and for use by emerging construction methods. Incorporating this three-dimensional (3-D) information into a database can help identify utility locations to prevent unanticipated and potentially unsafe contact with utility facilities during construction of state transportation and permit projects and thus can minimize construction delays and costs.

The large amounts of existing data identifying these locations needs efficient storage and retrieval technology for future use and reference by project delivery teams. Therefore, it is essential that the 3-D utility information be retained in an efficient enterprise level database that facilitates 3-D utility data storage and retrieval.

The California Department of Transportation (Caltrans) Division of Design has created a statewide 3-D Utility Database, the Caltrans Utility Database (CUD), to store, identify, and track the locations of new and existing facilities. This 3-D utility database will support Caltrans' goal of 3-D design modeling and the information can be used to help prevent costly construction delays and relocation of the existing utility facilities in the future.

Effective the date of this memo, all as-built utility data, approved for installation within the State Right of Way (including those installed by encroachment permit), whether above or below ground, privately or state owned, new or existing, when available, must be provided to the respective District Utility Engineer or Utility Engineering Workgroup who shall manage the upload and storage of the data in the CUD.

This requirement has been incorporated into the Project Development Procedures Manual (PDPM). See Chapter 17 of the PDPM for utility quality level definitions.

Instructions for importing data into the CUD are included in the 'Caltrans Training Manual for Bentley Map Enterprise and Oracle Database' on the CADD website: <https://cadd.onramp.dot.ca.gov/bentley-map-enterprise-and-oracle-database>

A list of the Districts Utility Engineering Workgroups and a pre-recorded demonstration of the CUD is available on the Design UEW website: <https://design.onramp.dot.ca.gov/utility-engineering-workgroups-uew>

If you have any questions or require assistance, please contact Jesus Mora, Office of CADD and Engineering GIS Support at (916) 996-2381 or by email at <jesus.mora@dot.ca.gov>.

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