State of California
DEPARTMENT OF TRANSPORTATION

California State Transportation Agency

Memorandum

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To: DEPUTY DISTRICT DIRECTORS: DESIGN, TRAFFIC OPERATIONS
CHIEF, DIVISION OF ENGINEERING SERVICES
CHIEF, DIVISION OF LOCAL ASSISTANCE

Date: November 25, 2013

File:

From: DENNIS T. AGAR, Chief
Division of Traffic Operations

TIMOTHY CRAGGS, Chief
Division of Design

Subject: **ELECTRICAL DESIGN STANDARDS FOR ADVERTISED PROJECTS**

This memorandum establishes electrical design standards complying with the 2010 Construction Contract Standards.

The current practice of showing multiple bid items on an electrical plan sheet does not comply with the 2010 Construction Contract Standards, because it does not clearly define the work paid by each bid item. Section 9-1.16B, "Schedule of Values", previously known as cost breakdown, requires the Contractor to submit a schedule of values for each bid item. The Contractor had to discern and segregate the materials and quantities for each bid item. Over the past six years, the Department has spent over $100M on electrical Contract Change Orders (CCOs) for 885 projects.

Accordingly, all projects with electrical plans sheets designated with "E-#", must clearly show the segregation of work for each bid item. This change will improve estimates, assist bidders in preparing competitive and responsive bids, and reduce claims and CCOs. This requirement does not apply to electrical work from Structure Design (Office of Electrical, Mechanical, Water, and Wastewater Engineering) designated with "EE-#" sheets typically used for building projects.

To achieve these objectives and comply with the Department's 2010 Construction Contract Standards, the designer shall ensure the following:

(1) Each electrical plan sheet shows work for only one bid item.

(2) The electrical plan sheet name is the same name as the bid item.

(3) The project plans include electrical quantity tables listing the materials and components of work and bid item quantities. The information in the quantity tables are for information only and must be labeled as such. The name of the quantity table and headings are consistent with the electrical plan sheet name.

(4) The standard electrical bid items are from the Bid Item List located at: <http://www.dot.ca.gov/hq/esc/oe/construction_standards.html>

(5) The plans comply with Plans Preparation Manual section 2-2.23 dated November 8, 2013 or later (attached).

All work on the State Highway System (SHS), including work done by others, shall segregate electrical work per this memorandum. On projects where the Plans Specifications and Estimates (PS&E) phase has started, the following conditions apply:

- Where the PS&E is not finalized, the new or revised design standards shall be incorporated unless this would impose a significant delay in the project schedule or a significant increase in the support costs. The District Office Engineer will make the final determination on whether to apply the new requirements on a project-by-project basis. This exception expires July 1, 2014.
- For locally sponsored projects, the Oversight Engineer must inform the funding sponsor of these requirements within 15 working days of this memo.

If you have questions, please contact Theresa Gabriel, Senior Transportation Electrical Engineer, Electrical Systems Branch, Division of Traffic Operations, Office of Traffic Engineering, at (916) 654-5039, or by email at <theresa.a.gabriel@dot.ca.gov>.

Attachments
Copy of Revised Plan Preparation Manual, section 2-2.23

c: Rihui Zhang, Division Chief, (Acting), Division of Local Assistance, Caltrans
John McMillan, Deputy Division Chief, Division of Engineering Services, Caltrans
Fardad Falakfarsa, Office Chief, Division of Budgets, Office of Federal Resources, Caltrans
Chuck Suszko, Office Chief, Division of Construction, Office of Construction Engineering, Caltrans
Yin-Ping Li, Office Chief, Division of Traffic Operations, Office of Permits, Caltrans
District Encroachment Permit Engineers