ACI DETAILING
MANUAL-2004

Including:

- Details and Detailing of Concrete Reinforcement (ACI 315-99)
- Manual of Structural and Placing Drawings for Reinforced Concrete Structures (ACI 315R-04)
- Supporting Reference Data

PUBLICATION SP-66 (04)
The detailer has, because of the complexity of the construction, drawn complete wall elevations for both the West (Elevation 2-2) and South (Elevation 7-7) walls. The East (Section 5-5) and North (Section 3-3) walls are shown in cross section. The column footing and pier reinforcing bars are shown in schedules.

In drawing wall elevations where footing steps occur, the detailer refers to the “Typical Stepped Footing” detail on the structural drawing and footing elevations on the plan view. The exact horizontal location of these steps, however, is not given. In this case, the detailer makes an assumption, shows the dimensions on the elevations (see Elevation 2-2), circles same, and adds a note asking the engineer to verify.

Because fabricators stock bars in 60 ft lengths, horizontal runs of bars in excess of 30 ft have been detailed in multiples of 30 ft lengths plus the remainder length to complete the run. Vertical bars on the inside face are detailed between piers as the pier reinforcement makes it necessary to have wall bars in addition. Because wall dowels are provided for all vertical bars, some of the dowels project from the column footings.

Structural and placing drawings presented in this manual are examples of drafting style and graphic arrangement. These drawings are demonstrative examples of how structural and placing drawings are configured from a drafting perspective only. They are in no way to be used as structural designs, although, in general, they meet the requirements of ACI 318 or those of the AASHTO specifications or Caltrans requirements. The sample structural drawings emphasize how the engineer should clearly indicate design requirements and convey necessary information to the detailer, including specific locations of cutoff points and amount of steel.
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