DESIGN DATA

- **Design:** AASHTO LRFD Bridge Design Specifications, 2014 edition with California Amendments
- **Materials:**
  - Concrete: Type 736S (Mod)
  - Reinforced Concrete Barrier
- **Dimensions and Spacings:**
  - #5 @ 8
  - #5 @ 15
  - #5 @ 24

**Elevation Notes:**
- "ha" above bars indicates distance from top of footing to upper end of bars, see table.
- "hb" above bars indicates distance from top of footing to lower end of bars, see table.
- "S" indicates 2 bar bundle.

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**Optional Detail A**
- "h" = 1'-0" for details not shown, see "Detail A"

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**Plan Notes:**
- "Not to Scale" above bars indicates distance from top of footing to lower end of bars, see table.
- "G" indicates 2 bar bundle.

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**Design:** Mononobe-Okabe Method
- **Soil:**
  - f'c = 3600 psi
  - fy = 60,000 psi

**Load Combinations and Limit States:**
- **Service I:**
  - Q = 1.00 DC + 1.00 EV + 1.00 EH + 1.00 LS + 0.30 WS
- **Service II:**
  - Q = 1.00 DC + 1.00 EV + 1.00 EH + 1.00 WS
- **Strength I:**
  - Q = 1.25 DC + 1.35 EV + 0.90 EH + 1.75 LS (for piles at heel)
- **Strength II:**
  - Q = 1.00 DC + 1.00 EV + 1.00 EH + 1.00 LS + 0.30 WS
- **Strength III:**
  - Q = 1.00 DC + 1.00 EV + 1.00 EH + 1.00 WS
- **Strength IV:**
  - Q = 1.00 DC + 1.00 EV + 1.00 EH + 1.00 LS
- **Strength V:**
  - Q = 1.00 DC + 1.00 EV + 1.00 EH + 1.40 WS

**Wind Load on Sound Wall and Barrier:**
- **Load:** 0.0 kip/psf on wall surface
- **Load:** 0.3 kip/psf on wall surface

**Seismic Earth Pressure:**
- **Load:** 33 psf on wall surface
- **Load:** 10 psf on wall surface

**Vehicular Collision Force:**
- **Load:** 54 kip maximum traffic impact loading evenly distributed over 10 feet at top of the barrier
- **Load:** 54 kip traffic impact loading evenly distributed over 10 feet at top of the barrier

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**Elevation Sections:**
- **Height:**

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**References:**
- *Portal Section, a bar bundle, 4th edition with California Amendments*
- *AASHTO LRFD Bridge Design Specifications*

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**Engineering Services:**
- **State of California Department of Transportation**
- **Division of Engineering Services**
- **Retaining Wall Type 55WBP-Details No. 2**

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**Approved By:**
- **Architect:**
- **Engineer:**
- **Draftsman:**
- **Print Approval:**
- **Contract No.:**

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