| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET No. | TOTAL SHEETS |
|---|---|---|---|---|---|
| | | | | | |

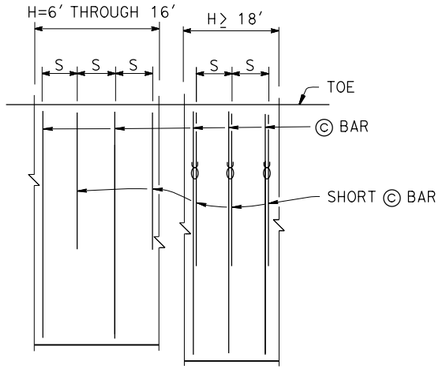
REGISTERED CIVIL ENGINEER _____ DATE _____

PLANS APPROVAL DATE _____

REGISTERED PROFESSIONAL ENGINEER No. _____ Exp. _____ CIVIL STATE OF CALIFORNIA

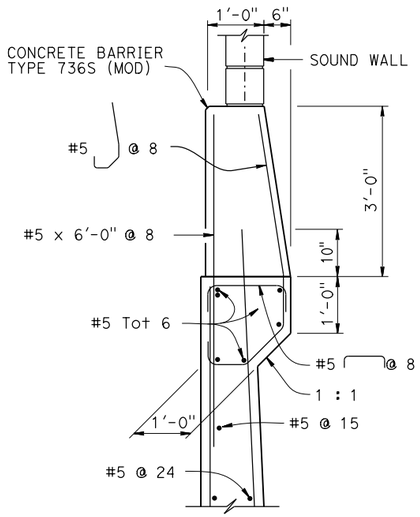
*The State of California or its officers or agents shall not be responsible for the accuracy or completeness of scanned copies of this plan sheet.*

*The Registered Civil Engineer for the project is responsible for the selection and proper application of the component design and any modifications shown.*

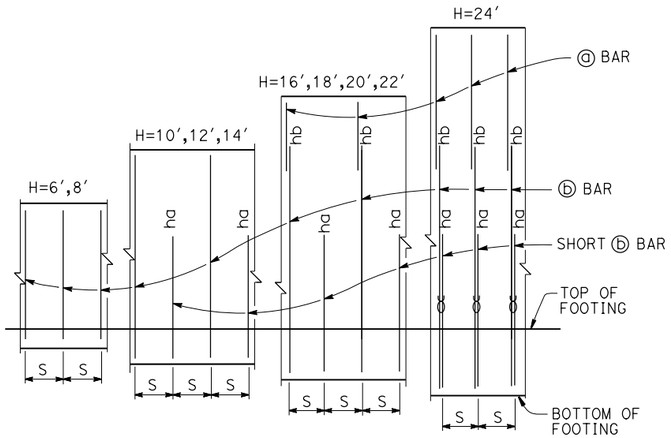



## PLAN
NO SCALE

NOTES:
Only Ⓒ bars shown
"S" is Ⓒ bar spacing, see table
ϑ indicates 2 bar bundle.

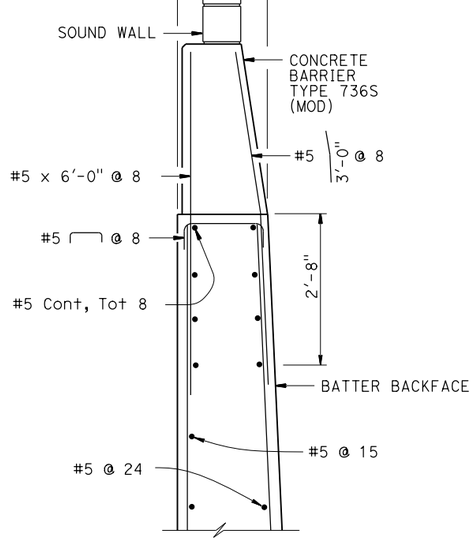



## DETAIL A
¾" = 1′-0"




## ELEVATION
NO SCALE

NOTES:
"ha" and "hb" above ⓑ bars indicate distance from top of footing to upper end of ⓑ bars, see table.
"S" is ⓑ bar spacing, see table.
ϑ indicates 2 bar bundle.




## OPTIONAL DETAIL A
¾" = 1′-0"

For details not shown, see "DETAIL A"

## DESIGN DATA

Design: AASHTO LRFD Bridge Design Specifications 4th edition with California Amendments

WS: 33 psf on sound wall and barrier

LS: Varied surcharge on level ground surface

CT: 54 kip maximum traffic impact loading evenly distributed over 10 feet at top of the barrier and 1:1 distribution down and outward

EQE: Mononabe-Okabe Method
$K_h$ = 0.3
$K_v$ = 0.0

Soil: Ø = 34°
γ = 120 pcf

Reinforced Concrete: f′c = 3600 psi
fy = 60,000 psi

Load Combinations and Limit States

| | |
|---|---|
| Service I | Q=1.00DC+1.00EV+1.00EH+1.00LS+0.30WS |
| Service II | Q=1.00DC+1.00EV+1.00EH+1.00WS |
| Strength I | Q=αDC+βEV+1.50EH+1.75LS<br>Q=1.25DC+1.35EV+0.90EH+1.75LS (for piles at heel) |
| Strength III | Q=αDC+βEV+1.50EH+1.40WS |
| Strength V | Q=αDC+βEV+1.50EH+1.35LS+0.40WS |
| Extreme I | Q=1.00DC+1.00EV+1.00EH+1.00EQD+1.00EQE |
| Extreme II | Q=1.00DC+1.00EV+1.00EH+1.00CT |

Where:

Q: Force Effects
α: 1.25 or 0.90, Which ever Controls Design
β: 1.35 or 1.00, which ever Controls Design
DC: Dead Load of Structure Components
EV: Vertical Earth Fill Pressure
LS: Live Load Surcharge
EQE: Seismic Earth Pressure
EQD: Soil and Structure Components Inertia. Soil inertia ignored for stem design
WS: Wind Load on Sound Wall and Barrier
CT: Vehicular Collision Force

BRIDGE STANDARD DETAILS

| xs14-370-2 | October 2014 | The components of the Bridge Standard Details have been prepared under the responsible charge of the Technical Owner, a registered civil engineer in the State of California |
|---|---|---|
| FILE NO. | APPROVAL DATE | |

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

BRIDGE NO.
POST MILE

# RETAINING WALL TYPE 5SWBP-DETAILS No. 2

Refer to: http://www.dot.ca.gov/hq/esc/techpubs/manual/bridgemanuals/bridge-standard-detail-sheets/index.html

FILE => xs14-370-2.dgn
USERNAME => s136236 TIME PLOTTED => 10:46 DATE PLOTTED => 18-JUL-2016

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT:
PROJECT NUMBER & PHASE:
CONTRACT NO.:

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

| REVISION DATES | | | SHEET | OF |
|---|---|---|---|---|
| 6-19-14 | 8-6-14 | 7-14-16 | | |