

Dist#	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET TOTAL SHEETS

DESIGN CONDITIONS:
Design H may be exceeded by 6" before going to the next size. Special footing design is required where foundation material is incapable of supporting bearing stress listed in the table.

DESIGN NOTES:
DESIGN: AASHTO LRFD Bridge Design Specifications, 4th Edition with California Amendments
LS: Varied surcharge on level ground surface
DC: Stem Architectural Treatment of thickness up to 6' of concrete (75 psf) considered
CT: 54 kip transverse force applied at $H_e = 32'$, distributed over 10 feet at the top of wall and 1:1 distribution down and outward. Distribution below footing taken no less than 40'.
SEISMIC: $k_H = 0.2, k_V = 0.0$
SOIL: $\phi = 34^\circ, \gamma = 120$ pcf
REINFORCED CONCRETE: $f'_c = 3,600$ psi, $f_y = 60,000$ psi
LOAD COMBINATIONS AND LIMIT STATES:
Service I: $Q = 1.00DC+1.00EV+1.00EH+1.00LS$
Strength I: $Q = aDC+PE+RE+H+1.75LS$
Extreme I: $Q = 1.00DC+1.00EV+1.00EH+1.00EOD+1.00EQE$
Extreme II: $Q = 1.00DC+1.00EV+1.00EH+1.00CT$
Where:
Q: Force Effects
a: 1.25 or 0.90, Whichever Controls Design
P: 1.35 or 1.00, Whichever Controls Design
R: 1.50 or 0.90, Whichever Controls Design
DC: Dead Load of Structure Components
EH: Horizontal Earth Fill Pressure
EV: Vertical Earth Pressure from Earth Fill Weight
LS: Live Load Surcharge
EQE: Seismic Earth Pressure
EOD: Soil and Structural and Nonstructural Components Inertia
CT: Vehicular Collision Force

July 21, 2017
PLANS APPROVAL DATE
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.

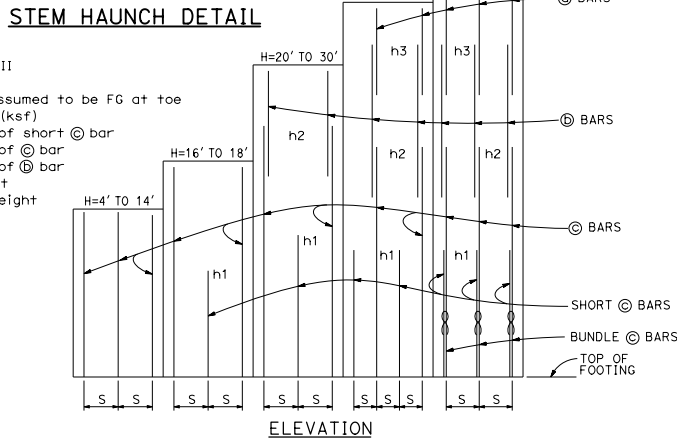
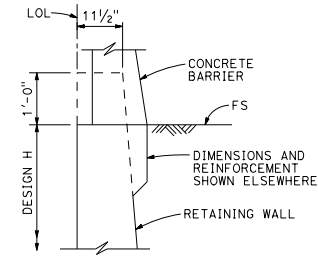
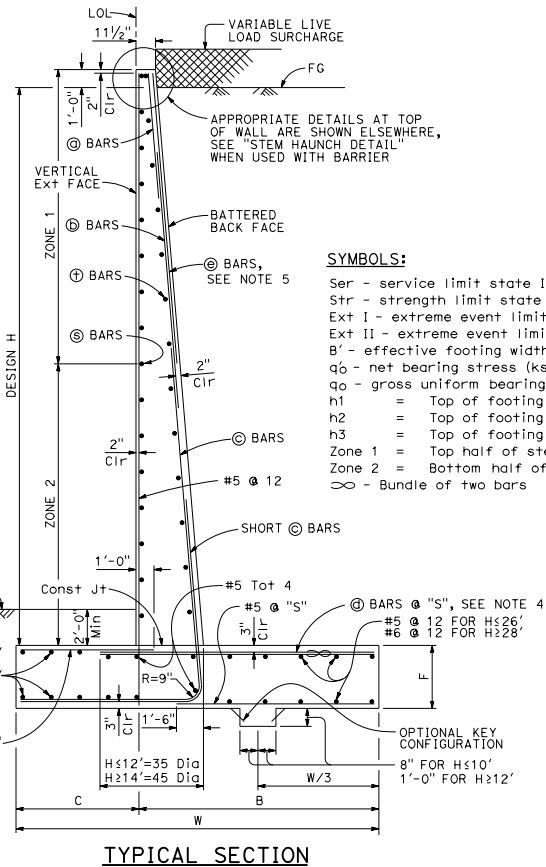


TABLE OF REINFORCING STEEL, DIMENSIONS AND DATA

DESIGN H	4'	6'	8'	10'	12'	14'	16'	18'	20'	22'	24'	26'	28'	30'	32'	34'	36'
W	6'-10"	7'-0"	7'-3"	7'-7"	8'-4"	9'-7"	10'-9"	12'-0"	13'-3"	14'-6"	15'-9"	17'-1"	18'-5"	19'-10"	21'-2"	22'-7"	24'-0"
C	2'-2"	2'-3"	2'-3"	2'-4"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-5"	6'-0"	6'-6"	7'-2"	7'-8"	8'-2"	9'-0"
B	4'-8"	4'-9"	5'-0"	5'-3"	5'-10"	6'-7"	7'-3"	8'-0"	8'-9"	9'-6"	10'-4"	11'-1"	11'-11"	12'-8"	13'-6"	14'-5"	15'-0"
F	1'-4"	1'-4"	1'-4"	1'-4"	1'-6"	1'-8"	1'-8"	1'-9"	1'-9"	1'-11"	2'-2"	2'-5"	2'-10"	3'-3"	3'-6"	4'-0"	4'-3"
BATTER	1/2: 12	1/2: 12	1/2: 12	1/2: 12	1/2: 12	1/2: 12	1/2: 12	1/2: 12	1/2: 12	1/2: 12	5/8: 12	5/8: 12	3/4: 12	3/8: 12	1: 12	1: 12	1: 12
SPACING "S"	9"	9"	9"	9"	9"	9"	6"	5"	6"	6"	6"	6"	6"	6"	6"	10"	8"
© BARS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#7	#6
⊕ BARS	-	-	-	-	-	-	-	-	#7	#7	#7	#7	#7	#7	#7	#9	#8
⊙ BARS	#6	#6	#6	#6	#6	#6	#7	#7	#8	#9	#9	#10	#10	#10	#11	#11	#11
⊚ BARS	#5	#5	#6	#6	#6	#6	#7	#8	#8	#9	#9	#10	#10	#10	#11	#11	#11
h1	-	-	-	-	-	5'-9"	5'-10"	8'-0"	9'-0"	10'-1"	11'-0"	12'-1"	13'-0"	13'-0"	12'-7"	11'-6"	-
h2	-	-	-	-	-	-	-	10'-5"	13'-0"	14'-7"	17'-6"	19'-0"	20'-5"	20'-5"	18'-0"	20'-2"	-
h3	-	-	-	-	-	-	-	-	-	-	-	-	-	21'-2"	21'-10"	24'-0"	-
ZONE 1 © BARS	#5 @ 18	#5 @ 18	#5 @ 18	#5 @ 18	#5 @ 18	#5 @ 18	#5 @ 18	#5 @ 18	#5 @ 18	#5 @ 18	#5 @ 12	#5 @ 12	#5 @ 12	#5 @ 12	#5 @ 12	#5 @ 12	#5 @ 12
ZONE 2 © BARS	#5 @ 18	#5 @ 18	#5 @ 18	#5 @ 18	#5 @ 18	#5 @ 18	#5 @ 18	#5 @ 12	#5 @ 12	#5 @ 12	#5 @ 12	#5 @ 12	#5 @ 12	#5 @ 12	#5 @ 12	#5 @ 12	#5 @ 12
ZONE 1 ⊕ BARS	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18
ZONE 2 ⊕ BARS	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18
Ser: B', q _o	6.8, 0.7	6.5, 1.0	6.2, 1.3	6.0, 1.6	6.3, 2.0	7.5, 2.1	8.6, 2.2	9.8, 2.3	11.0, 2.4	12.1, 2.5	13.2, 2.8	14.4, 2.9	15.5, 3.1	16.8, 3.3	18.0, 3.5	19.2, 3.7	20.6, 3.7
Str: B', q _o	6.6, 1.6	5.0, 1.8	3.6, 2.3	3.0, 3.3	3.2, 4.0	4.3, 3.8	5.3, 3.7	6.4, 3.7	7.4, 3.8	8.2, 4.1	9.0, 4.4	9.9, 4.6	10.7, 4.9	11.7, 5.2	12.6, 5.4	13.6, 5.8	14.6, 5.9
Ext I: B', q _o	5.2, 1.1	4.7, 1.5	3.9, 2.2	3.1, 3.4	2.8, 4.8	3.2, 5.3	3.6, 5.7	4.1, 6.1	4.6, 6.4	5.0, 6.9	5.3, 7.6	5.8, 8.1	6.1, 8.9	6.7, 9.4	7.1, 10.0	7.5, 10.7	8.2, 10.9
Ext II: B', q _o	2.6, 2.2	2.7, 2.6	2.8, 3.1	2.9, 3.6	3.7, 3.6	5.2, 3.3	6.7, 3.1	8.3, 3.0	9.8, 3.0	11.2, 3.1	12.5, 3.2	13.9, 3.4	15.2, 3.6	16.7, 3.8	18.0, 4.0	19.3, 4.2	20.8, 4.3

NOTES:

- For details not shown and drainage notes see **B3-5**
- For wall stem joint details see **B0-3/3-3** and **B0-3/3-4**
- At © bars:
H < 6', no splices are allowed within 1'-8" above the top of footing.
H > 6', no splices are allowed within H/4 above the top of footing.
- Bundle © bars for H = 34' & 36'.
- Provide #6 @ 10" x 16'-0" © bars over a distance of 8'-0" measured from all expansion joints, begin wall and end wall locations. For H ≤ 14', hook © bar into footing and reduce bar length as needed to maintain Min Clr cover.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
RETAINING WALL TYPE 1 (CASE 1)
NO SCALE
RSP B3-1A DATED JULY 21, 2017 SUPERSEDES STANDARD PLAN B3-1A
DATED OCTOBER 30, 2015 - PAGE 286 OF THE STANDARD PLANS BOOK DATED 2015.

REVISED STANDARD PLAN RSP B3-1A

2015 REVISED STANDARD PLAN RSP B3-1A