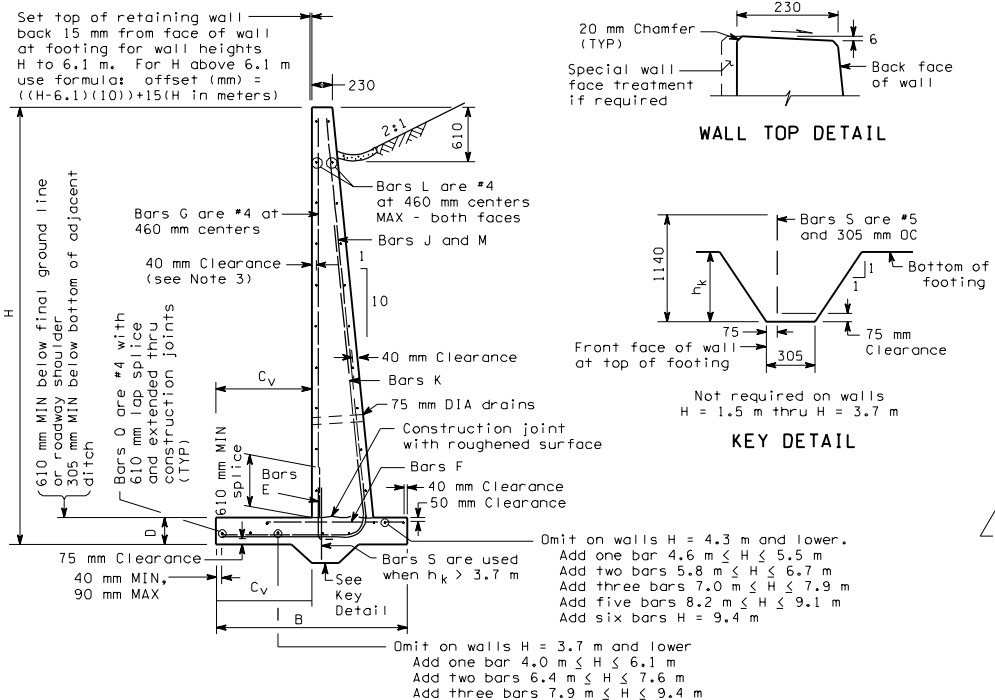
DIMENSIONS					FOOTING REINFORCEMENT																	STEM REINFORCEMENT			MATERIAL QUANTITY		H (m)
					BAR E (size #4)				BAR F			BAR K										BAR G (size #4)					
H (m)	B (mm)	C_v (mm)	D (mm)	h_k (mm)	SPACING (mm)	LENGTH (mm)	h (mm)	b (mm)	SIZE	SPACING (mm)	LENGTH (mm)	SIZE	SPACING (mm)	LENGTH (mm)	h (mm)	b (mm)								LENGTH (mm)	CONCRETE (m^3/m)	STEEL (Kg/m)	
1.5	900	380	300		460	1070	840	2400	#4	300	800	#5	300	2000	1400	700									1200	0.632	32.287	1.5
1.8	1100	460	300		460	1070	840	2400	#4	300	800	#5	300	2400	1700	800									1500	0.790	37.007	1.8
2.1	1100	530	300		460	1070	840	2400	#4	300	800	#5	300	2800	2000	900									1800	0.933	39.739	2.1
2.4	1300	530	300		460	1070	840	2400	#4	300	800	#5	300	3100	2300	900									2100	1.111	43.942	2.4
2.7	1400	610	300		460	1070	840	2400	#4	300	800	#5	300	3500	2600	1100									2400	1.297	48.662	2.7
3.0	1600	690	300		460	1070	840	2400	#4	300	800	#5	300	3900	2900	1100									2700	1.490	51.522	3.0
3.4	1800	840	300		460	1070	840	2400	#4	250	800	#5	250	4400	3200	1300									3000	1.718	61.826	3.4
3.7	2000	910	300		460	1070	840	2400	#4	200	900	#5	200	4700	3500	1400									3300	1.931	74.213	3.7
4.0	2100	990	300	300	460	1070	840	2400	#5	250	1000	#5	180	5200	3800	1500									3600	2.340	93.262	4.0
4.3	2400	1070	300	300	460	1070	840	2400	#5	180	1100	#6	180	5700	4100	1600									3900	2.599	124.988	4.3
4.6	2600	1140	300	300	460	1070	840	2400	#5	150	1200	#6	150	6100	4400	1800									4200	2.862	149.749	4.6
4.9	2800	1220	380	300	460	1120	840	2400	#6	150	1500	#6	150	6500	4700	1900									4500	3.299	166.047	4.9
5.2	3000	1300	380	300	460	1120	910	2400	#6	150	1700	#6	130	6900	5100	2000									4700	3.597	176.521	5.2
5.5	3200	1300	460	300	460	1120	910	2400	#6	130	1800	#6	130	7200	5400	2000									5100	4.064	188.730	5.5
5.8	3400	1370	460	460	460	1190	990	2400	#7	150	2200	#7	150	7900	5700	2100	BAR M					BAR J			5300	4.558	250.459	5.8
6.1	3700	1370	530	460	460	1270	1070	2400	#7	130	2400	#7	130	8000	6000	2100	SIZE	SPACING (mm)	LENGTH (mm)	h (mm)	b (mm)	SIZE	SPACING (mm)	LENGTH (mm)	5500	5.117	303.536	6.1
6.4	3800	1520	610	460	460	1350	1140	2400	#8	200	2600	#8	280	6100	3900	2300	#8	280	3900	1800	2300	#8	280	5800	5800	5.671	334.822	6.4
6.7	4000	1600	690	460	460	1420	1220	2400	#8	180	2800	#8	280	6300	4100	2400	#8	280	4100	1900	2400	#8	280	6000	6000	6.306	357.080	6.7
7.0	4300	1680	690	460	460	1420	1220	2400	#8	150	2900	#8	250	6600	4200	2500	#8	250	4200	1900	2500	#8	250	6300	6300	6.720	405.586	7.0
7.3	4500	1750	760	460	460	1500	1300	2400	#8	150	3000	#8	230	6800	4400	2600	#8	230	4400	1900	2600	#8	230	6500	6500	7.420	453.042	7.3
7.6	4700	1830	840	460	460	1570	1370	2400	#8	150	3100	#9	250	7400	4900	2700	#9	250	4800	2300	2700	#9	250	6800	6700	8.157	498.867	7.6
7.9	5000	1910	910	460	460	1650	1450	2400	#8	130	3300	#9	230	7700	5000	2800	#9	230	5000	2400	2800	#9	230	7000	7000	8.937	575.273	7.9
8.2	5100	1980	990	460	460	1730	1520	2400	#8	130	3300	#9	200	7900	5200	2900	#9	200	5200	2500	2900	#9	200	7200	7200	9.680	643.344	8.2
8.5	5300	2060	1070	460	460	1800	1600	2400	#8	130	3500	#9	200	8200	5400	3000	#9	200	5400	2600	3000	#9	200	7500	7400	10.535	667.111	8.5
8.8	5600	2130	1140	460	460	1880	1680	2400	#8	130	3600	#10	230	8800	5900	3100	#10	230	5900	3000	3100	#10	230	7700	7600	11.428	735.768	8.8
9.1	5800	2210	1220	460	460	1960	1750	2400	#9	150	4100	#10	200	9100	6100	3300	#10	200	6100	3100	3300	#10	200	7900	7900	12.361	795.556	9.1
9.4	5900	2290	1300	460	460	2030	1830	2400	#9	130	4100	#10	200	9400	6200	3400	#10	200	6300	3200	3400	#10	200	8200	8100	13.237	832.726	9.4

NOTES

1. All concrete shall be Class 28.
2. For backfill requirements, see Standard Plan "Backfill for Retaining Walls."
3. When Wall Type 3-SW (saltwater) is specified, the concrete cover over steel in the front face and the total wall thickness shall be increased by 25 mm.
4. When Wall Type 3-SW (saltwater) is specified, concrete in the table column "Material Quantity" shall be increased by 0.0254 x H m^3/m (H in meters).

Bar	Radius (mm)
#5	230
#6	280
#7	330
#8	380
#9	460
#10	510

Bar	MIN Splice (mm)
#4	610
#5	610
#6	640
#7	890
#8	1140
#9	1450
#10	1850

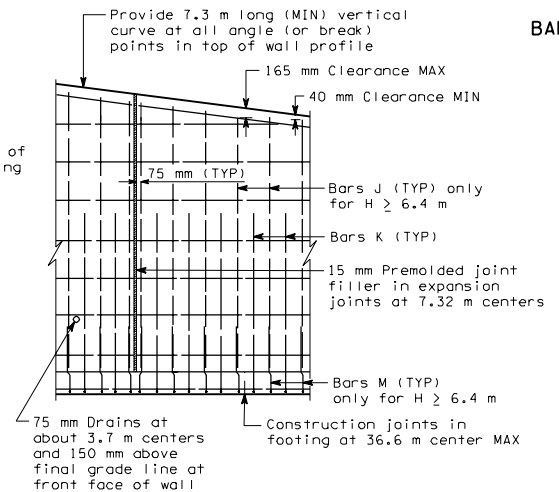


SECTION - VERTICAL FACE

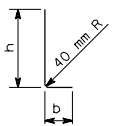
WALL TOP DETAIL

Not required on walls H = 1.5 m thru H = 3.7 m

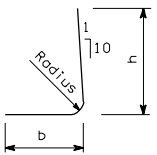
KEY DETAIL



ELEVATION



BAR E



BARS K AND M

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED

REINFORCED CONCRETE RETAINING WALL TYPE 3 AND 3 SW

2:1 BACKSLOPE WITH VERTICAL FRONT FACE

STANDARD PLAN D-1c

APPROVED FOR PUBLICATION

STATE DESIGN ENGINEER — DATE

WASHINGTON STATE DEPARTMENT OF TRANSPORTATION
OLYMPIA, WASHINGTON