

TYPE 1A - REINFORCED CONCRETE RETAINING WALL TABLE OF DIMENSIONS AND REINFORCING STEEL				
Layout and reinforcement data	Design H	4'	6'	8'
	W	3'-5"	4'-11"	6'-5"
	F	1'-4"	1'-4"	1'-4"
	C	1'	1'-3"	1'-9"
	Batter, Z	1/2	1/2	1/2
	Ⓐ bars	-	-	-
	Ⓑ bars	-	-	-
Ⓒ bars	#5@12"	#5@12"	#5@12"	
Ⓓ bars	#5@12"	#5@12"	#5@12"	
Ⓔ bars	#5@18"	#5@18"	#5@18"	
L1	-	-	-	
L2	-	-	-	
Est'd Qty	Concrete ft <sup>3</sup> /ft	8.9	13.3	17.9
	Reinf lbs/ft	31	42	54
Max Toe Pressure (ksf)	Level Slope w/surch.	1.2	1.4	1.6
	Level Slope @ 0.15g	1.0	1.3	1.5
	Level Slope @ 0.25g	1.1	1.4	1.6
	Level Slope @ 0.35g	1.1	1.4	1.7
	Level Slope @ 0.40g	1.2	1.5	1.7
	Level Slope @ 0.50g	1.2	1.6	1.8

**GENERAL NOTES:**

1. Design Specifications: AASHTO LRFD Bridge Design Specifications, 6th Edition 2012.

2. Loading: Live load surcharge pressure equal to 2 feet of earth.

Seismic Acceleration = 0.15g, 0.25g, 0.35g, 0.40g and 0.50g, where 1/2 the peak ground acceleration is used in the design.

3. Concrete: All concrete shall be class A or AA modified (major) with f'c = 4000 psi at 28 days.

4. Reinforcing Steel: All reinforcing steel shall be ASTM A615 grade 60 or A706.

5. Design Data: Cantilevered Walls are designed based on the following parameters.

Soil Properties:

Internal Angle of Friction = 32 degrees  
 Unit Weight = 120 pcf  
 Cohesion = 0.200 ksf  
 Equivalent Active Fluid Pressure = 0.036 kcf (Level Backfill)  
 Equivalent Active Fluid Pressure = 0.060 kcf (2H: 1V Backfill)  
 Equivalent Active Fluid Pressure = Rankine Method (Sloping Backfill)  
 Equivalent Passive Fluid Pressure = 0.360 pcf (Top of Footing Down)  
 Coefficient of Friction between Concrete Footing and Foundation Soil = 0.450

6. Return Walls: Return wall not required unless shown in plans. For dimension (D), see project plans.

7. Drainage: Drainage system (gutter, drain, pipe) not required unless specified in the plans.

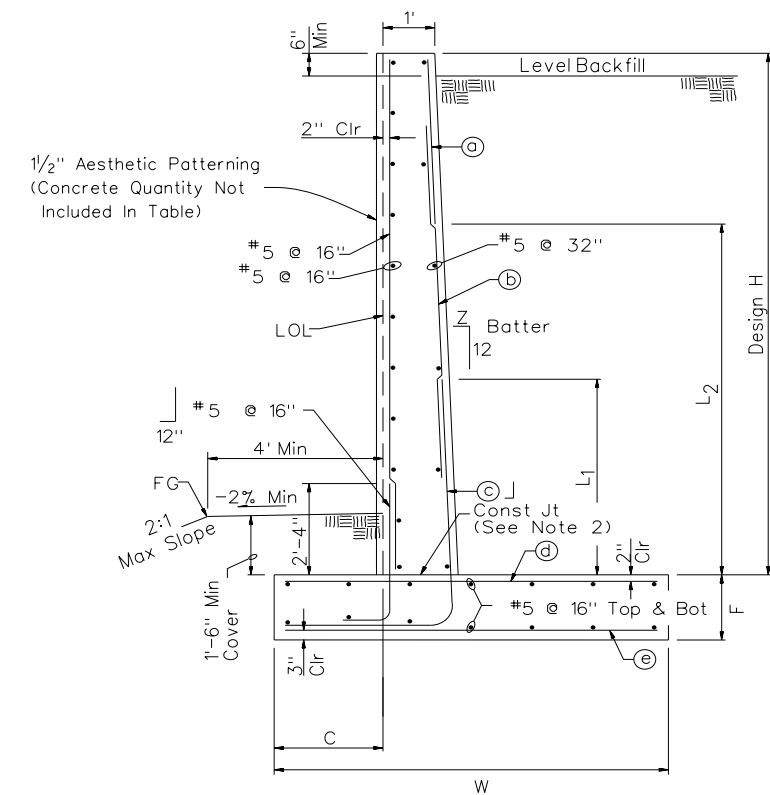
Backfill Condition	Wall Type Required for Seismic Acceleration				
	0.15g	0.25g	0.35g	0.40g	0.50g
Level backfill w/surcharge	1A	1A	1A	1A	1A

**NOTES:**

1. FOR DETAILS NOT SHOWN AND DRAINAGE REQUIREMENTS SEE STANDARD PLAN SHEETS B-30.1.3 THRU B-30.1.5.

2. ROUGHEN CONSTRUCTION JOINT SURFACE TO 1/4" AMPLITUDE.

3. THIS SHEET SUPERCEDES STANDARD PLAN SHEET B-30.1.1



TYPICAL SECTION: TYPE 1A

STANDARD BAR LAPS		
BAR #	UNCOATED	EPOXIED
4	20"	23"
5	26"	30"
6	31"	36"
7	39"	45"
8	51"	59"
9	59"	67"
10	75"	85"
11	91"	102"

STATE OF NEVADA  
DEPARTMENT OF TRANSPORTATION

**SPECIAL DETAIL TYPE 1A  
CANTILEVER CONCRETE  
RETAINING WALLS (LRFD)**

B-30.1.1-SD	Signed Original On File
ADOPTED 03/13	REVISOR CHIEF BRIDGE ENGINEER