

GENERAL NOTES

DESIGN:.....AASHTO LRFD Bridge Design Specifications, 2017 Edition, with latest interim specifications.

LIVE LOAD SURCHARGE:.....Up to 2' of fill on level ground surface.

ADDITIONAL DEAD LOAD:.....Up to 2" Non-Structural Concrete on exterior face included.

SEISMIC PARAMETERS:..... $A_s \leq 0.40g$

FOUNDATION SOIL:..... $\phi \geq 28^\circ$; Special footing design is required where foundation material is incapable of supporting bearing stress listed in the table.

RETAINED SOIL:..... $32^\circ \leq \phi \leq 36^\circ$
 $120 \text{ pcf} \leq \gamma \leq 140 \text{ pcf}$

REINFORCED CONCRETE:.....Class A Concrete, $f'_c = 4,000 \text{ psi}$

REINFORCEMENT:.....ASTM A706 or A615, Grade 60, $F_y = 60,000 \text{ psi}$

LOAD COMBINATIONS AND LIMIT STATES:.....Service I = $1.0DC + 1.0EV + 1.0EH + 1.0LS$
 Strength I = $\alpha DC + \beta EV + \eta EH + 1.75LS$

Where:

α :.....1.25 or 0.90, Whichever Controls Design

β :.....1.35 or 1.00, Whichever Controls Design

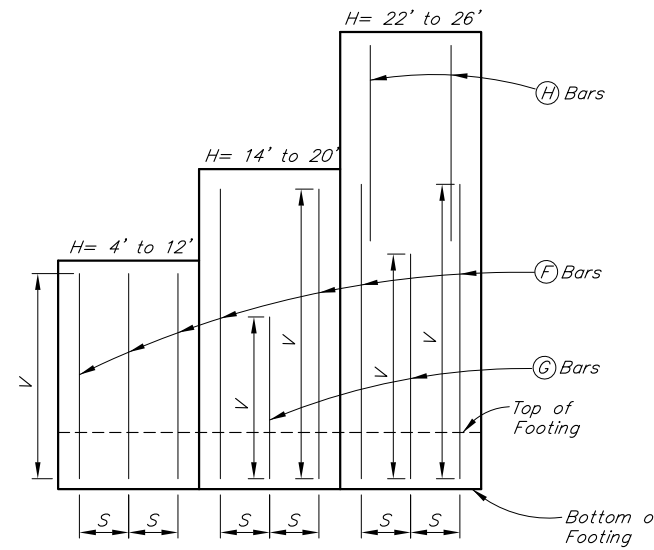
η :.....1.50 or 0.90, Whichever Controls Design

DC:.....Dead Load of Structure Components

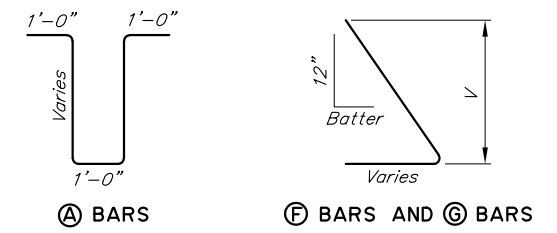
EH:.....Horizontal Earth Fill Pressure

EV:.....Vertical Earth Pressure from Earth Fill Weight

LS:.....Live Load Surcharge



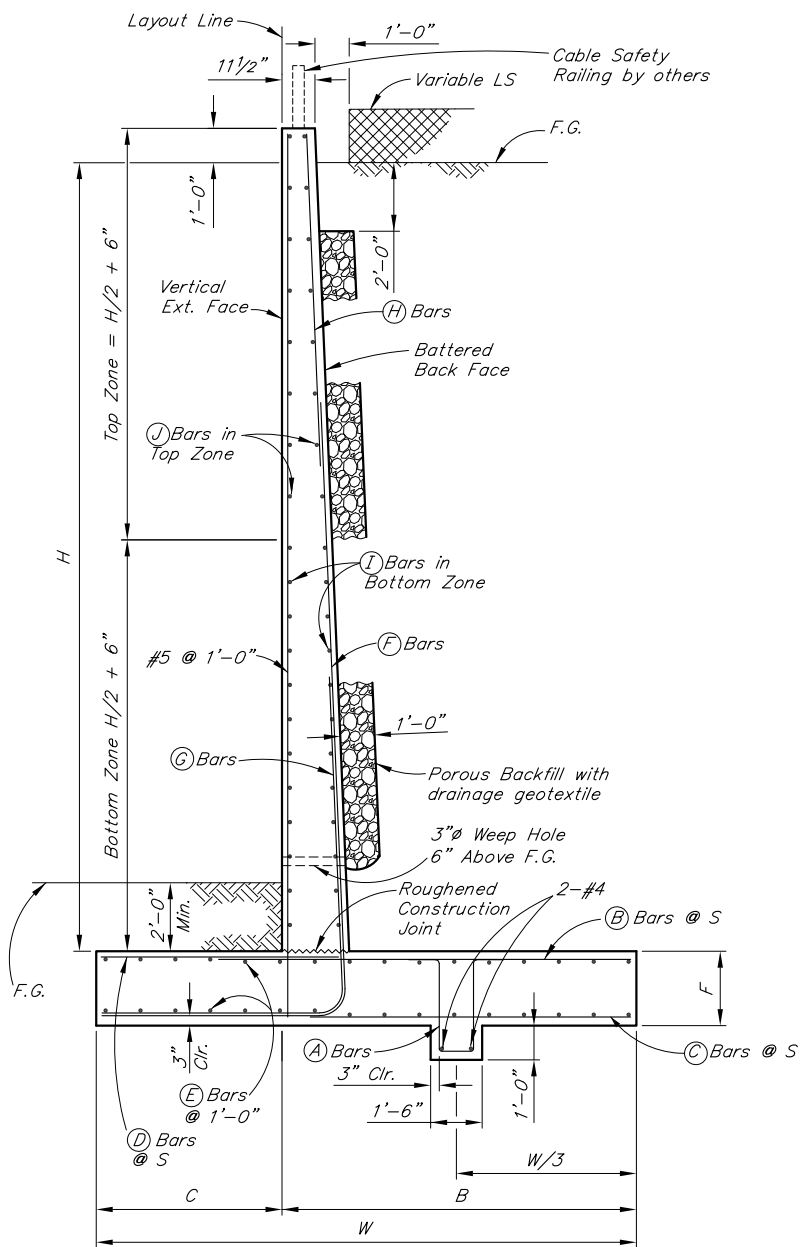
BACK FACE ELEVATION
No Scale



See "B-07.10" for details not shown

ABBREVIATIONS:

- Ser I - Service I limit state
- Str I - Strength I limit state
- B' - Effective footing width (ft)
- qo - Gross uniform bearing stress (ksf)
- F.G. - Finished grade



TYPICAL SECTION
No Scale

TABLE OF DIMENSIONS, REINFORCING STEEL, AND DATA

DIMENSIONS							A BARS		B BARS		C BARS		D BARS		E BARS		F BARS		G BARS			H BARS		I BARS		J BARS		EFFECTIVE FOOTING WIDTHS AND BEARING PRESSURES		Steel (Lbs/ft) Concrete (CF/ft)		
H	W	F	C	B	Batter	Spacing S	Size	Spacing	Length	Size	Length	Size	Length	Size	Length	Size	V	Length	Size	V	Length	Size	Length	Size	Spacing	Size	Spacing	Ser I B'-qo	Str I B'-qo			
4'-0"	4'-0"	1'-0"	1'-0"	3'-0"	1/2":12"	12"	#4	1'-6"	6'-2"	#4	2'-11"	#4	2'-6"	#4	1'-8"	#4	5'-7"	7'-5"	-	-	-	-	-	#4	1'-6"	#4	1'-6"	3.6-1.0	3.5-1.4	30-10.9		
6'-0"	4'-3"	1'-0"	1'-3"	3'-0"	1/2":12"	12"	#4	1'-6"	6'-2"	#4	2'-10"	#4	2'-5"	#4	1'-11"	#4	7'-7"	9'-9"	-	-	-	-	-	#4	1'-0"	#4	1'-6"	3.4-1.4	3.2-2.0	38-13.5		
8'-0"	4'-6"	1'-0"	1'-6"	3'-0"	1/2":12"	9"	#4	1'-6"	6'-2"	#4	2'-9"	#4	2'-4"	#4	2'-2"	#4	9'-7"	12'-1"	-	-	-	-	-	#4	1'-0"	#4	1'-6"	3.1-2.0	2.7-3.0	49-16.4		
10'-0"	5'-0"	1'-2"	1'-6"	3'-6"	1/2":12"	9"	#4	1'-6"	6'-6"	#4	3'-2"	#4	2'-9"	#4	2'-2"	#4	#5	11'-9"	14'-4"	-	-	-	-	-	#4	1'-0"	#4	1'-0"	3.0-2.8	2.6-4.4	66-20.4	
12'-0"	5'-9"	1'-3"	1'-9"	4'-0"	1/2":12"	9"	#4	1'-6"	6'-8"	#4	3'-11"	#4	3'-2"	#4	2'-5"	#4	#6	13'-10"	16'-9"	-	-	-	-	-	#4	1'-0"	#4	1'-0"	3.5-3.2	2.9-5.1	87-24.7	
14'-0"	6'-6"	1'-3"	2'-0"	4'-6"	1/2":12"	6"	#4	1'-6"	6'-8"	#4	4'-4"	#4	3'-7"	#4	2'-8"	#4	#6	15'-10"	19'-1"	#6	6'-4"	11'-1"	-	-	-	#4	1'-0"	#4	1'-0"	3.9-3.6	3.4-5.7	110-28.7
16'-0"	7'-3"	1'-6"	2'-6"	4'-9"	1/2":12"	6"	#4	1'-6"	7'-2"	#4	4'-6"	#4	3'-9"	#4	3'-2"	#4	#7	18'-1"	21'-11"	#7	7'-7"	12'-11"	-	-	-	#4	1'-0"	#4	1'-0"	4.3-4.0	3.6-6.4	144-34.7
18'-0"	8'-3"	1'-8"	2'-9"	5'-6"	1/2":12"	6"	#4	1'-6"	7'-6"	#5	5'-7"	#4	4'-5"	#4	3'-5"	#4	#8	20'-3"	24'-5"	#8	8'-8"	14'-4"	-	-	-	#5	1'-0"	#4	1'-0"	5.1-4.2	4.4-6.6	197-41.0
20'-0"	9'-6"	1'-8"	3'-0"	6'-6"	5/8":12"	6"	#4	1'-6"	7'-6"	#5	6'-3"	#4	5'-1"	#4	3'-8"	#5	#8	22'-3"	27'-0"	#8	10'-0"	15'-7"	-	-	-	#5	1'-0"	#4	1'-0"	6.5-4.3	5.8-6.5	225-49.0
22'-0"	11'-0"	2'-0"	3'-6"	7'-6"	5/8":12"	6"	#4	1'-6"	8'-2"	#6	7'-7"	#4	6'-0"	#4	4'-2"	#5	#8	17'-8"	23'-0"	#8	12'-5"	17'-9"	#5	16'-10"	#5	1'-0"	#4	1'-0"	8.1-4.3	7.4-6.3	258-59.4	
24'-0"	12'-3"	2'-3"	4'-0"	8'-3"	5/8":12"	6"	#4	1'-6"	8'-8"	#7	8'-7"	#4	6'-8"	#4	4'-8"	#5	#9	20'-10"	26'-9"	#9	13'-11"	19'-10"	#5	18'-2"	#5	1'-0"	#4	1'-0"	9.4-4.4	8.7-6.5	332-69.3	
26'-0"	14'-3"	2'-9"	4'-9"	9'-6"	5/8":12"	6"	#4	1'-6"	9'-8"	#8	10'-2"	#4	7'-10"	#4	5'-5"	#5	#10	24'-5"	31'-3"	#10	15'-7"	22'-5"	#5	19'-6"	#5	1'-0"	#5	1'-0"	11.8-4.4	11.1-6.3	449-85.6	

State of Alaska DOT&PF
 ALASKA STANDARD PLAN
CANTILEVER RETAINING WALL TYPE I

Adopted as an Alaska Standard Plan by: *Carolyn Morehouse*
 Carolyn Morehouse, P.E.
 Chief Engineer

Adoption Date: 07/17/2020

Last Code and Stds. Review By: NWM Date: 7/17/2020

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DRAWN BY: MCM CHECKED BY: BAS DESIGNED BY: NWM B-04.10