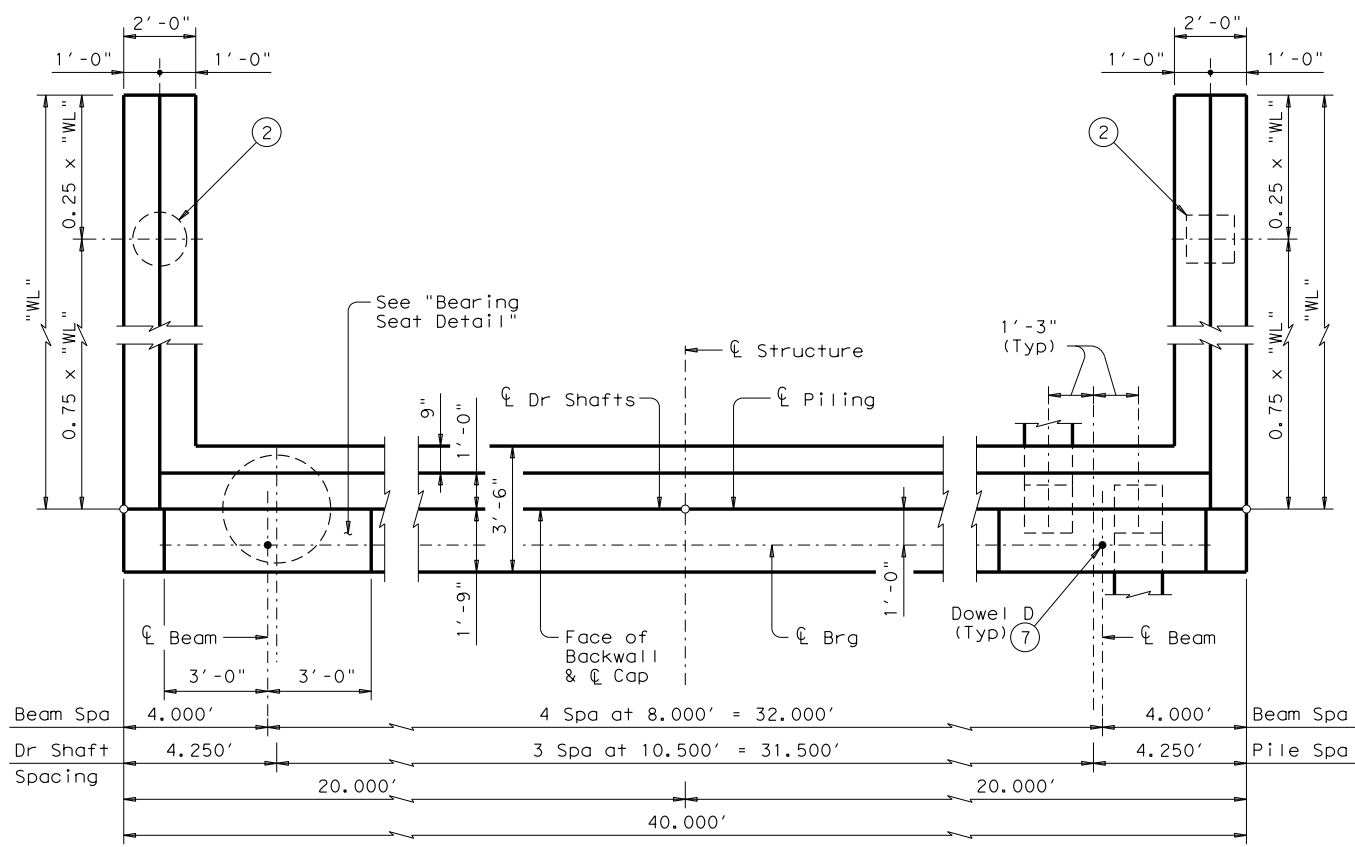
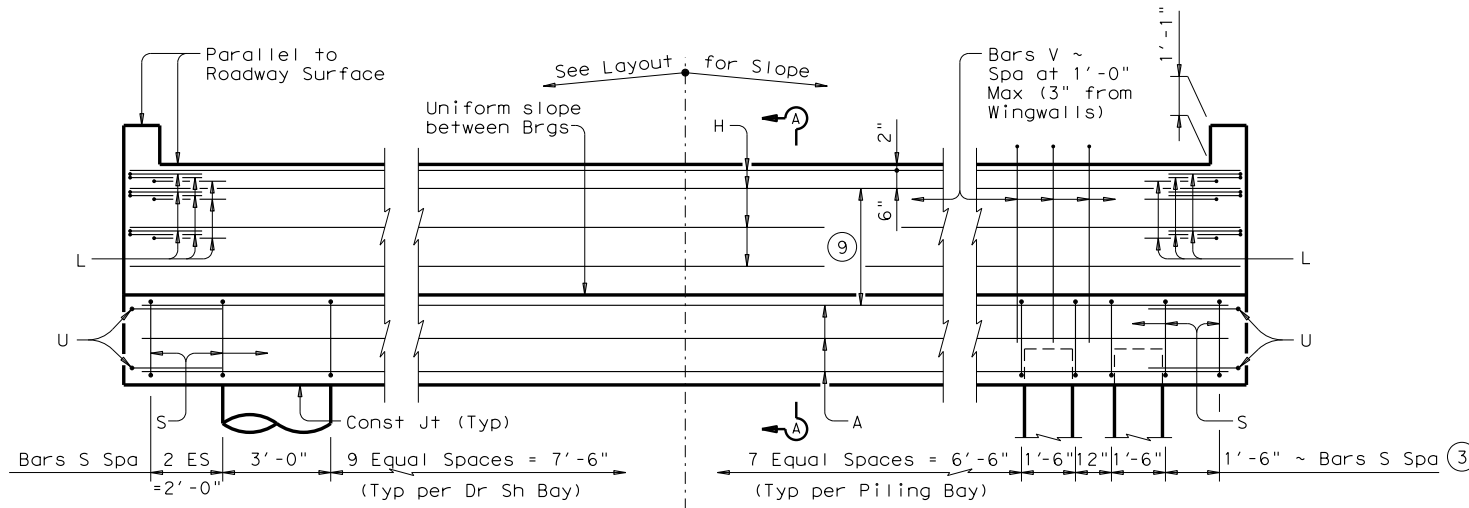


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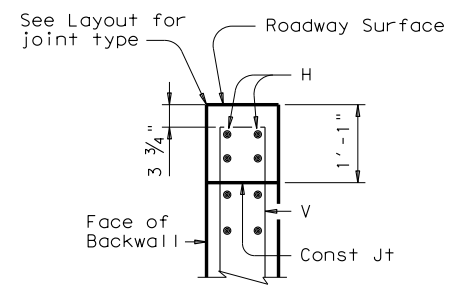


SHOWING DRILLED SHAFTS PLAN 1 SHOWING PILES



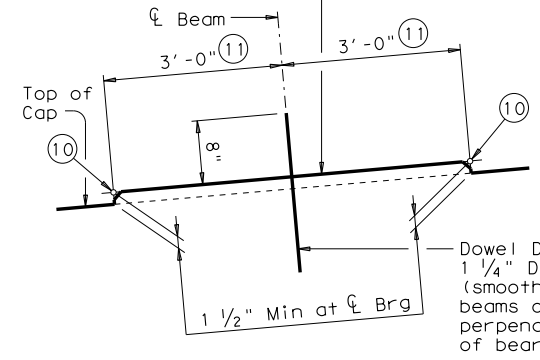
SHOWING DRILLED SHAFTS ELEVATION SHOWING PILES

Header Slope	Beam Type	Wingwall Type	Wingwall Lgth "WL"
2:1	XB20	Cantilevered	7.000'
	XB28	Cantilevered	8.000'
	XB34	Cantilevered	9.000'
	XB40	Cantilevered	10.000'
3:1	XB20	Cantilevered	10.000'
	XB28	Cantilevered	12.000'
	XB34	Founded	13.000'
	XB40	Founded	15.000'



BACKWALL DETAIL (Without Approach Slab) 6

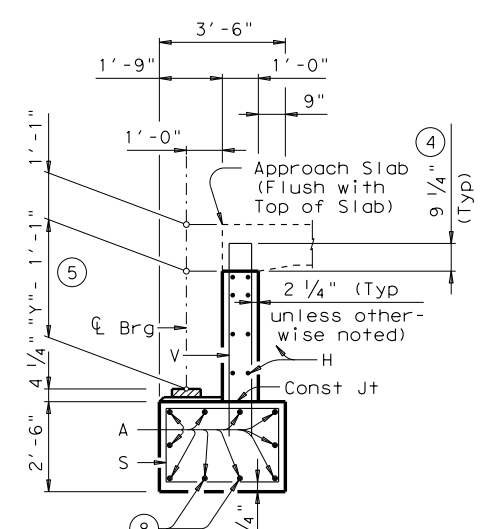
Level along a line perpendicular to backwall. Uniform slope between Left and Right Bearing Seat Elevations with wood float finish.



BEARING SEAT DETAIL

(Bearing surface must be clean and free of all loose material before placing bearing pad.)

- See Table A for variable dimensions based on header slope and beam type.
- See Table A to determine if wingwall foundations are required.
- For Piling larger than 16" adjust Bars S spacing as required to avoid Piling.
- Increase as required to maintain 3 3/4" from Finished Grade.
- See Span details for "Y" value.
- See Bridge Layout to determine if Approach Slab is present.
- Omit Dowels D at end of unit. Deduct 14 lbs from reinforcing steel total.
- With pile foundations, move Bars A shown to clear piles.
- Spacing based on beam type:  
XB20 ~ 2 Equal Spaces  
XB28 ~ 3 Equal Spaces  
XB34 ~ 3 Equal Spaces  
XB40 ~ 3 Equal Spaces
- Right and left elevations and locations are provided elsewhere.
- Measured along  $\bar{C}$  of Bearing.



SECTION A-A (With Approach Slab) 6

TABLE OF FOUNDATION LOADS

Span Length	Beam Types 5XB20 Thru 5XB40	
	Tons/Shaft	Tons/Pile
40	66	50
45	71	52
50	76	55
55	80	57
60	85	59
65	89	62
70	94	64
75	98	66
80	102	68
85	107	71
90	111	73
95	115	75
100	119	77
105	124	79

**GENERAL NOTES:**  
 Designed according to AASHTO LRFD Specifications.  
 Concrete strength  $f'c = 3,600$  psi.  
 All cap and wall reinforcing must be Grade 60.  
 Galvanize dowel bars D.  
 See Bridge Layout for header slope and foundation type, size and length.  
 See Foundation Detail Standard Sheet, FD, for all foundation details and notes.  
 See Concrete Riprap Standard Sheet, CRR, for riprap attachment details, if applicable.  
 See applicable rail details for rail anchorage in wingwalls.  
 These abutment details may be used with Standard SXB-38 only.

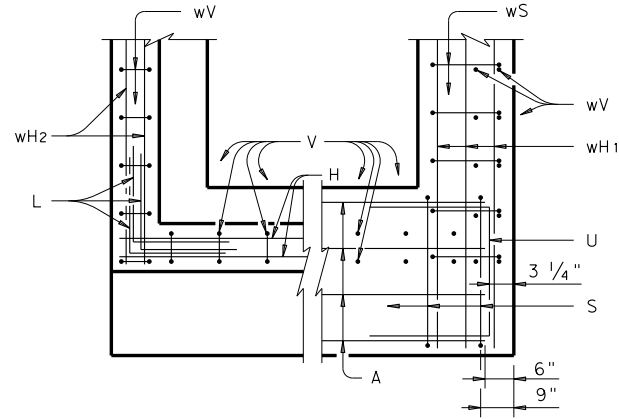


ABUTMENTS  
 TYPE 5XB20 THRU 5XB40  
 PRESTR CONC X-BEAMS  
 38' ROADWAY

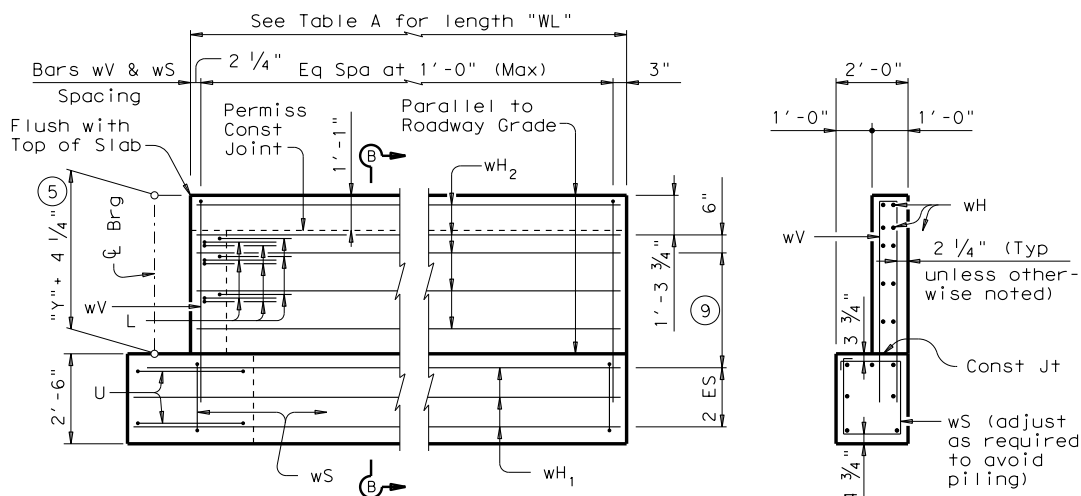
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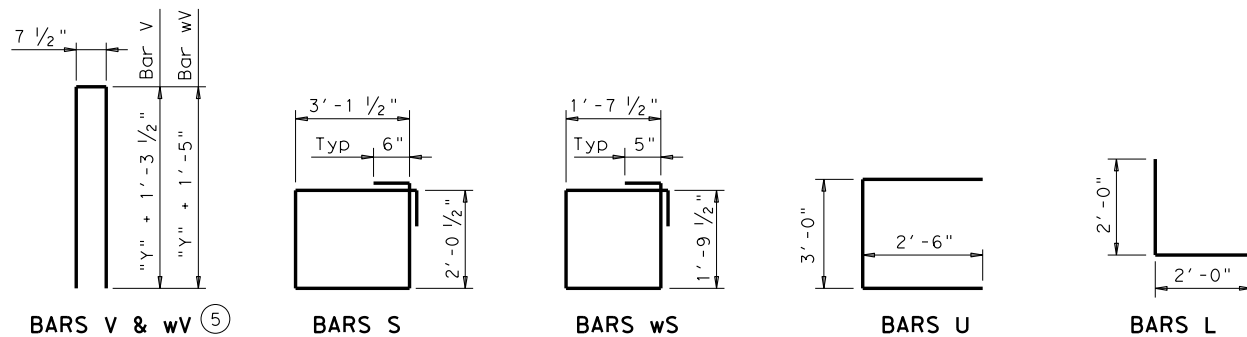


BACKWALL CAP  
CORNER DETAILS



WINGWALL ELEVATION

SECTION B-B



BARS V & wV

BARS S

BARS wS

BARS U

BARS L

- ⑤ See Span details for "Y" value.
- ⑦ Omit Dowels D at end of unit. Deduct 14 lbs from reinforcing steel total.
- ⑨ Spacing based on beam type:  
XB20 ~ 2 Equal Spaces  
XB28 ~ 3 Equal Spaces  
XB34 ~ 3 Equal Spaces  
XB40 ~ 3 Equal Spaces
- ⑫ Quantities shown are for one Abutment only (with Approach Slab). With no Approach Slab, add 1.5 CY Class "C" Concrete and 238 Lbs Reinforcing Steel for 4 additional H bars.

TABLES OF ESTIMATED QUANTITIES WITH 2:1 HEADER SLOPE ⑫

TYPE 5XB20 BEAMS					TYPE 5XB28 BEAMS					TYPE 5XB34 BEAMS					TYPE 5XB40 BEAMS								
Bar	No.	Size	Length	Weight	Bar	No.	Size	Length	Weight	Bar	No.	Size	Length	Weight	Bar	No.	Size	Length	Weight				
A	10	#11	39'-0"	2,072	A	10	#11	39'-0"	2,072	A	10	#11	39'-0"	2,072	A	10	#11	39'-0"	2,072				
D ⑦	2	1 1/4"D	1'-8"	14	D ⑦	2	1 1/4"D	1'-8"	14	D ⑦	2	1 1/4"D	1'-8"	14	D ⑦	2	1 1/4"D	1'-8"	14				
H	6	#6	39'-8"	357	H	8	#6	39'-8"	477	H	8	#6	39'-8"	477	H	8	#6	39'-8"	477				
L	18	#6	4'-0"	108	L	18	#6	4'-0"	108	L	18	#6	4'-0"	108	L	18	#6	4'-0"	108				
S	36	#5	11'-4"	426	S	36	#5	11'-4"	426	S	36	#5	11'-4"	426	S	36	#5	11'-4"	426				
U	4	#6	8'-0"	48	U	4	#6	8'-0"	48	U	4	#6	8'-0"	48	U	4	#6	8'-0"	48				
V	39	#5	8'-5"	342	V	39	#5	9'-9"	397	V	39	#5	10'-9"	437	V	39	#5	11'-9"	478				
wH 1	14	#6	8'-5"	177	wH 1	14	#6	9'-5"	198	wH 1	14	#6	10'-5"	219	wH 1	14	#6	11'-5"	240				
wH 2	16	#6	6'-8"	160	wH 2	20	#6	7'-8"	230	wH 2	20	#6	8'-8"	260	wH 2	20	#6	9'-8"	290				
wS	16	#4	7'-8"	82	wS	18	#4	7'-8"	92	wS	20	#4	7'-8"	102	wS	22	#4	7'-8"	113				
wV	16	#5	8'-8"	145	wV	18	#5	10'-0"	188	wV	20	#5	11'-0"	229	wV	22	#5	12'-0"	275				
Reinforcing Steel				Lb	3,931	Reinforcing Steel				Lb	4,250	Reinforcing Steel				Lb	4,392	Reinforcing Steel				Lb	4,541
Class "C" Concrete				CY	19.3	Class "C" Concrete				CY	21.2	Class "C" Concrete				CY	22.9	Class "C" Concrete				CY	24.6

TABLES OF ESTIMATED QUANTITIES WITH 3:1 HEADER SLOPE ⑫

TYPE 5XB20 BEAMS					TYPE 5XB28 BEAMS					TYPE 5XB34 BEAMS					TYPE 5XB40 BEAMS								
Bar	No.	Size	Length	Weight	Bar	No.	Size	Length	Weight	Bar	No.	Size	Length	Weight	Bar	No.	Size	Length	Weight				
A	10	#11	39'-0"	2,072	A	10	#11	39'-0"	2,072	A	10	#11	39'-0"	2,072	A	10	#11	39'-0"	2,072				
D ⑦	2	1 1/4"D	1'-8"	14	D ⑦	2	1 1/4"D	1'-8"	14	D ⑦	2	1 1/4"D	1'-8"	14	D ⑦	2	1 1/4"D	1'-8"	14				
H	6	#6	39'-8"	357	H	8	#6	39'-8"	477	H	8	#6	39'-8"	477	H	8	#6	39'-8"	477				
L	18	#6	4'-0"	108	L	18	#6	4'-0"	108	L	18	#6	4'-0"	108	L	18	#6	4'-0"	108				
S	36	#5	11'-4"	426	S	36	#5	11'-4"	426	S	36	#5	11'-4"	426	S	36	#5	11'-4"	426				
U	4	#6	8'-0"	48	U	4	#6	8'-0"	48	U	4	#6	8'-0"	48	U	4	#6	8'-0"	48				
V	39	#5	8'-5"	342	V	39	#5	9'-9"	397	V	39	#5	10'-9"	437	V	39	#5	11'-9"	478				
wH 1	14	#6	11'-5"	240	wH 1	14	#6	13'-5"	282	wH 1	14	#6	14'-5"	303	wH 1	14	#6	16'-5"	345				
wH 2	16	#6	9'-8"	232	wH 2	20	#6	11'-8"	350	wH 2	20	#6	12'-8"	381	wH 2	20	#6	14'-8"	441				
wS	22	#4	7'-8"	113	wS	26	#4	7'-8"	133	wS	28	#4	7'-8"	143	wS	32	#4	7'-8"	164				
wV	22	#5	8'-8"	199	wV	26	#5	10'-0"	271	wV	28	#5	11'-0"	321	wV	32	#5	12'-0"	401				
Reinforcing Steel				Lb	4,151	Reinforcing Steel				Lb	4,578	Reinforcing Steel				Lb	4,730	Reinforcing Steel				Lb	4,974
Class "C" Concrete				CY	21.0	Class "C" Concrete				CY	23.8	Class "C" Concrete				CY	25.6	Class "C" Concrete				CY	28.2

ABUTMENTS  
TYPE 5XB20 THRU 5XB40  
PRESTR CONC X-BEAMS  
38' ROADWAY

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