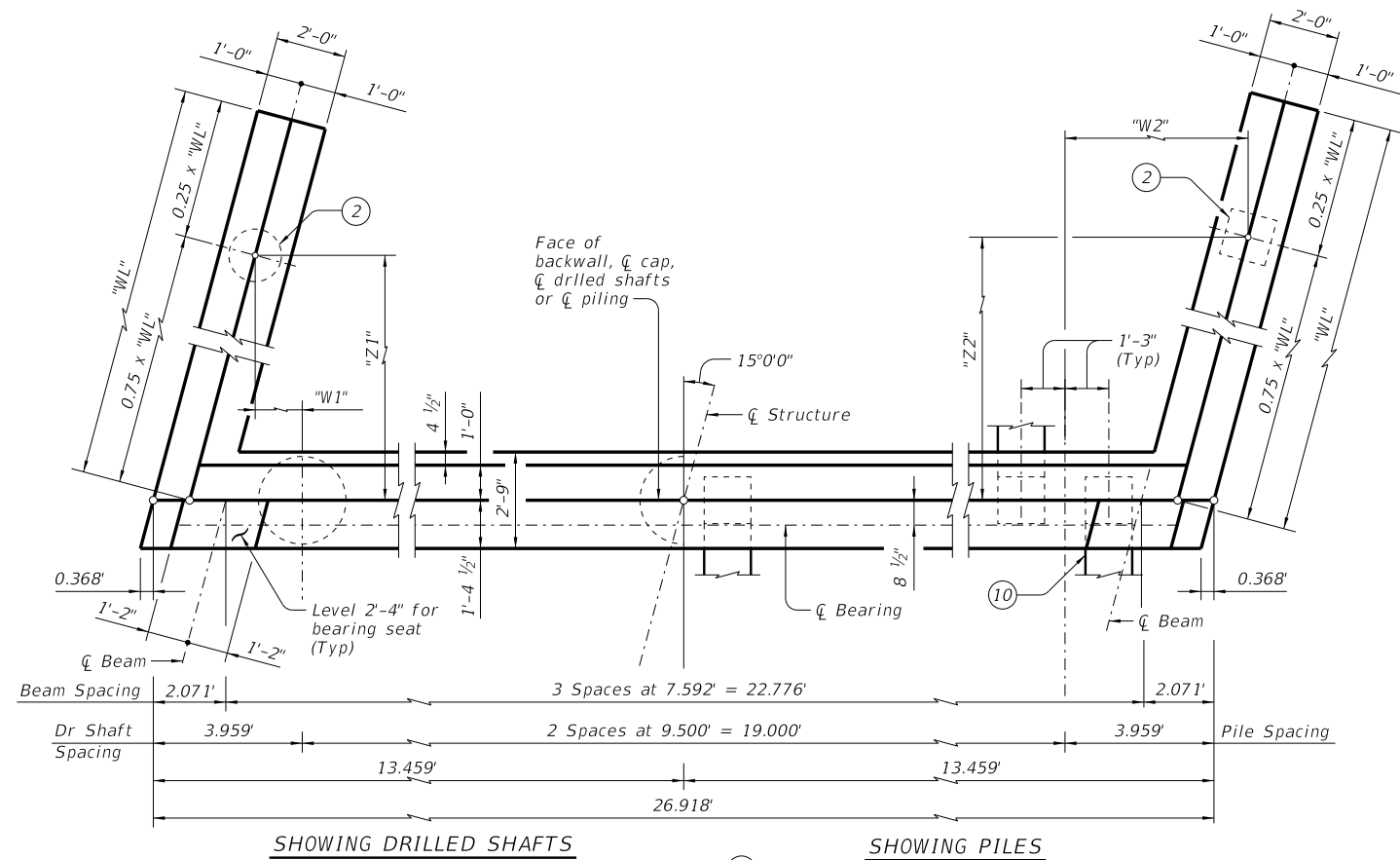
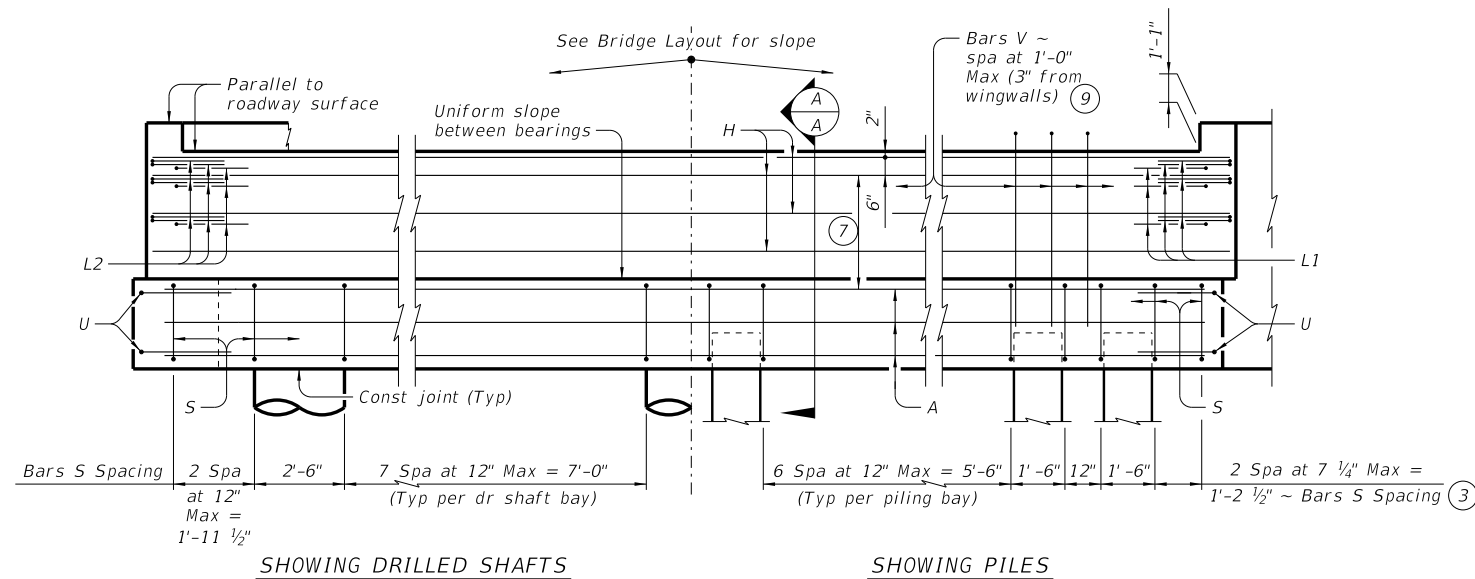


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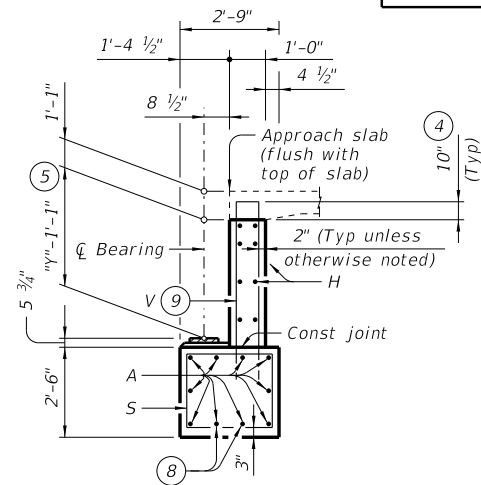
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PLAN 1



ELEVATION



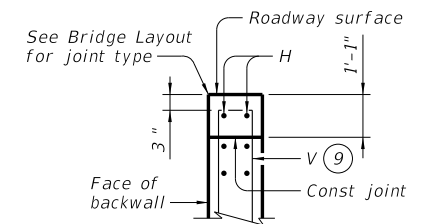
SECTION A-A

(With approach slab) 6

- 1 See Table A for variable dimensions based on header slope and beam type.
- 2 See Table A to determine if wingwall foundations are required.
- 3 For piling larger than 16", adjust Bars S spacing as required to avoid piling.
- 4 Increase as required to maintain 3" from finished grade.
- 5 See Steel Beam Standard Design (SBSD-24) standard for "Y" value.
- 6 See Bridge Layout to determine if approach slab is present.
- 7 Use 2 spaces at 12" Max for W18 through W24 beams and 3 spaces at 12" Max for W27 beams and larger.
- 8 With pile foundations, replace Bars A located at bottom centerline of cap with 2 ~ #11 x 5'-6" (per bay) placed between piling groups. Deduct 159 lbs total from reinforcing steel total.
- 9 Field bend as needed to clear piles.
- 10 See Detail "A" on FD standard.

TABLE A

Header Slope	Beam Type	Wingwall Type	Wingwall length "WL"	"W1"	"Z1"	"W2"	"Z2"				
2:1	W18	Cantilevered	7.000'	Not Applicable							
	W21	Cantilevered	7.000'								
	W24	Cantilevered	8.000'								
	W27	Cantilevered	8.000'								
	W30	Cantilevered	9.000'								
	W33	Cantilevered	9.000'								
3:1	W36	Cantilevered	10.000'	Not Applicable							
	W40	Cantilevered	10.000'								
	W18	Cantilevered	10.000'								
	W21	Cantilevered	10.000'								
	W24	Cantilevered	11.000'								
	W27	Cantilevered	12.000'								
	W30	Founded	13.000'					0.400'	9.418'	5.447'	9.418'
	W33	Founded	14.000'					0.206'	10.142'	5.641'	10.142'
W36	Founded	14.000'	0.206'	10.142'	5.641'	10.142'					
W40	Founded	15.000'	0.012'	10.867'	5.835'	10.867'					



BACKWALL DETAIL

(Without approach slab) 6

MATERIAL NOTES:

Provide Class C Concrete, $f'_c = 3,600$ psi.
Provide Class C (HPC) Concrete if shown elsewhere in the plans.
Provide Grade 60 reinforcing steel.

GENERAL NOTES:

Designed according to AASHTO LRFD Bridge Design Specifications. Details are drawn showing right forward skew. See Bridge Layout for actual skew direction. See Bridge Layout for beam type, header slope, and foundation type, size and length. See Common Foundation Details (FD) standard sheet for all foundation details and notes. See Concrete Riprap (CRR) standard sheet or Stone Riprap (SRR) standard sheet for riprap attachment details, if applicable. See Standard Erection and Bracing Requirements (SBBR) standard sheet for location and size of anchor bolt required for erection bracing. See applicable rail details for rail anchorage in wingwalls. These abutment details may be used with standard SSB-24-15 only.

Cover dimensions are clear dimensions, unless noted otherwise. Reinforcing bar dimensions shown are out-to-out of bar.

HL93 LOADING

SHEET 1 OF 3



ABUTMENTS
STEEL BEAM SPANS
24' ROADWAY 15° SKEW

ASB-24-15

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2:1 HEADER SLOPE

TABLE OF ESTIMATED QUANTITIES (W18 BEAMS)

Bar	No.	Size	Length	Weight	
A (8)	10	#11	25'-11"	1,377	
H	6	#6	26'- 7"	240	
L1	9	#6	4'- 0"	54	
L2	9	#6	4'- 0"	54	
S (13)	22	#5	10'- 0"	229	
U	4	#6	7'- 4"	44	
V	26	#5	9'-11"	269	
wH1	14	#6	8'- 1"	170	
wH2	16	#6	6'- 8"	160	
wS	16	#4	7'-10"	84	
wV	16	#5	9'-11"	165	
Reinforcing Steel				Lb	2,846

TABLE OF ESTIMATED QUANTITIES (W21 BEAMS)

Bar	No.	Size	Length	Weight	
A (8)	10	#11	25'-11"	1,377	
H	6	#6	26'- 7"	240	
L1	9	#6	4'- 0"	54	
L2	9	#6	4'- 0"	54	
S (13)	22	#5	10'- 0"	229	
U	4	#6	7'- 4"	44	
V	26	#5	10'- 5"	282	
wH1	14	#6	8'- 1"	170	
wH2	16	#6	6'- 8"	160	
wS	16	#4	7'-10"	84	
wV	16	#5	10'- 5"	174	
Reinforcing					

TABLE OF ESTIMATED QUANTITIES (W24 BEAMS)

Bar	No.	Size	Length	Weight	
A (8)	10	#11	25'-11"	1,377	
H	6	#6	26'- 7"	240	
L1	9	#6	4'- 0"	54	
L2	9	#6	4'- 0"	54	
S (13)	22	#5	10'- 0"	229	
U	4	#6	7'- 4"	44	
V	26	#5	11'- 0"	298	
wH1	14	#6	9'- 1"	191	
wH2	16	#6	7'- 8"	184	
wS	18	#4	7'-10"	94	
wV	18	#5	11'- 0"	207	
Reinforcing					

TABLE OF ESTIMATED QUANTITIES (W18 BEAMS)

Bar	No.	Size	Length	Weight	
A (8)	10	#11	25'-11"	1,377	
H	6	#6	26'- 7"	240	
L1	9	#6	4'- 0"	54	
L2	9	#6	4'- 0"	54	
S (13)	22	#5	10'- 0"	229	
U	4	#6	7'- 4"	44	
V	26	#5	9'-11"	269	
wH1	14	#6	11'- 1"	233	
wH2	16	#6	9'- 8"	232	
wS	22	#4	7'-10"	115	
wV	22	#5	9'-11"	228	
Reinforcing					

Bar	No.	Size	Length	
A (8)	10	#11	25'-11"	
H	6	#6	26'- 7"	
L1	9	#6	4'- 0"	
L2	9	#6	4'- 0"	
S (13)	22	#5	10'- 0"	
U	4	#6	7'- 4"	
V	26	#5	10'- 4"	
wH1	14	#6	11'- 1"	
wH2	16	#6	9'- 8"	
wS	22	#4	7'-10"	
wV	22	#5	10'- 4"	
Reinforcing				

Bar	No.	Size	Length	
(8)				
(13)				
Reinforcing				

Bar	No.	Size	Length	Weight
(8)				
(13)				
Reinforcing				

Bar	No.	Size	Length	Weight
(8)				
(13)				
Reinforcing				

Bar	No.	Size	Length	Weight
(8)				
(13)				
Reinforcing				

Bar	No.	Size	Length	Weight
(8)				
(13)				
Reinforcing				

Bar	No.	Size	Length	
(8)				
(13)				
Reinforcing				

Bar	No.	Size	Length	
(8)				
(13)				
Reinforcing				

Bar	No.	Size	Length	Weight
(8)				
(13)				
Reinforcing				

Bar	No.	Size	Length	Weight
(8)				
(13)				
Reinforcing				

Bar	No.	Size	Length	Weight
(8)				
(13)				
Reinforcing				

Bar	No.	Size	Length	
(8)				
(13)				
Reinforcing				

(8)				
(12)				
(13)				
Reinforcing				

HL93 LOADING SHEET 3 OF 3



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