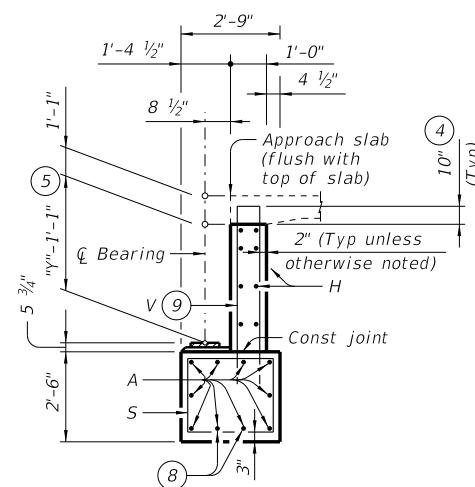
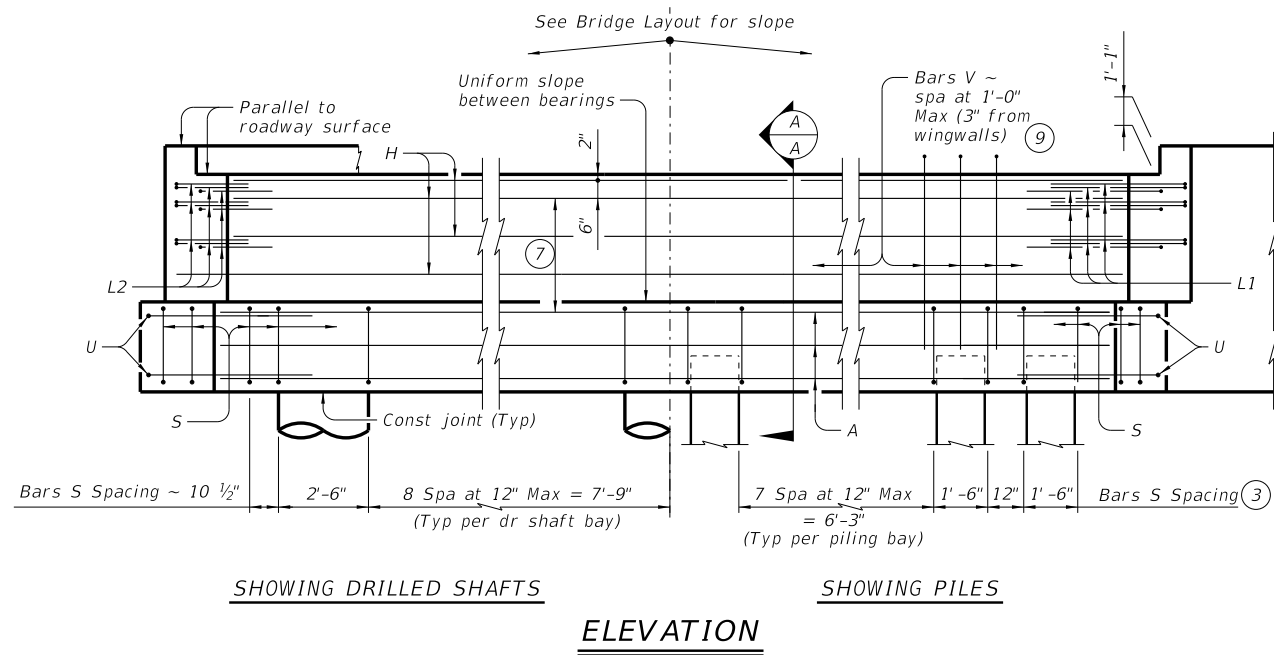
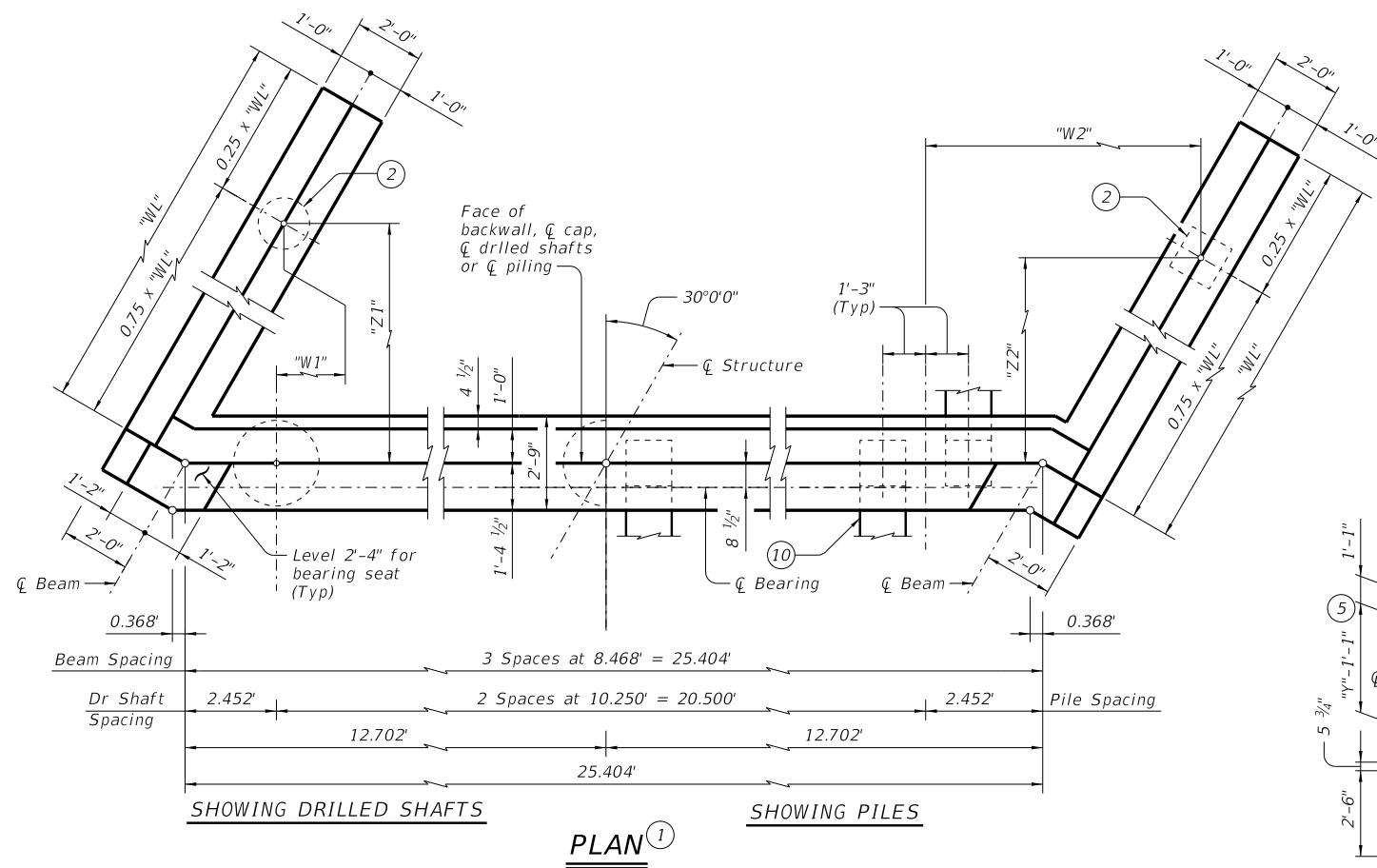
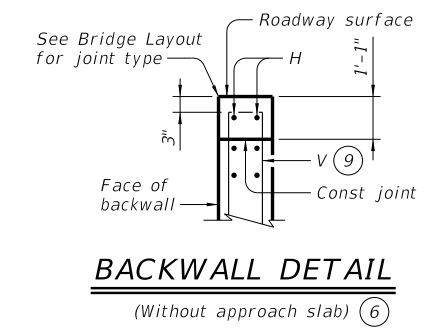


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Header Slope	Beam Type	Wingwall Type	Wingwall length "WL"	"W1"	"Z1"	"W2"	"Z2"
2:1	W18	Cantilevered	8.000'	Not Applicable			
	W21	Cantilevered	9.000'				
	W24	Cantilevered	10.000'				
	W27	Cantilevered	10.000'				
	W30	Cantilevered	11.000'				
	W33	Cantilevered	11.000'				
	W36	Cantilevered	12.000'				
3:1	W40	Founded	13.000'	1.557'	8.944'	8.193'	7.944'
	W18	Cantilevered	12.000'	Not Applicable			
	W21	Founded	13.000'	1.557'	8.944'	8.193'	7.944'
	W24	Founded	14.000'	1.932'	9.593'	8.568'	9.243'
	W27	Founded	15.000'	2.307'	10.243'	8.943'	9.243'
	W30	Founded	15.000'	2.307'	10.243'	8.943'	9.243'
	W33	Founded	16.000'	2.682'	10.892'	9.318'	9.892'
	W36	Founded	17.000'	3.057'	11.542'	9.693'	10.542'
W40	Founded	18.000'	3.432'	12.191'	10.068'	11.191'	



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-24-30 only.

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

- SECTION A-A**
(With approach slab) ⑥
- 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" from finished grade.
 - See Steel Beam Standard Design (SBSD-24) standard for "Y" value.
 - See Bridge Layout to determine if approach slab is present.
 - Use 2 spaces at 12" Max for W18 through W24 beams and 3 spaces at 12" Max for W27 beams and larger.
 - With pile foundations, replace Bars A located at bottom centerline of cap with 2 ~ #11 x 6'-3" (per bay) placed between piling groups. Deduct 137 lbs total from reinforcing steel total.
 - Field bend as needed to clear piles.
 - See Detail "A" on FD standard.

HL93 LOADING SHEET 1 OF 3

Texas Department of Transportation
 Bridge Division Standard

ABUTMENTS
STEEL BEAM SPANS
 24' ROADWAY 30° SKEW

ASB-24-30

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2:1 HEADER SLOPE

TABLE OF ESTIMATED QUANTITIES (W18 BEAMS) (12)

Bar	No.	Size	Length	Weight
A (8)	10	#11	25'- 5"	1,350
H	6	#6	25'- 5"	229
L1	9	#6	5'-10"	79
L2	9	#6	5'- 9"	78
S (13)	26	#5	10'- 0"	271
U	4	#6	10'- 9"	65
V	29	#5	9'-11"	300
wH1	14	#6	9'- 1"	191
wH2	16	#6	7'- 8"	184
wS	18	#4	7'-10"	94
wV	18	#5	9'-11"	186
(12)				

TABLE OF ESTIMATED QUANTITIES (W21 BEAMS) (12)

Bar	No.	Size	Length	Weight
A (8)	10	#11	25'- 5"	1,350
H	6	#6	25'- 5"	229
L1	9	#6	5'-10"	79
L2	9	#6	5'- 9"	78
S (13)	26	#5	10'- 0"	271
U	4	#6	10'- 9"	65
V	29	#5	10'- 5"	315
wH1	14	#6	10'- 1"	212
wH2	16	#6	8'- 8"	208
wS	20	#4	7'-10"	105
wV	20	#5	10'- 5"	217
(12)				

TABLE OF ESTIMATED QUANTITIES (W24 BEAMS) (12)

Bar	No.	Size	Length	Weight
A (8)	10	#11	25'- 5"	1,350
H	6	#6	25'- 5"	229
L1	9	#6	5'-10"	79
L2	9	#6	5'- 9"	78
S (13)	26	#5	10'- 0"	271
U	4	#6	10'- 9"	65
V	29	#5	11'- 0"	333
wH1	14	#6	11'- 1"	233
wH2	16	#6	9'- 8"	232
wS	22	#4	7'-10"	115
wV	22	#		
(12)				

TABLE OF ESTIMATED QUANTITIES (W18 BEAMS) (12)

Bar	No.	Size	Length	Weight
A (8)	10	#11	25'- 5"	1,350
H	6	#6	25'- 5"	229
L1	9	#6	5'-10"	79
L2	9	#6	5'- 9"	78
S (13)	26	#5	10'- 0"	271
U	4	#6	10'- 9"	65
V	29	#5	9'-11"	300
wH1	14	#6	13'- 1"	275
wH2	16	#6	11'- 8"	280
wS	26	#4	7'-10"	136
(12)				

TABLE OF ESTIMATED QUANTITIES (W21 BEAMS) (12)

Bar	No.	Size	Length	Weight
A (8)	10	#11	25'- 5"	1,350
H	6	#6	25'- 5"	229
L1	9	#6	5'-10"	79
L2	9	#6	5'- 9"	78
S (13)	26	#5	10'- 0"	271
U	4	#6	10'- 9"	65
V	29	#5	10'- 5"	315
wH1	14	#6	14'- 1"	296
wH2	16	#6	12'- 8"	304
wS	28	#4	7'-10"	147
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