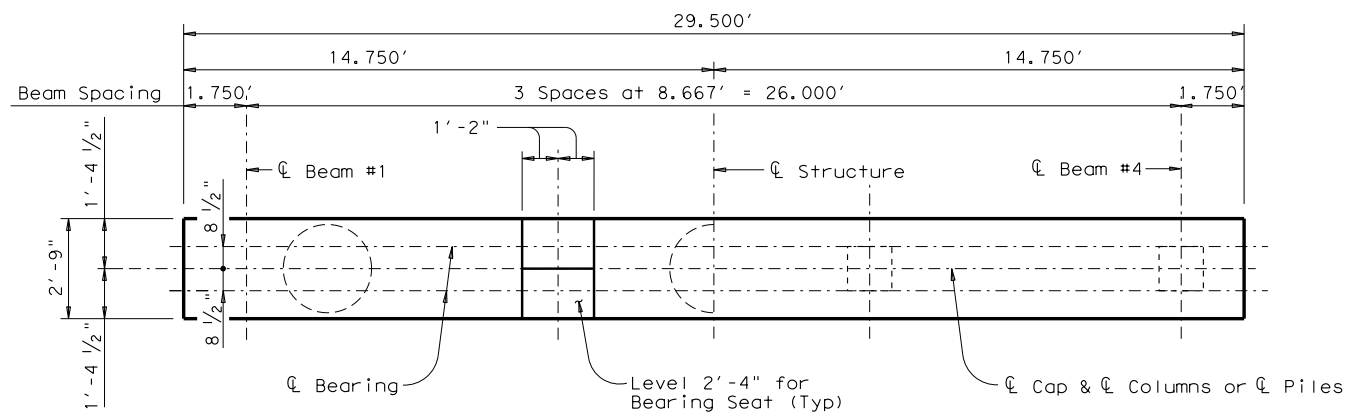


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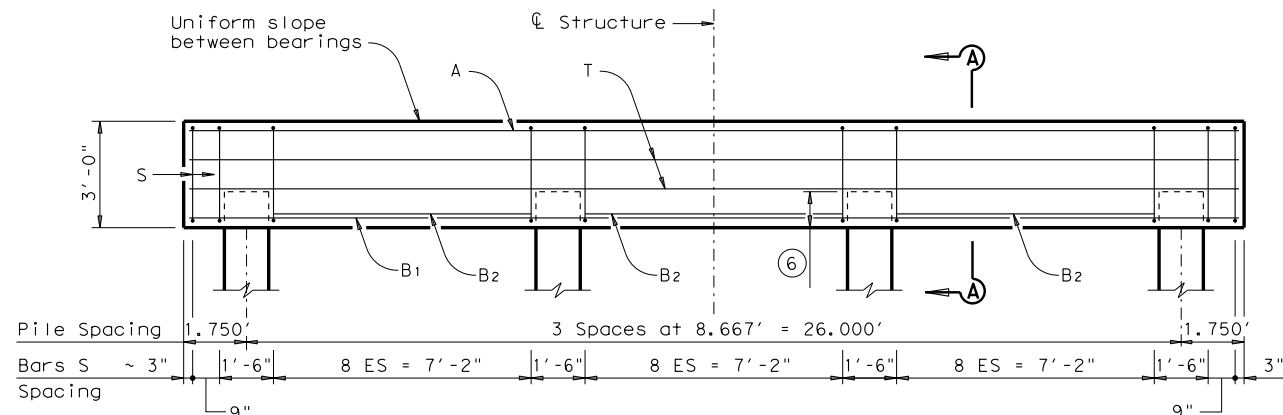


HALF PLAN

(3 Column/Dr Shaft Bent)

HALF PLAN

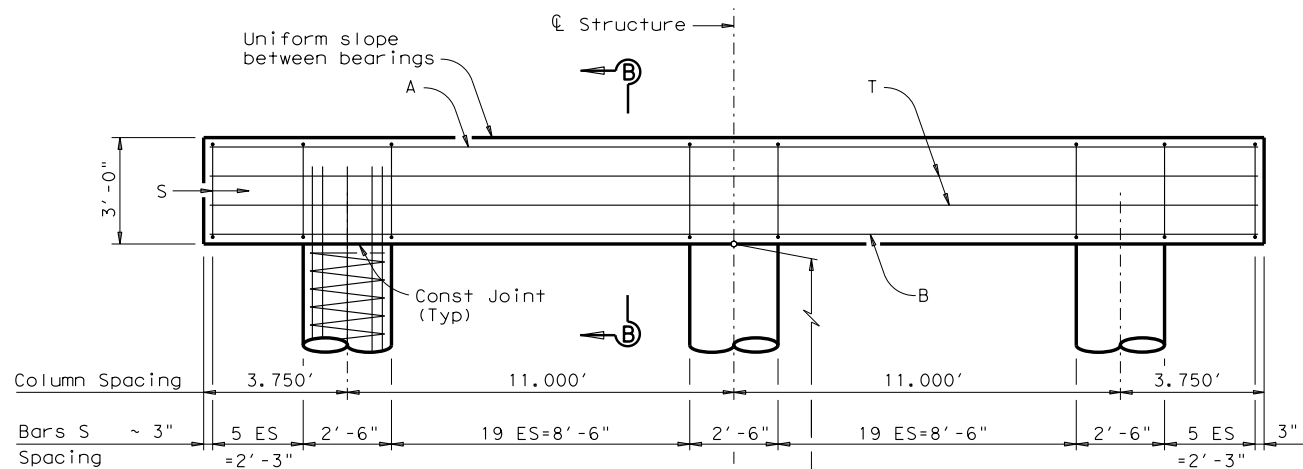
(4 Pile Bent)



ELEVATION ③ ⑤

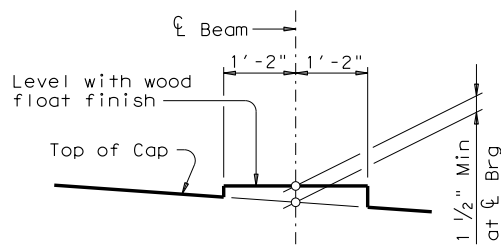
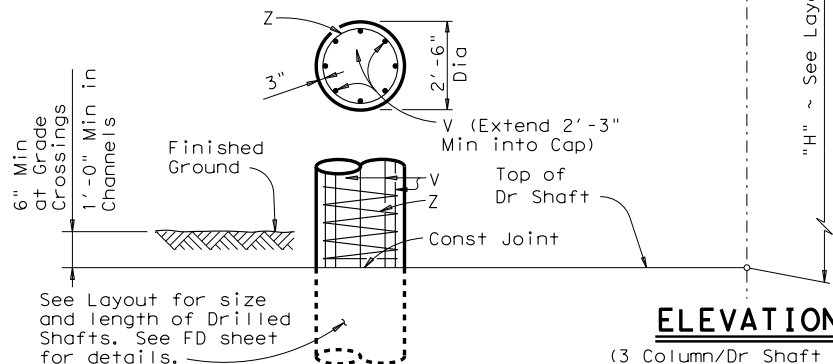
(4 Pile Bent)

Note: For Piling larger than 16", adjust Bars S spacing as required to avoid Piling.



ELEVATION

(3 Column/Dr Shaft Bent)



BEARING SEAT DETAIL

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

TABLE OF ESTIMATED QUANTITIES 4 PILE BENT

Bar	No	Size	Length	Weight
A	4	#9	29'-2"	397
B1	2	#9	29'-2"	198
B2	6	#9	7'-2"	146
S	31	#5	11'-0"	356
T	4	#5	29'-2"	122
Reinforcing Steel				Lb 1,219
Class "C" Conc (Cap)				CY 9.1

TABLE OF ESTIMATED QUANTITIES FOR 3 COLUMN BENT ①

Bar	No	Size	Length	Weight
A	5	#11	29'-2"	775
B	4	#11	29'-2"	620
S	52	#5	11'-0"	597
T	4	#5	29'-2"	122
V	24	#9	32'-3"	2,631
Z	3	#3	391'-0"	441
Reinforcing Steel				Lb 5,186
Class "C" Conc (Cap)				CY 9.1
Class "C" Conc (Cols)				CY 16.4

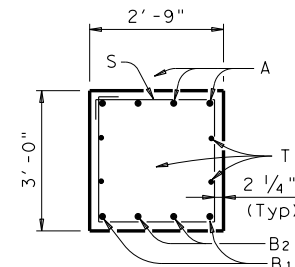
TABLE OF MAXIMUM ALLOWABLE EXPOSED PILE HEIGHTS AND PILE LOADS ③

Pile Type		Max Ht	Max Load
Concrete	Steel	Ft	Tons/Pile
16" Sq	HP14x73	16	75
18" Sq	HP14x117 ④	20	90
20" Sq	HP18x135	24	110

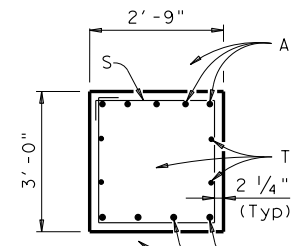
TABLE OF FOUNDATION LOADS ②

Span Length	Shaft Load	Pile Load
	Tons/Shaft	Tons/Pile
30	66	41
35	71	45
40	77	50
45	82	54
50	88	58
55	93	62
60	98	66
65	103	69
70	110	74
75	116	79
80	122	83
85	127	87
90	134	92
95	142	98
100	144	100
105	152	106
110	157	110
115	164	⑤
120	171	⑤

- Quantities shown are based on an "H" value of 30'-0". For each linear foot variation in "H" value, make the following adjustments:
Bars V length, 1'-0"
Bars Z length, 12.610'
Reinforcing Steel, 96 Lbs
Class "C" Conc (Cols) 0.545 CY
- Foundation Loads based on "H"=30'-0".
- This standard may not be used for "H" heights exceeding 30'-0" or exposed pile heights exceeding the values shown in the table. In areas of very soft soil or where scour is anticipated, maximum allowable "H" heights or exposed pile heights shall be evaluated by the Engineer prior to the use of this standard.
- When HP14x117 steel piling is specified in the plans, the Contractor has the option of furnishing either HP14x117 or HP16x101 steel piling.
- Maximum average span length allowed for 4 pile bent is 110'.
- See FD standard.



SECTION A-A



SECTION B-B

GENERAL NOTES:

Designed according to AASHTO LRFD Specifications. For Pile Bents supporting unequal spans, the shorter span cannot be less than 80 percent of the longer span. Concrete compressive strength $f'c=3,600$ psi. All Cap reinforcing shall be Grade 60. Column and Drilled Shaft reinforcing may be Grade 40. See Bridge Layout for foundation type, size and length. See standard SBBR for location and size of anchor bolt required for erection bracing. See standard FD for foundation details and notes. These bent details do not support the use of multi-pile footings as shown on the FD standard. Bent selection shall be based on the average span length rounded up to the next 5' increment. These bent details may be used for the beam types and span lengths shown on the standard SBSD-28 only.

HL93 LOADING

		Bridge Division Standard	
INTERIOR BENTS STEEL BEAM SPANS 28' ROADWAY			
BSB-28			
FILE: sbstdel9.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT
©TxDOT August 2004	CONT	SECT	JOB
REVISIONS		HIGHWAY	
02-2012: Piles, Notes and No. of Columns		COUNTY	
		SHEET NO.	

DATE: FILE: