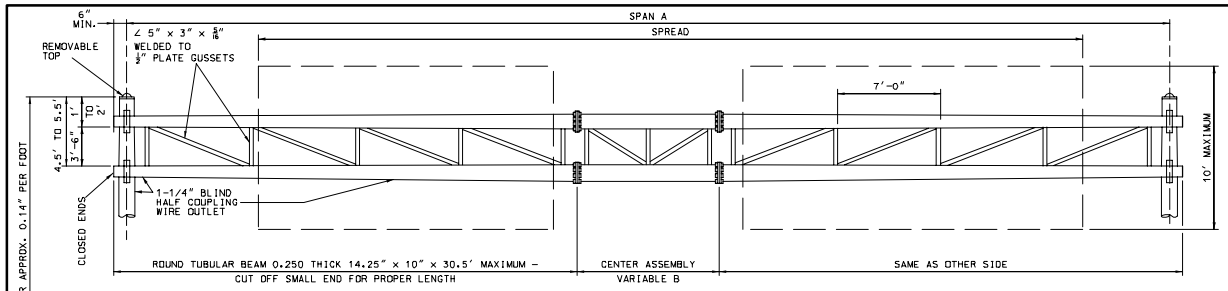
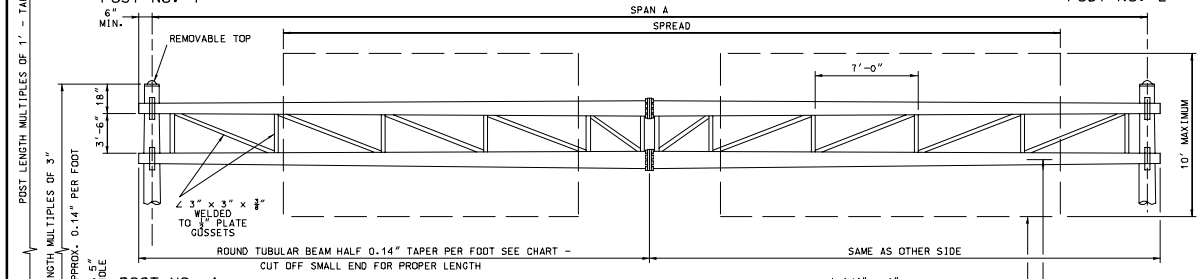
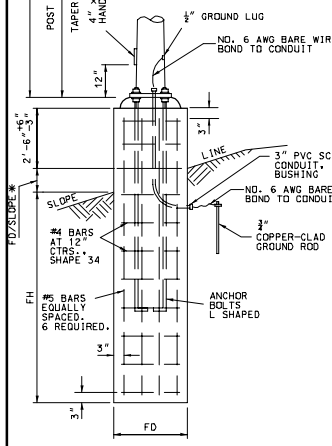
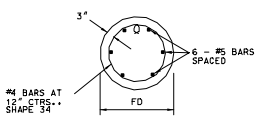






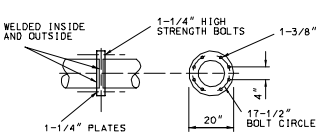
ELEVATION



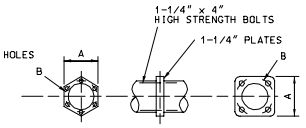
PLAN

FOOTINGS

* EXAMPLE: IF SLOPE IS 6:1, THE DENOMINATOR IS 6

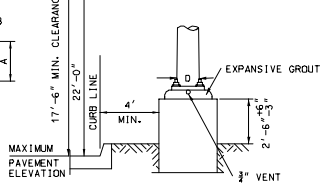


SPANS 76' & OVER

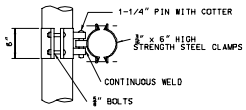


TUBE DIA.	A	B	NO. OF BOLTS
9.5"	11-1/2"	12-1/2"	4
10.5"	14-5/8"	14"	4
14.0"	17-1/4"	17"	6

SPANS UP TO 76'

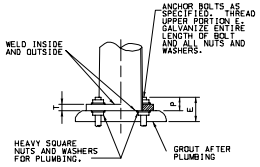


CENTER JOINT DETAIL

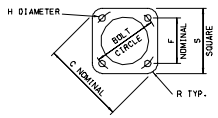


BEAM CLAMP DETAIL

TWO END POST			
TYPE	GA	D INCHES	ALLOWABLE MOMENT-FT-LBS.
S-2315	3	15	120 000
S-2316.5	3	16.5	147 000
S-2318	3	18	177 000
S-27716	7+7	16	214 000
S-2018	0	18	222 000
S-27718	7+7	18	255 000
S-23316.5	3+3	16.5	292 000
S-23317	3+3	17	328 000
S-20018	0+0	18	453 000

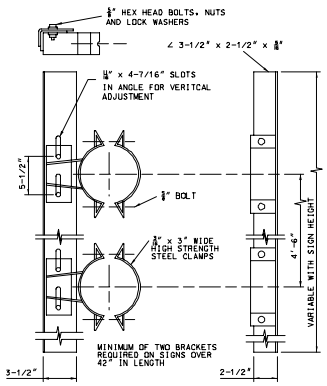


ELEVATION



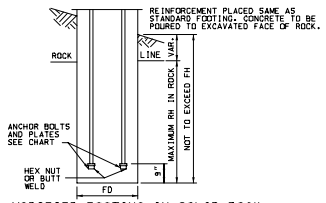
PLAN

POST BASE DETAIL



SIGN HEIGHT INCHES	MAX. LIN. FT. OF SIGN WIDTH PER BRACKET
48 & UNDER	16
60	16
72	15
84	11
96	6
108	4
120	3

GALVANIZED SIGN BRACKET ASSEMBLY



MODIFIED FOOTING IN SOLID ROCK

BASE DATA										FOOTINGS									ESTIMATED QUANTITIES OF STANDARD FOOTINGS						
										IN EARTH				IN SOLID ROCK					CLASS B CONC		REINFORCING STEEL				TOTAL
TYPE NO.	BOLT CIRCLE	C	F	H	P	R	S	T	E	DIA. FD	FH	ANCHOR BOLTS DIA.	ANCHOR BOLTS LENGTH	RH MAX	ANCHOR BOLTS DIA.	ANCHOR BOLTS LENGTH	PLATES		CY/FT	CY/IN	#5 BARS NO.	#5 BARS LENGTH	#4 BARS * NO.	#4 BARS * LENGTH	LBS.
S-2315	22"	28-5/8"	15-1/2"	2-3/8"	4-3/4"	4-5/8"	23"	2"	8-1/2"	2'-6"	8'	2"	96"	3'	2"	AS REQUIRED SEE ROCK FOOTING	3.5" x 3.5" x 0.75"		0.1818	0.01515	6	11'-9"	13	7'-2"	136
S-2316.5	23-1/2"	30-1/2"	16-5/8"	2-3/8"	4-3/4"	5"	24-1/2"	2"	8-1/2"	3'-0"	10'	2"	96"	3'	2"		3.5" x 3.5" x 0.75"		0.2618	0.0218	6	14'-0"	15	8'-9"	176
S-2318	26-1/2"	33"	18"	2-3/8"	4-3/4"	5-1/2"	26-1/2"	2"	8-1/2"	3'-0"	10'	2"	96"	3'	2"		3.5" x 3.5" x 0.75"		0.2618	0.0218	6	14'-0"	15	8'-9"	176
S-27716	23-1/2"	30-1/2"	16-5/8"	2-5/8"	5-1/2"	5"	24-1/2"	2-1/2"	9-1/2"	3'-0"	10'	2-1/4"	96"	3'	2-1/4"		4.5" x 4.5" x 0.75"		0.2618	0.0218	6	14'-0"	15	8'-9"	176
S-2018	25-1/2"	33"	18"	2-5/8"	5-1/2"	5-1/2"	26-1/2"	2-1/2"	9-1/2"	3'-6"	11'	2-1/4"	96"	4'	2-1/4"		4.5" x 4.5" x 0.75"		0.3563	0.0297	6	15'-3"	17	10'-4"	212
S-27718	25-1/2"	33"	16"	2-7/8"	6"	5-1/2"	26-1/2"	2-1/2"	10-1/2"	3'-6"	11'	2-1/2"	120"	4'	2-1/2"		5" x 5" x 1"		0.3563	0.0297	6	15'-3"	17	10'-4"	212
S-23316.5	23-1/2"	30-1/2"	16-5/8"	3-3/8"	7"	5"	24-1/2"	3"	12"	3'-6"	12'	3"	144"	4'	3"		5" x 5" x 1"		0.3563	0.0297	6	16'-3"	18	10'-4"	226
S-23317	25-1/2"	33"	18"	3-3/8"	7"	5-1/2"	26-1/2"	3"	12"	3'-6"	12'	3"	144"	4'	3"		5" x 5" x 1"		0.3563	0.0297	6	16'-3"	18	10'-4"	226
S-20018	25-1/2"	33"	18"	3-3/8"	7"	5-1/2"	26-1/2"	3"	12"	4'-0"	12'	3"	144"	5'	3"		5" x 5" x 1"		0.4654	0.0388	6	16'-6"	18	11'-10"	245

* ESTIMATED QUANTITY FOR REINFORCING STEEL IS BASED ON A 2:1 (H:V) SLOPE.

SPAN A	SPREAD IN FEET													STRUCTURE						POSTS FOR MAXIMUM AREA									
														TUBULAR BEAMS			CENTER SECTION B			LENGTH OF POSTS IN FEET									
FEET	30	35	40	45	50	55	60	65	70	75	80	85	90	GA	LARGE DIA.	MIN. L	THICK-NESS	O.D.	LENGTH	18	19	20	21	22	23	24	25	26	27
40	300													3	9.5"	20.5'													
45	264	288												3	9.5"	23.0'				S-2315	S-2315	S-2315	S-2316.5	S-2316.5	S-2318	S-2318	S-2318	S-2318	S-2318
50	282	308	336											3	10.5"	25.5'				S-2315	S-2315	S-2315	S-2316.5	S-2316.5	S-2316.5	S-2318	S-2318	S-2318	S-2318
55	238	262	284	310										3	10.5"	28.0'				S-2315	S-2316.5	S-2316.5	S-2316.5	S-2316.5	S-2318	S-2318	S-2318	S-27716	S-27716
60	266	288	314	340	364									7	14.0"	30.5'				S-2318	S-27716	S-27716	S-27716	S-2018	S-27718	S-27718	S-27718	S-23316.5	S-23316.5
65	234	256	280	304	328	352								7	14.0"	33.0'				S-2318	S-27716	S-27716	S-27716	S-27716	S-27718	S-27718	S-27718	S-23316.5	S-23316.5
70	262	284	304	324	346	368	394							7	14.0"	35.5'				S-27716	S-27716	S-27716	S-27718	S-27718	S-27718	S-23316.5	S-23316.5	S-23316.5	S-23317
75	228	248	268	288	308	330	352	374						3	14.0"	38.0'				S-27716	S-27716	S-27716	S-2018	S-27718	S-27718	S-27718	S-23316.5	S-23316.5	S-23316.5
76	295	308	326	350	370	397	425	450	472	502				3	14.25"	30.5'	312"	14.238"	16'	S-27716	S-27718	S-27718	S-27718	S-23316.5	S-23316.5	S-23317	S-23317	S-23317	S-20018
79	310	326	347	366	384	410	432	460	490	520				3	14.25"	28.5'	312"	14.238"	23'	S-2018	S-27718	S-27718	S-23316.5	S-23316.5	S-23317	S-23317	S-23317	S-20018	S-20018
83	277	288	300	322	340	360	385	412	434	465	498			3	14.25"	30.5'	312"	14.238"	23'	S-27716	S-2018	S-27718	S-27718	S-23316.5	S-23316.5	S-23316.5	S-23317	S-23317	S-20018
86	297	309	322	337	356	378	402	425	447	473	500	522		3	14.25"	28.0'	312"	14.238"	30'	S-2018	S-27718	S-27718	S-23316.5	S-23316.5	S-23317	S-23317	S-23317	S-20018	S-20018
90	269	280	294	310	327	345	363	385	403	426	446	466	485	3	14.25"	30.5'	312"	14.238"	30'	S-27716	S-27718	S-27718	S-23316.5	S-23316.5	S-23316.5	S-23316.5	S-23317	S-23317	S-20018

MAXIMUM SIGN AREA IN SQ. FEET

GENERAL NOTES:

DESIGN SPECS: AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS-1975.

USE LONGEST POST AND SPAN A (NEXT GREATER IF NOT CHARTED) TO DETERMINE END POSTS AND STRUCTURE DESIGNS. MAXIMUM SIGN AREA FOR GIVEN SPREAD (INTERPOLATE FOR UNCHARTED SPREADS) NOT TO BE EXCEEDED. SUPPORTS DESIGNED BY END POST TYPE AND SPAN A. (I.E. S-2315-40 ETC).

ALL SIGNS CENTERED VERTICALLY.

SEE STD. PLAN 903.09 FOR LIGHTING DETAILS IF LIGHTING THE SIGN IS NECESSARY.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

HIGHWAY SIGNING

TUBULAR SUPPORT STEEL-TYPE S

TWO TUBE

DATE:_____ EFFECTIVE: 01-01-2003 903.06G 1/1