

S = Bar is included in substructure quantities.
F = Bar to be field welded.
T = Tie or Stirrup.

— 4 x A.S.T.M. A-615, Grade 40.

— V: Bar dimensions vary between dimensions shown on this line and the following line.

S-Bar is included in substructure quantities

— 4 = A.S.T.M. A-615, Grade 40

F. Bar to be field welded

— V: Bar dimensions vary between dimensions shown on this line and the following line.

$T = \text{Tie or Stirrup}$

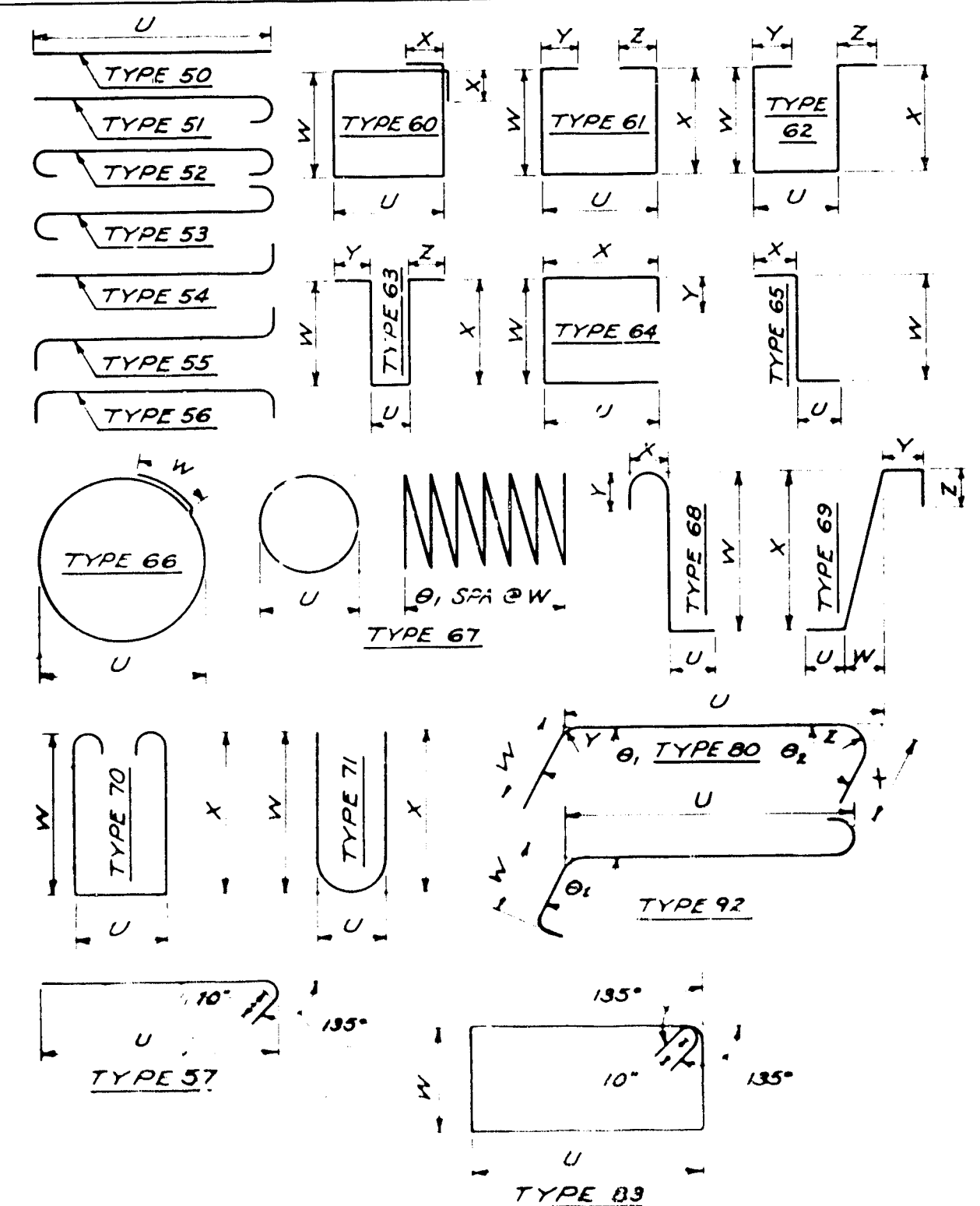
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MARK NO.	LOCATION	SIZE	NO REQD	BEND TYPE	TIE OR STIR	FLD WELD	SUBSTR.	GRADE	VARIES	NO. EACH	DIMENSIONS (Out to out)												LENGTH		WEIGHT Lbs.		
											U		W		X		Y		Z		θ ₁	θ ₂	Ft.	In.			
											Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.						Deg.	Deg.
1	FTG LONG TOP & BOT	5	888	50		S					0	8.0									8	8	302				
2	FTG TRANSV TOP & BOT	5	176	50		S					26	6.0									26	6	436				
3	PIER WALL VERT BACK FACE	8	256	54		S					12	3.0									13	2	900				
4	PIER WALL VERT FRONT FACE	8	256	80		S					3	3.0	1	4.0	3	9.0		4.0	93	166	13	0	388				
5	PIER WALL HORIZ BACK FACE	7	80	54		S					24	0.0									24	9	436				
6	PIER WALL HORIZ FRONT FACE	5	72	54		S					24	0.0									24	9	135				
7	PIER WALL HORIZ	5	24	54		S					24	0.0									25	0	122				
8	PIER WALL HORIZ	7	24	54		S					24	0.0									2	3	117				
9	PIER WALL TIE BACK FACE	4	792	57	T	S					1	4.0									4	1	167				
10	PIER WALL TIE FRONT FACE	4	792	57	T	S					3	2.0									4	1	170				
11	PIER WALL TIE	5	256	80	T	S					3	9.0		6.0		6.0		1.8	1.8	90	7	4	6	8	120		
12	PIER WALL TIE	4	60	56	T	S					1	7.0									2	2	8	13	3		
13	PIER WALL	4	32	50		S					3	3.0									6	3	3	0	3		
14	PIER WALL	4	16	50		S					3	0.0									3	0	0	0	3		
15	PIER WALL TIE	4	136	64	T	S					7	6.0	1	7.0	2	6.0		3.0			6	5	58	14	8		
16	WING WALL DOWELS	8	24	80		S					3	0.0	1	4.0	2	9.0		4.0	90	166	6	10	6	4	3		
17	WING WALL DOWELS	6	16	54		S					5	6.0									6	6	1	5	4		
18	WING WALL DOWELS	6	80	54		S					4	6.0									5	4	6	4	4		
19	WING WALL VERT	6	80	50		S					15	4.0									15	4	184	9	8		
20	WING WALL HORIZ INT	5	16	80		S					3	7.0	1	3.0	1	3.0		2.0	2.0	90	90	5	10	5	8		
21	WING WALL HORIZ BOT	6	8	92		S					6	0.0	1	11.0							148	122	7	5	8		
22	WING WALL HORIZ BOT	6	8	92		S					6	4.0	1	11.0							9	9	9	11	11		
23	WING WALL CORNER TIES	7	40	52		S					9	6.0									7	2	58	9	9		
24	WING WALL CORNER TIES	7	40	52		S					9	6.0									11	2	91	6	7		
25	WING WALL AT TOP	8	16	50		S					16	5.0									15	9	67	1	4		
26	WING WALL AT INT	5	32	54		S					11	4.0									12	1	40	2	4		
27	WING WALL AT BOT	8	16	51		S					25	6.0									26	5	112	2	4		
28	WING WALL INSIDE FACE	8	24	51		S					26	9.0									27	8	177	3	4		
29	WING WALL INSIDE FACE	8	72	51		S					26	3.0									27	7	177	3	4		
30	WING WALL INSIDE FACE	6	40	50		S					19	1.0									18	3	45	5	4		
31	WING WALL INSIDE FACE	5	8	50		S					15	9.0									10	9	47	2	4		
32	WING WALL INSIDE FACE	5	72	50		S					27	6.0									27	6	227	3	4		
33	WING WALL INSIDE FACE	5	72	50		S					27	6.0									27	6	227	3	4		
34	WING WALL AT TOP	5	32	50		S					10	9.0									10	9	116	2	4		
35	WING WALL AT TOP	5	32	50		S					7	9.0									7	9	7	2	4		
36	WING WALL AT TOP	8	16	80		S					4	9.0									4	9	70	2	4		
37	WING WALL AT TOP	8	16	80		S					11	6.0	1	6.0		3.0		4.0	3.0	76	3	14	8	60	2	4	
38	WING WALL AT TOP	5	16	50		S					19	7.0									19	7	51	2	4		
39	WING WALL VERT OUTSIDE FACE	4	240	40		S					3	6.0			3.0		11.0		0.0	1.5	85	4	2	17	13	176	
40	WING WALL VERT INSIDE FACE	5	740	65		S					16	0.0		2	3.0		0.0		0.0	1.5	85	2	11	7	26	13	264
41	WING WALL CORN TIES	5	240	40		S					1	7.0	2	4.0		6.0		3.0	3.0	145	1.5	3	10	9	91	13	26
42	WING WALL AT TOP	8	16	50		S					20	0.0									20	0	3	0	3	5	
43	END DIAPHRAGM LONGIT	6	4	50		S					41	4.0									41	4	8	2	4	5	
44	END DIAPHRAGM LONGIT	4	64	50		S					22	0.0									22	0	7	2	4	5	
45	END DIAPHRAGM LONGIT	6	4	50		S					44	7.0									44	0	7	2	4	5	
46	END DIAPHRAGM LONGIT	4	140	65	T	S					7	9.0	6	3.0		4.0		0.0			7	1	7	2	4	5	
47	END DIAPHRAGM LONGIT	4	140	65	T	S					9.0		6	3.0		4.0		0.0			7	1	7	2	4	5	
48	END DIAPHRAGM	6	8	50		S					22	7.0									22	0	3	0	3	5	
49	END DIAPHRAGM	4	776	56	T	S					1	7.0									2	0	3	0	3	5	
50	INTERM DIAPHR STIFF	4	176	71	T	S					3	5.0	1	5.0	1	5.0					7	1	8	2	4	5	
51	INTERM DIAPHR	11	8	50		S					21	0.0									21	0	4	0	4	5	
52	INTERM DIAPHR	8	32	50		S					8	3.0									8	0	3	0	3	5	
53	INTERM DIAPHR	8	8	50		S					23	0.0									20	0	4	0	4	5	
54	INTERM DIAPHR	7	16	50		S					37	7.0									37	0	12	0	12	5	
55	INTERM DIAPHR	4	440	50		S					27	3.0									27	0	8	0	8	5	
56	INTERM DIAPHR	5	256	50		S					27	6.0									52	6	11	2	4	5	
57	INTERM DIAPHR	8	8	50		S					27	7.0									17	2	5	2	4	5	
58	INTERM DIAPHR	5	320	51		S					16	7.0									35	2	8	2	4	5	
59	INTERM DIAPHR	5	320	51		S					24	7.0									8	7	2	4	5	5	
60	INTERM DIAPHR AT ENDS	5	124	51		S					37	7.0									67	7	2	4	5	5	
61	INTERM DIAPHR	5	124	51		S					34	0.0									16	0	116	0	116	5	5
62	INTERM DIAPHR	5	116	50		S					4	1.0									4	1	4	1	4	5	5
63	INTERM DIAPHR	5	116	50		S					32	4.0									32	4	4	4	4	5	5

* Easy-cooled

FED ROAD DIV NO	STATE	FED AID PROJ NO	FISCAL YEAR	SHEET NO	TOTAL SHEETS
10	WASH.	I-82-2(78)37		89	89
		79W051			

BENDING DIAGRAMS



NOTES

- NOTES
1. All reinforcing bars on this sheet shall be ASTM A-615 Grade 60 unless shown otherwise (4 in Grade column)
 2. Reinforcing for traffic barrier is not shown in this Bar List. See Traffic Barrier sheet.
 3. Bend for transverse bars due to roadway crown conditions have not been shown. These bars shall be bent as required to conform to the configuration of the structure.
 4. This bar list includes reinforcing for both the Westbound and Eastbound Bridges.

SR 82

MP 38.94 TO MP 41.52

UNION GAP TO SUNNYSIDE DAM

YAKIMA COUNTY

GANGLE ROAD OVERCROSSINGS

BAR LIST

WASHINGTON STATE DEPARTMENT OF TRANSPORTATION
OLYMPIA, WASHINGTON

W. A. BULLEY

~~SECRETARY~~



ABSTRACT

CONTRACT NUMBER 16.3

SHEET 89 OF 89 SHEETS:

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