

REVISED 10-2016 - UPDATED DIAPHRAGM WEIGHTS FOR BRIDGE LENGTHS 160'-0" TO 220'-0" WITH 10, 20 AND 30 DEGREE SKEWS.  
 REVISED 08-2018 - UPDATED DIAPHRAGM WEIGHTS FOR BRIDGE LENGTHS 200'-0" TO 340'-0" FOR ALL SKEWS. UPDATED BRIDGE ENGINEER SIGNATURE.

0 SKEW DIAPHRAGM WEIGHTS (WEIGHT IN LBS. INCLUDES DIAPHRAGM, NUTS, BOLTS, CONNECTION PLATES AND WELDS)										
DIAPHRAGM	BRIDGE LENGTH									
	160'-0"	180'-0"	200'-0"	220'-0"	240'-0"	260'-0"	280'-0"	300'-0"	320'-0"	340'-0"
ROLLED SHAPE	13,980	15,407	18,580	18,833	24,197	27,607	29,673	29,675	33,799	43,370
BENT PLATE	12,697	13,929	15,522	15,775	20,029	21,968	23,541	23,543	26,682	38,412

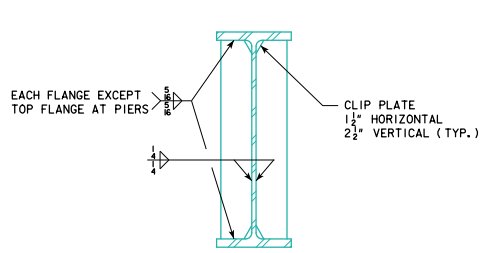
10 SKEW DIAPHRAGM WEIGHTS (WEIGHT IN LBS. INCLUDES DIAPHRAGM, NUTS, BOLTS, CONNECTION PLATES AND WELDS)										
DIAPHRAGM	BRIDGE LENGTH									
	160'-0"	180'-0"	200'-0"	220'-0"	240'-0"	260'-0"	280'-0"	300'-0"	320'-0"	340'-0"
ROLLED SHAPE	14,611	16,038	19,357	19,618	24,266	27,684	29,751	29,752	33,876	43,460
BENT PLATE	13,248	14,480	16,144	16,405	20,091	22,034	23,608	23,609	26,748	38,497

20 SKEW DIAPHRAGM WEIGHTS (WEIGHT IN LBS. INCLUDES DIAPHRAGM, NUTS, BOLTS, CONNECTION PLATES AND WELDS)										
DIAPHRAGM	BRIDGE LENGTH									
	160'-0"	180'-0"	200'-0"	220'-0"	240'-0"	260'-0"	280'-0"	300'-0"	320'-0"	340'-0"
ROLLED SHAPE	14,799	16,226	19,575	19,836	24,484	27,928	29,994	29,996	34,120	43,745
BENT PLATE	13,430	14,663	16,339	16,600	20,286	22,243	23,817	23,818	26,957	38,763

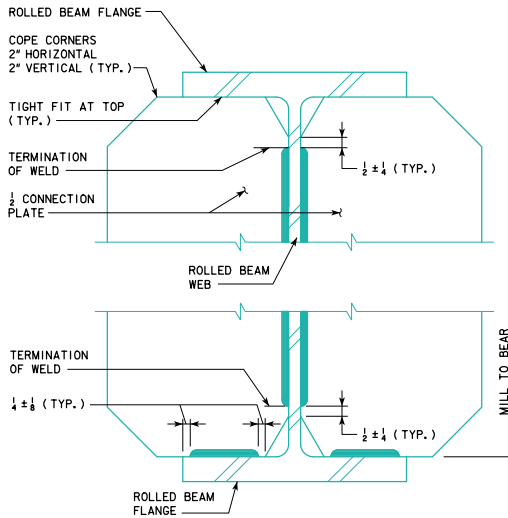
30 SKEW DIAPHRAGM WEIGHTS (WEIGHT IN LBS. INCLUDES DIAPHRAGM, NUTS, BOLTS, CONNECTION PLATES AND WELDS)										
DIAPHRAGM	BRIDGE LENGTH									
	160'-0"	180'-0"	200'-0"	220'-0"	240'-0"	260'-0"	280'-0"	300'-0"	320'-0"	340'-0"
ROLLED SHAPE	15,149	16,576	19,982	20,243	24,891	24,891	30,448	30,449	34,573	44,276
BENT PLATE	13,770	15,002	16,704	16,965	20,651	22,632	24,206	24,207	27,346	39,259

45 SKEW DIAPHRAGM WEIGHTS (WEIGHT IN LBS. INCLUDES DIAPHRAGM, NUTS, BOLTS, CONNECTION PLATES AND WELDS)										
DIAPHRAGM	BRIDGE LENGTH									
	160'-0"	180'-0"	200'-0"	220'-0"	240'-0"	260'-0"	280'-0"	300'-0"	320'-0"	340'-0"
ROLLED SHAPE	15,284	16,711	20,028	20,297	23,873	31,256	31,258	35,390	37,448	45,148
BENT PLATE	14,036	15,269	16,935	17,205	20,040	25,040	25,042	28,189	29,754	40,173

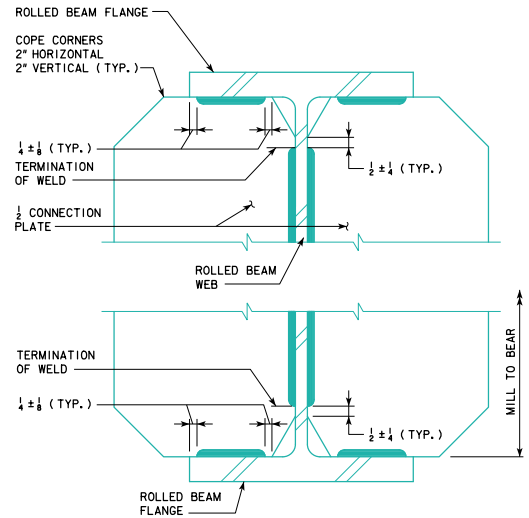
PAYMENT FOR STRUCTURAL STEEL WILL BE BASED ON WEIGHT FOR BENT PLATE DIAPHRAGMS. WEIGHTS FOR ROLLED SHAPE DIAPHRAGMS OPTION ARE PROVIDED FOR INFORMATION ONLY.



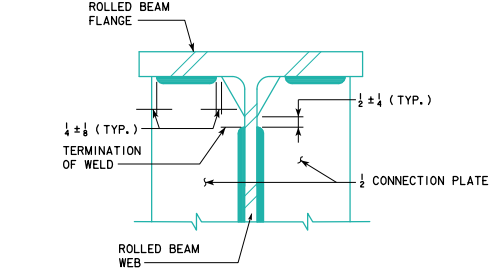
**CONNECTION PLATE DETAIL**  
 NOTE:  
 EXTERIOR BEAMS REQUIRE A CONNECTION PLATE ON THE INTERIOR SIDE OF THE WEB ONLY.



**CONNECTION PLATE WELD TERMINATION DETAIL (PIER DIAPHRAGM, 0° to 30° SKEW)**



**CONNECTION PLATE WELD TERMINATION DETAIL (PIER DIAPHRAGM, 45° SKEW)**



**CONNECTION PLATE WELD TERMINATION DETAIL (ABUTMENT & INTERMEDIATE DIAPHRAGM)**

NOTE:  
 WEIGHTS TABULATED ON THIS SHEET ARE ALREADY INCLUDED IN TOTAL WEIGHT OF STRUCTURAL STEEL GIVEN ELSEWHERE IN THESE STANDARDS.

08-2018 LATEST REVISION DATE  APPROVED BY BRIDGE ENGINEER	 STANDARD DESIGN - 40' ROADWAY, 3 SPAN BRIDGES <b>ROLLED STEEL BEAM BRIDGES</b> JUNE, 2010
	<b>DIAPHRAGM DETAILS</b> SHEET 2
	RS40-082-10