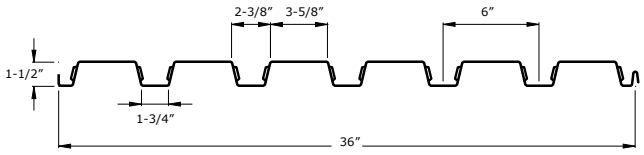
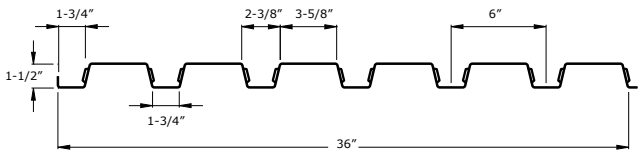
4.1 **BH-36**

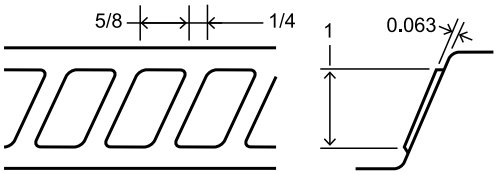


BH-36 Profile



BHN-36 Profile

36/4 Attachment Pattern



B Series Embossment

Panel Properties

Gage	Weight	Base Metal Thickness	Yield Strength	Tensile Strength	Gross Section Properties				
					Area	Moment of Inertia	Distance to N.A. from Bottom	Section Modulus	Radius of Gyration
	w	t	F_y	F_u	A_g	I_g	y_b	S_g	r
	psf	in	ksi	ksi	in^2/ft	in^4/ft	in	in^3/ft	in
22	1.75	0.0299	50	65	0.514	0.200	0.94	0.213	0.625
20	2.09	0.0359	50	65	0.615	0.240	0.94	0.253	0.623
18	2.76	0.0478	50	65	0.814	0.313	0.95	0.330	0.619
16	3.43	0.0598	50	65	1.012	0.383	0.95	0.404	0.615

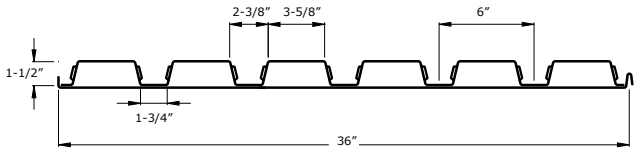
Gage	Effective Section Modulus at F_y					Effective Moment of Inertia for Deflection			
	Compression	Bending						Uniform Load Only	
	Area	Section Modulus	Distance to N.A. from Bottom	Section Modulus	Distance to N.A. from Bottom	Moment of Inertia	Moment of Inertia	$I_d = (2I_e+I_g)/3$	
	A_e	S_e+	y_b	S_e-	y_b	I_e+	I_e-	I+	I-
	in^2/ft	in^3/ft	in	in^3/ft	in	in^4/ft	in^4/ft	in^4/ft	in^4/ft
22	0.179	0.175	0.74	0.187	0.98	0.157	0.197	0.171	0.198
20	0.235	0.228	0.77	0.236	0.96	0.197	0.237	0.211	0.238
18	0.351	0.311	0.84	0.329	0.94	0.287	0.313	0.296	0.313
16	0.330	0.392	0.89	0.404	0.95	0.377	0.383	0.379	0.383

Reactions at Supports (plf) Based on Web Crippling

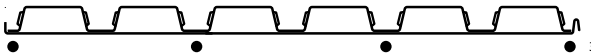
Gage	Condition	Bearing Length of Webs							
		Allowable (R_n/Ω)				Factored (ΦR_n)			
		1"	1.5"	2"	3"	1"	1.5"	2"	3"
22	End	772	874	960	1105	1180	1337	1469	1691
	Interior	1229	1366	1482	1675	1828	2032	2204	2492
20	End	1081	1220	1336	1532	1655	1866	2045	2344
	Interior	1737	1922	2078	2339	2584	2859	3091	3479
18	End	1834	2053	2239	2550	2805	3142	3425	3901
	Interior	2984	3277	3525	3940	4439	4875	5243	5860
16	End	2771	3086	3351	3796	4240	4721	5127	5809
	Interior	4555	4975	5329	5923	6776	7401	7927	8810

Web Crippling Constraints h=1.32" r=0.125" θ=78.3°

BHF-36 4.2



BHF-36 Profile



36/4 Attachment Pattern

Panel Properties

Gage	Weight	Base Metal Thickness	Yield Strength	Tensile Strength	Gross Section Properties				
					Area	Moment of Inertia	Distance to N.A. from Bottom	Section Modulus	Radius of Gyration
	w psf	t in	F_y ksi	F_u ksi	A_g in²/ft	I_g in⁴/ft	y_b in	S_g in³/ft	r in
20/20	3.69	0.0359 / 0.036	50	65	1.040	0.460	0.58	0.462	0.665
20/18	4.16	0.0359 / 0.047	50	65	1.179	0.499	0.52	0.471	0.651
20/16	4.68	0.0359 / 0.059	50	65	1.330	0.535	0.48	0.479	0.634
18/20	4.35	0.0478 / 0.036	50	65	1.231	0.564	0.65	0.601	0.677
18/18	4.83	0.0478 / 0.047	50	65	1.370	0.614	0.59	0.613	0.670
18/16	5.35	0.0478 / 0.059	50	65	1.521	0.661	0.55	0.624	0.659
16/20	5.03	0.0598 / 0.036	50	65	1.423	0.661	0.70	0.736	0.682
16/18	5.51	0.0598 / 0.047	50	65	1.562	0.721	0.65	0.752	0.679
16/16	6.03	0.0598 / 0.059	50	65	1.713	0.777	0.60	0.767	0.674

Gage	Effective Section Modulus at F_y					Effective Moment of Inertia for Deflection			
	Compression	Bending						Uniform Load Only	
	Area	Section Modulus	Distance to N.A. from Bottom	Section Modulus	Distance to N.A. from Bottom	Moment of Inertia	Moment of Inertia	$I_d = (2I_e+I_g)/3$	
	A_e in²/ft	S_e+ in³/ft	y_b in	S_e- in³/ft	y_b in	I_e+ in⁴/ft	I_e- in⁴/ft	I+ in⁴/ft	I- in⁴/ft
20/20	0.643	0.272	0.43	0.438	0.73	0.354	0.389	0.389	0.413
20/18	0.744	0.278	0.39	0.452	0.66	0.381	0.445	0.420	0.463
20/16	0.861	0.284	0.35	0.465	0.58	0.404	0.505	0.448	0.515
18/20	0.876	0.409	0.53	0.569	0.77	0.489	0.486	0.514	0.512
18/18	0.977	0.419	0.48	0.587	0.71	0.529	0.547	0.558	0.569
18/16	1.094	0.427	0.44	0.604	0.65	0.566	0.617	0.598	0.631
16/20	1.105	0.564	0.61	0.698	0.81	0.619	0.582	0.633	0.609
16/18	1.206	0.577	0.56	0.719	0.75	0.673	0.646	0.689	0.671
16/16	1.323	0.588	0.52	0.739	0.70	0.724	0.723	0.742	0.741

Details

Composite deck-slab systems are not complete without edge form and flashings to contain the concrete during the pour. These common details are an important part of the system. Edge forms provide both concrete containment and establish one point of depth control for the concrete.

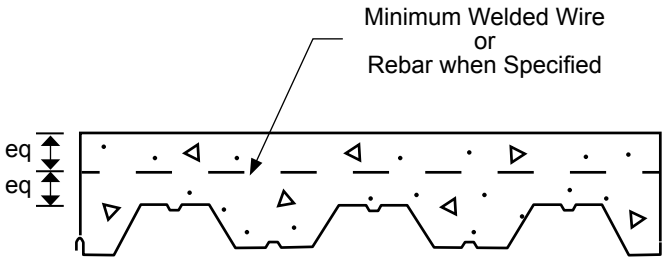


Figure 1.17.1: **TYPICAL PLACEMENT OF TEMPERATURE & SHRINKAGE REINFORCEMENT**

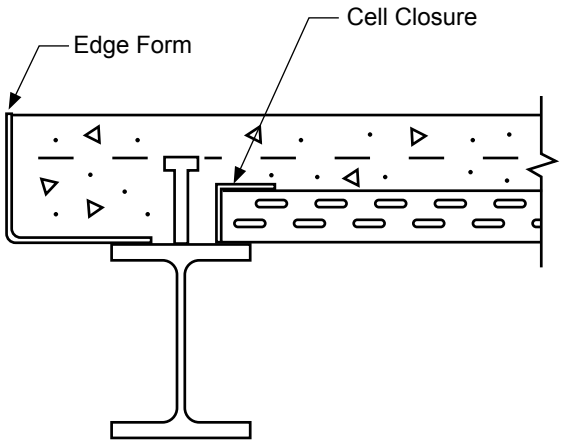


Figure 1.17.3: **SINGLE PIECE EDGE FROM PERPENDICULAR TO DECK ON WIDE FLANGE BEAM**

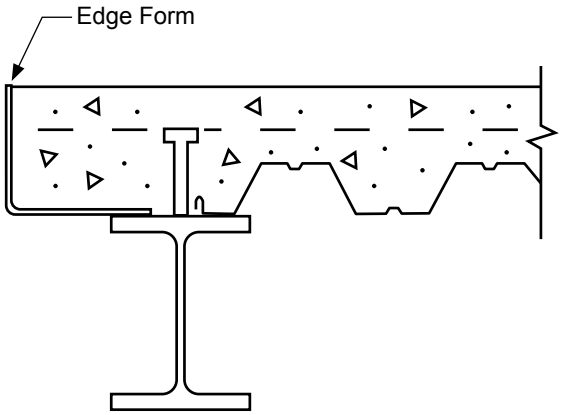


Figure 1.17.2: **SINGLE PIECE EDGE FROM PARALLEL TO DECK ON WIDE FLANGE BEAM**

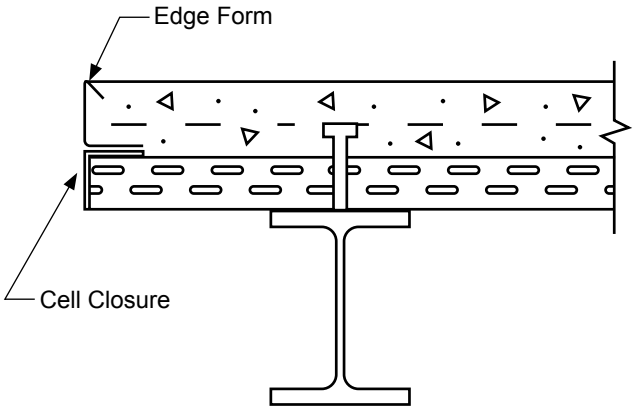


Figure 1.17.4: **TWO PIECE EDGE FORM WITH DECK CANTILEVER ON WIDE FLANGE BEAM**

1.17 **Typical Details**

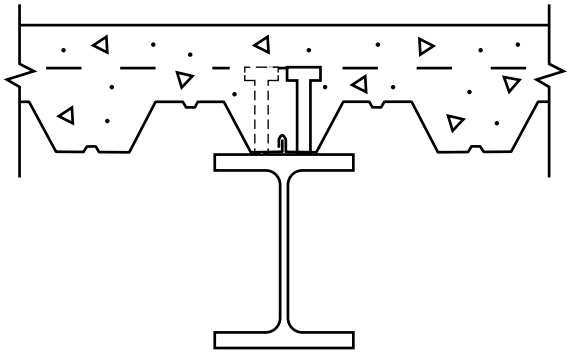


Figure 1.17.5: **DECK PARALLEL TO WIDE FLANGE BEAM**

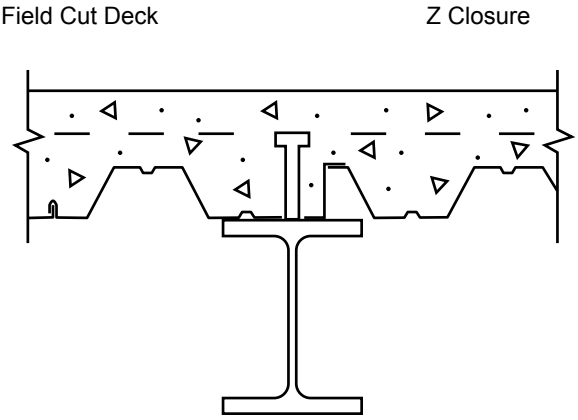


Figure 1.17.8: **DECK PARALLEL TO WIDE FLANGE BEAM CUT WITH ZEE FLASHING TO ACCOMMODATE DECK MODULE**

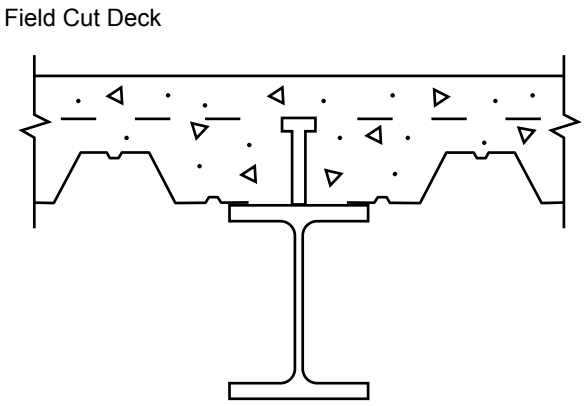


Figure 1.17.6: **DECK PARALLEL TO WIDE FLANGE BEAM CUT TO ACCOMMODATE DECK MODULE**

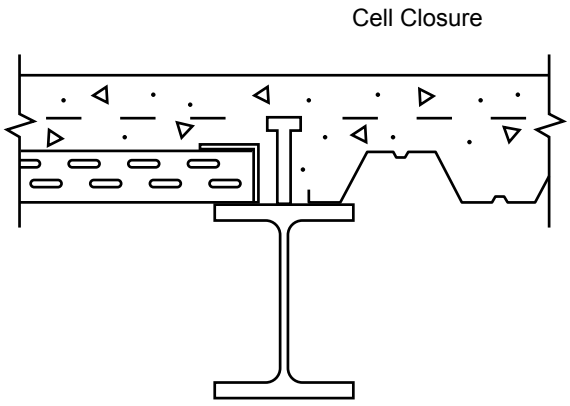


Figure 1.17.9: **DECK TRANSITION ON WIDE FLANGE BEAM**

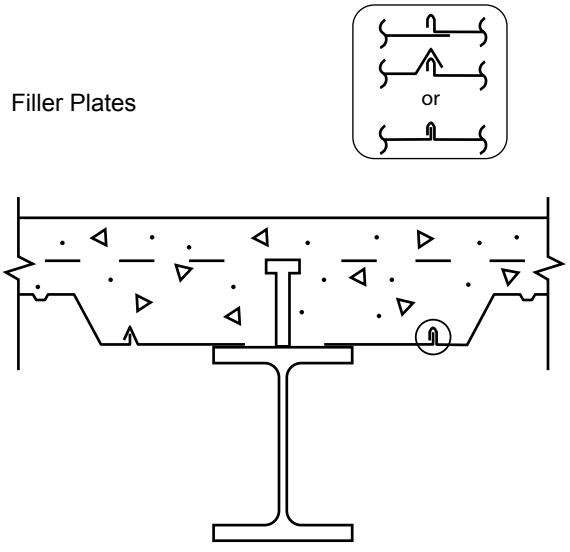


Figure 1.17.7: **DECK PARALLEL TO WIDE FLANGE BEAM WITH FILLER PLATES**

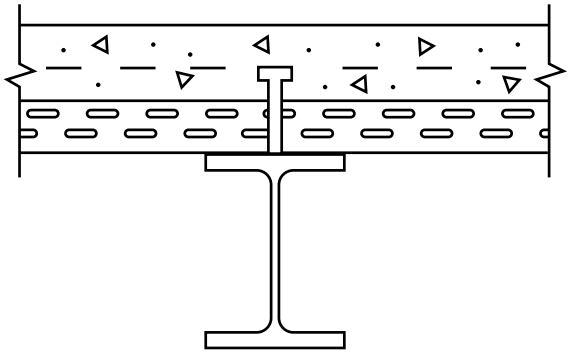


Figure 1.17.10: **DECK PERPENDICULAR TO WIDE FLANGE BEAM**

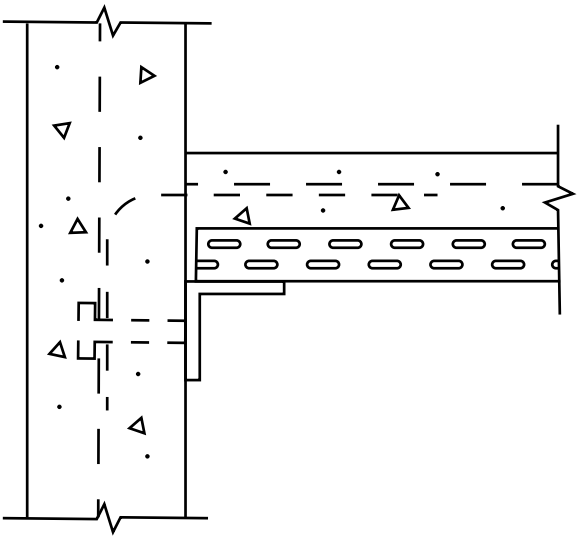


Figure 1.17.11: **CONCRETE OR CMU WALL LEGER DECK PERPENDICULAR**

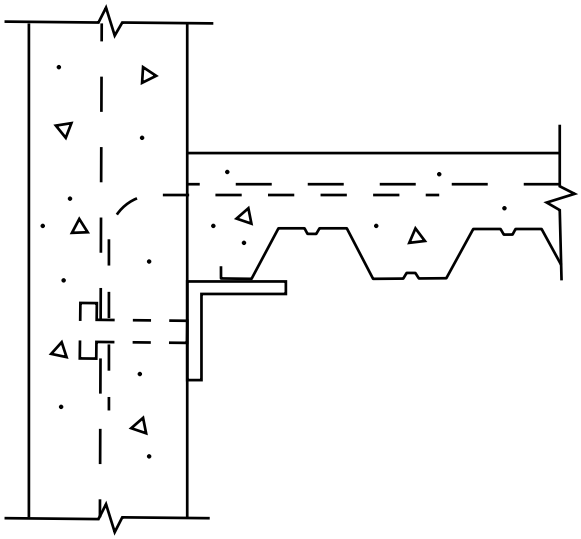


Figure 1.17.12: **CONCRETE OR CMU WALL LEGER DECK PARALLEL**

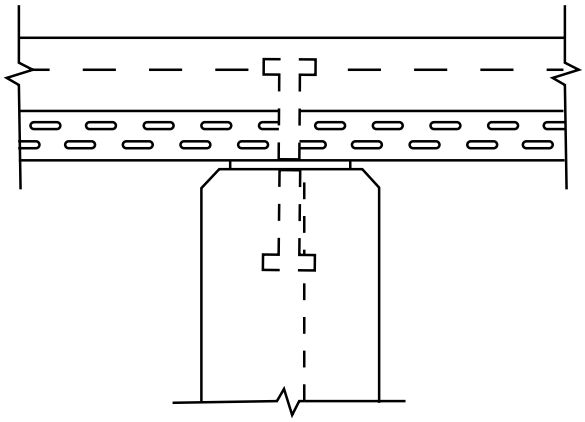


Figure 1.17.13: **CONCRETE OR CMU WALL WITH EMBED PERPENDICULAR**

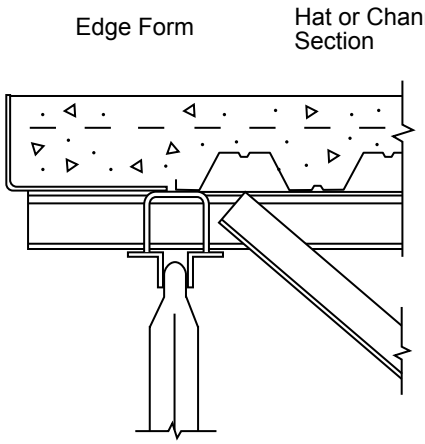


Figure 1.17.14: **SINGLE PIECE EDGE FROM PARALLEL TO DECK ON OPEN WEB JOIST GIRDER**

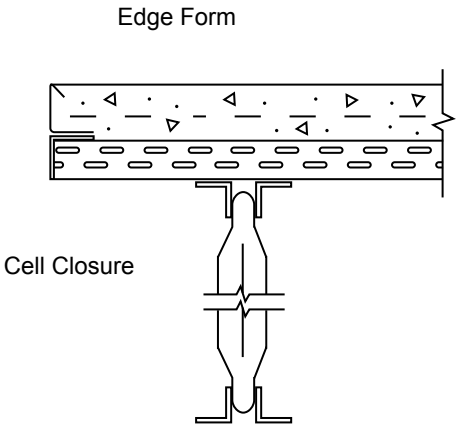


Figure 1.17.15: **TWO PIECE EDGE FORM WITH DECK CANTILEVER ON WIDE FLANGE BEAM**

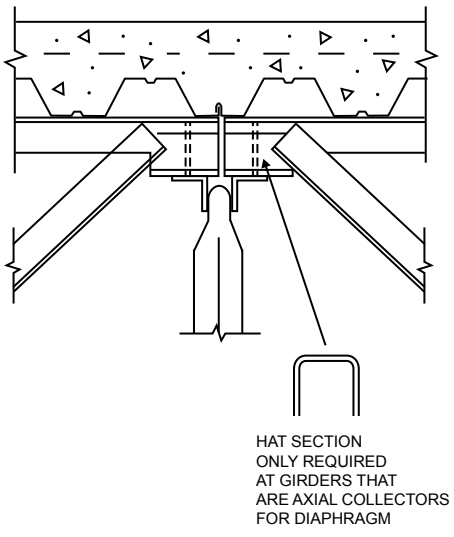
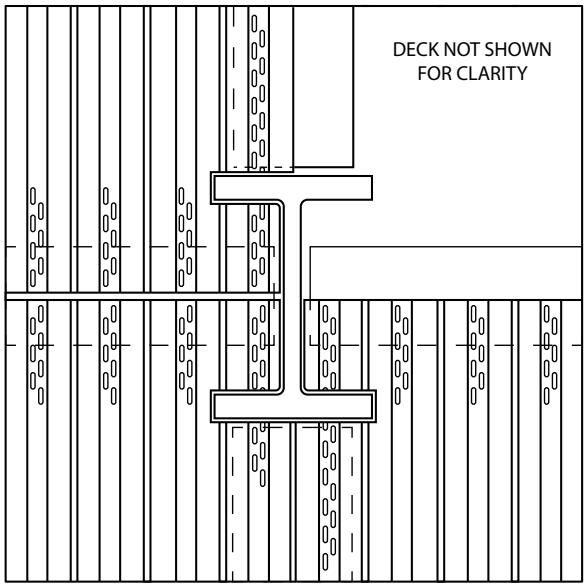


Figure 1.17.16: **DECK ON OPEN WEB STEEL JOISTS AND OPEN WEB STEEL JOIST GIRDER**

1.17 **Typical Details**

Column Flashings

Columns may require deck support angles depending on web support. Smaller columns often do not require deck support angles because there are no unsupported webs as shown in Figure 1.17.17. Large columns will create a condition in which one or more webs are unsupported, as shown in Figure 1.17.18. When the webs are unsupported, deck support angles are required to limit localized deflections during concrete placement. The Detail in Figure 1.17.18 is a common example of how deck may be supported when required. Using the thinnest support angles practical, when installed as shown, makes fitting and attaching the deck easier.



Deck Support **Not** Required When These Webs are Supported by Beams

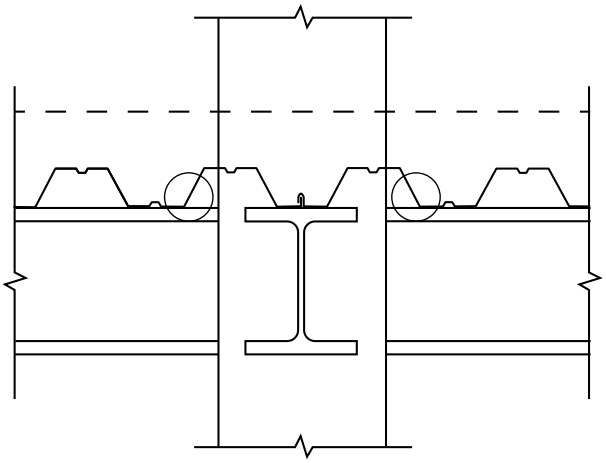
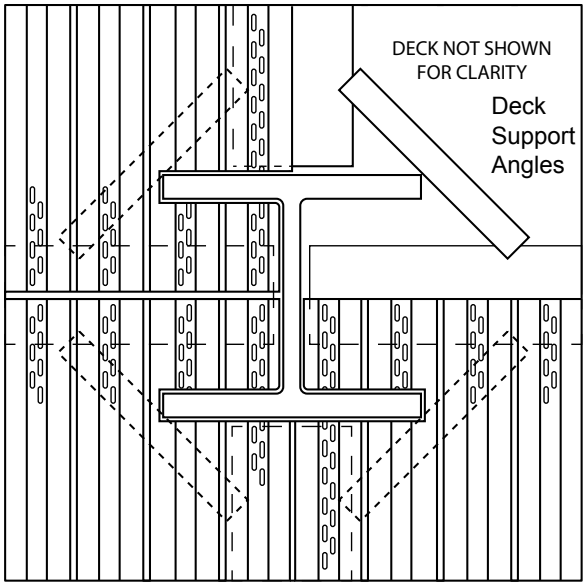


Figure 1.17.17: **COLUMN DETAIL NOT REQUIRING DECK SUPPORT ANGLES**



Deck Support Required When These Webs are Unsupported by Beams

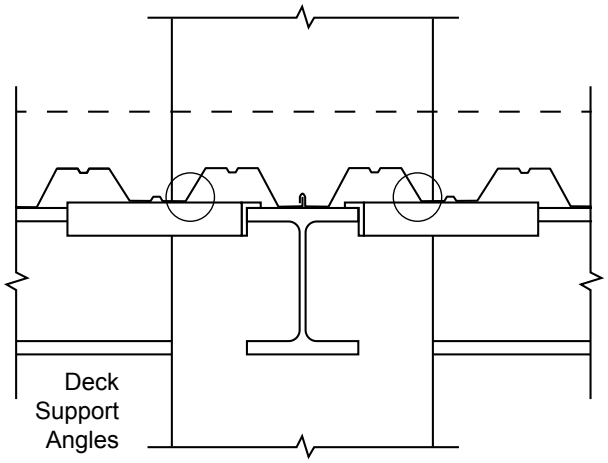


Figure 1.17.18: **COLUMN DETAIL REQUIRING DECK SUPPORT ANGLES**