

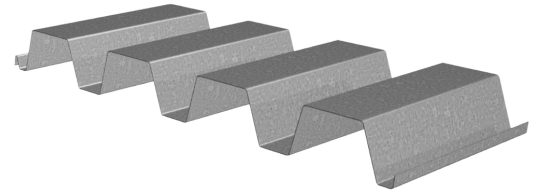
3NL-32/3NI-32/3PLN-32 ROOF DECKS

GRADE 80 STEEL

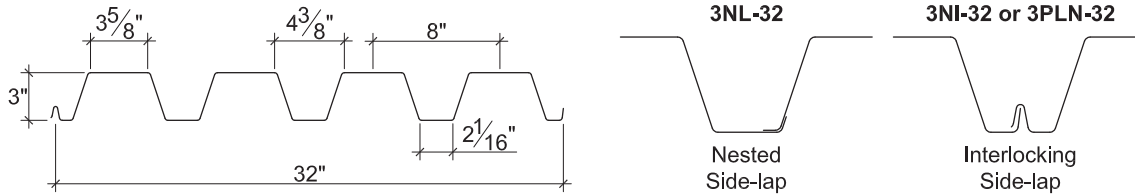
LRFD

32" WIDE 3N ROOF DECKS

- 3NL-32 Deck used with Side-lap Screws
- 3NI-32 Deck used with TSWs or BPs
- 3PLN-32 Deck used with PunchLok® II System



Nominal Dimensions



Section Properties

Deck Gage	Deck Weight w_{dd} (psf)	Base Metal Thickness t (in.)	Yield Strength F_y (ksi)	Effective Moment of Inertia at Service Load $I_d = (2I_e + I_g)/3$		Effective Section Modulus at $F_y = 60$ ksi		Design Moment		Vertical Web Shear ϕV_n (lb/ft)
				I_{d+} (in ⁴ /ft)	I_{d-} (in ⁴ /ft)	S_{e+} (in ³ /ft)	S_{e-} (in ³ /ft)	ϕM_{n+} (lb-ft/ft)	ϕM_{n-} (lb-ft/ft)	
22	1.8	0.0295	60	0.635	0.707	0.335	0.346	1508	1557	3307
20	2.2	0.0358	60	0.794	0.876	0.434	0.463	1953	2084	5926
19	2.6	0.0418	60	0.950	1.040	0.536	0.563	2412	2534	8537
18	2.9	0.0474	60	1.103	1.195	0.637	0.659	2867	2966	10985

Design Reactions at Supports Based on Web Crippling, ϕR_n (lb/ft)

Deck Gage	Bearing Length of Webs											
	One-Flange Loading						Two-Flange Loading					
	End Bearing				Interior Bearing		End Bearing				Interior Bearing	
	1 1/2"	2"	3"	4"	4"	8"	1 1/2"	2"	3"	4"	4"	8"
22	984	1081	1245	1383	2115	2459	933	1005	1126	1227	2464	2891
20	1421	1557	1785	1977	3029	3751	1448	1554	1733	1883	3595	4515
19	1903	2079	2375	2625	4030	5073	2041	2185	2427	2630	4845	6195
18	2411	2629	2995	3303	5081	6364	2687	2870	3178	3437	6166	7848

Standard Features

- ASTM A653 SS GR80, with G60 or G90, white or gray primer optional
- ASTM A1008 SS GR50 with gray primer
- Standard lengths – 6'-0" to 42'-0"
- IAPMO UES ER-0652, UL, and FM Listed
- Tables conform to ANSI/SDI RD-2017

Optional Features

- Inquire regarding cost and lead times for:
 - Short cuts < 6'-0"
 - Sheet Lengths > 42'-0"
 - Alternative metallic and painted finishes
- Web Perforated Acoustical Versions

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Inward Uniform Design Loads, LRFD (psf)

Deck Gage	Spans	Criteria	Span (ft-in.)										
			4'-0"	6'-0"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"	14'-0"	16'-0"	18'-0"	20'-0"
22	Single	ϕW_n	754	335	188	149	121	100	84	62	47	37	30
		L/240	650	193	81	57	42	31	24	15	10	7	5
	Double	ϕW_n	671	322	187	149	121	101	85	63	48	38	31
		L/240	1744	517	218	153	112	84	65	41	27	19	14
	Triple	ϕW_n	795	391	229	183	150	125	105	78			
		L/240	1367	405	171	120	88	66	51	32			
20	Single	ϕW_n	977	434	244	193	156	129	109	80	61	48	39
		L/240	813	241	102	71	52	39	30	19	13	9	7
	Double	ϕW_n	954	444	254	202	164	136	115	84	65	51	42
		L/240	2161	640	270	190	138	104	80	50	34	24	17
	Triple	ϕW_n	1152	546	315	250	204	169	143	105			
		L/240	1694	502	212	149	108	81	63	40			
19	Single	ϕW_n	1206	536	302	238	193	159	134	98	75	60	48
		L/240	973	288	122	85	62	47	36	23	15	11	8
	Double	ϕW_n	1188	547	311	247	200	166	140	103	79	62	51
		L/240	2566	760	321	225	164	123	95	60	40	28	21
	Triple	ϕW_n	1447	675	386	307	249	207	174	128			
		L/240	2011	596	251	177	129	97	74	47			
18	Single	ϕW_n	1433	637	358	283	229	190	159	117	90	71	57
		L/240	1130	335	141	99	72	54	42	26	18	12	9
	Double	ϕW_n	1405	643	366	290	235	195	164	120	92	73	59
		L/240	2949	874	369	259	189	142	109	69	46	32	24
	Triple	ϕW_n	1718	795	454	360	293	242	204	150			
		L/240	2311	685	289	203	148	111	86	54			

Note:

1. Table does not account for web crippling. Required bearing should be determined based on specific span conditions.

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