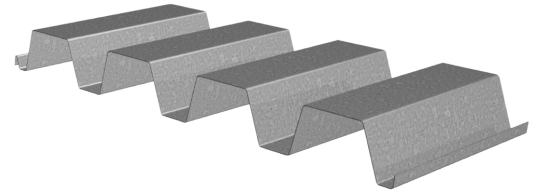


3NL-32/3NI-32/3PLN-32 ROOF DECKS GRADE 50 STEEL

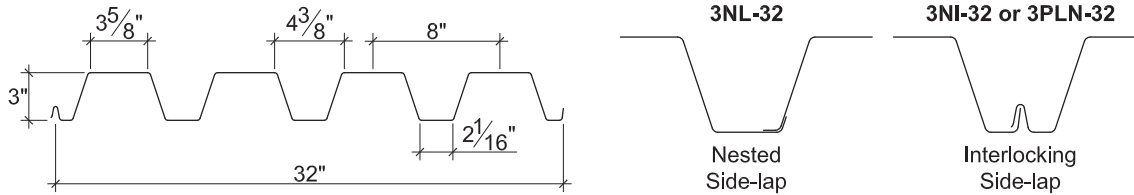
LRFD

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 $F_y = 50$ 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	50	0.643	0.715	0.345	0.372	1294	1395	3307
20	2.2	0.0358	50	0.806	0.886	0.448	0.476	1680	1785	5716
19	2.6	0.0418	50	0.965	1.052	0.554	0.579	2077	2172	7793
18	2.9	0.0474	50	1.123	1.200	0.660	0.675	2475	2532	10028
16	3.7	0.0598	50	1.479	1.524	0.869	0.885	3259	3319	13777

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	820	901	1037	1152	1763	2049	777	837	938	1023	2053	2410
20	1184	1297	1487	1647	2524	3126	1206	1295	1444	1569	2996	3762
19	1586	1733	1979	2187	3358	4227	1701	1821	2022	2192	4038	5163
18	2009	2191	2496	2752	4234	5304	2239	2392	2648	2864	5138	6540
16	3108	3375	3823	4201	6493	8057	3693	3928	4323	4656	7994	10087

Standard Features

- ASTM A653 SS GR50 Min., with G60 or G90, white or gray primer optional
- ASTM A1008 SS GR50 Min. 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

3NL-32/3NI-32/3PLN-32 ROOF DECKS GRADE 50 STEEL

LRFD

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	647	288	162	128	104	86	72	53	40	32	26
		L/240	659	195	82	58	42	32	24	15	10	7	5
	Double	ϕW_n	617	292	169	134	109	91	76	56	43	34	28
		L/240	1764	523	221	155	113	85	65	41	28	19	14
	Triple	ϕW_n	737	357	208	166	135	112	95	70			
		L/240	1383	410	173	121	88	66	51	32			
20	Single	ϕW_n	840	373	210	166	134	111	93	69	53	41	34
		L/240	826	245	103	72	53	40	31	19	13	9	7
	Double	ϕW_n	831	384	219	174	141	117	98	72	56	44	36
		L/240	2186	648	273	192	140	105	81	51	34	24	17
	Triple	ϕW_n	1010	473	272	216	175	145	122	90			
		L/240	1713	508	214	150	110	82	63	40			
19	Single	ϕW_n	1039	462	260	205	166	137	115	85	65	51	42
		L/240	988	293	124	87	63	48	37	23	15	11	8
	Double	ϕW_n	1025	470	267	212	172	142	120	88	68	53	43
		L/240	2596	769	324	228	166	125	96	61	41	28	21
	Triple	ϕW_n	1252	581	332	264	214	177	149	110			
		L/240	2034	603	254	179	130	98	75	47			
18	Single	ϕW_n	1238	550	309	244	198	164	138	101	77	61	50
		L/240	1150	341	144	101	74	55	43	27	18	13	9
	Double	ϕW_n	1207	551	313	248	201	166	140	103	79	62	51
		L/240	2961	877	370	260	189	142	110	69	46	32	24
	Triple	ϕW_n	1480	682	389	308	250	207	174	128			
		L/240	2321	688	290	204	149	112	86	54			
16	Single	ϕW_n	1629	724	407	322	261	215	181	133	102	80	65
		L/240	1515	449	189	133	97	73	56	35	24	17	12
	Double	ϕW_n	1589	723	410	325	264	218	183	135	103	82	66
		L/240	3760	1114	470	330	241	181	139	88	59	41	30
	Triple	ϕW_n	1951	896	510	405	329	272	229	168			
		L/240	2947	873	368	259	189	142	109	69			

Note:

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

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