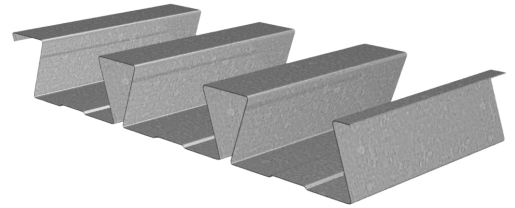


# 3.5D DOVETAIL ROOF DECK GRADE 40 STEEL

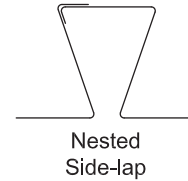
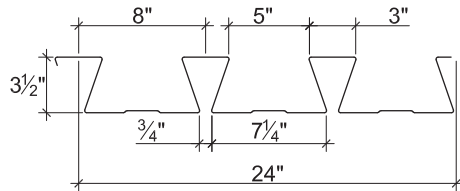
LRFD

## 3.5D DOVETAIL ROOF DECK

- Enhanced 2-Coat Polyester Paint
- White Factory Primer Paint
- Galvanized Finish
- FM Listed



## 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 $F_y = 40$ ksi		Design Moment		Vertical Web Shear $\phi V_n$ (lb/ft)
				$I_{d+}$ (in <sup>4</sup> /ft)	$I_{d-}$ (in <sup>4</sup> /ft)	$S_{e+}$ (in <sup>3</sup> /ft)	$S_{e-}$ (in <sup>3</sup> /ft)	$\phi M_{n+}$ (lb-ft/ft)	$\phi M_{n-}$ (lb-ft/ft)	
20	3.3	0.0358	40	1.762	1.646	0.676	0.781	2028	2343	5221
18	4.3	0.0474	40	2.415	2.272	0.980	1.070	2940	3210	9138
16	5.4	0.0598	40	3.133	2.968	1.317	1.377	3951	4131	12635

## Design Reactions at Supports Based on Web Crippling, $\phi R_n$ (lb/ft)

Deck Gage	Bearing Length of Webs											
	One-Flange Loading						Two-Flange Loading					
	End Bearing				Interior Bearing		End Bearing				Interior Bearing	
	2"	3"	4"	5"	4"	6"	2"	3"	4"	5"	4"	6"
20	1060	1215	1346	1461	2170	2484	1092	1218	1324	1417	2564	2962
18	1787	2035	2245	2429	3602	4096	2004	2219	2399	2559	4354	4998
16	2744	3108	3416	3687	5475	6191	3270	3599	3876	4120	6717	7671

## Standard Features

- ASTM A653 SS GR 40 Min. with G90
- Standard lengths – 6'-0" to 42'-0"
- Tables conform to ANSI/SDI RD-2017
- IAPMO UES ER-423, FM and UL Listed

## Optional Features

- Inquire regarding cost and lead times for:
  - 19 gage
  - Short cuts < 6'-0"
  - Alternative metallic and painted finishes
- Acoustical Version

# 3.5D DOVETAIL ROOF DECK GRADE 40 STEEL

LRFD

## Inward Uniform Design Loads, LRFD (psf)

Deck Gage	Spans	Criteria	Span (ft-in.)										
			11'-0"	12'-0"	13'-0"	14'-0"	15'-0"	16'-0"	17'-0"	18'-0"	19'-0"	20'-0"	21'-0"
20	Single	$\phi W_n$	134	113	96	83	72	63	56	50	45	41	37
		L/240	87	67	53	42	34	28	24	20	17	14	12
	Double	$\phi W_n$	152	128	109	94	82	73	64	57	52	47	42
		L/240	195	150	118	95	77	63	53	45	38	32	28
	Triple	$\phi W_n$	188	159	136	117							
		L/240	153	118	93	74							
18	Single	$\phi W_n$	194	163	139	120	105	92	81	73	65	59	53
		L/240	119	92	72	58	47	39	32	27	23	20	17
	Double	$\phi W_n$	210	176	151	130	113	100	88	79	71	64	58
		L/240	270	208	163	131	106	88	73	62	52	45	39
	Triple	$\phi W_n$	261	220	188	162							
		L/240	211	163	128	102							
16	Single	$\phi W_n$	261	220	187	161	140	123	109	98	88	79	72
		L/240	154	119	93	75	61	50	42	35	30	26	22
	Double	$\phi W_n$	270	227	194	167	146	128	114	102	91	82	75
		L/240	352	271	213	171	139	114	95	80	68	59	51
	Triple	$\phi W_n$	336	283	242	209							
		L/240	276	213	167	134							

**Note:**

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

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