

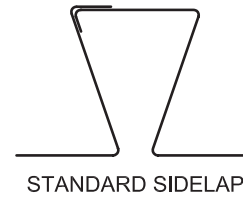
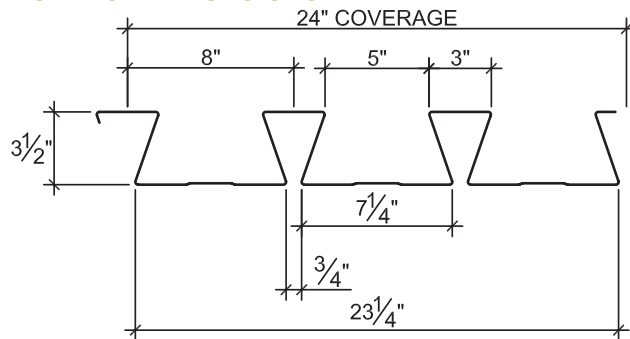
3.5D DOVETAIL ROOF DECK

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- 3.5" Deep Deck
- FM Approved
- UL Fire Rated
- IAPMO UES ER-423



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 | | Vertical Web Shear V_n/Ω (lb/ft) |
|-----------|----------------------------------|--------------------------------------|----------------------------------|---|-----------------------------------|---|-----------------------------------|---|
| | | | | I_{d+} (in ⁴ /ft) | I_{d-} (in ⁴ /ft) | S_{e+} (in ³ /ft) | S_{e-} (in ³ /ft) | |
| 20 | 3.25 | 0.0358 | 40 | 1.762 | 1.646 | 0.676 | 0.781 | 3434 |
| 18 | 4.31 | 0.0474 | 40 | 2.415 | 2.272 | 0.980 | 1.070 | 6010 |
| 16 | 5.44 | 0.0598 | 40 | 3.133 | 2.968 | 1.317 | 1.377 | 8313 |

Allowable Reactions at Supports Based on Web Crippling, R_n/Ω (lb/ft)

| Deck Gage | Bearing Length of Webs | | | | | | | | | | | |
|-----------|------------------------|------|------|------|------|------|------------------|------|------|------|------|------|
| | End Bearing | | | | | | Interior Bearing | | | | | |
| | 2" | 3" | 4" | 5" | 6" | 8" | 2" | 3" | 4" | 5" | 6" | 8" |
| 20 | 693 | 794 | 880 | 955 | 1023 | 1117 | 1185 | 1333 | 1459 | 1570 | 1670 | 1807 |
| 18 | 1168 | 1330 | 1467 | 1588 | 1697 | 1890 | 1989 | 2224 | 2422 | 2596 | 2753 | 3033 |
| 16 | 1793 | 2032 | 2233 | 2410 | 2569 | 2854 | 3054 | 3394 | 3681 | 3933 | 4162 | 4567 |

Standard Features

- ASTM A653 or A1063 SS GR 40 minimum steel with $F_y = 40$ ksi.
- G90 stocked standard
- Standard lengths – 6'-0" to 42'-0"
- Tables conform to ANSI/SDI RD-2017.

Optional Features

- Inquire regarding cost and lead times for:
 - 19 or 14 gage
 - Short cuts < 6'-0"
 - Alternative metallic and painted finishes

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Allowable Uniform Load, W_n/Ω (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 | F_y / Ω | 89 | 74 | 63 | 55 | 47 | 42 | 37 | 33 | 29 | 26 | 24 |
| | | L/240 | 87 | 67 | 53 | 42 | 34 | 28 | 24 | 20 | 17 | 14 | 12 |
| | | L/180 | --- | --- | --- | --- | 46 | 38 | 31 | 26 | 22 | 19 | 17 |
| | Double | F_y / Ω | 100 | 85 | 72 | 62 | 54 | 48 | 42 | 38 | 34 | 30 | 28 |
| | | L/240 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | | L/180 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | Triple | F_y / Ω | 125 | 105 | 90 | 78 | 68 | 60 | 53 | 47 | 42 | 38 | 35 |
| | | L/240 | --- | --- | --- | 74 | 60 | 50 | 41 | 35 | 30 | 25 | 22 |
| | | L/180 | --- | --- | --- | --- | --- | --- | --- | 47 | 40 | 34 | 29 |
| 18 | Single | F_y / Ω | 129 | 108 | 92 | 79 | 69 | 61 | 54 | 48 | 43 | 39 | 35 |
| | | L/240 | 119 | 92 | 72 | 58 | 47 | 39 | 32 | 27 | 23 | 20 | 17 |
| | | L/180 | --- | --- | --- | 77 | 63 | 52 | 43 | 36 | 31 | 26 | 23 |
| | Double | F_y / Ω | 139 | 117 | 100 | 86 | 75 | 66 | 58 | 52 | 47 | 42 | 38 |
| | | L/240 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | | L/180 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | Triple | F_y / Ω | 173 | 146 | 124 | 107 | 93 | 82 | 73 | 65 | 58 | 53 | 48 |
| | | L/240 | --- | --- | --- | 102 | 83 | 69 | 57 | 48 | 41 | 35 | 30 |
| | | L/180 | --- | --- | --- | --- | --- | --- | --- | 64 | 55 | 47 | 40 |
| 16 | Single | F_y / Ω | 173 | 146 | 124 | 107 | 93 | 82 | 72 | 64 | 58 | 52 | 47 |
| | | L/240 | 155 | 119 | 94 | 75 | 61 | 50 | 42 | 35 | 30 | 26 | 22 |
| | | L/180 | --- | --- | --- | 100 | 81 | 67 | 56 | 47 | 40 | 34 | 30 |
| | Double | F_y / Ω | 179 | 151 | 129 | 111 | 97 | 85 | 75 | 67 | 60 | 54 | 49 |
| | | L/240 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | | L/180 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | Triple | F_y / Ω | 223 | 188 | 160 | 138 | 121 | 106 | 94 | 84 | 75 | 68 | 62 |
| | | L/240 | --- | --- | --- | 134 | 109 | 90 | 75 | 63 | 54 | 46 | 40 |
| | | L/180 | --- | --- | --- | --- | --- | --- | --- | 84 | 71 | 61 | 53 |

Notes:

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

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