

1.5 FD Deck

- Deck Options and Material Specs
 - Galvanized: 20 Gauge, G60, Minimum Thickness .036" Grade: A1011 CS Type B
 - Galvanized: 20 Gauge, G40, Minimum Thickness .036" Grade: A1011 CS Type B
 - Galvanized: 22 Gauge, G40, Minimum Thickness .030" Grade: A1011 CS Type B
 - Chem dry galvanized material is not in stock but is available upon request.
 - Standard Length Options: 2' – 40' (contact sales for longer length options)
- Section properties are calculated in accordance with ANSI/SDI NC-2017 "Standard for Non-Composite Steel Floor Deck"
- Loads and spans are based on the *SDI Floor Deck Design Manual Second Edition*
- Deck may be fastened using mechanical fasteners or puddle welds.
- All fastening methods must be approved by the engineer of record.
- Minimum overlap of 2", 6" overlap recommended.
- Minimum end bearing length shall be 1 1/2".
- Minimum interior bearing length shall be 3" (check web crippling).
- Side lap screws are required if support spacing is greater than 5'.
- "Minimum Standard Yield Strength is 30 KSI based on standard mill tensile range of 30-50 KSI. For specific projects requiring higher tensile yield strengths, please contact our sales dept to request your specific demand for any orders above 225 SQs or full truck load QTY.
- Table does not account for web crippling, see *SDI Floor Deck Design Manual Second Edition*
- Reinforcement placement shall be located at center depth of topping.
- All documentation is assuming normal weight concrete 145pcf (weight per cubic foot)
- Design Process Step 1: Confirm construction loading condition. (see chart on page 2)
- Design Process Step 2: Confirm max live load. (see chart on page 2)
- Design Process Step 3: Consult with EOR (engineer of record) on design approval and fastening method.
- Design Process Step 4: Order decking material and install per EOR specs.



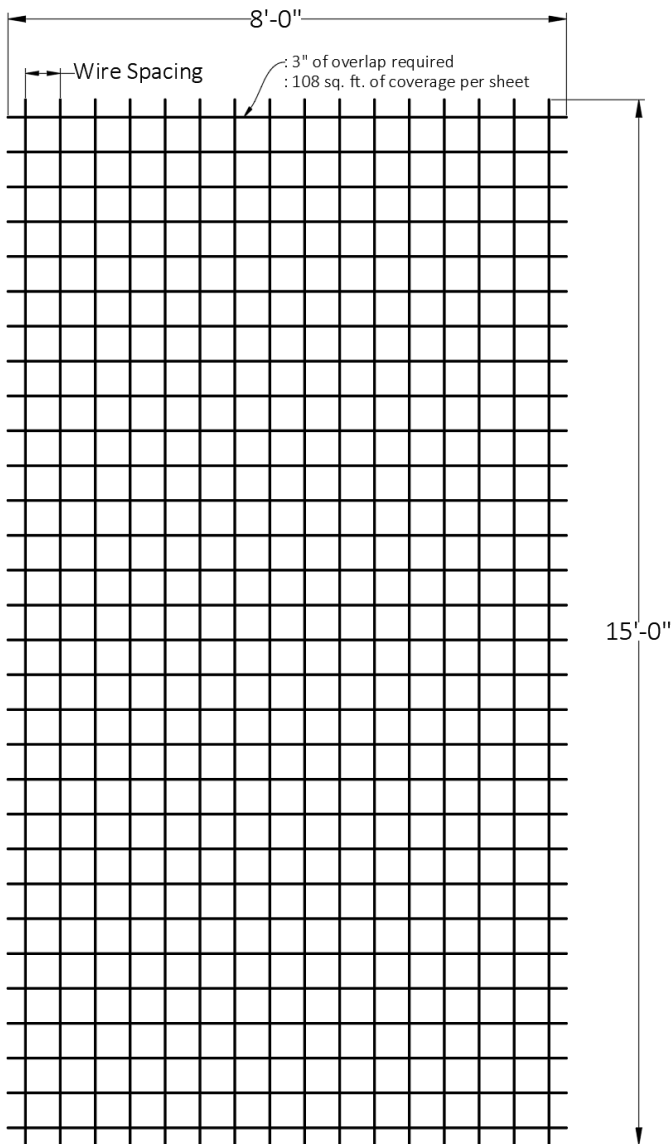
Construction Loadings					
Total Slab Depth	Deck Thickness	Concrete Weight	Maximum Unshored Construction Clear Span		
(in.)	Gauge	(psf)	Single	Double	Triple
3 1/2"	22	36	5' - 6"	5' - 6"	5' - 8"
	20		6' - 4"	6' - 1"	6' - 3"
4"	22	42	5' - 3"	5' - 3"	5' - 6"
	20		6' - 2"	5' - 11"	6' - 1"
4 1/2"	22	48	5' - 0"	5' - 1"	5' - 3"
	20		5' - 11"	5' - 8"	5' - 11"
5"	22	54	4' - 10"	5' - 0"	5' - 3"
	20		5' - 8"	5' - 6"	5' - 9"
5 1/2"	22	60	4' - 8"	4' - 10"	5' - 0"
	20		5' - 6"	5' - 4"	5' - 7"
6"	22	66	4' - 6"	4' - 8"	4' - 10"
	20		5' - 4"	5' - 3"	5' - 5"

Max Allowable Superimposed Uniform Loads PSF (pounds per square foot live load)										
Slab Depth		Wire Mesh Reinforcement	Span (ft-in.)							
Total	Topping		3' - 0"	3' - 6"	4' - 0"	4' - 6"	5' - 0"	5' - 6"	6' - 0"	6' - 6"
3 1/2"	2"	6x6 - W4.0xW4.0	368	276	214	169	137	113	95	81
		4x4 - W2.9xW2.9	400	305	234	185	150	124	104	89
		4x4 - W4.0xW4.0	400	370	284	225	182	150	126	108
4"	2 1/2"	6x6 - W4.0xW4.0	400	400	304	241	195	161	136	116
		4x4 - W2.9xW2.9	400	400	325	257	208	172	145	123
		4x4 - W4.0xW4.0	400	400	376	297	240	199	167	142
4 1/2"	3"	6x6 - W4.0xW4.0	400	400	400	349	283	234	196	167
		4x4 - W2.9xW2.9	400	400	400	383	310	257	216	184
		4x4 - W4.0xW4.0	400	400	400	400	371	307	258	220
5"	3 1/2"	6x6 - W4.0xW4.0	400	400	400	400	400	336	282	241
		4x4 - W2.9xW2.9	400	400	400	400	400	392	330	281
		4x4 - W4.0xW4.0	400	400	400	400	400	400	376	320
5 1/2"	4"	6x6 - W4.0xW4.0	400	400	400	400	400	400	357	305
		4x4 - W2.9xW2.9	400	400	400	400	400	400	400	353
		4x4 - W4.0xW4.0	400	400	400	400	400	400	400	386
6"	4 1/2"	6x6 - W4.0xW4.0	400	400	400	400	400	400	400	375
		4x4 - W2.9xW2.9	400	400	400	400	400	400	400	400
		4x4 - W4.0xW4.0	400	400	400	400	400	400	400	400



Welded Wire Reinforcement (Remesh)

- Remesh type must be approved by the engineer of record for each project.
- Note required overlap of remesh sheets.

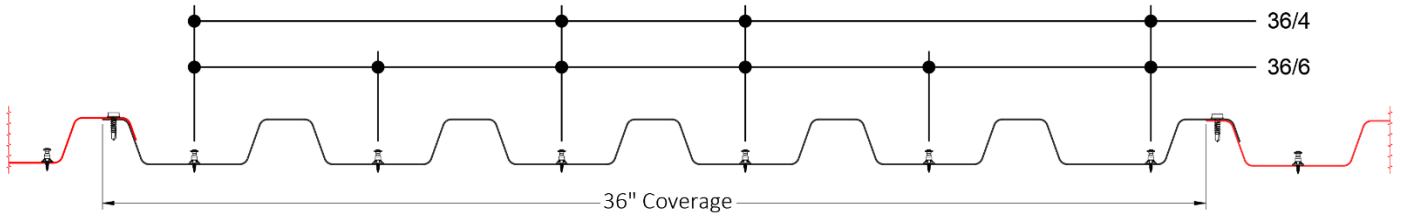


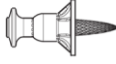
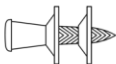
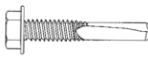
Gauge - Diameter Chart				
Old Gauge Sizes			W-Number Sizes	
Gauge	Nominal Diameter (inch)	"W" Size	Nominal Diameter (inch)	Nominal Weight (lbs/ft)
7/0	0.49	W18.9	0.49	0.643
7/0.5	0.476	W17.8	0.476	0.605
6/0	0.4615	W16.7	0.461	0.568
6/0.5	0.446	W15.6	0.445	0.53
5/0	0.4305	W14.5	0.431	0.496
5/0.5	0.412	W13.3	0.411	0.452
4/0	0.3938	W12.2	0.394	0.415
4/0.5	0.378	W11.2	0.377	0.381
3/0	0.3625	W10.3	0.362	0.35
3/0.5	0.347	W9.5	0.347	0.323
2/0	0.331	W8.5	0.33	0.292
2/0.5	0.319	W8	0.319	0.272
0	0.3065	W7.4	0.306	0.252
0.5	0.295	W6.8	0.294	0.231
1	0.283	W6.3	0.283	0.214
1.5	0.273	W5.9	0.274	0.201
2	0.2625	W5.4	0.262	0.184
2.5	0.253	W5	0.252	0.17
3	0.2437	W4.7	0.244	0.16
3.5	0.235	W4.3	0.233	0.146
4	0.2253	W4	0.225	0.136
4.5	0.216	W3.7	0.217	0.126
5	0.207	W3.4	0.208	0.116
5.5	0.2	W3.1	0.198	0.105
6	0.192	W2.9	0.192	0.099
6.5	0.185	W2.7	0.185	0.092
7	0.177	W2.5	0.178	0.085
7.5	0.17	W2.3	0.171	0.078
8	0.162	W2.1	0.163	0.071
9	0.1483	W1.7	0.147	0.058
10	0.135	W1.4	0.133	0.048

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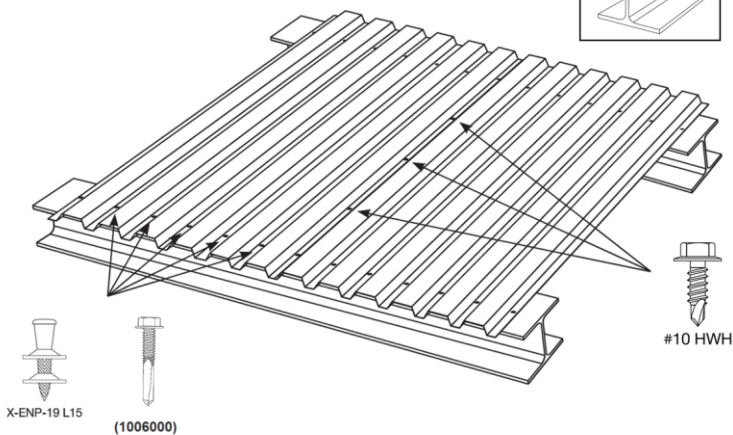
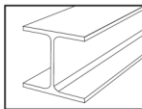


1.5 FD
Fastener Layout
(EOR to specify fastener pattern)

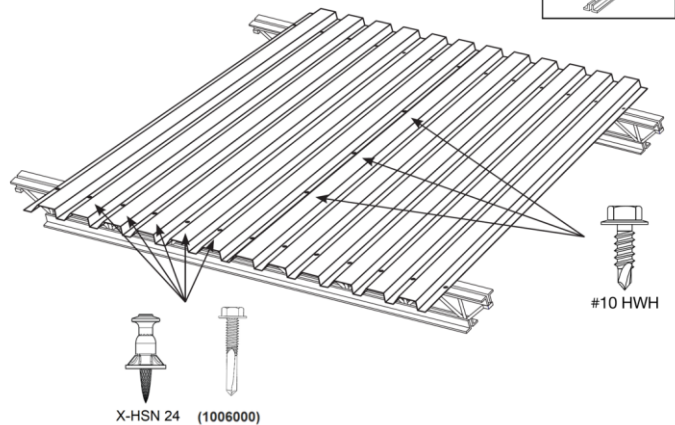
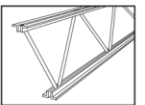


Base Material	Propellant	Fastener Type	Installation Tool
Joist and Structural Steel (0 - 1/4")	RED (short) 2128214 DX Cartridge 6.8/11 M40	Powder-Actuated (X-HSN 24)  	DX 9-HSN 
Joist and Structural Steel (1/4" - 3/8")	BLACK (long) 2208111 DX Cartridge 6.8/11 M40		
Joist and Structural Steel (1/4" - 1"+)	BLACK (long) 2128213 DX Cartridge 6.8/18 M40	Powder-Actuated (X-ENP-19 L15 MXR)  	DX 9-ENP 
Joist and structural steel (1/8" - 1/2")	N/A	 12-24 x 1-1/4" Hex Screw (1006000) 	Screw Gun/Impact Driver (5/16" hex)  

Solutions for structural steel applications

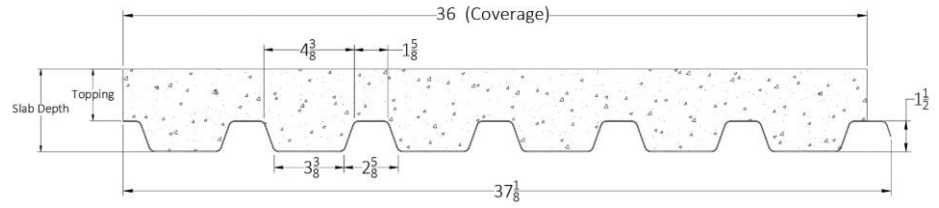


Solutions for bar joist (open web joists)





- Side Lap Screw
 - Hilti #10 HWH Screw
- Support Member Spacing:
 - 3': use (1) side lap screw
 - 4': use (2) side lap screws
 - 5': use (2) side lap screws
 - 6': use (3) side lap screws



Hilti #10 HWH Screw



HILTI SDT 9 STAND-UP HANDLE

