

7®

CE Long-Span Roof and Floor Deck Ceiling Systems

30

I

E

30

S

inspiring CREATIVITY

through PERFORMANCE



1

.

Super Wideck SWN12A



Wideck® Long Span Roof & Floor Deck Ceiling Systems

EPIC Metals manufactures 9 types of Wideck[®] long-span roof and floor deck ceiling systems that efficiently clear spans from 10 to 58 feet.

This creates a visually open building envelope with the structural framing system. There are 3 ceiling appearance alternatives: beamed, flush with shadow lines, or bold ribbed. Wideck Systems can be highly light-reflective for indirect lighting and can enhance the daylight available when designed with a clerestory, window walls, or skylights. Acoustic Wideck also enables the architect or acoustic consultant to control the interior sound environment of the building. The applications for Wideck Systems used in conjunction with exposed structural framing systems are limited only by the designer's imagination.

Wideck contributes to the beauty of the architect's interior design and can establish the exterior focal point of the entire building.

The acoustic control, appearance, structural capacities, and ceiling benefits of the Wideck profiles have led to their specification in the following types of projects: airport terminals, arenas, art galleries, canopies, church chapels, classrooms, convention centers, gymnasiums, libraries, museums, natatoriums, office buildings, power plants, schools, shopping malls and centers, theaters, transit stations, and more...

Skydeck® option: SW(A), SWN(A), SWI(A), WP(A),
WHF(A), WN(A) and W(A) may be specified to accommodate Solatube® daylighting systems to bring natural light into any design (see page 41).



Composite and Form Decks Composite (C) (pg. 44) \square

Design Examples:



Cathedral Folded Plate



Gambrel Folded Plate



Cathedral



Half Cathedral



Barrel Vaulted



Serpentine



Half Vaulted



Flat



Super Wideck is designed and manufactured to give architects and engineers the ability to clear span the structural framing system from 24 to 58 feet. Three acoustic roof and floor deck ceiling systems visually establish three distinct beamed ceiling appearances. The ceiling appearance of Super Wideck is superior to other systems since the welding of the panel joints occurs 4½ to 9¼ inches above the ceiling surface. Super Wideck profiles can provide noise reduction coefficients as high as .95. Across some sound frequency ranges, Super Wideck achieves perfect absorption. Super Wideck with the acoustic option has perforations across the horizontal surface of the ceiling. Compared to the precast alternatives for similar spans, Super Wideck can be 80% lighter. This weight savings allows the designer to create additional project savings in the structural framing and foundations of the building. The erection of Super Wideck is simplified because the inset enables the top of the panel to be welded to the supports with no special operations required (pictured below). With the double panel system of Super Wideck all of the roofing system fasteners are hidden from the ceiling surface. Super Wideck is available galvanized, or galvanized with a factory prime coat of paint ready to accept the finish coat of paint. In many instances, the Super Wideck panels may clear span from wall to wall of the building, creating an unobstructed open view that is highly light reflective.



The inset-bottom option of Super Wideck can save from $4\frac{1}{2}$ to 9¼ inches of height above the truss. The inset also permits the top to be welded to the structural supports with no special operations required.

Specify SW(A), SWN(A), and SWI(A) with the Skydeck® option to accommodate innovative Solatube® daylighting systems that bring natural light indoors (see page 41).



*U.S. Patent Number D742,549 Canadian Patent Number 155720 Ford Center, Evansville, Indiana Super Wideck SW12A, LEED-NC Silver

Super Wideck® SW(A) Technical Tables

ACOUSTIC (SWA) NON-ACOUSTIC (SW)





IAPMO Evaluation Report Number 0226.

SWA & SW Section Properties (per foot of width)

Deck Type	Gage	Weight (psf)	l _₀ (in.⁴)	S _P (in.³)	S _N (in.³)	Allowable Support Reaction (PLF
	18/18	6.2	19.39	3.06	1.99	662
SW9A	16/16	7.8	25.74	4.36	2.83	1021
	14/14	9.8	32.88	5.99	3.91	1523
	18/18	6.8	35.93	4.12	2.88	681
SW12A	16/16	8.7	48.25	6.04	4.10	1055
	14/14	10.8	62.45	8.30	5.72	1579
	18/18	7.4	58.21	5.18	3.70	694
SW15A	16/16	9.5	78.44	7.65	5.28	1081
	14/14	11.9	101.91	10.61	7.39	1623
	18/18	6.3	20.63	3.12	2.12	662
SW9	16/16	7.9	27.38	4.45	3.01	1021
	14/14	9.8	34.98	6.11	4.16	1523
	18/18	6.9	38.22	4.20	3.06	681
SW12	16/16	8.8	51.33	6.16	4.36	1055
	14/14	10.9	66.44	8.47	6.09	1579
	18/18	7.5	61.93	5.29	3.94	694
SW15	16/16	9.6	83.45	7.81	5.62	1081
	14/14	12.0	108.42	10.83	7.86	1623

*Minimum end support bearing lengths (see Note 5 below): SW9(A) = 4 \degree , SW12(A) = 5 \degree , SW15(A) = 6 \degree

SWA Noise Reduction Coefficients

-		Ab	sorption	Coefficie	nts		
Туре	125Hz	250Hz	500Hz	1000Hz	2000Hz	4000Hz	NRC
SW9A	0.87	1.12	0.97	0.90	0.73	0.66	0.95
SW12A	1.00	1.06	0.92	0.90	0.73	0.62	0.90
SW15A	0.98	1.03	0.93	0.87	0.75	0.61	0.90

Consult EPIC Metals for other test results and individual reports.

SWA & SW Load Table — Uniform Total Load (Dead and Live) in Pounds Per Square Foot

Deck	No.	6								Spa	n Lengt	h Cente	r to Cen	ter of Si	upports	(ft.)							
Туре	Spans	Gage	24	26	28	30	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
		18/18	55/92	51/72	47/58	44/47	41/36	40/32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SW9A	1	16/16	85/122	79/96	73/77	68/63	64/48	62/43	60/38	57/34	54/30	-	-	-	-	-	-	-	-	-	-	-	-
		14/14	127/156	117/123	109/98	102/80	94/62	88/55	83/48	78/43	74/39	70/35	66/31	-	-	-	-	-	-	-	-	-	-
		18/18	57/171	52/134	49/107	45/87	43/67	41/60	40/53	39/47	38/42	37/38	36/34	35/31	-	-	-	-	-	-	-	-	-
SW12A	1	16/16	88/229	81/180	75/144	70/117	66/91	64/80	62/71	60/63	59/57	57/51	56/46	54/41	53/37	51/34	50/31	-	-	-	-	-	-
		14/14	132/297	121/233	113/187	105/152	99/117	96/104	93/92	90/82	88/73	85/66	83/59	81/53	79/48	77/44	75/40	72/36	69/33	66/30	-	-	-
		18/18	58/276	53/217	50/174	46/142	43/109	42/97	41/86	40/76	39/68	38/61	37/55	36/50	35/45	34/41	33/37	32/34	32/31	-	-	-	-
SW15A	1	16/16	90/373	83/293	77/235	72/191	68/147	66/130	64/116	62/103	60/92	58/82	57/74	55/67	54/60	53/55	51/50	50/45	49/41	48/38	47/35	46/32	-
		14/14	135/484	125/381	116/305	108/248	101/191	98/169	95/150	93/134	90/120	88/107	85/96	83/87	81/78	79/71	77/65	75/59	74/54	72/49	71/45	69/41	68/38
		18/18	55/98	51/77	47/62	44/50	41/39	40/34	39/30	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SW9	1	16/16	85/130	79/102	73/82	68/67	64/51	62/45	60/40	58/36	55/32	-	-	-	-	-	-	-	-	-	-	-	-
		14/14	127/166	117/131	109/105	102/85	95/66	90/58	85/52	80/46	75/41	71/37	68/33	64/30	-	-	-	-	-	-	-	-	-
		18/18	57/182	52/143	49/114	45/93	43/72	41/63	40/56	39/50	38/45	37/40	36/36	35/33	-	-	-	-	-	-	-	-	-
SW12	1	16/16	88/244	81/192	75/154	70/125	66/96	64/85	62/76	60/67	59/60	57/54	56/48	54/44	53/39	51/36	50/32	49/30	-	-	-	-	-
		14/14	132/316	121/248	113/199	105/162	99/125	96/110	93/98	90/87	88/78	85/70	83/63	81/57	79/51	77/46	75/42	73/38	70/35	67/32	-	-	-
		18/18	58/294	53/231	50/185	46/151	43/116	42/103	41/91	40/81	39/73	38/65	37/59	36/53	35/48	34/43	33/39	32/36	32/33	31/30	-	-	-
SW15	1	16/16	90/396	83/312	77/250	72/203	68/157	66/139	64/123	62/110	60/98	58/88	57/79	55/71	54/64	53/58	51/53	50/48	49/44	48/40	47/37	46/34	45/31
0.110		14/14	135/500	125/405	116/324	108/264	101/204	98/180	95/160	93/142	90/127	88/114	85/102	83/92	81/83	79/76	77/69	75/62	74/57	72/52	71/48	69/44	68/40

If higher loads or longer spans are required, contact EPIC Metals.

NOTES: 1. Loads are based on ASD Design.

2. Uniform load values listed on the left side of the box, 100/50, are governed by stress or web crippling and the values listed on the right side, 100/50, are governed by deflection.

3. The deflection criteria used for generating the tables above were L/240 or 1.5" maximum. The Engineer of Record shall calculate the allowable uniform load if a different deflection criteria is required.

4. Stress governed values assume a maximum allowable stress of 24 ksi.

5. Minimum end support bearing lengths are shown above. If shorter bearing lengths are used, check safe reaction table on page 43.



SPANS 24´-48´

Super Wideck® SWN(A) Technical Tables

ACOUSTIC (SWNA) NON-ACOUSTIC (SWN)

SWNA





SWNA & SWN Section Properties (per foot of width)

Deck Type	Gage	Weight (psf)	I _⊳ (in.⁴)	S _P (in.³)	S _N (in.³)	Allowable Support Reaction (PLF)
	18/18	7.0	21.81	3.44	2.24	745
SWN9A	16/16	8.8	28.96	4.91	3.18	1149
	14/14	11.0	36.99	6.74	4.40	1713
	18/18	7.7	40.42	4.64	3.24	766
SWN12A	16/16	9.8	54.28	6.80	4.61	1187
	14/14	12.2	70.26	9.34	6.44	1776
	18/18	8.3	65.49	5.83	4.16	781
SWN15A	16/16	10.7	88.25	8.61	5.94	1216
	14/14	13.4	114.65	11.94	8.31	1826
	18/18	7.1	23.21	3.51	2.39	745
SWN9	16/16	8.9	30.80	5.01	3.39	1149
	14/14	11.0	39.35	6.87	4.68	1713
	18/18	7.8	43.00	4.73	3.44	766
SWN12	16/16	9.9	57.75	6.93	4.91	1187
	14/14	12.3	74.75	9.53	6.85	1776
	18/18	8.4	69.67	5.95	4.43	781
SWN15	16/16	10.8	93.88	8.79	6.32	1216
	14/14	13.5	121.97	12.18	8.84	1826

SPANS

24´-50´

*Minimum end support bearing lengths (see Note 5 below): SWN9(A) = 4", SWN12(A) = 5", SWN15(A) = 6"

SWNA Noise Reduction Coefficients

-		Ab	sorption	Coefficie	nts		NDC
Туре	125Hz	250Hz	500Hz	1000Hz	2000Hz	4000Hz	NRC
SWN9A*	1.03	1.02	1.00	0.91	0.84	0.61	0.95
SWN12A*	1.03	0.99	0.90	0.88	0.75	0.55	0.90
SWN15A*	1.03	0.93	0.83	0.86	0.80	0.62	0.85

In accordance with ASTM C423 and E795. Consult EPIC Metals for other test results and individual reports. *Estimated Values

SWNA & SWN Load Table — Uniform Total Load (Dead and Live) in Pounds Per Square Foot

Deck	No.	6								Spa	n Lengt	h Cente	r to Cen	ter of Si	upports	(ft.)							
Туре	Spans	Gage	24	26	28	30	32	34	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
		18/18	62/104	57/81	53/65	50/53	47/41	44/32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SWN9A	1	16/16	96/138	88/108	82/87	77/70	72/54	68/43	61/34	57/30	-	-	-	-	-	-	-	-	-	-	-	-	-
		14/14	143/176	132/138	122/111	114/90	105/69	93/55	83/43	79/39	75/35	71/31	-	-	-	-	-	-	-	-	-	-	-
		18/18	64/192	59/151	55/121	51/98	48/76	45/60	43/47	41/42	40/38	39/34	38/31	-	-	-	-	-	-	-	-	-	-
SWN12A	1	16/16	99/258	91/203	85/162	79/132	74/102	70/80	66/64	64/57	62/51	61/46	59/42	58/38	57/34	55/31	-	-	-	-	-	-	-
		14/14	148/334	137/262	127/210	118/171	111/132	104/104	99/82	96/74	93/66	91/60	89/54	87/49	85/44	81/40	77/37	74/34	71/31	-	-	-	-
		18/18	65/311	60/245	56/196	52/159	49/123	46/97	43/77	42/69	41/62	40/56	39/50	38/46	37/41	36/38	36/34	35/31	-	-	-	-	-
SWN15A	1	16/16	101/419	94/330	87/264	81/215	76/166	72/130	68/103	66/93	64/83	62/75	61/68	59/62	58/56	57/51	55/46	54/42	53/39	52/36	51/33	50/30	-
		14/14	152/545	140/428	130/343	122/279	114/215	107/169	101/134	99/121	96/108	94/98	91/88	89/80	87/73	85/66	83/60	81/55	79/50	78/46	76/43	75/39	73/36
		18/18	62/110	57/87	53/69	50/56	47/44	44/34	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SWN9	1	16/16	96/146	88/115	82/92	77/75	72/58	68/45	62/36	58/32	55/29	-	-	-	-	-	-	-	-	-	-	-	-
		14/14	127/166	117/131	109/105	102/85	95/66	85/52	75/41	71/37	68/33	64/30	-	-	-	-	-	-	-	-	-	-	-
		18/18	64/204	59/161	55/129	51/105	48/81	45/63	43/50	41/45	40/41	39/37	38/33	37/30	-	-	-	-	-	-	-	-	-
SWN12	1	16/16	99/274	91/216	85/173	79/140	74/108	70/85	66/68	64/61	62/55	61/49	59/44	58/40	57/37	55/33	54/30	-	-	-	-	-	-
		14/14	148/355	137/279	127/224	118/182	111/140	104/110	99/88	96/79	93/71	91/64	89/58	87/52	85/47	82/43	79/39	75/36	72/33	69/30	-	-	-
		18/18	65/331	60/260	56/208	52/169	49/131	46/103	43/82	42/73	41/66	40/59	39/54	38/49	37/44	36/40	36/37	35/33	34/31	-	-	-	-
SWN15	1	16/16	101/446	94/351	87/281	81/228	76/176	72/138	68/110	66/99	64/89	62/80	61/72	59/65	58/59	57/54	55/49	54/45	53/41	52/38	51/35	50/32	49/30
		14/14	152/500	140/456	130/365	122/297	114/229	107/180	101/143	99/128	96/115	94/104	91/94	89/85	87/77	85/70	83/64	81/59	79/54	78/49	76/45	75/42	73/38

If higher loads or longer spans are required, contact EPIC Metals.

NOTES: 1. Loads are based on ASD Design.

2. Uniform load values listed on the left side of the box, 100/50, are governed by stress or web crippling and the values listed on the right side, 100/50, are governed by deflection.

3. The deflection criteria used for generating the tables above were U/240 or 1.5" maximum. The Engineer of Record shall calculate the allowable uniform load if a different deflection criteria is required.

4. Stress governed values assume a maximum allowable stress of 24 ksi.

5. Minimum end support bearing lengths are shown above. If shorter bearing lengths are used, check safe reaction table on page 43.



Super Wideck® SWI(A) Technical Tables

ACOUSTIC (SWIA) NON-ACOUSTIC (SWI)

SWIA*





*U.S. Patent Number D742,549 Canadian Patent Number 155720

SWIA & SWI Load Table — Uniform Total Load (Dead and Live) in Pounds Per Square Foot

Deck	No.	Gage							Span Ler	igth Cent	er to Cent	er of Sup	ports (ft.)						
Туре	Spans	uaye	26	28	30	32	34	36	38	40	42	44	46	48	50	52	54	56	58
		18/18	63/222	59/178	55/145	51/112	48/88	46/70	43/56	41/46	39/38	37/31	36/26	-	-	-	-	-	-
SWI15.6A	1	16/16	97/290	90/233	84/189	79/146	74/115	70/91	67/73	63/60	60/49	58/41	55/34	53/29	51/25	-	-	-	-
		14/14	145/372	135/298	126/242	118/187	111/147	105/117	99/94	95/77	90/63	86/52	82/44	76/37	70/31	64/27	-	-	-
		18/18	60/333	56/267	52/217	49/168	46/131	43/105	41/84	39/69	37/56	36/47	34/39	33/33	31/28	-	-	-	-
SWI18.6A	1	16/16	94/436	87/349	81/284	76/219	72/172	68/137	64/110	61/90	58/74	55/61	53/51	51/43	49/37	47/31	45/27	-	-
		14/14	140/500	130/448	122/364	114/282	107/221	101/176	96/142	91/115	87/95	83/79	79/66	76/56	73/47	70/40	68/35	65/30	63/26
		18/18	63/237	59/189	55/154	51/119	48/93	46/74	43/60	41/49	39/40	37/33	36/28	-	-	-	-	-	-
SWI15.6	1	16/16	97/309	90/247	84/201	79/155	74/122	70/97	67/78	63/64	60/52	58/43	55/36	53/31	51/26	-	-	-	-
		14/14	145/396	135/317	126/258	118/199	111/156	105/124	99/100	95/82	90/67	86/56	82/47	77/39	71/33	66/29	61/25	-	-
		18/18	60/354	56/284	52/231	49/178	46/140	43/111	41/90	39/73	37/60	36/50	34/42	33/35	31/30	30/26	-	-	-
SWI18.6	1	16/16	94/463	87/371	81/302	76/233	72/183	68/145	64/117	61/95	58/79	55/65	53/55	51/46	49/39	47/33	45/29	43/25	-
		14/14	140/500	130/477	122/388	114/299	107/235	101/187	96/151	91/123	87/101	83/84	79/70	76/59	73/50	70/43	68/37	65/32	63/28

If higher loads or longer spans are required, contact EPIC Metals.

NOTES: 1. Loads are based on ASD Design.

2. Uniform load values listed on the left side of the box, $\frac{1}{100/50}$, are governed by stress or web crippling and the values listed on the right side, 100/50, are governed by deflection.

3. The deflection criteria used for generating the tables above were L/240 or 1.5" maximum. The Engineer of Record shall calculate the allowable uniform load if a different deflection criteria is required

4. Stress governed values assume a maximum allowable stress of 24 ksi.

5. Minimum end support bearing lengths are shown above. If shorter bearing lengths are used, check safe reaction table on page 43.

Deck Type	Gage	Weight (psf)	I _D (in.⁴)	S _P (in.³)	S _N (in.³)	Allowable Support Reaction (PLF)
	18/18	7.6	59.51	6.05	4.81	819
SWI15.6A	16/16	9.7	77.74	8.19	6.50	1266
	14/14	12.1	99.68	10.90	8.58	1890
	18/18	8.4	89.18	7.41	6.01	781
SWI18.6A	16/16	10.6	116.62	10.05	8.14	1216
	14/14	13.3	149.85	13.39	10.78	1825
	18/18	7.6	63.31	6.17	5.06	819
SWI15.6	16/16	9.7	82.70	8.36	6.84	1266
	14/14	12.1	106.04	11.12	9.03	1890
	18/18	8.4	94.87	7.56	6.33	781
SWI18.6	16/16	10.6	124.06	10.25	8.57	1216
	14/14	13.3	159.41	13.66	11.35	1825

SWIA & SWI Section Properties (per foot of width)

*Allowable reaction based on 6" end bearing length.

SWIA Noise Reduction Coefficients

-		Abs	orption	Coefficie	ents		
Туре	125Hz	250Hz	500Hz	1000Hz	2000Hz	4000Hz	NRC
SWI15.6A*	0.96	0.98	0.92	0.87	0.79	0.66	0.90
SWI18.6A	0.96	0.98	0.92	0.87	0.79	0.66	0.90

In accordance with ASTM C423 and E795.

Consult EPIC Metals for other test results and individual reports.

*Estimated Values

Super Wideck[®] SW(A), SWN(A) & SWI(A) **Specifications**

Notes: Omit underlined areas for non-acoustic applications. Please fill in deck type under 2.2 Materials, Part A. For acoustic ceiling deck, please fill in required NRC under 2.3 Fabrication, Part 5. For the additional specification language covering factory reinforced openings to accommodate sprinkler pipes, lights, speakers, or Skydeck* openings for Solatube* daylighting systems, contact EPIC Metals.

PART 1: GENERAL

1.1 SUMMARY

A. The requirements of this specification section include all materials, equipment, and labor necessary to furnish and install an EPIC Wideck Roof Deck/Ceiling System

1.2 SUBMITTALS

- A. Product Data: Submit manufacturer's specifications, section properties, load tables, diaphragm shear tables, dimensions, finishes, and noise reduction coefficients
- B. Shop Drawings: Submit panel placement drawings showing profiles, material thicknesses, finishes, layout, anchorage, and openings as dimensioned on the structural drawings. Show access openings and covers if required.
- C. Samples: Submit full width sample if requested to verify compliance with the specifications and the level of quality.

1.3 REFERENCE STANDARDS

- A. Section Properties: Shall be computed in accordance with the American Iron and Steel Institute (AISI) Specification for Design of Cold-Formed Steel Structural Members.
- B. Welding: Shall comply with applicable provisions of the American Welding Society (AWS) D1.3 Structural Welding Code—Sheet Steel.
- C. Superimposed Load and Diaphragm Shear Capacities: Shall be computed in accordance with the requirements of the Steel Deck Institute (SDI).
- Noise Reduction Coefficients: Shall be verified by the results of sound D. absorption tests conducted in accordance with ASTM C423 and E795.
- E. Manufacturer shall have been regularly engaged in the production of roof deck ceiling systems deeper than 8" for a period of at least seven years.
- F. Independent test reports will be provided that demonstrate that the acoustical elements are securely attached to prevent dislocation or blow out at wind gusts of up to 100 miles per hour.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Wideck panels shall be protected from damage during delivery, storage, and handling.
- B. If storage at the jobsite is required, Wideck panels shall be elevated above the ground, sloped to provide drainage, and protected from weather with a ventilated covering

1.5 COORDINATION

- A. Coordinate length of fasteners for roofing and thermal insulation to avoid penetrating the finished bottom surface of the SW Wideck panels.
- B. Coordinate location and size of shop-cut access openings in bottom of Wideck panels with affected trades

PART 2: PRODUCTS

2.1 MANUFACTURER

- A. In accordance with the requirements of this specification section, provide products manufactured by EPIC Metals, Rankin, PA.
- B. The type of Wideck panels, design thickness, section properties, and NRC shall be shown on the structural design drawings.

2.2 MATERIALS

- A. Type SW ____ Wideck panels shall be cold-formed from steel coils conforming to ASTM A653, Structural Quality, Grade 40 with minimum yield strength of 40 ksi
- Before forming, the steel coils shall have received a hot-dip protective coating of zinc conforming to ASTM A924, Class G60 or G90, as defined in ASTM A653.
- C. The minimum uncoated thickness of materials furnished shall not be less than 95% of the design thickness.

2.3 FABRICATION

- A. Wideck panels shall be cold-formed by the continuous roll forming process and resistance-welded together to form an integral cellular panel.
 - Wideck panels shall have interlocking type sidelaps suitable for screw or weld fastening
- 2. Wideck panels shall have roll-formed embossments located between the longitudinal stiffening ribs in the top flanges to enhance the structural performance.
- Shallow stiffening ribs shall be roll-formed into the bottom section of Wideck panels. Ribs shall be located in the area between the webs to enhance flatness of the bottom plate
- (Omit this paragraph if prime painting is not required.) The bottom surfaces of Wideck panels shall be prime painted at the factory. Before painting, the galvanized steel shall be chemically cleaned and coated with a pretreatment followed by a coat of manufacturer's standard prime paint and then oven-cured. Compatibility of fieldapplied finish paint with factory-applied prime paint shall be the responsibility of the painting contractor.
- NOTE: CONTACT EPIC METALS FOR SPECIAL PAINTING SYSTEMS THAT ARE RECOMMENDED FOR NATATORIUMS OR OTHER HIGH HUMIDITY APPLICATIONS.
- 5. For acoustic Wideck panels, the bottom section in the area located between the webs shall be perforated for enhanced acoustic performance with uniform rows of holes. Acoustic elements shall be provided for the cells of the panels. These shall be factory-installed. The acoustic elements shall be supported above the perforated surface to avoid plugging the holes when field painted. A minimum NRC value shall be provided. This value shall be established by sound absorption tests without the use of thermal insulation above the panels.

2.4 ACCESSORIES

- Manufacturer's standard ridge plates, valley plates, transition plates, and Δ closures shall be provided as indicated on the structural drawings.
- Openings and reinforcement for openings noted specifically "by the deck В. manufacturer" on the structural drawings shall be provided.
- C. Wideck panels requiring access openings shall be shown on the structural or architectural drawings. Openings shall be shop-cut in the bottom plate area between ribs 8" wide to the length required but not exceeding 8'-0" with a minimum of 12" between openings. Access covers shall be fabricated from minimum 18 gage galvanized material to match the finish and profile of the adjacent deck surface, including stiffening ribs and perforations. Covers shall be factory-attached with #10 screws at 4" to 8" on center and shall be cable suspended.
- D. Where panels continue from the interior of the building through to the exterior of the building (for example as a cantilever canopy): the panels will be perforated on the interior and not perforated on the exterior. Air dams will be provided to minimize the movement of conditioned air from the interior of the building to the exterior.



PART 3: EXECUTION

3.1 GENERAL

A. The Wideck Roof/Ceiling System shall be installed in strict accordance with the manufacturer's instructions, approved erection drawings, and applicable safety regulations.

3.2 PREPARATION

A. Bundles of material shall be located on the supporting frame in such a manner that overloading of any of the individual framing members de not occur

3.3 INSTALLATION

- A. Before being permanently fastened, Wideck panels shall be placed on the supporting frame and adjusted to final position with ends accurate aligned and adequately bearing on the supporting frame. Consistent coverage shall be maintained so that panels located in adjacent bays will be properly aligned.
- B. Cutting of Wideck panels to suit jobsite conditions shall be performed in a neat and workmanlike manner. Only those openings indicated on the structural drawings shall be cut. Other openings shall be cut and reinforced by those requiring the opening as approved by the structural engineer.

all	
oes	I
ly	

- C. Wideck panels shall be fastened to all supporting members with two 34" diameter puddle welds per 18" or 16" wide panel or as indicated on the manufacturer's erection drawings
 - 1. The sides of Wideck panels located at the perimeter of the building shall be fastened to supporting members at a maximum spacing of 36" on center or less as indicated on the manufacturer's erection drawings.
- D. The sidelaps of Wideck panels shall be fastened together by 11/2" long fillet welds or #14 screws at a maximum of 36" on center or less as indicated on the manufacturer's erection drawings.
- E. Construction loads shall not be applied to Wideck panels until after the panels are permanently fastened to supporting members and sidelaps are attached, and shall not exceed the load-carrying capacity of the panels.
- F. Items such as ceilings, light fixtures, conduit, pipe, and ductwork shall not be suspended from Wideck panels without specific approval of the structural engineer.

Wideck[®] WPA & EDPA

The WPA and EDPA profile types give a ceiling appearance that is flush with minor shadow lines. These systems can provide noise reduction coefficient values from .90 to 1.00 (NRC of 1.00 = perfect absorption). The profiles can be specified as acoustic (A) with perforations in the horizontal surface of the ceiling. The acoustic panels and the non-acoustic panels are manufactured with minor shadow lines to reduce a wave appearance in the ceiling surface. The flush ceiling appearance of these systems serves to hide the roofing system fasteners and create higher levels of sound absorption. WPA and EDPA profiles are manufactured in various gages and depths to efficiently clear span from 10 to 34 feet. Utility systems can be hidden within the cells of these floor or roof deck ceiling panels such as lighting fixtures, sprinkler lines, electrical wiring, and speakers. Type WP and EDP non-acoustic flat ceiling profiles and special factory-applied paint finishes are especially beneficial in food, drug, and laundry processing facilities that are required to maintain rigid sanitary conditions. Wideck can be washed to maintain a clean environment for these special-purpose buildings.

The type WPA has 36 inches of coverage and is available in 4½, 6, and 7½ inch depths. These profiles have 50% fewer sidelap joints with minor reductions in structural capacities at a more economical cost to manufacture and install. The wider cells of type WPA can also accommodate larger fixtures and equipment.

Type EDPA profiles have 24 inches of coverage and can be specified in depths of 3, 4½, 6, and 7½ inches to provide the structural attributes required for the designed span.

Wideck types WPA and EDPA are specified embossed (to mask the welds of the panels, see page 42) and galvanized with a factory prime coat of paint. After the panels are erected in place, the specified color of finish paint is applied to complete the desired ceiling appearance. The flush appearance of these profiles accentuates the expansive clear spans of the architect's design and focuses the building occupants' attention on the beauty of the structure.

Specify WP(A) with the Skydeck® option to accommodate innovative Solatube® daylighting systems that bring natural light indoors (see page 41).



EDPA*



ACOUSTIC (WPA)



WPA S	Section	Prop	erties	(per	foot	of width)	

Deck Type	Gage	Weight (psf)	ا _{له} (in.4)	S _P (in. ³)	S _№ (in. ³)		vable port on (PLF
						End*	Int.
	18/18	5.0	5.00	1.24	1.09	662	128
	18/16	5.5	5.45	1.26	1.33	662	128
WP450A	16/18	5.7	6.01	1.79	1.26	1021	195
	16/16	6.3	6.59	1.81	1.51	1021	195
	14/16	7.2	7.79	2.41	1.67	1523	289
	18/18	5.3	9.29	1.71	1.52	629	127
	18/16	5.9	10.08	1.72	1.86	629	127
WP600A	16/18	6.1	11.33	2.55	1.78	978	194
	16/16	6.7	12.42	2.58	2.12	978	194
	14/16	7.7	14.60	3.53	2.43	1467	288
	18/18	5.6	14.97	2.18	1.95	600	126
	18/16	6.2	16.20	2.18	2.38	600	126
WP750A	16/18	6.5	18.47	3.29	2.31	939	193
	16/16	7.1	20.17	3.31	2.74	939	193
	14/16	8.2	23.82	4.61	3.16	1417	287
* Minimum e End = 4″ Interior = 6		erior support	bearing ler	igths (see N	ote 5 below)		

WPA Noise Reduction Coefficients

T			NDC				
Туре	125Hz	250Hz	500Hz	1000Hz	2000Hz	4000Hz	NRC
WP450A	0.58	0.99	1.14	0.92	0.82	0.61	0.95
WP600A	0.68	1.18	1.06	0.89	0.80	0.61	1.00
WP750A	0.77	1.17	1.03	0.91	0.82	0.61	1.00

In accordance with ASTM C423 and E795.

Consult EPIC Metals for other test results and individual reports.

WPA Load Table — Uniform Total Load (Dead and Live) in Pounds Per Square Foot

Deck	No.	Gage							Sp	oan Leng	th Cente	r to Cen	ter of Su	pports (f	t.)						
Туре	Spans	uaye	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	30	32
		18/18	110/190	102/149	95/120	88/97	78/80	69/67	61/56	55/48	50/41	45/34	41/28	-	-	-	-	-	-	-	-
		18/16	110/207	102/163	95/130	88/106	79/87	70/73	62/61	56/52	50/45	46/37	42/31	-	-	-	-	-	-	-	-
WP450A	1	16/18	170/228	157/179	146/144	127/117	112/96	99/80	88/68	79/57	72/49	65/41	59/34	54/28	-	-	-	-	-	-	-
		16/16	170/251	157/197	146/158	129/128	113/106	100/88	89/74	80/63	72/54	66/45	60/37	55/31	-	-	-	-	-	-	-
		14/16	254/296	229/233	197/186	172/152	151/125	134/104	119/88	107/75	97/64	88/53	80/44	73/37	67/31	-	-	-	-	-	-
		18/18	105/353	97/278	90/222	84/181	79/149	74/124	70/105	66/89	63/76	60/63	56/52	52/44	47/37	44/31	-	-	-	-	-
WP600A		18/16	105/383	97/301	90/241	84/196	79/162	74/135	70/114	66/97	63/83	60/68	57/57	52/47	48/40	44/34	41/29	-	-	-	-
		16/18	163/431	150/339	140/271	130/220	122/182	115/151	109/128	103/108	98/93	93/77	84/64	77/53	71/45	65/38	60/33	56/28	-	-	-
		16/16	163/472	150/371	140/297	130/242	122/199	115/166	109/140	103/119	98/102	93/84	85/70	78/58	72/49	66/42	61/36	57/31	-	-	-
		14/16	245/500	226/436	210/349	196/284	183/234	173/195	163/164	154/140	141/120	128/99	117/82	107/68	98/58	90/49	84/42	78/36	72/31	-	-
		18/18	100/500	92/447	86/358	80/291	75/240	71/200	67/169	63/143	60/123	57/101	55/84	52/70	50/59	48/50	46/43	44/37	43/32	-	-
		18/16	100/500	92/484	86/388	80/315	75/260	71/217	67/182	63/155	60/133	57/109	55/91	52/76	50/64	48/54	46/47	44/40	43/35	39/26	-
WP750A	1	16/18	157/500	144/500	134/442	125/359	117/296	110/247	104/208	99/177	94/152	89/125	85/104	82/87	78/73	75/62	72/53	70/46	67/39	58/30	-
		16/16	157/500	144/500	134/483	125/392	117/323	110/270	104/227	99/193	94/166	89/136	85/113	82/95	78/80	75/68	72/58	70/50	67/43	59/33	-
		14/16	236/500	218/500	202/500	189/463	177/382	167/318	157/268	149/228	142/196	135/161	129/134	123/112	118/94	113/80	109/68	101/59	94/51	82/39	72/30

If higher loads or longer spans are required, contact EPIC Metals.

NOTES: 1. Loads are based on ASD Design.

2. Uniform load values listed on the left side of the box, 100/50, are governed by stress or web crippling and the values listed on the right side, 100/50, are governed by deflection.

3. The deflection criteria used for generating the tables above were L/240 or 1" maximum. The Engineer of Record shall calculate the allowable uniform load if a different deflection criteria is required.

4. Stress governed values assume a maximum allowable stress of 24 ksi.

5. Minimum end support bearing lengths are shown above. If shorter bearing lengths are used, check safe reaction table on page 43.

NON-ACOUSTIC (WP)



Deck	No.	Gage							S	oan Leng	th Cente	r to Cent	er of Su	pports (f	t.)						
Туре	Spans	uaye	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	30	32
		18/18	110/200	102/157	95/126	88/102	82/84	73/70	65/59	58/50	53/43	48/36	43/29	-	-	-	-	-	-	-	-
		18/16	110/218	102/171	95/137	88/111	83/92	73/77	65/64	59/55	53/47	48/39	44/32	40/27	-	-	-	-	-	-	-
WP450	1	16/18	170/240	157/189	146/151	134/123	118/101	104/85	93/71	83/61	75/52	68/43	62/35	57/30	-	-	-	-	-	-	-
		16/16	170/264	157/207	146/166	135/135	119/111	105/93	94/78	84/66	76/57	69/47	63/39	58/33	53/27	-	-	-	-	-	-
		14/16	254/312	234/245	207/196	181/160	159/131	141/110	125/92	113/79	102/67	92/55	84/46	77/38	71/32	65/28	-	-	-	-	-
		18/18	105/372	97/292	90/234	84/190	79/157	74/131	70/110	66/94	63/80	60/66	57/55	54/46	50/39	46/33	43/28	-	-	-	-
		18/16	105/403	97/317	90/254	84/206	79/170	74/142	70/119	66/102	63/87	60/72	57/59	55/50	50/42	46/36	43/30	-	-	-	-
WP600	1	16/18	163/453	150/357	140/285	130/232	122/191	115/159	109/134	103/114	98/98	93/81	89/67	81/56	75/47	69/40	64/34	59/29	-	-	-
		16/16	163/497	150/391	140/313	130/254	122/210	115/175	109/147	103/125	98/107	93/88	89/73	82/61	75/52	69/44	64/38	60/32	55/28	-	-
		14/16	245/500	226/459	210/368	196/299	183/246	173/205	163/173	154/147	147/126	135/104	123/86	112/72	103/61	95/52	88/44	81/38	76/33		-
		18/18	100/500	92/471	86/377	80/307	75/253	71/211	67/177	63/151	60/129	57/106	55/88	52/74	50/62	48/53	46/45	44/39	43/34	40/26	-
		18/16	100/500	92/500	86/408	80/332	75/273	71/228	67/192	63/163	60/140	57/115	55/96	52/80	50/68	48/57	46/49	44/42	43/36	40/28	-
WP750	1	16/18	157/500	144/500	134/465	125/378	117/312	110/260	104/219	99/186	94/160	89/131	85/109	82/91	78/77	75/65	72/56	70/48	67/42	62/32	-
		16/16	157/500	144/500	134/500	125/413	117/340	110/284	104/239	99/203	94/174	89/143	85/119	82/100	78/84	75/71	72/61	70/52	67/45	62/34	55/27
		14/16	236/500	218/500	202/500	189/488	177/402	167/335	157/282	149/240	142/206	135/169	129/141	123/118	118/99	113/84	109/72	105/62	99/54	86/41	76/31

If higher loads or longer spans are required, contact EPIC Metals.

NOTES: 1. Loads are based on ASD Design.

3. The deflection criteria used for generating the tables above were L/240 or 1" maximum. The Engineer of Record shall calculate the allowable uniform load if a different deflection criteria is required.

- 4. Stress governed values assume a maximum allowable stress of 24 ksi.
- 5. Minimum end support bearing lengths are shown above. If shorter bearing lengths are used, check safe reaction table on page 43.

Deck Type	Gage	Weight (psf)	I _D (in.⁴)	S _Р (in. ³)	S _N (in. ³)	Sup	vable port on (PLF)
						End*	Int.*
	18/18	5.0	5.26	1.31	1.14	662	1283
	18/16	5.5	5.73	1.32	1.40	662	1283
WP450	16/18	5.7	6.33	1.88	1.33	1021	1955
	16/16	6.3	6.94	1.90	1.59	1021	1955
	14/16	7.2	8.20	2.54	1.76	1523	2893
	18/18	5.3	9.78	1.80	1.60	629	1276
	18/16	5.9	10.61	1.81	1.95	629	1276
WP600	16/18	6.1	11.93	2.69	1.88	978	1946
	16/16	6.7	13.08	2.71	2.23	978	1946
	14/16	7.7	15.36	3.71	2.56	1467	2881
	18/18	5.6	15.76	2.29	2.05	600	1269
	18/16	6.2	17.06	2.30	2.51	600	1269
WP750	16/18	6.5	19.45	3.46	2.43	939	1937
	16/16	7.1	21.24	3.49	2.88	939	1937
	14/16	8.2	25.07	4.85	3.33	1417	2870

WP Section Properties (per foot of width)

* Minimum end and interior support bearing lengths (see Note 5 below): End = 4''

Interior = 6''

WP Load Table — Uniform Total Load (Dead and Live) in Pounds Per Square Foot

2. Uniform load values listed on the left side of the box, 100/50, are governed by stress or web crippling and the values listed on the right side, 100/50, are governed by deflection.

ACOUSTIC (EDPA)

EDPA	
EDP750A 7½" (190mm) EDP600A 6" (152mm) EDP450A 4½" (114mm) EDP324A 3" (76mm) 24" (610mm) coverage	
U.S. Patent Number D507,665	

EDPA	Noise	Reduction	Coefficients

T		Ab	sorption	Coefficie	nts		NDC
Туре	125Hz	250Hz	500Hz	1000Hz	2000Hz	4000Hz	NRC
EDP324A	0.45	0.76	1.11	0.91	0.75	0.62	0.90
EDP450A	0.51	1.07	1.04	0.93	0.80	0.60	0.95
EDP600A	0.48	1.15	1.07	0.96	0.80	0.64	1.00
EDP750A	0.62	1.21	0.98	0.89	0.85	0.57	1.00

In accordance with ASTM C423 and E795. Consult EPIC Metals for other test results and individual reports.

EDPA Section Properties (per foot of width)

Deck Type	Gage	Weight (psf)	I _⊳ (in.⁴)	S _P (in. ³)	S _N (in. ³)	Sup	wable port on (PLF)
,,		4,		,		End*	Int.*
	20/18	4.4	1.86	0.63	0.79	591	1112
	18/18	5.1	2.39	0.97	0.92	985	1837
	18/16	5.7	2.60	1.00	1.25	985	1837
EDP324A	16/18	5.8	2.95	1.37	1.07	1511	2800
	16/16	6.5	3.21	1.41	1.25	1511	2800
	14/16	7.3	3.76	1.91	1.41	2246	4145
	20/18	4.7	4.45	0.95	1.30	570	1136
	18/18	5.5	5.67	1.60	1.54	962	1880
	18/16	6.1	6.14	1.59	1.83	962	1880
DP450A	16/18	6.4	6.93	2.24	1.80	1486	2867
Ì	16/16	7.0	7.53	2.30	2.09	1486	2867
ĺ	14/16	8.0	8.79	3.10	2.36	2220	4244
	18/18	6.0	10.66	2.12	2.20	925	1889
	18/16	6.6	11.47	2.16	2.60	925	1889
EDP600A	16/18	7.0	12.87	3.21	2.61	1439	2882
	16/16	7.6	13.98	3.23	3.00	1439	2882
	14/16	8.8	16.33	4.42	3.45	2162	4268
	18/18	6.5	17.39	2.68	2.86	888	1888
	18/16	7.1	18.55	2.68	3.38	888	1888
EDP750A	16/18	7.6	21.03	4.13	3.42	1390	2882
	16/16	8.2	22.85	4.10	3.94	1390	2882
	14/16	9.5	26.59	5.88	4.59	2099	4269

EDPA Load Table — Uniform Total Load (Dead and Live) in Pounds Per Square Foot

Deck	No.	Gage								Span L	ength Co	enter to	Center o	f Suppo	rts (ft.)							
Туре	Spans	Gaye	10	12	14	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	32	34
		20/18	101/122	70/71	51/45	39/30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		18/18	156/157	108/91	80/57	61/38	54/32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		18/16	159/171	111/99	81/62	62/42	55/35	49/29	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EDP324A	1	16/18	219/193	152/112	112/70	86/47	76/39	68/33	61/28	-	-	-	-	-	-	-	-	-	-	-	-	-
		16/16	226/211	157/122	115/77	88/51	78/43	70/36	63/31	-	-	-	-	-	-	-	-	-	-	-	-	-
		14/16	306/247	213/143	156/90	120/60	106/50	95/42	85/36	77/31	-	-	-	-	-	-	-	-	-	-	-	-
		20/18	114/292	95/169	77/106	59/71	53/59	47/50	42/43	38/37	34/30	-	-	-	-	-	-	-	-	-	-	-
		18/18	192/372	160/215	131/136	100/91	89/76	79/64	71/54	64/47	58/38	53/32	-	-	-	-	-	-	-	-	-	-
		18/16	192/403	160/233	131/147	100/98	89/82	79/69	71/59	64/50	58/41	53/34	48/29	-	-	-	-	-	-	-	-	-
EDP450A	-	16/18	297/455	248/263	183/166	140/111	124/93	111/78	99/66	90/57	81/47	74/39	68/33	-	-	-	-	-	-	-	-	-
		16/16	297/494	248/286	188/180	144/121	127/101	114/85	102/72	92/62	84/51	76/42	70/35	64/30	-	-	-	-	-	-	-	-
		14/16	444/500	344/334	253/210	194/141	172/118	153/99	137/84	124/72	112/59	102/49	94/41	86/35	79/30	-	-	-	-	-	_	-
		18/18	185/500	154/405	132/255	116/171	109/142	103/120	94/102	85/87	77/72	70/60	64/50	59/42	54/36	50/31	-	-	-	-	-	-
		18/16	185/500	154/436	132/274	116/184	109/153	103/129	96/110	87/94	78/77	72/64	65/54	60/45	55/39	51/33	47/28	-	-	-	-	-
EDP600A	1	16/18	288/500	240/489	206/308	180/206	169/172	159/145	142/123	128/106	116/87	106/72	97/60	89/51	82/43	76/37	70/32	-	-	-	-	-
		16/16	288/500	240/500	206/335	180/224	169/187	160/157	143/134	129/115	117/94	107/78	98/66	90/55	83/47	76/40	71/35	66/30	-	-	-	-
		14/16	432/500	360/500	309/391	270/262	245/218	218/184	196/156	177/134	161/110	146/92	134/77	123/65	113/55	105/47	97/40	90/35	84/30	-	-	-
		18/18	178/500	148/500	127/416	111/279	104/232	99/196	93/166	89/143	85/117	81/97	77/82	74/69	69/58	63/50	59/43	55/37	51/32	-	-	-
		18/16	178/500	148/500	127/444	111/297	104/248	99/209	93/178	89/152	85/125	81/104	77/87	74/73	68/62	63/53	59/46	55/40	51/34	48/30	_	-
EDP750A	1	16/18	278/500	232/500	199/500	174/337	164/281	154/237	146/201	139/173	132/142	126/118	121/99	115/83	106/71	98/60	91/52	84/45	79/39	73/34	65/26	-
		16/16	278/500	232/500	199/500	174/366	164/305	154/257	146/219	139/188	132/154	126/128	121/107	114/90	105/77	97/66	90/56	84/49	78/42	73/37	64/29	-
		14/16	420/500	350/500	300/500	262/426	247/355	233/299	221/255	210/218	200/180	191/149	178/125	163/105	151/89	139/76	129/66	120/57	112/49	105/43	92/33	81/2

If higher loads or longer spans are required, contact EPIC Metals.

NOTES: 1. Loads are based on ASD Design.

2. Uniform load values listed on the left side of the box, 100/50, are governed by stress or web crippling and the values listed on the right side, 100/50, are governed by deflection.

3. The deflection criteria used for generating the tables above were L/240 or 1" maximum. The Engineer of Record shall calculate the allowable uniform load if a different deflection criteria is required.

4. Stress governed values assume a maximum allowable stress of 24 ksi.

5. Minimum end support bearing lengths are shown above. If shorter bearing lengths are used, check safe reaction table on page 43.

NON-ACOUSTIC (EDP)



U.S. Patent Number D507,665

EDP Load Table — Uniform Total Load (Dead and Live) in Pounds Per Square Foot

Deck	No.	Gage								Span L	ength Co	enter to	Center o	of Suppo	rts (ft.)							
Туре	Spans	ouge	10	12	14	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	32	34
		20/18	105/129	73/74	53/47	41/31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		18/18	165/166	114/96	84/60	64/40	57/34	51/28	-	-	-	-	-	-	-	-	-	-	-	-	-	-
500004	4	18/16	168/180	117/104	86/66	66/44	58/37	52/31	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EDP324	1	16/18	232/203	161/118	118/74	91/50	80/41	72/35	64/30	-	-	-	-	-	-	-	-	-	-	-	-	-
		16/16	237/222	164/129	121/81	92/54	82/45	73/38	66/32	59/28	-	-	-	-	-	-	-	-	-	-	-	-
		14/16	322/259	224/150	164/95	126/63	111/53	99/44	89/38	80/32	73/28	-	-	-	-	-	-	-	-	-	-	-
		20/18	114/308	95/178	81/112	62/75	55/63	49/53	44/45	40/38	36/32	-	-	-	-	-	-	-	-	-	-	-
		18/18	192/391	160/227	137/143	105/96	93/80	83/67	75/57	67/49	61/40	56/33	-	-	-	-	-	-	-	-	-	-
EDP450	1	18/16	192/424	160/246	136/155	105/104	93/86	83/73	74/62	67/53	61/44	55/36	51/30	-	-	-	-	-	-	-	-	-
		16/18	297/479	248/277	193/174	148/117	131/97	117/82	105/70	95/60	86/49	78/41	72/34	66/29	-	-	-	-	-	-	-	-
		16/16	297/500	248/301	197/189	151/127	134/106	119/89	107/76	97/65	88/53	80/44	73/37	67/31	-	-	-	-	-	-	-	-
		14/16	444/500	363/352	267/221	204/148	181/124	161/104	145/89	131/76	118/62	108/52	99/43	91/37	84/31	-	-	-	-	-	-	-
		18/18	185/500	154/426	132/268	116/180	109/150	103/126	97/107	89/92	81/76	74/63	67/53	62/44	57/38	53/32	-	-	-	-	-	-
		18/16	185/500	154/459	132/289	116/193	109/161	103/136	97/116	91/99	82/82	75/68	69/57	63/48	58/41	54/35	50/30	-	-	-	-	-
EDP600	1	16/18	288/500	240/500	206/324	180/217	169/181	160/152	150/130	135/111	123/91	112/76	102/64	94/54	87/46	80/39	74/33	69/29	-	-	-	-
		16/16	288/500	240/500	206/352	180/236	169/197	160/166	151/141	136/121	123/99	112/83	103/69	94/58	87/49	80/42	75/36	69/31	-	-	-	-
		14/16	432/500	360/500	309/411	270/275	254/230	230/193	207/165	186/141	169/116	154/96	141/81	129/68	119/58	110/49	102/42	95/37	89/32	-	-	-
		18/18	178/500	148/500	127/438	111/293	104/245	99/206	93/175	89/150	85/124	81/103	77/86	74/72	71/62	67/53	62/45	58/39	54/34	50/30	-	-
		18/16	178/500	148/500	127/467	111/313	104/261	99/220	93/187	89/160	85/132	81/109	77/92	74/77	71/66	67/56	62/48	57/42	54/36	50/32	-	-
EDP750	1	16/18	278/500	232/500	199/500	174/355	164/296	154/249	146/212	139/182	132/150	126/124	121/104	116/88	111/74	103/64	95/55	89/47	83/41	77/36	68/28	-
LDI730		16/16	278/500	232/500	199/500	174/386	164/322	154/271	146/230	139/197	132/162	126/135	121/113	116/95	110/81	102/69	95/59	88/51	82/45	77/39	67/30	-
		14/16	420/500	350/500	300/500	262/449	247/374	233/315	221/268	210/230	200/189	191/157	183/131	172/111	158/94	146/80	136/69	126/60	118/52	110/45	97/35	86/28

If higher loads or longer spans are required, contact EPIC Metals.

NOTES: 1. Loads are based on ASD Design.

2. Uniform load values listed on the left side of the box, 100/50, are governed by stress or web crippling and the values listed on the right side, 100/50, are governed by deflection.

3. The deflection criteria used for generating the tables above were L/240 or 1" maximum. The Engineer of Record shall calculate the allowable uniform load if a different deflection criteria is required.

4. Stress governed values assume a maximum allowable stress of 24 ksi.

5. Minimum end support bearing lengths are shown above. If shorter bearing lengths are used, check safe reaction table on page 43.

Deck Type	Gage	Weight (psf)	I _D (in.4)	S _Р (in. ³)	S _N (in. ³)	Allowable Support Reaction (PL		
						End*	Int.*	
	20/18	4.4	1.96	0.66	0.83	591	1112	
	18/18	5.1	2.53	1.03	0.97	985	1837	
	18/16	5.7	2.74	1.05	1.31	985	1837	
EDP324	16/18	5.8	3.10	1.45	1.12	1511	2800	
	16/16	6.5	3.39	1.48	1.31	1511	2800	
	14/16	7.3	3.95	2.01	1.48	2246	4145	
	20/18	4.7	4.69	1.00	1.37	570	1136	
	18/18	5.5	5.96	1.68	1.63	962	1880	
EDP450	18/16	6.1	6.47	1.67	1.92	962	1880	
	16/18	6.4	7.29	2.37	1.90	1486	2867	
	16/16	7.0	7.92	2.42	2.20	1486	2867	
	14/16	8.0	9.26	3.27	2.49	2220	4244	
	18/18	6.0	11.22	2.23	2.32	925	1889	
	18/16	6.6	12.07	2.27	2.74	925	1889	
EDP600	16/18	7.0	13.55	3.38	2.74	1439	2882	
	16/16	7.6	14.72	3.40	3.16	1439	2882	
	14/16	8.8	17.19	4.66	3.64	2162	4268	
	18/18	6.5	18.30	2.82	3.02	888	1888	
EDP750	18/16	7.1	19.53	2.82	3.56	888	1888	
	16/18	7.6	22.14	4.34	3.61	1390	2882	
	16/16	8.2	24.06	4.31	4.15	1390	2882	
-	14/16	9.5	27.99	6.19	4.83	2099	4269	

EDP Section Properties (per foot of width)

* Minimum end and interior support bearing lengths (see Note 5 below):

End = 4" Interior = 6"

Wideck[®] WP(A) & EDP(A) Specifications

Notes: Omit underlined areas for non-acoustic applications. Please fill in deck type under 2.2 Materials, part A. For acoustic ceiling deck, please fill in required NRC under 2.3 Fabrication, part 6. For the additional specification language covering factory reinforced openings in type WP or type EDP to accommodate sprinkler pipes, lights, speakers, or in type WP to accommodate Skydeck* openings for Solatube* daylighting systems, contact EPIC Metals.

PART 1: GENERAL

1.1 SUMMARY

A. The requirements of this specification section include all materials, equipment, and labor necessary to furnish and install an EPIC Wideck Roof Deck/Ceiling System.

1.2 SUBMITTALS

- A. Product Data: Submit manufacturer's specifications, section properties, load tables, diaphragm shear tables, dimensions, finishes, <u>and noise</u> <u>reduction coefficients</u>.
- B. Shop Drawings: Submit panel placement drawings showing profiles, material thicknesses, finishes, layout, anchorage, and openings as dimensioned on the structural drawings. Show access openings and covers if required.
- C. Samples: Submit full width sample if requested to verify compliance with the specifications and the level of quality.

1.3 REFERENCE STANDARDS

- A. Section Properties: Shall be computed in accordance with the American Iron and Steel Institute (AISI) Specification for Design of Cold-Formed Steel Structural Members.
- B. Welding: Shall comply with applicable provisions of the American Welding Society (AWS) D1.3 Structural Welding Code—Sheet Steel.
- C. Superimposed Load and Diaphragm Shear Capacities: Shall be computed in accordance with the requirements of the Steel Deck Institute (SDI).
- D. Noise Reduction Coefficients: Shall be verified by the results of sound absorption tests conducted in accordance with ASTM C423 and E795.
- E. Manufacturer shall have been regularly engaged in the production of roof deck ceiling systems with all of the required features for a period of at least seven years.
- F. Independent test reports will be provided that demonstrate that the acoustical elements are securely attached to prevent dislocation or blow out at wind gusts of up to 100 miles per hour.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Wideck panels shall be protected from damage during delivery, storage, and handling.
- B. If storage at the jobsite is required, Wideck panels shall be elevated above the ground, sloped to provide drainage, and protected from weather with a ventilated covering.

1.5 COORDINATION

- A. Coordinate length of fasteners for roofing and thermal insulation to avoid penetrating the finished bottom surface of the Wideck panels.
- B. Coordinate location and size of shop-cut access openings in bottom of Wideck panels with affected trades.

PART 2: PRODUCTS

2.1 MANUFACTURER

- A. In accordance with the requirements of this specification section, provide products manufactured by EPIC Metals, Rankin, PA.
- B. The type of Wideck panels, design thickness, section properties, <u>and NRC</u> shall be shown on the structural design drawings.

2.2 MATERIALS

A. Wideck panels shall be cold-formed from steel coils conforming to ASTM A653, Structural Quality, with a minimum yield strength of 40 ksi for type WP ____ or type EDP ____ panels.

- B. Before forming, the steel coils shall have received a hot-dip protective coating of zinc conforming to ASTM A924, Class G60 or G90, as defined in ASTM A653.
- C. The minimum uncoated thickness of materials furnished shall not be less than 95% of the design thickness.

2.3 FABRICATION

- A. Type WP and EDP Wideck panels shall be cold-formed by the continuous roll forming process and resistance-welded together to form an integral cellular unit.
- Type WP and EDP Wideck panels shall have interlocking and vertically selfaligning sidelaps that present a flush appearance with tight fitting joints from the underside.
- Type WP Wideck panels shall have roll-formed embossments located between the longitudinal stiffening ribs in the top flanges to enhance the structural performance.
- 3. Shallow stiffening ribs shall be roll-formed into the bottom plates of type WP and EDP Wideck panels. Ribs shall be located in the area between the webs to enhance flatness of the bottom plate.
- 4. The entire bottom plate area of type WP and EDP Wideck panels shall be embossed to enhance appearance and to disguise spot welds that connect the plates to the hat sections. (Not available in 14 gage.)
- 5. After forming and welding, the bottom surfaces of type WP and EDP Wideck panels shall be prime painted at the factory. Before painting, the galvanized steel shall be chemically cleaned and coated with an acid wash pretreatment primer followed by a coat of manufacturer's standard prime paint and then oven-cured. Compatibility of field-applied finish paint with factory-applied prime paint shall be the responsibility of the painting contractor.
- NOTE: CONTACT EPIC METALS FOR SPECIAL PAINTING SYSTEMS THAT ARE RECOMMENDED FOR NATATORIUMS OR OTHER HIGH HUMIDITY APPLICATIONS.
- 6. For acoustic type Wideck panels, the bottom plates in the area located between the webs shall be perforated for enhanced acoustic performance with uniform rows of holes. Acoustic elements shall be provided for the cells of the panels. These shall be factory-installed. The acoustic elements shall be supported above the bottom plate by either individual clips or continuous mesh to avoid plugging the perforated holes when field painting. A minimum NRC value of ______ shall be provided. This value shall be established by sound absorption tests without the use of thermal insulation above the units.

2.4 ACCESSORIES

- A. Manufacturer's standard ridge plates, valley plates, transition plates, and closures shall be provided as indicated on the structural drawings.
- B. Openings and reinforcement for openings noted specifically by the deck manufacturer on the structural drawings shall be provided.
- C. Type WP and EDP Wideck panels requiring access openings shall be shown on the structural or architectural drawings. Openings shall be shop-cut in the bottom plate area between ribs 8" wide in WP and 6" wide in EDP units to the length required but not exceeding 8-0" with a minimum of 12" between openings. Access covers shall be fabricated from minimum 18 gage galvanized material to match the finish and profile of the adjacent deck surface, including stiffening ribs, perforations, and embossing patterns. Covers shall be fieldattached with #10 screws at 4" to 8" on center. Holes in access covers to be pre-punched. Screws furnished by deck manufacturer.
- D. Where panels continue from the interior of the building through to the exterior of the building (for example as a cantilever canopy): <u>the panels will be perforated on the interior and not perforated on the exterior</u>. Air dams will be provided to minimize the movement of conditioned air from the interior of the building to the exterior.



PART 3: EXECUTION

3.1 GENERAL

A. The Wideck Roof/Ceiling System shall be installed in strict accordance with the manufacturer's instructions, approved erection drawings, and all applicable safety regulations.

3.2 PREPARATION

A. Bundles of material shall be located on the supporting frame in such a manner that overloading of any of the individual framing members does not occur.

3.3 INSTALLATION

- A. Before being permanently fastened, Wideck panels shall be placed on the supporting frame and adjusted to final position with ends accurately aligned and adequately bearing on the supporting frame. Consistent coverage shall be maintained so that panels located in adjacent bays will be properly aligned.
- B. Cutting of Wideck panels to suit jobsite conditions shall be performed in a neat and workmanlike manner. Only those openings indicated on the structural drawings shall be cut. Other openings shall be cut and reinforced by those requiring the opening as approved by the structural engineer.

C.	Type WP and EDP Wideck panels shall be fastened to all supporting
	members with three ¾ diameter puddle welds per 36 wide panel for
	WP and 24" wide panel for EDP or as indicated on the manufacturer's
	erection drawings.

- The sides of Wideck panels located at the perimeter of the building shall be fastened to supporting members at a maximum spacing of 36" on center or less as indicated on the manufacturer's erection drawings.
- D. The sidelaps of type WP and EDP Wideck panels shall be fastened together by 1½" long seam welds or #12 screws (¾" maximum length) at a maximum of 36" on center or less as indicated on the manufacturer's erection drawings.
- E. Construction loads shall not be applied to Wideck panels until after they are permanently fastened to supporting members and sidelaps are attached, and shall not exceed the load-carrying capacity of the panels.
- F. Items such as ceilings, light fixtures, conduit, pipe, and ductwork shall not be suspended from Wideck panels without specific approval of the structural engineer.

EPIC METALS 23

Wideck® WHFA & WA

WHFA*

WA

The WHFA and WA profile types establish a visually bold ribbed ceiling appearance and economically accommodate clear span truss spacing from 12 to 30 feet. This wider truss spacing makes any building design appear more spacious. Wideck types WHFA and WA are specified galvanized, or galvanized with a factory prime coat of paint. After the panels are erected in place, the specified color of finish paint is applied to complete the desired ceiling appearance.

The type WHFA profile (available in 4½, 6, and 7½ inches) conceals the roofing system fasteners. When specified as an acoustic product, the noise reduction coefficient (NRC) values of WHFA are from .75 to .90 (NRC is the average of sound absorption at various frequency levels). With the acoustic option, WA profiles have the vertical surfaces perforated and a vertical standing acoustic element between the ribs to provide sound absorption.

With the WCHFA composite floor deck option, the vertical surfaces of the WCHFA panel are not perforated or insulated. WHFA without the vertical perforations and vertical insulation may also be specified as a roof deck ceiling system when the acoustic requirements of the designed space are not as important as the system economics.

The type WA profile's wider ribbed appearance has an 18 inch coverage and is available in depths of $4\frac{1}{2}$, 6, and $7\frac{1}{2}$ inches. The type WA profile has minor reductions in structural capacities at a more economical cost to manufacture, paint, and install compared to 12 inch coverage panels.

The structural strength of these deeper profiles permits long cantilevers for canopies and sheltered walkways. Recessed lighting fixtures can be installed between the ribs to provide attractive, efficient lighting. The bold deep ribs of the WHFA and WA profiles draw the attention of the building occupants to the beauty of the ceiling and truss system design.

Specify WHF(A) & W(A) with the Skydeck® option to accommodate innovative Solatile Solatile accommodate innovative Solatube® daylighting systems that bring natural light indoors (see page 41).



*U.S. Patent Number 6.691.482



Wideck[®] WNA & EDA

WNA*

Wideck WNA and EDA establish a visually bold ribbed ceiling appearance and economically accommodate clear span truss spacing from 10 to 36 feet. Wider truss spacing makes the building's interior design appear more spacious. Product finishes can be specified as galvanized or galvanized with a factory prime coat of paint. After the panels are erected and in place, the specified color of finish paint is applied to complete the desired ceiling appearance.

The Wideck EDA panel has 12 inch coverage with a hidden sidelap. The panel can be specified in depths of 3, 4 ½, 6 and 7 ½ inches to provide a span from 10 – 32 feet, depending on the gage required for the structural attributes. Wideck EDA also provides a versatile hanging feature. Lighting fixtures can be installed between the ribs to provide attractive, efficient lighting. Safe load hanging capacities are listed on page 33.

Wideck WNA and EDA provide a traditional look that offer a long span and acoustic options. The structural strength of these deeper profiles permits long cantilevers for uninterrupted canopies and sheltered walkways. The bold, deep ribs of these panels draw the attention of the building occupants to the beauty of the ceiling and the truss system design.

EpiGrip® Hangers



Wideck ED EpiGrip hanger* *For safe load hanging capacities, see page 33





Dick's Sporting Goods Headquarters Moon Township, Pennsylvania, Wideck ED600

Wideck[®] WHF(A), W(A) **Technical Tables**

ACOUSTIC (WHFA, WA)





WHFA & WA Section Properties (per foot of width)

Deck Type	Gage	Weight (psf)	l _₀ (in.⁴)	S _P (in. ³)	S _N (in. ³)		vable port on (PLF)
						End*	Int.*
	18	3.4	2.72	0.94	1.01	582	1129
WHF450A/	16	4.3	3.59	1.22	1.27	898	1697
W450A	14	5.4	4.60	1.54	1.60	1340	2545
	18	3.7	5.33	1.42	1.36	553	1123
WHF600A/	16	4.7	7.10	1.84	1.93	861	1712
W600A	14	5.9	9.08	2.34	2.41	1291	2535
	18	4.0	8.97	1.94	1.81	528	1117
WHF750A/	16	5.1	11.98	2.54	2.40	826	1705
W750A	14	6.4	15.37	3.23	3.14	1247	2526

*Minimum end and interior support bearing lengths (see Note 5 below): End = 4" Interior = 6"

WHFA & WA Noise Reduction Coefficients

-	Гуре		Abs	orption	Coefficie	ents		NRC
ļ	iyhe	125Hz	250Hz	500Hz	1000Hz	2000Hz	4000Hz	
	50% Acoustic	0.35	0.57	0.97	0.87	0.66	0.60	0.75
WHF450A	100% Acoustic	0.31	0.81	1.00	0.99	0.88	0.65	0.90
	50% Acoustic	0.31	0.79	0.92	0.91	0.66	0.59	0.80
WHF600A	100% Acoustic	0.31	0.81	1.00	0.99	0.77	0.65	0.90
	50% Acoustic	0.46	0.90	0.85	0.84	0.63	0.61	0.80
WHF750A	100% Acoustic	0.46	0.84	0.88	0.95	0.94	0.83	0.90
W	450A	0.19	0.39	0.79	0.58	0.38	0.31	0.55
W	600A	0.26	0.59	0.73	0.64	0.46	0.44	0.65
W	750A	0.32	0.61	0.78	0.79	0.56	0.52	0.65

In accordance with ASTM C423 and E795.

Consult EPIC Metals for other test results and individual reports.

WHFA and WA Load Table — Uniform Total Load (Dead and Live) in Pounds Per Square Foot

Deck	No.								S	oan Leng	th Cente	r to Cent	ter of Su	pports (fi	t.)						
Туре	Spans	Gage	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
		18	97/103	89/81	77/65	67/53	59/44	52/36	46/31	-	-	-	-	-	-	-	-	-	-	-	-
	1	16	136/136	116/107	100/86	87/70	76/58	68/48	60/40	54/34	49/29	-	-	-	-	-	-	-	-	-	-
WHF450A/		14	171/175	146/137	126/110	110/89	96/74	85/61	76/52	68/44	62/38	56/31	-	-	-	-	-	-	-	-	-
W450A		18	75/249	69/196	65/157	60/127	56/105	53/88	50/74	45/63	40/54	37/44	33/37	31/31	-	-	-	-	-	-	-
	2	16	113/328	104/258	97/207	90/168	79/139	70/116	63/97	56/83	51/71	46/58	42/48	38/41	35/34	-	-	-	-	-	-
		14	170/421	151/331	131/265	114/215	100/178	89/148	79/125	71/106	64/91	58/75	53/62	48/52	44/44	41/37	38/32	-	-	-	-
		18	92/203	85/159	79/128	74/104	69/85	65/71	61/60	58/51	55/44	52/36	47/30	-	-	-	-	-	-	-	-
	1	16	144/270	132/212	123/170	115/138	108/114	101/95	91/80	82/68	74/58	67/48	61/40	56/33	-	-	-	-	-	-	-
WHF600A/		14	215/345	199/271	184/217	166/177	146/146	130/121	116/102	104/87	94/75	85/61	77/51	71/43	65/36	60/31	-	-	-	-	-
W600A		18	75/488	69/383	64/307	60/250	56/206	53/171	50/144	47/123	45/105	43/87	41/72	39/60	37/51	35/43	32/37	30/32	-	-	-
	2	16	114/500	105/500	98/409	91/333	86/274	81/228	76/192	72/164	68/140	65/115	62/96	58/80	54/68	49/57	46/49	42/42	-	-	-
		14	169/500	156/500	145/500	135/425	127/350	119/292	113/246	107/209	96/179	87/148	80/123	73/103	67/87	62/73	57/63	53/54	-	-	-
		18	88/341	81/268	75/215	70/175	66/144	62/120	59/101	56/86	53/74	50/61	48/50	46/42	44/36	42/30	-	-	-	-	-
WHF750A/	1	16	138/455	127/358	118/287	110/233	103/192	97/160	92/135	87/115	83/98	79/81	75/67	72/56	69/47	65/40	60/34	56/30	-	-	-
W750A		14	208/500	192/459	178/368	166/299	156/246	147/205	139/173	131/147	125/126	117/104	107/86	98/72	90/61	83/52	76/44	71/38	66/33	61/29	57/25

If higher loads or longer spans are required, contact EPIC Metals.

NOTES: 1. Loads are based on ASD Design.

2. Uniform load values listed on the left side of the box, 100/50, are governed by stress or web crippling and the values listed on the right side, 100/50, are governed by deflection.

3. The deflection criteria used for generating the tables above were U/240 or 1" maximum. The Engineer of Record shall calculate the allowable uniform load if a different deflection criteria is required.

Stress governed values assume a maximum allowable stress of 24 ksi.

5. Minimum end support bearing lengths are shown above. If shorter bearing lengths are used, check safe reaction table on page 43.

NON-ACOUSTIC (WHF, W)







WHF and W Load Table — Uniform Total Load (Dead and Live) in Pounds Per Square Foot

Deck	No.	6							S	oan Leng	th Cente	r to Cent	ter of Su	pports (fi	t.)						
Туре	Spans	Gage	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
		18	110/109	94/85	81/68	70/56	62/46	55/38	49/32	44/27	-	-	-	-	-	-	-	-	-	-	-
	1	16	142/144	121/113	104/90	91/74	80/61	71/51	63/43	57/36	51/31	-	-	-	-	-	-	-	-	-	-
WHF450/		14	180/184	153/145	132/116	115/94	101/78	90/65	80/54	72/46	65/40	59/33	54/27	-	-	-	-	-	-	-	-
W450		18	86/262	79/206	73/165	68/134	64/110	59/92	52/78	47/66	42/57	38/46	35/39	32/32	-	-	-	-	-	-	-
	2	16	130/346	120/272	109/218	95/177	84/146	74/122	66/102	59/87	54/75	49/61	44/51	41/43	37/36	34/31	-	-	-	-	-
		14	187/443	159/348	137/279	119/227	105/187	93/156	83/131	74/112	67/96	61/79	56/65	51/55	47/46	43/39	40/33	37/29	-	-	-
		18	105/213	97/168	90/134	84/109	79/90	74/75	70/63	66/54	60/46	54/38	49/31	45/26	-	-	-	-	-	-	-
	1	16	163/284	150/223	140/179	130/145	121/120	107/100	96/84	86/72	78/61	70/50	64/42	59/35	54/30	50/25	-	-	-	-	-
WHF600/		14	245/363	226/286	201/229	175/186	154/153	136/128	121/108	109/92	98/78	89/65	81/54	74/45	68/38	63/32	58/27	54/24	-	-	-
W600		18	85/500	79/404	73/323	68/263	64/216	60/180	57/152	54/129	51/111	49/91	46/76	44/63	41/53	37/45	35/39	32/33	-	-	-
	2	16	130/500	120/500	111/430	104/350	97/288	92/240	86/202	82/172	78/148	74/121	67/101	61/84	56/71	52/60	48/52	45/44	-	-	-
		14	192/500	177/500	165/500	154/448	144/369	136/308	125/259	113/220	102/189	92/155	84/129	77/108	71/91	65/77	60/66	56/57	52/49	48/43	45/37
		18	100/359	92/282	86/226	80/184	75/151	71/126	67/106	63/90	60/77	57/64	55/53	52/44	50/37	48/32	46/27	-	-	-	-
WHF750/ W750	1	16	157/479	144/377	134/302	125/245	117/202	110/169	104/142	99/121	94/103	89/85	85/71	81/59	74/50	68/42	63/36	59/31	54/27	-	-
W/30		14	236/500	218/484	202/387	189/315	177/259	167/216	157/182	149/155	136/133	123/109	112/91	103/76	94/64	87/54	80/46	75/40	69/35	65/30	60/26

If higher loads or longer spans are required, contact EPIC Metals. NOTES: 1. Loads are based on ASD Design.

2. Uniform load values listed on the left side of the box, 100/50, are governed by stress or web crippling and the values listed on the right side, 100/50, are governed by deflection. 3. The deflection criteria used for generating the tables above were L/240 or 1" maximum. The Engineer of Record shall calculate the allowable uniform load if a different deflection criteria is required.

4. Stress governed values assume a maximum allowable stress of 24 ksi.

5. Minimum end support bearing lengths are shown above. If shorter bearing lengths are used, check safe reaction table on page 43.

Allowable Weiaht I, Sp Deck S, Support Gage Туре (psf) (in.ً⁴) (in.3) (in.³) Reaction (PLF) End* Int.* 3.4 2.86 0.99 1.06 662 1283 18 WHF450/ 16 4.3 3.78 1.28 1.34 1021 1955 W450 5.4 4.84 14 1523 2893 1.62 1.68 18 3.7 5.61 1.49 1.46 629 1276 WHF600/ 16 4.7 7.47 1.94 2.03 978 1946 W600 14 5.9 9.56 2.46 2.54 1467 2881 4.0 9.44 2.04 1.91 600 1269 18 WHF750/ 16 5.1 12.61 2.67 2.53 939 1937 W750

14 6.4 16.18 3.40 3.31 1417 2870

W & WHF Section Properties (per foot of width)

* Minimum end and interior support bearing lengths (see Note 5 below): End = 4" Interior = 6"

ACOUSTIC (WNA)

WNA*



*U.S. Patent Number D785,209 Canadian Patent Number 155719

WNA Section Properties (per foot of width)

Deck Type	Gage	Weight (psf)	I _⊳ (in.⁴)	S _p (in. ³)	S _N (in. ³)	Sup	vable port on (PLF)
						End*	Int.*
	18	4.2	9.36	2.15	2.03	623	1263
WN775A	16	5.3	12.14	2.84	2.73	968	1926
	14	6.6	15.51	3.60	3.59	1452	2852
	18	4.5	14.33	2.77	2.49	643	1257
WN925A	16	5.8	18.56	3.68	3.33	1003	1918
	14	7.2	23.68	4.66	4.37	1509	2841

*Allowable reactions for WN775A based on 4" and 6" of bearing length at end and interior supports, respectively

*Allowable reactions for WN925A based on 5" and 6" of bearing length at end and interior supports, respectively.

WNA Noise Reduction Coefficients

Туре		Ab	sorption	Coefficie	nts		NRC
Type	125Hz	250Hz	500Hz	1000Hz	2000Hz	4000Hz	MAC
WN775A*	0.33	0.65	0.83	0.72	0.60	0.53	0.70
WN925A	0.44	0.94	0.76	0.62	0.61	0.50	0.75
In accordance v Consult EPIC M *Estimated Valu	etals for oth		•••	dual reports	-		

WNA Load Table — Uniform Total Load (Dead and Live) in Pounds Per Square Foot

Deck	No.									Span L	ength Co	enter to	Center o	of Suppo	rts (ft.)							
Туре	Spans	Gage	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	36
		18	78/150	73/125	69/105	66/90	62/77	59/66	57/58	54/51	52/44	50/39	48/35	46/31	-	-	-	-	-	-	-	-
	1	16	121/195	114/162	108/137	102/116	97/100	92/86	88/75	84/66	79/58	73/51	67/45	62/40	58/36	54/33	50/30	-	-	-	-	-
		14	171/207	161/175	153/148	144/127	131/110	119/96	109/84	100/74	92/65	85/58	79/52	73/46	68/42	64/38	60/33	56/29	-	-	-	-
WN775A		18	63/361	59/301	56/254	53/216	51/185	48/160	46/139	44/122	42/107	40/95	39/84	37/75	-	-	-	-	-	-	-	-
	2	16	96/469	91/391	86/329	81/280	77/240	73/207	70/180	67/158	64/139	62/123	59/109	57/97	-	-	-	-	-	-	-	-
		14	143/599	134/499	127/420	120/357	114/306	109/265	104/230	99/202	95/177	91/157	85/139	79/125	-	-	-	-	-	-	-	-
		18	80/230	76/192	71/161	68/137	64/118	61/102	58/88	56/77	54/68	51/60	49/54	48/48	46/43	44/39	43/35	41/31	-	-	-	-
	1	16	125/298	118/248	111/209	106/178	100/152	96/132	91/114	87/100	84/88	80/78	77/69	74/62	72/56	69/50	65/45	61/40	58/35	54/31	-	-
		14	189/380	178/316	168/267	159/227	151/194	144/168	137/146	131/128	126/112	119/100	110/88	102/79	95/71	89/64	83/58	78/51	73/44	68/39	64/35	58/28
WN925A		18	63/500	59/461	56/388	53/330	50/283	48/245	46/213	44/186	42/164	40/145	39/129	37/115	-	-	-	-	-	-	-	-
	2	16	96/500	90/500	85/500	81/428	77/367	73/317	70/276	67/241	64/212	61/188	59/167	57/149	-	-	-	-	-	-	-	-
		14	142/500	134/500	126/500	120/500	114/468	108/404	103/352	99/308	95/271	91/240	87/213	84/190	-	-	-	-	-	-	-	-

If higher loads or longer spans are required, contact EPIC Metals.

NOTES: 1. Loads are based on ASD Design.

Uniform load values listed on the left side of the box, 100/50, are governed by stress or web crippling and the values listed on the right side, 100/50, are governed by deflection.

3. The deflection criteria used for generating the tables above were L/240 or 1.5" maximum. The Engineer of Record shall calculate the allowable uniform load if a different deflection criteria is required.

4. Stress governed values assume a maximum allowable stress of 24 ksi.

5. Minimum end support bearing lengths are shown above. If shorter bearing lengths are used, check safe reaction table on page 43.

Deck	No.	6								Span L	ength Ce	enter to	Center o	of Suppo	rts (ft.)							
Туре	Spans	Gage	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	36
		18	89/160	83/133	79/112	75/95	71/82	67/71	64/61	62/54	59/47	56/42	52/37	48/33	45/30	-	-	-	-	-	-	-
	1	16	138/207	129/173	122/145	116/124	110/106	105/92	96/80	88/70	81/61	74/54	69/48	64/43	59/39	55/35	52/31	-	-	-	-	-
		14	206/265	194/221	181/186	163/158	147/135	133/117	121/102	111/89	102/78	94/69	87/62	81/55	75/49	70/44	65/40	61/35	57/31	-	-	-
WN775		18	72/384	68/320	64/270	60/230	57/197	55/170	52/148	50/129	48/114	46/101	44/90	43/80	-	-	-	-	-	-	-	-
	2	16	109/499	103/416	97/350	92/298	88/255	83/221	80/192	76/168	73/148	70/131	67/116	64/104	-	-	-	-	-	-	-	-
		14	162/637	153/531	144/447	136/380	130/326	123/282	118/245	113/214	106/189	98/167	90/148	84/133	-	-	-	-	-	-	-	-
		18	91/244	86/204	81/172	77/146	73/125	70/108	66/94	64/82	61/72	58/64	56/57	54/51	52/46	50/41	49/37	47/33	44/29	-	-	-
	1	16	143/316	134/264	127/222	120/189	114/162	109/140	104/122	99/107	95/94	91/83	88/74	82/66	77/59	71/53	67/48	62/42	59/37	55/33	52/29	-
		14	214/404	202/337	191/284	181/241	172/207	163/179	156/155	144/136	132/120	122/106	112/94	104/84	97/75	90/68	84/61	79/54	74/47	70/42	66/37	59/30
WN925		18	71/500	67/490	63/413	60/351	57/301	54/260	52/226	50/198	48/174	46/154	44/137	42/122	-	-	-	-	-	-	-	-
	2	16	109/500	103/500	97/500	92/455	87/390	83/337	79/293	76/256	73/226	70/200	67/178	65/159	-	-	-	-	-	-	-	-
		14	161/500	152/500	143/500	136/500	129/498	123/430	117/374	112/327	108/288	103/255	99/227	96/202	-	-	-	-	-	-	-	-

If higher loads or longer spans are required, contact EPIC Metals. NOTES: 1. Loads are based on ASD Design.

4. Stress governed values assume a maximum allowable stress of 24 ksi.

5. Minimum end support bearing lengths are shown above. If shorter bearing lengths are used, check safe reaction table on page 43.

2

WN*

16" (406mm) coverage

NON-ACOUSTIC (WN)

*U.S. Patent Number D785,209 Canadian Patent Number 155719

₩N925 9 ¼″ (235mm) WN775 7 ¾″ (197mm)

Deck Type	Gage	Weight (psf)	I _⊳ (in.⁴)	S _P (in. ³)	S _N (in. ³)	Sup	vable port on (PLF)
						End*	Int.*
	18	4.2	9.96	2.19	2.16	708	1435
WN775	16	5.3	12.92	2.90	2.90	1100	2189
	14	6.6	16.50	3.67	3.82	1650	3241
	18	4.5	15.24	2.83	2.65	731	1428
WN925	16	5.8	19.74	3.75	3.54	1140	2180
	14	7.2	25.19	4.75	4.65	1715	3228

WN Section Properties (per foot of width)

*Allowable reactions for WN775 based on 4" and 6" of bearing length at end and interior supports, respectively.

*Allowable reactions for WN925 based on 5" and 6" of bearing length at end and interior supports, respectively.

WN Load Table — Uniform Total Load (Dead and Live) in Pounds Per Square Foot

 Uniform load values listed on the left side of the box, 100/50, are governed by stress or web crippling and the values listed on the right side, 100/50, are governed by deflection. 3. The deflection criteria used for generating the tables above were L/240 or 1.5" maximum. The Engineer of Record shall calculate the allowable uniform load if a different deflection criteria is required.

ACOUSTIC (EDA)



U.S. Patent Number D507,665

EDA Noise Reduction Coefficients

Tuno		Ab	sorption	Coefficie	nts		NRC
Туре	125Hz	250Hz	500Hz	1000Hz	2000Hz	4000Hz	NRC
ED324A	0.29	0.49	0.89	0.68	0.48	0.41	0.65
ED450A	0.37	0.57	0.91	0.70	0.52	0.49	0.70
ED600A	0.34	0.71	0.87	0.69	0.57	0.53	0.70
ED750A	0.48	0.77	0.88	0.86	0.70	0.60	0.80
In accordance	with ASTM C4	423 and E79	95.				

Consult EPIC Metals for other test results and individual reports.

EDA Load Table — Uniform Total Load (Dead and Live) in Pounds Per Square Foot

Deck	No.	6							Span	Length C	enter to	Center of	Support	s (ft.)						
Туре	Spans	Gage	10	12	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	30
		20	91/74	63/43	47/27	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		18	139/103	97/59	71/37	62/30	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	1	16	182/135	126/78	93/49	81/40	71/33	63/27	-	-	-	-	-	-	-	-	-	-	-	-
		14	228/169	158/98	116/61	101/50	89/41	79/34	70/29	-	-	-	-	-	-	-	-	-	-	-
ED324A		20	78/177	63/102	47/65	41/52	36/43	32/36	28/30	-	-	-	-	-	-	-	-	-	-	-
		18	129/247	93/143	68/90	60/73	52/60	46/50	41/42	37/36	33/31	-	-	-	-	-	-	-	-	-
	2	16	179/325	124/188	91/118	79/96	70/79	62/66	55/56	50/47	45/41	41/33	-	-	-	-	-	-	-	-
		14	228/406	159/235	117/148	102/120	89/99	79/83	71/70	63/59	57/51	52/42	47/35	43/29	-	-	-	-	-	-
		20	100/177	84/103	72/65	66/53	58/43	52/36	46/30	-	-	-	-	-	_	-	-	-	-	-
		18	169/246	141/142	117/90	102/73	89/60	79/50	71/42	63/36	57/31	-	-	-	-	-	-	-	-	-
	1	16	262/325	207/188	152/118	132/96	116/79	103/66	92/56	82/47	74/41	67/33	61/28	-	-	-	-	-	-	-
FD 4504		14	378/406	262/235	193/148	168/120	148/99	131/83	117/70	105/59	94/51	86/42	78/35	71/29	-	-	-	-	-	-
ED450A		20	80/427	67/247	57/156	53/127	50/104	47/87	44/73	41/62	37/53	34/44	31/36	-	-	-	-	-	-	-
		18	132/500	110/343	95/216	88/176	83/145	76/121	68/102	61/86	55/74	50/61	45/51	42/42	38/36	35/30	-	-	-	-
	2	16	202/500	168/453	144/285	129/232	113/191	100/159	90/134	80/114	73/98	66/80	60/67	55/56	50/47	46/40	43/34	40/29	-	-
		14	299/500	249/500	193/356	168/290	148/239	131/199	117/168	105/142	95/122	86/101	78/83	72/70	66/59	61/50	56/43	52/37	48/32	-
		18	163/466	136/270	116/170	109/138	102/114	96/95	90/80	86/68	81/58	75/48	68/40	62/33	57/28	-	-	-	-	-
ED600A	1	16	253/500	211/356	181/224	169/182	158/150	148/125	132/105	119/90	107/77	97/63	89/52	81/44	74/37	69/31	-	-	-	-
		14	380/500	317/444	272/280	242/227	212/187	188/156	168/132	151/112	136/96	123/79	112/65	103/55	94/46	87/39	80/34	75/29	-	-
		18	156/500	130/447	112/282	104/229	98/189	92/157	87/133	82/113	78/97	74/79	71/66	68/55	65/47	62/40	60/34	58/29	-	-
ED750A	1	16	245/500	204/500	175/370	163/301	153/248	144/207	136/174	129/148	122/127	117/104	111/87	106/73	100/61	92/52	85/44	79/38	73/33	-
		14	369/500	308/500	264/462	246/376	231/310	217/258	205/217	194/185	182/159	165/130	151/108	138/91	127/76	117/65	108/56	100/48	93/41	81/31

If higher loads or longer spans are required, contact EPIC Metals

NOTES: 1. Loads are based on ASD Design.

2. Uniform load values listed on the left side of the box, 100/50, are governed by stress or web crippling and the values listed on the right side, 100/50, are governed by deflection.

3. The deflection criteria used for generating the tables above were L/240 or 1" maximum. The Engineer of Record shall calculate the allowable uniform load if a different deflection criteria is required.

4. Stress governed values assume a maximum allowable stress of 24 ksi.

5. Minimum end support bearing lengths are shown above. If shorter bearing lengths are used, check safe reaction table on page 43.

EDA Section Properties (per foot of width)

Deck Type	Gage	Weight (psf)	Ι _D (in.4)	S _P (in. ³)	S _N (in. ³)	Allov Sup Reactio	port
						End*	Int.
	20	2.6	1.12	0.57	0.57	520	979
	18	3.4	1.56	0.87	0.84	867	161
ED324A	16	4.4	2.05	1.13	1.12	1330	246
	14	5.4	2.57	1.43	1.43	1976	364
	20	2.9	2.70	0.93	0.94	502	100
	18	3.9	3.75	1.43	1.38	847	165
ED450A	16	4.9	4.95	1.86	1.81	1308	252
	14	6.2	6.18	2.36	2.37	1954	373
	18	4.4	7.09	2.06	1.97	814	166
ED600A	16	5.5	9.36	2.68	2.62	1266	253
	14	6.9	11.68	3.40	3.41	1902	375
	18	4.8	11.77	2.74	2.51	781	166
ED750A	16	6.1	15.47	3.58	3.49	1223	253
	14	7.7	19.32	4.56	4.56	1847	375



NON-ACOUSTIC (ED)

U.S. Patent Number D507,665

Wideck ED & EDA EpiGrip® Hanger Safe Load Hanging Capacities

1.EpiGrip Hangers carry 100 pounds safe load hanging capacities. 2.Deck shall be designed to carry these additional hanging loads. 3.Do not place hangers closer together than 5' on center along the same deck rib. 4. Contact EPIC for installation instructions. WARNING: Failure to adhere to the above notes may cause hangers to pull from deck rib.

ED Load Table — Uniform Total Load (Dead and Live) in Pounds Per Square Foot

Deck	No.			Span Length Center to Center of Supports (ft.)																	
Туре	Spans	Gage	10	12	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	30	32
		20	96/78	67/45	49/28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		18	147/108	102/62	75/39	65/32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	1	16	191/142	133/82	98/52	85/42	75/35	66/29	-	-	-	-	-	-	-	-	-	-	-	-	-
55204		14	241/177	167/103	123/65	107/53	94/43	83/36	74/30	-	-	-	-	-	-	-	-	-	-	-	-
ED324		20	89/187	67/108	49/68	43/55	38/46	33/38	30/32	-	-	-	-	-	-	-	-	-	-	-	-
		18	140/260	97/150	72/95	62/77	55/63	49/53	43/45	39/38	35/32	-	-	-	-	-	-	-	-	-	-
	2	16	188/342	131/198	96/125	84/101	74/84	65/70	58/59	52/50	47/43	43/35	39/29	-	-	-	-	-	-	-	-
		14	241/427	168/247	123/156	107/126	94/104	83/87	74/73	67/62	60/53	55/44	50/36	46/31	-	-	-	-	-	-	-
		20	114/187	95/108	80/68	70/55	62/46	55/38	49/32	-	-	-	-	-	-	-	-	-	-	-	-
		18	192/259	160/150	123/95	108/77	95/63	84/53	75/44	67/38	60/32	-	-	-	-	-	-	-	-	-	-
	1	16	297/342	218/198	160/125	139/101	123/84	109/70	97/59	87/50	78/43	71/35	65/29	-	-	-	-	-	-	-	-
55450		14	397/427	276/247	203/156	176/127	155/104	137/87	123/73	110/62	99/53	90/44	82/36	75/31	-	-	-	-	-	-	-
ED450		20	91/449	76/260	65/164	61/133	57/110	53/91	49/77	44/65	39/56	36/46	33/38	30/32	-	-	-	-	-	-	-
		18	150/500	125/361	107/228	100/185	90/152	80/127	71/107	64/91	58/78	52/64	48/53	44/45	40/38	37/32	-	-	-	-	-
	2	16	229/500	191/477	156/300	136/244	120/201	106/168	95/141	85/120	77/103	69/85	63/70	58/59	53/50	49/42	45/36	42/31	-	-	-
		14	340/500	276/500	203/375	177/305	155/251	138/209	123/176	110/150	99/128	90/106	82/88	75/73	69/62	64/53	59/45	55/39	51/33	44/25	-
		18	185/490	154/284	132/179	123/145	116/120	109/100	103/84	96/71	87/61	79/50	72/42	66/35	60/30	-	-	-	-	-	-
ED600	1	16	288/500	240/374	206/236	192/192	176/158	156/132	139/111	125/94	113/81	102/66	93/55	85/46	78/39	72/33	67/28	-	-	-	-
		14	432/500	360/467	292/294	255/239	224/197	198/164	177/138	159/118	143/101	130/83	118/69	108/58	99/49	92/41	85/35	79/30	-	-	-
		18	178/500	148/471	127/297	118/241	111/199	104/166	99/140	93/119	89/102	85/84	81/69	77/58	74/49	71/42	68/36	63/31	-	-	-
ED750	1	16	278/500	232/500	199/389	185/317	174/261	164/218	154/183	146/156	139/134	132/110	125/91	114/76	105/64	97/55	89/47	83/40	77/35	-	-
		14	420/500	350/500	300/487	280/396	262/326	247/272	233/229	213/195	192/167	174/137	159/114	145/95	133/81	123/68	114/58	105/50	98/43	85/33	75/25

If higher loads or longer spans are required, contact EPIC Metals.

NOTES: 1. Loads are based on ASD Design.

2. Uniform load values listed on the left side of the box, 100/50, are governed by stress or web crippling and the values listed on the right side, 100/50, are governed by deflection.

3. The deflection criteria used for generating the tables above were L/240 or 1" maximum. The Engineer of Record shall calculate the allowable uniform load if a different deflection criteria is required.

4. Stress governed values assume a maximum allowable stress of 24 ksi.

5. Minimum end support bearing lengths are shown above. If shorter bearing lengths are used, check safe reaction table on page 43.

SPANS 10'-30'

S_N

Allowable

Support

Reaction (PLF)

Deck

Туре

Gage

ED Section Properties (per foot of width)

I_D

Weight

		-				End*	Int.*
	20	2.6	1.18	0.60	0.60	591	1112
55204	18	3.4	1.64	0.92	0.88	985	1837
ED324	16	4.4	2.16	1.20	1.18	1511	2800
	14	5.4	2.70	1.51	1.51	2246	4145
	20	2.9	2.84	0.99	0.99	570	1136
	18	3.9	3.95	1.51	1.45	962	1880
ED450	16	4.9	5.21	1.96	1.91	1486	2867
	14	6.2	6.50	2.48	2.49	2220	4244
	18	4.4	7.46	2.17	2.07	925	1889
ED600	16	5.5	9.85	2.82	2.76	1439	2882
	14	6.9	12.29	3.58	3.59	2162	4268
	18	4.8	12.40	2.88	2.64	888	1888
ED750	16	6.1	16.28	3.77	3.67	1390	2882
	14	7.7	20.34	4.80	4.80	2099	4269

Sp

(psf) (in.⁴) (in.³) (in.³)

* Minimum end and interior support bearing lengths (see Note 5 below): End = 4" Interior = 6"

Wideck[®] WHF(A) **Specifications**

Notes: Omit underlined areas for non-acoustic applications. Please fill in deck type under 2.2 Materials, part A. For acoustic ceiling deck, please fill in required NRC under 2.3 Fabrication, part 4. For the additional specification language covering factory reinforced openings to accommodate Skydeck® for Solatube® Daylighting Systems, contact EPIC Metals

PART 1: GENERAL

1.1 SUMMARY

A. The requirements of this specification section include all materials, equipment, and labor necessary to furnish and install an EPIC Wideck Roof Deck/Ceiling System

1.2 SUBMITTALS

- A. Product Data: Submit manufacturer's specifications, section properties, load tables, diaphragm shear tables, dimensions, finishes, and noise reduction coefficients
- B. Shop Drawings: Submit panel placement drawings showing profiles, material thicknesses, finishes, layout, anchorage, and openings as dimensioned on the structural drawings
- C. Samples: Submit full width sample if requested to verify compliance with the specifications and the level of quality.

1.3 REFERENCE STANDARDS

- A. Section Properties: Shall be computed in accordance with the American Iron and Steel Institute (AISI) Specification for Design of Cold-Formed Steel Structural Members.
- B. Welding: Shall comply with applicable provisions of the American Welding Society (AWS) D1.3 Structural Welding Code—Sheet Steel.
- C. Superimposed Load and Diaphragm Shear Capacities: Shall be computed in accordance with the requirements of the Steel Deck Institute (SDI).
- D. Noise Reduction Coefficients: Shall be verified by the results of sound absorption tests conducted in accordance with ASTM C423 and E795.
- E. Manufacturer shall have been regularly engaged in the production of roof deck ceiling systems with all of the required features for a period of at least seven years.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Wideck panels shall be protected from damage during delivery, storage, and handling
- B. If storage at the jobsite is required, Wideck panels shall be elevated above the ground, sloped to provide drainage, and protected from weather with a ventilated covering.

1.5 COORDINATION

- A. Coordinate length of fasteners for roofing and thermal insulation to avoid penetrating the concealment cover of the WHF Wideck panels.
- B. Coordinate installation of acoustic elements in deck ribs with the roofing contractor prior to installing roofing.

PART 2: PRODUCTS

2.1 MANUFACTURER

- A. In accordance with the requirements of this specification section, provide products manufactured by EPIC Metals, Rankin, Pennsylvania.
- B. The type of Wideck panels, design thickness, section properties, and NRC shall be shown on the structural design drawings.

2.2 MATERIALS

- A. Type WHF ____ panels shall be cold-formed from steel coils conforming to ASTM A653, Structural Quality, with a minimum yield strength 40 ksi.
- B. Before forming, the steel coils shall have received a hot-dip protective coating of zinc conforming to ASTM A924, Class G60 or G90, as defined in ASTM A653
- C. The minimum uncoated thickness of materials furnished shall not be less than 95% of the design thickness.

2.3 FABRICATION

- A. Wideck panels shall be cold-formed by the continuous roll forming process. 1. Type WHF Wideck panels shall have dovetail type sidelaps suitable for
 - crew or weld fastening 2. Type WHF Wideck panels shall have roll-formed embossments located between the longitudinal stiffening ribs in the top flanges to enhance the structural performance. A continuous roll-formed galvanized steel cover plate shall be factory-attached to the upper inside portion of the structural hat section, creating a cellular space for the concealment of roofing fasteners
 - 3. (Omit this paragraph if prime painting is not required.)

The bottom surfaces of Wideck panels shall be prime painted at the factory. Before painting, the galvanized steel shall be chemically cleaned and coated with an acid wash pretreatment primer followed by a coat of manufacturer's standard prime paint and then oven-cured. Compatibility of field-applied finish paint with factory-applied prime paint shall be the responsibility of the painting contractor.

- NOTE: CONTACT EPIC METALS FOR SPECIAL PAINTING SYSTEMS THAT ARE RECOMMENDED FOR NATATORIUMS OR OTHER HIGH HUMIDITY APPLICATIONS.
- 4. For acoustic type WHFA Wideck panels the webs of the structural hat sections and the flat areas of the factory-attached cover plate shall be perforated for enhanced acoustic performance with uniform rows of holes. Acoustic elements shall be provided for the space between the webs. These shall be field-installed by the roofing contractor. The acoustical elements within the cellular space between the top flange and the cover plate shall be factory-installed. A minimum NRC value of ____ shall be provided. This value shall be established by sound absorption tests without the use of thermal insulation above the units. WHFA 50% does not have perforated webs and does not have acoustical elements to be field installed by the roofing contractor.

2.4 ACCESSORIES

- A. Manufacturer's standard ridge plates, valley plates, transition plates, and closures shall be provided as indicated on the structural drawings.
- Openings and reinforcement for openings noted specifically by the Β. deck manufacturer on the structural drawings shall be provided.

PART 3: EXECUTION

3.1 GENERAL

A The Wideck Roof/Ceiling System shall be installed in strict accordance with the manufacturer's instructions, approved erection drawings, and all applicable safety regulations.

3.2 PREPARATION

A. Bundles of material shall be located on the supporting frame in such a manner that overloading of any of the individual framing members does not occur.

3.3 INSTALLATION

- A. Before being permanently fastened, Wideck panels shall be placed on the supporting frame and adjusted to final position with ends accurately aligned and adequately bearing on the supporting frame. Consistent coverage shall be maintained so that panels located in adjacent bays will be properly aligned.
- Cutting of Wideck panels to suit jobsite conditions shall be performed in a neat and workmanlike manner. Only those openings indicated on the structural drawings shall be cut. Other openings shall be cut and reinforced by those requiring the opening as approved by the structural engineer.
- C. Type WHF Wideck panels shall be fastened to all supporting members with ³/₄" diameter puddle welds, two welds per 18" wide panel or as indicated on the manufacturer's erection drawings.
- 1. The sides of Wideck panels located at the perimeter of the building shall be fastened to supporting members at a maximum spacing of 36" on center or less as indicated on the manufacturer's erection drawings.



- D. The sidelaps of type WHF Wideck panels shall be fastened together by #12 x $\frac{3}{4}$ maximum length screws or 1" long x $\frac{3}{8}$ arc seam welds at a maximum spacing of 36" on center or less as indicated on the manufacturer's erection drawings
- E. Construction loads shall not be applied to Wideck panels until after they are permanently fastened to supporting members and sidelaps are attached, and shall not exceed the load-carrying capacity of the panels.

F. Items such as ceilings, light fixtures, conduit, pipe, and ductwork shall not be suspended from Wideck panels without specific approval of the structural engineer.

Wideck[®] W(A), WN(A) & ED(A) **Specifications**

Notes: Omit underlined areas for non-acoustic applications. Please fill in deck type under 2.2 Materials, part A For acoustic ceiling deck, please fill in required NRC under 2.3 Fabrication, part 4. For types W(A) and WN(A) additional specification language covering factory reinforced openings to accommodate Skydeck® for Solatube® Daylighting Systems, contact EPIC Metals

PART 1: GENERAL

1.1 SUMMARY

- A. The requirements of this specification section include all materials, equipment, and labor necessary to furnish and install an EPIC Wideck Roof Deck/Ceiling System
- B. Wideck EpiGrip®, hanging devices that are specially configured to fit into the Wideck EDA Acoustical Roof Deck panels, shall be available. These hanging devices shall be utilized wherever any related work is suspended from Wideck EDA Acoustical Roof Deck. Wideck EpiGrip hanging devices shall be furnished by the installer of the related work unless otherwise indicated.

1.2 SUBMITTALS

- A. Product Data: Submit manufacturer's specifications, section properties, load tables, diaphragm shear tables, dimensions, finishes, and noise reduction coefficients
- B. Shop Drawings: Submit panel placement drawings showing profiles, material thicknesses, finishes, layout, anchorage, and openings as dimensioned on the structural drawings
- C. Samples: Submit full width sample if requested to verify compliance with the specifications and the level of quality.

1.3 REFERENCE STANDARDS

- A. Section Properties: Shall be computed in accordance with the American Iron and Steel Institute (AISI) Specification for Design of Cold-Formed Steel Structural Members
- B. Welding: Shall comply with applicable provisions of the American Welding Society (AWS) D1.3 Structural Welding Code-Sheet Steel.
- C. Superimposed Load and Diaphragm Shear Capacities: Shall be computed in accordance with the requirements of the Steel Deck Institute (SDI).
- D. Noise Reduction Coefficients: Shall be verified by the results of sound absorption tests conducted in accordance with ASTM C423 and E795.
- E. Manufacturer shall have been regularly engaged in the production of roof deck ceiling systems with all of the required features for a period of at least seven years

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Wideck panels shall be protected from damage during delivery, storage, and handling
- B. If storage at the jobsite is required, Wideck panels shall be elevated above the ground, sloped to provide drainage, and protected from weather with a ventilated covering.

1.5 COORDINATION

- A. Coordinate length of fasteners for roofing and thermal insulation to avoid penetrating the lower bottom surface of the Wideck panels.
- B. Coordinate installation of acoustic elements with the roofing contractor prior to installing roofing.

PART 2: PRODUCTS

2.1 MANUFACTURER

- A. In accordance with the requirements of this specification section, provide products manufactured by EPIC Metals, Rankin, Pennsylvania.
- B. The type of Wideck panels, design thickness, section properties, and NRC shall be shown on the structural design drawings.

2.2 MATERIALS

- A. Wideck panels shall be cold-formed from steel coils conforming to ASTM A653, Structural Quality, with a minimum yield strength of 40 ksi for type W ____ or type ED ____ panels.
- Before forming, the steel coils shall have received a hot-dip protective coating of zinc conforming to ASTM A924, Class G60 or G90, as defined in ASTM A653.
- C. The minimum uncoated thickness of materials furnished shall not be less than 95% of the design thickness.

2.3 FABRICATION

- A. Wideck panels shall be cold-formed by the continuous roll forming process.
 - 1. Type ED Wideck panels shall have full nested type sidelaps that from the underside present a uniform appearance without joints. Type W and WN Wideck panels shall have dovetail type sidelaps suitable for screw or weld fastening.
 - 2. Type W and WN Wideck panels shall have roll-formed embossments located between the longitudinal stiffening ribs in the top flanges to enhance the structural performance.
 - 3. (Delete this paragraph if prime painting is not required.)

The bottom surfaces of Wideck panels shall be prime painted at the factory. Before painting, the galvanized steel shall be chemically cleaned and coated with an acid wash pretreatment primer followed by a coat of manufacturer's standard prime paint and then oven-cured. Compatibility of field-applied finish paint with factory-applied prime paint shall be the responsibility of the painting contractor.

- NOTE: CONTACT EPIC METALS FOR SPECIAL PAINTING SYSTEMS THAT ARE RECOMMENDED FOR NATATORIUMS OR OTHER HIGH HUMIDITY APPLICATIONS.
- 4. For acoustic type WA, WNA and type EDA Wideck panels, the webs shall be perforated for enhanced acoustic performance with uniform rows of holes. Acoustic elements shall be provided. These shall be field installed by the roofing contractor. A minimum NRC value of _____ shall be provided. This value shall be established by sound absorption tests without the use of thermal insulation above the panels.

2.4 ACCESSORIES

- A. Manufacturer's standard ridge plates, valley plates, transition plates, and closures shall be provided as indicated on the structural drawings
- B. Openings and reinforcement for openings noted specifically "by the deck manufacturer" on the structural drawings shall be provided.
- C. Wideck EpiGrip hanging devices shall be installable and relocatable along the length of the interior ribs of the Wideck EDA Acoustical Roof Deck panels. Manufacturer's product data shall be consulted for minimum spacing, load capacities, and proper installation procedures of the Wideck ED EpiGrip hanging devices.

PART 3: EXECUTION

3.1 GENERAL

A. The Wideck Roof/Ceiling System shall be installed in strict accordance with the manufacturer's instructions, approved erection drawings, and all applicable safety regulations.

3.2 PREPARATION

A. Bundles of material shall be located on the supporting frame in such a manner that overloading of any of the individual framing members does not occur

3.3 INSTALLATION

- A. Before being permanently fastened, Wideck panels shall be placed on the supporting frame and adjusted to final position with ends accurately aligned and adequately bearing on the supporting frame. Consistent coverage shall be maintained so that panels located in adjacent bays will be properly aligned.
- B. Cutting of Wideck panels to suit jobsite conditions shall be performed in a neat and workmanlike manner. Only those openings indicated on the structural drawings shall be cut. Other openings shall be cut and reinforced by those requiring the opening as approved by the structural engineer.
- C. Wideck panels shall be fastened to all supporting members with 34" diameter puddle welds 12" on center for type ED panels, two welds per 18" wide panel for type W panels and two welds per 16" wide panel for type WN or as indicated on the manufacturer's erection drawings.
- 1. The sides of Wideck panels located at the perimeter of the building shall be fastened to supporting members at a maximum spacing of 36" on center or less as indicated on the manufacturer's erection drawings
- D. The sidelaps of Wideck panels shall be fastened together by $\#12 \times \frac{34''}{2}$ maximum length screws or welds (1" long x 3/8" arc seam welds for type W and WN panels and 1" x 3%" seam welds for type ED panels) at a maximum spacing of 36" on center or less as indicated on the manufacturer's erection drawings.
- E. Construction loads shall not be applied to Wideck panels until after they are permanently fastened to supporting members, and sidelaps are attached and shall not exceed the load-carrying capacity of the panels.
- F. Items such as ceilings, light fixtures, conduit, pipe, and ductwork shall not be suspended from Wideck panels without specific approval of the structural engineer.

Designer's **Responsibility** & Warranty

Designer's Responsibility

The information presented in this brochure has been prepared in accordance with generally recognized engineering principles. We recommend that this information not be used or relied upon for any application without a thorough review by a licensed professional engineer, designer, or architect who will be competent to evaluate the significance and limitations of this material and who will accept responsibility for the application of this material for any specific application.

EPIC Metals makes no representation or warranty respecting any information contained in this manual, including but not limited to the accuracy, completeness, or suitability of such information for any particular purpose or use

EPIC Metals expressly disclaims any and all warranties, expressed or implied

By making this information available, EPIC Metals is not rendering professional services, and assumes no duty or responsibility with respect to any person making use of such information.

In addition, EPIC Metals is not liable for any claim, demand, injury, loss, expense, or liability of any kind whatsoever that in any way arises out of, or is connected with, the use of the information contained in this publication, whether or not such claim, demand, loss, expense, or liability results directly or indirectly from any action or omission of EPIC Metals. Any party using the information contained in this brochure assumes all liability arising from such use.

Since hazards may be associated with the handling, installation, or use of steel and its accessories, prudent construction practices should always be followed. We recommend that the parties involved in such handling, installation, or use review all applicable manufacturer's material safety data sheets, applicable rules and regulations of the Occupational Safety and Health Administration and other government agencies having jurisdiction over such handling, installation, or use, and other relevant construction practice publications, including the Steel Deck Institute (SDI) Manual for Construction with Steel Deck.

Warranty

EPIC Metals warrants that materials to be furnished under this contract, insofar as they are manufactured by EPIC Metals, shall be free from structural defects. In the event of the failure of the material within one year from the date of delivery, and providing that such failure is attributed to defects found to have existed at the time of delivery, EPIC Metals's liability hereunder shall be limited to furnishing necessary replacement material. EPIC Metals assumes no liability for damages, losses, or injuries, direct or consequential, that may arise from use or inability to use the products.

Except as herein provided, there are no expressed or implied warranties as to merchantability or fitness of the materials for any particular purpose.



Wideck® **Taperdeck**

EPIC Taperdeck is designed to clear span up to 28 feet and can be manufactured with the maximum tapering of 24 to 8 inches. This innovative EPIC panel offers architects the ability to use an exposed roof deck ceiling system to follow forms, turn corners and create curves and circles. EPIC's tapered panels are available with acoustic features that can provide Noise Reduction Coefficient up to .90. Contact EPIC Metals for consultation on Taperdeck.

Maximum 24 Inches





U.S. Patent Number 6,691,482

Standard Features with Wideck



Conceals Fasteners All of the SW(A), SWN(A), SWI(A), WP(A), EDP(A) & WHF(A) panels conceal the roofing system fasteners.



Sidelap

The SW(A), SWN(A), SWI(A), WP(A), EDP(A), W(A), WN(A) and WHF(A), panels are manufactured with an interlocking and vertically self-aligning sidelap, which presents a ceiling appearance of tight, uniform joints.

Wideck[®] Options

Wideck's Superior **Acoustic Properties**

Acoustic roof deck ceiling systems are specified as an economical means of reducing noise levels in Acoustic Element building interiors. NRC values are the noise absorption averages over a Acoustic range of frequencies. The higher the NRC Perforation value, the greater the amount of noise that is absorbed over 250, 500, 1000 and 2000 Hz frequency ranges. An NRC value of 1.00 would mean that 100% of the noise that strikes the panel is absorbed, whereas an NRC value of .60 would mean that only 60% of the sound that strikes the panel is absorbed and 40% of the sound is reflected back. Lower NRC values can contribute to creating reverberation (an echo effect) that makes speech less intelligible and can create a sense of noise amplification. Many building factors such as room size, layout, shape, materials specified, windows, the number of occupants, and noise sources also affect noise levels. Therefore, EPIC Metals recommends that these factors be considered prior to the preparation of acoustic design specifications.

Sound Absorption Comparison

Wideck[®] WHFA Direct Sound Reflected Sound

EpiGrip[®] Hangers



Wideck ED EpiGrip hanger* *For safe load hanging capacities, see page 33

Windgard[®]

EPIC Metal's structural roof deck ceiling systems utilize acoustic elements to reduce interior noise and sound reverberation. Dislodged or missing acoustic elements can greatly reduce the system's effectiveness to control noise. Dislodging can occur during product transportation or installation.

EPIC Metals addresses this issue with Windgard, a system designed to ensure that acoustic insulation stays in place from panel fabrication to final installation. The EPIC Windgard system has been laboratory tested to maintain acoustic element positions at wind speeds up to 105 mph. Windgard ensures the acoustic properties are preserved, delivering expected noise reduction coefficients and effectiveness.

SkyDeck®

Natural light makes spaces appear larger and reveals true colors in the interior of buildings. With EPIC Metals' Skydeck, a major obstacle has been overcome that had complicated the use of skylights in conjunction with long-span roof deck ceiling systems. In the past, incorporating skylights within a longspan roof deck ceiling system required that the skylight be framed with structural steel, detracting from the open appearance of the system. Skydeck with Solatube[®] daylighting systems captures ambient light as well as direct light, enabling them to provide exceptional lighting even on cloudy days, and in the early morning and late afternoon when the sun is low in the sky. Energy costs can be reduced in structures using Skydeck as one of the day-lighting techniques. Specification of Skydeck can be an important contributor to achieving Leadership in Energy and Environmental Design (LEED®) points.

EPIC Metals Skydeck specified In SW(A), SWN(A), SWI(A), WP(A), WHF(A), WN(A)

Without Windgard acoustic insulation can shift or dislodge

With Windgard acoustic insulation remains intact

or W(A) systems featuring the Solatube Raybender[®] Light Intercepting Transfer Device (LITD[®]), and Spectralight[®] Infinity tubing transfers up to 500% more daylight than other tubular skylight systems. With Spectralight Infinity tubing, you receive the brightest, cleanest, and whitest natural light possible today. This advantage is particularly significant in low-angle light conditions, such as during the early morning and late afternoon, and in the winter months when the sun is low on the horizon. Skydeck has minimal heat loss or gain between the interior and exterior because the Solatubes work like a dual glazed window.

As an example each Solatube 290 DS 14 inch Solatube may create on average 6,150 lumens (dependent on the geographical location of the building) and up to 9,180 lumens. For comparison, the output of one light fixture with three 20 watt T8 LED 48 inch lamps would provide 5,160 lumens. The results of using Skydeck are remarkable.



Wideck SWA, WHFA, and WPA with Skydeck Option U.S. Patent Number 6,813,864

Raybender, Solatube, Spectralight, LITD are registered trademarks owned by Solatube International Inc. LEED® is a trademark owned by the U.S. Green Building Council and is used with permission.

Wideck[®] Options & Features



Access Panel

With Super Wideck SW(A), SWN(A) and SWI(A) cable suspended access panels, it is possible to easily access utilities that have been located within the roof deck ceiling system. Access panels come in various sizes, are placed according to architectural drawings and are provided during the manufacturing process. The removable panels are fabricated to match the finish, size, and shape of the adjacent ceiling surface. The result is a simple and convenient access to hidden utilities.

Other types of access panels are also available for the Wideck WP(A) & EDP(A)

EPIC Metals understands the importance of reducing energy

loss in buildings. This is the reason that EPIC pioneered the use

of specially designed air dams to prevent air movement in roof

to the outside, a barrier is necessary to prevent the exterior

interior of a building to the exterior of the building.

and floor deck ceiling panels that cantilever outside of a building.

Where these panels are partially inside the building and transition

unconditioned air from moving through the conditioned spaces.

EPIC Metals specially designed air dams to help reduce the building

energy usage when roof or floor deck ceiling panels extend from the

Air Dams are available for the Wideck types SW(A), SWN(A), SWI(A),



Without the Embossed option, the weld marks are visible in lower ceiling applications

With the Embossed option, weld marks are significantly reduced.

Embossing

Air Dams

WP(A) & EDP(A).

When Wideck EDP(A) and WP(A) are specified for a low ceiling height (lower than 20 feet), the embossed option masks the panel welds to enhance the overall appearance. The embossed option can also be considered when reflective ceiling lighting is used that could possibly emphasize the surface weld marks.

Shallow shadow line stiffening ribs should also be specified to enhance the flatness of ceiling panels.

Specify EPIC factory prime painting of the ceiling surface after forming and welding to ensure a quality base surface for field application of the finish coat of paint.

Natacoat®

Natatoriums create a highly humid and corrosive interior environment for building materials. EPIC Natacoat is an innovative, specialized coating that has been applied to protect long span, acoustic roof and floor deck ceiling system in such harsh settings for over 20 years.

Prior to panel fabrication, all surfaces of the galvanized steel are degreased and cleaned by a chemical conversion coating before applying a primer to increase bonding capabilities. Following the prime coat, the panels are fabricated and the Natacoat specialized coating is applied to the ceiling surface. Natacoat is a factory-applied, oven-baked polyamide epoxy. The finish coat is applied after installation. Contact EPIC for special paint specifications for natatoriums or other high humidity applications.



Doling Aquatic Center, Springfield-Greene County Park, Springfield, Missouri, Wideck WP600A, Skydeck, Natacoat



Wideck® Safe Support Reaction Tables

Safe Support Reaction Tables for End and Interior Supports (PLF)

Deck Type	Gage*	2″	3″	4	ļ″	5	5″	6″		
Type		end	end	end	int.	end	int.	end	in	
	20	465	533	591	972	641	1045	687	111	
ED324	18	784	893	985	1615	1066	1732	1139	183	
EDP324(A)	16	1214	1375	1511	2477	1631	2646	1739	280	
	14	1821	2051	2246	3686	2417	3927	2572	414	
	20	449	515	570	993	619	1068	663	113	
ED450	18	766	872	962	1653	1041	1772	1113	188	
EDP450(A)	16 14	1194 1800	1352 2028	1486 2220	2535 3774	1604 2390	2709 4021	1710 2543	28	
	14	737	839	925	1661	1002	1780	1070	18	
ED600	16	1156	1310	1439	2549	1553	2723	1656	28	
EDP600(A)	14	1752	1975	2162	3795	2327	4043	2476	42	
	18	707	805	888	1660	961	1780	1027	18	
ED750	16	1117	1265	1390	2549	1500	2723	1600	28	
EDP750(A)	14	1702	1917	2099	3796	2259	4045	2404	42	
W450	18	527	600	662	1128	716	1209	766	12	
WP450(A)	16	820	929	1021	1729	1102	1848	1175	19	
WHF450	14	1235	1391	1523	2573	1639	2741	1744	28	
SW9(A)										
W600 WP600(A)	18	501	571	629	1122	681	1203	728	12	
WP600(A) WHF600	16	785	890	978	1721	1055	1839	1125	19	
SW12(A)	14	1189	1340	1467	2562	1579	2730	1680	28	
W750	18	478	544	600	1116	650	1197	694	12	
WP750(A)	16	754	855	939	1713	1013	1831	1081	19	
WHF750										
SW15(A)	14	1149	1294	1417	2552	1525	2719	1623	28	
	20	409	469	520	855	564	920	605	97	
ED324A	18	690	786	867	1421	938	1524	1002	16	
	16 14	1068 1602	1210 1805	1330 1976	2179 3244	1435 2127	2329 3456	1530 2264	24 36	
	20	395	453	502	874	545	940	584	30 10	
	18	674	768	847	1455	916	1560	979	16	
ED450A	16	1051	1190	1308	2231	1411	2384	1505	25	
	14	1584	1785	1954	3321	2103	3538	2238	37	
	18	648	738	814	1462	881	1567	942	16	
ED600A	16	1017	1153	1266	2243	1367	2397	1457	25	
	14	1542	1738	1902	3339	2048	3558	2179	37	
	18	622	708	781	1461	845	1566	903	16	
ED750A	16	983	1113	1223	2243	1320	2397	1408	25	
	14	1497	1687	1847	3341	1988	3559	2116	37	
W450A	18 16	464 722	528	582	993	630 970	1064 1626	674	11:	
WHF450A	16	1087	818 1224	898 1340	1522 2264	970	2412	1034 1535	16 25	
	14	441	502	553	987	599	1059	641	11	
W600A	16	691	783	861	1514	928	1618	990	17	
WHF600A	14	1046	1179	1291	2255	1390	2402	1478	25	
	18	421	479	528	982	572	1053	611	11	
W750A WHF750A	16	664	752	826	1507	891	1611	951	17	
WITE / JUA	14	1011	1139	1247	2246	1342	2393	1428	25	
WN775	18	564	642	708	1262	766	1353	819	14	
SWN12(A)	16	884	1001	1100	1936	1187	2069	1266	21	
SWI15.6(A)	14	1337	1507	1650	2882	1776	3070	1890	32	
WN925	18	538 849	612 962	675 1056	1256 1928	731 1140	1346 2060	781	14	
SWN15(A) SWI18.6(A)	14	1292	1456	1056	2870	1715	3058	1216	21 32	
571110.0(A)	14	496	565	623	1111	674	1191	721	12	
WN775A	16	778	881	968	1704	1045	1821	1114	19	
	14	1177	1326	1452	2536	1563	2702	1663	28	
	18	473	539	594	1105	643	1184	687	12	
WN925A	16	747	847	929	1697	1003	1813	1070	19	
WN925A	14	1137	1281	1403	2526	1509	2691	1606	28	
	18 16	594 923	676 1046	745 1149	1270 1946	807	1361	863 1323	14	

SIMPLE SPAN - ER = .5WL DOUBLE SPAN - ER = .375WL IR = 1.25WL *Gage of top hat section is indicated





Wideck[®] Composite WCHF(A), WCP(A), WC, EDCP(A), EDC Technical Tables

ACOUSTIC (WCHFA, WCPA)







*U.S. Patent Number 6,691,482



Regular Weight Concrete (145 PCF) — Concrete Strength 4 ksi*

	Deck	Slab	Concrete		Maximum Spans Without Shoring		Allowable Superimposed Loads (psf)													
Deck Type	Depth (in.)	Depth Weight	Volume (ft ³ ./ft ² .)	Gage*		in.)	Spans (ft.)													
	(111.)	(psf*)	(10.710.7		Simple	Double	13	14	15	16	17	18	19	20	21	22	23	24	25	
WC450/				18	14-1	13-0	157	139	123	109	92	77	64	53	-	-	-	-	-	
WCHF(A)450		7 1⁄2″	24	16	16-5	16-10	169	151	134	119	99	83	69	57	-	-	-	-	-	
	41⁄2	(53)	.31	18/18	16-5	12-2	195	172	153						-	-	-	-	-	
WCP(A)450				16/18	18-8	16-8	200	181	161	144	129				-	-	-	-	-	
WC600/				18	15-3	12-5	-	-	-	101					58		46	-	-	
WCHF(A)600		9″		16	19-3	18-8	-	-	-	117	105	95	86		71		50		-	
	6	(56)	.34	18/18	15-0	12-2	-	-	-	128				82	74	66		52	46	
WCP(A)600				16/18	21-6	18-4	-	-	-	142	128	116	105	95						
WC750/				18	14-0	11-10	-	-	-	-	109	99	89	81	73	66	60	54	46	
WCHF(A)750		10½″	24	16	21-7	17-10	-	-	-	-	128	116	106	97	88				43	
	WCP(A)750	(60)	.36	18/18	13-9	11-7	-	-	-	-	139	125				84		68	62	
WCP(A)/50			-	-		16/18	21-3	17-6	-	-	-	-	156	142	130	118	108	99	90	82

No Shoring Shoring Required in Shaded Areas

COMPOSITE SLAB DESIGN NOTES:

- 1.*Other concrete strengths, slab depths, and deck gages are available. Contact FPIC Metals.
- 2. Slab weight shown includes weight of heaviest deck gage.
- 3. All loads are assumed to be uniformly and statically applied.

If loads greater than 200 psf are required, contact EPIC Metals.

- 4. Superimposed loads for spans in shaded areas and with bold face type assume deck is shored.
- Composite slab design is based on simple span analysis.
- 6. Deflection limit of the composite slab is L/360 under the superimposed load.
- 7. Load tables are in accordance with SDI recommendations.

U.L. Fire Ratings* Type &

Deck Type	Fire Rating Type–Hours	U.L. Design Number	Concrete Cover (In.)	Density of Concrete (PCF)	Bottom Slab Protection						
	RAR – 2 HR.	D501	2	LŴ (110)	5/8" Gyp Board						
	KAK – 2 FIK.	0501	21/2	RW (147)	98 бур Боаго						
WC	UAR –	D501	2	LW (110)	5∕8″ Gyp Board						
WC	1½ HR.	0501	21/2	RW (147)	98 бур Боаго						
	RAR – 1 HR.	D903	2¾	LW (110)	None						
	KAK – T HK.	D903	3	RW (147)	None						
	RAR – 1 HR.	D903	21/2	LW (110)	None						
WCP(A)	как – т пк.	D903	2¾	RW (147)	None						
we	RAR – 2 HR.	0000	31/2	LW (110)	Neme						
WC	KAK – 2 HK.	D903	41⁄4	RW (147)	None						
		0000	3	LW (110)	Neme						
WCP(A)	RAR – 2 HR.	D903	4	RW (147)	None						
WC	RAR – 3 HR.	D903	4	LW (110)	None						
WCP(A)	RAR – 3 HR.	D903	3¾	LW (110)	None						
RAR – Re	strained Assembl	y Rating	LW – Li	ght Weight Concret	e						
UAR – Unrestrained Assembly Rating RW – Regular Weight Concrete											
	he latest <i>U.L. Fire</i> he above hourly		<i>ctory</i> for the spe	cific system assemb	ly requirements to						

WCHFA, WCPA and EDCPA Noise **Reduction Coefficients**

Tuno	Absorption Coefficients											
Туре	125Hz	250Hz	500Hz	1000Hz	2000Hz	4000Hz	NRC					
WCHF450A	0.35	0.57	0.97	0.87	0.66	0.60	0.75					
WCHF600A	0.31	0.79	0.92	0.91	0.66	0.59	0.80					
WCHF750A	0.46	0.90	0.85	0.84	0.63	0.61	0.80					
WCP450A	0.58	0.99	1.14	0.92	0.82	0.61	0.95					
WCP600A	0.68	1.18	1.06	0.89	0.80	0.61	1.00					
WCP750A	0.77	1.17	1.03	0.91	0.82	0.61	1.00					
EDCP324A	0.45	0.76	1.11	0.91	0.75	0.62	0.90					
EDCP450A	0.51	1.07	1.04	0.93	0.80	0.60	0.95					
EDCP600A	0.48	1.15	1.07	0.96	0.80	0.64	1.00					
EDCP750A	0.62	1.21	0.98	0.89	0.85	0.57	1.00					

Consult EPIC Metals for other test results and individual reports.

Туре	(in.)	Weight	(ft ³ ./ft ² .)	Uaye	(ft.·	·in.)	Spans (ft.)												
	()	(psf*)	(10.710.7		Simple	Double	13	14	15	16	17	18	19	20	21	22	23	24	25
WC450/				18	14-1	13-0	157						64		-	-	-	-	-
WCHF(A)450		7 1⁄2″	24	16	16-5	16-10	169	151	134	119	99	83	69	57	-	-	-	-	-
	41⁄2	(53)	.31	18/18	16-5	12-2	195	172	153	136		107	95	84	-	-	-	-	-
WCP(A)450				16/18	18-8	16-8	200	181	161	144	129	115	103	89	-	-	-	-	-
WC600/				18	15-3	12-5	-	-	-	101			73		58	52	46	-	-
WCHF(A)600		9″		16	19-3	18-8	-	-	-	117	105	95	86		71	59	50	41	-
	6	(56)	.34	18/18	15-0	12-2	-	-	-	128				82					
WCP(A)600				16/18	21-6	18-4	-	-	-	142	128	116	105	95	86	78	70	63	
WC750/				18	14-0	11-10	-	-	-	-	109	99	89	81	73	66	60	54	
WCHF(A)750		10½″		16	21-7	17-10	-	-	-	-	128	116	106	97	88				43
MCD(A)750	71⁄2	(60)	.36	18/18	13-9	11-7	-	-	-	-	139	125							
WCP(A)750				16/18	21-3	17-6	-	-	-	-	156	142	130	118	108	99	90	82	75
			·				DECK D	-		-									

DECK DESIGN AS A WET CONCRETE FORM

1. Maximum clear spans without shoring are based on the Steel Deck Institute's recommendations for sequential loading and load resistance factor design. The table is based on 40 ksi steel yield stress and deflection limits of L/180 or 34", whichever is less.

Loading includes slab weight plus either a 30 psf uniform construction load or a 250-pound concentrated construction load on a 1'-0" width section. If heavier construction loads or less form deflection are required, spans must be reduced. Consult EPIC Metals for recommendations 2. Runways and planking must be used for all concrete placement.

- 3. Minimum bearing is 4" at end supports and 6" at interior support bearing lengths.
- 4. The slump of the concrete will determine the amount of concrete leakage and cleanup that will be required to the ceiling surface. On all projects some cleanup of the ceiling surface will be required.
- 5. The determination of the time for removal of supporting shores may be controlled by the presence of construction loads or deflection limitations. The removal of shores may have to occur after the concrete has reached its full compressive strength f'c, modules Ec and stiffness, particularly in those instances where the construction loads may be as high as the specified live load. If shoring is removed too early, more significant deflection may occur and may even result in permanent damage. The strength and stiffness of the concrete during the various stages of construction should be substantiated by job-constructed and job-cured test specimens (cylinders). See ACI 318-99 (Chapter 6).

ACOUSTIC (EDCPA) NON-ACOUSTIC (EDC)





*U.S. Patent Number D507,665

Regular Weight Concrete (145 pcf) - Concrete Strength 4 ksi

	Deck	Slab	Concrete			m Spans						Allo	wable	Superin	nposed	Loads (psf)							
Deck Type	Depth (in.)	Depth Weight	Volume (ft ³ ./ft ² .)	Gage*		Shoring in.)	Spans (ft.)																	
	()	(psf*)	(10.710.7		Simple	Double	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25		
500004				18	13-4	13-7	200	193	168	147	129	114	100	-	-	-	-	-	-	-	-	-		
EDC324	_	6″	20	16	14-4	15-8	200	200	178	157	138	122	108	-	-	-	-	-	-	-	-	-		
50 (0) 20 4	3	(52)	.32	18/18	14-2	14-2	200	200	184	161	142			-	-	-	-	-	-	-	-	-		
EDCP(A)324				16/18	15-7	15-2	200	200	191	168	148	131		-	-	-	-	-	-	-	-	-		
55.0450				18	16-3	16-11	-	-	-	196	173	153	136	121	104	88	74	-	-	-	-	-		
EDC450		71⁄2″	25	16	17-5	19-3	-	-	-	200	188	167	149	133				-	-	-	-	-		
	4½	(58)	.35	18/18	17-11	17-4	-	-	-	200	194	172	153	136				-	-	-	-	-		
EDCP(A)450				16/18	18-9	19-1	-	-	-	200	200	182	163	145	130	116	104	-	-	-	-	-		
55.0/00				18	18-8	16-8	-	-	-	-	-	-	132	118	106	95	85	76	68	60	54	47		
EDC600		9″		16	19-11	22-6	-	-	-	-	-	-	152	137	124	112	101	92	83	72	61	52		
	6	(63)	.39	18/18	20-1	16-5	-	-	-	-	-	-	149	134	120	107		86	77	68	61	54		
EDCP(A)600				16/18	21-5	22-3	-	-	-	-	-	-	166	150	135	122	111	100	91	82	74	67		
				18	18-6	15-9	-	-	-	-	-	-	-	146	132	119	108	98	88	80	72	65		
EDC750		10½″		16	22-1	23-9	-	-	-	-	-	-	-	171	155	142	129	118	108	98				
	/ 1/2 (69)		.42	18/18	18-3	15-6	-	-	-	-	-	-	-	166	150	135	122	111	100		82			
EDCP(A)750		(69)	² (69)	(07)) 1	16/18	23-9	23-5	-	-	-	-	-	-	-	187	170	155	141	129	118	108	98

No Shoring Shoring Required in Shaded Areas

COMPOSITE SLAB DESIGN NOTES

- 1.*Other concrete strengths, slab depths, and deck gages are available.
- Contact EPIC Metals.
- 2. Slab weight shown includes weight of heaviest deck gage.
- 3. All loads are assumed to be uniformly and statically applied. If loads greater than 200 psf are required, contact EPIC Metals.
- 4. Superimposed loads for spans in shaded areas and with bold face type assume deck is shored.
- 5. Composite slab design is based on simple span analysis.
- 6. Deflection limit of the composite slab is L/360 under the superimposed load.
- 7. Load tables are in accordance with SDI recommendations

CONTACT EPIC METALS FOR SPECIFICATION LANGUAGE.

U.L. Fire Ratings*

Deck Type	Fire Rating Type–Hours	U.L. Design Number	Concrete Cover (In.)	Type & Density of Concrete (PCF)	Bottom Slab Protection
	RAR – 2 HR.	D501	2	LW (110)	5/8″ Gyp Board
	NAN - 2 HN.	0301	21/2	RW (147)	78 Gyp Boald
EDC	UAR – 1½ HR.	D501	2	LW (110)	5/8″ Gyp Board
EDC	UAR - 1 ½ HR.	0301	21/2	RW (147)	98 бур Боаго
	RAR – 1 HR.	D903	2¾	LW (110)	None
	как – т пк.	D903	3	RW (147)	None
		D903	21/2	LW (110)	None
EDCP(A)*	RAR – 1 HR.	D903	2¾	RW (147)	None
EDC	RAR – 2 HR.	D903	31⁄2	LW (110)	News
EDC	KAK – Z FIK.	D903	41⁄4	RW (147)	None
	RAR – 2 HR.	D903	3	LW (110)	News
EDCP(A)*	KAK – Z FIK.	D903	4	RW (147)	None
EDC	RAR – 3 HR.	D903	4	LW (110)	None
EDCP(A)*	RAR – 3 HR.	D903	3¾	LW (110)	None
RAR – Res	trained Assembly	Rating	LW – Li	ght Weight Concrete	

RAR - Restrained Assembly Rating UAR - Unrestrained Assembly Rating

RW - Regular Weight Concrete

* NOTE: Add 1/4" to concrete cover for EDCP324 products only

** Consult the latest U.L. Fire Resistance Directory for the specific system assembly requirements to achieve the above hourly fire ratings.

DECK DESIGN AS A WET CONCRETE FORM:

1. Maximum clear spans without shoring are based on the Steel Deck Institute recommendations for sequential loading and load resistance factor design. The table is based on 40 ksi steel yield stress and deflection limits of L/180 or ¾", whichever is less.

Loading includes slab weight plus either a 30 psf uniform construction load or a 250-pound concentrated construction load on a 1'-0" width see tion. If heavier construction loads or less form deflection are required, spans must be reduced. Consult EPIC Metals for recommendations. 2. Runways and planking must be used for all concrete placement.

3. Minimum bearing is 4" at end supports and 6" at interior support bearing lengths.

4. The slump of the concrete will determine the amount of concrete leakage and cleanup that will be required to the ceiling surface. On all projects some cleanup of the ceiling surface will be required.

5. The determination of the time for removal of supporting shores may be controlled by the presence of construction loads or deflection limitations. The removal of shores may have to occur after the concrete has reached its full compressive strength f'c, modules Ec and stiffness, particularly in those instances where the construction loads may be as high as the specified live load. If shoring is removed too early, more significant deflection may occur and may even result in permanent damage. The strength and stiffness of the concrete during the various stages of construction should be substantiated by job-constructed and job-cured test specimens (cylinders). See ACI 318-99 (Chapter 6).

CONTACT FPIC METALS FOR SPECIFICATION LANGUAGE.





11 Talbot Avenue Rankin, PA 15104 USA 877-696-3742 Toll-Free 412-351-3913 Tel

epicmetals.com



Copyright © 1995, 2019 EPIC Metals Corporation. All rights reserved. Reproduction in whole or in part without the expressed consent of EPIC Metals Corporation is prohibited.



EPIC Metals Specialty Building Product Catalogs:

Envista® Roof and Floor Deck Ceiling Systems

Toris[®] Roof and Floor Deck Ceiling Systems

Epicore[®] Roof and Floor Deck Ceiling Systems

Archdeck[®] Curved Roof Deck Ceiling Systems

Epicore MSR® Multi-Story Residential Composite Floor Deck

EPIC Roof and Acoustic Deck Systems

EPIC Composite Acoustic Floor and Form Decks Left: Quakertown Community Senior High School Quakertown, Pennsylvania Wideck EDP750A

Front Cover: Queens University, Goodes Hall Kingston, Ontario Super Wideck SW15A

Specifying EPIC Metals' Wideck[®] Long Span Roof and Floor Deck Ceiling Systems for your next project can bring the structural art of the building's design and acoustics to the appreciation of the public. Acoustic Wideck enables the architect or engineer to control the interior sound environment of the building. EPIC Metals continues to be the innovative leader in the design and production of long-span roof and floor deck ceiling systems.



Declare.

Steel Deck with EPICLAD® Finish Red List Free

