ICC EVALUATION SERVICE®

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ICC-ES Evaluation Report

ESR-2839

Reissued May 2022

Revised July 2022

This report is subject to renewal May 2024.

DIVISION: 05 00 00—METALS
Section: 05 31 00—Steel Decking

REPORT HOLDER:

NEW MILLENNIUM BUILDING SYSTEMS, LLC

EVALUATION SUBJECT:

NEW MILLENNIUM COMPOSITE FLOOR DECK PANELS

1.0 EVALUATION SCOPE

Compliance with the following code:

2021, 2018, 2015, 2012, 2009 and 2006 *International Building Code®* (IBC)

For evaluation for compliance with codes adopted by the Los Angeles Department of Building and Safety (LADBS), see ESR-2839 LABC and LARC Supplement.

Property evaluated:

Structural

2.0 USES

The New Millennium Deep-Dek® Composite, Deep-Dek® Composite Cellular, and Deep-Dek® Composite Cellular Acoustical composite floor deck panels are used in conjunction with structural normal weight and lightweight concrete topping with minimum specified compressive strength, f_c', of 3,000 psi (20.68 MPa) to support construction, gravity, and lateral loads.

3.0 DESCRIPTION

3.1 General:

The New Millennium Deep-Dek® Composite, Deep-Dek® Composite Cellular, and Deep-Dek® Composite Cellular Acoustical composite deck panels are cold-formed from ASTM A653 SS Grade 50 steel sheets into panels with deck sections having a minimum G40 galvanization coating (total both surfaces). Some panels may have a paint coating over the galvanized bottom surface, which is not in contact with concrete. Panel dimensions and profiles are as shown in the tables and figures of this report.

3.2 Deep-Dek® Composite 4.5, 6, and 7.5 (DDC4.5, DDC6, and DDC7.5) Panels:

The DDC4.5, DDC6, and DDC7.5 deck panels are fluted sections as shown in Figure 1 and are available in design thicknesses ranging from No. 14 to No. 20 gage [0.0747 inch (1.90 mm) to 0.0358 inch (0.909 mm)]. The DDC4.5 and DDC6deck panels are produced with closed ends to provide additional web crippling strength and a permanent deck end closure.

3.3 Deep-Dek® Composite 4.5, 6, and 7.5 Cellular (DDC4.5C, DDC6C, and DDC7.5C) Panels:

The DDC4.5C, DDC6C, and DDC7.5C deck panels consist of fluted, hat sections that are factory-attached to pan/liner sections, as shown in Figure 1. The DDC4.5C, DDC6C, and DDC7.5C panels are available with hat section design thicknesses ranging from No. 14 to No. 20 gage [0.0747 inch (1.90 mm) to 0.0358 inch (0.909 mm)] and liner section design thicknesses ranging from No. 14 to No. 20 gage [0.0747 inch (1.90 mm) to 0.0358 inch (0.909 mm)]. The DDC4.5C and DDC6C deck panel hat sections are produced with closed ends to provide additional web crippling strength and a permanent deck end closure.

3.4 Deep-Dek® Composite 4.5, 6, and 7.5 Cellular Acoustical (DDC4.5CA, DDC6CA, and DDC7.5CA) Panels:

The DDC4.5CA, DDC6CA, and DDC7.5CA deck panels are the same as DDC4.5C, DDC6C, and DDC7.5C Deep-Dek® Composite Cellular panels described in Section 3.3 above, except the pan/liner section of the panels is perforated with holes.

4.0 DESIGN AND INSTALLATION

4.1 Vertical Load Design:

The composite steel decks and composite deck-slabs must be designed in accordance with ANSI/SDI C-2017 or ANSI/SDI SD-2022 using the section properties in Table 1 and additional requirements of sections 4.1.1, 4.1.2, and 4.1.3.

4.1.1 Web Crippling Strength: The web crippling strength of deck panels must be determined per the AISI S100-16(2020) w/S2-20 provisions, with additional requirements described in Appendix A.

4.1.2 Shear Bond Resistance of Composite Deck-Slabs: The shear bond resistance and permissible uniform load for shear bond of composite deck-slabs must be computed per ANSI/SDI SD-2022 or per Appendix 3 of ANSI/SDI C-2017, with the tested shear bond resistance, V_t, calculated using ANSI/SDI T-CD-2017 Eq. (10-1) and shear bond coefficients presented in Appendix B of this report.

4.1.3 Flexural Strength of Composite Deck-Slabs in Positive Bending: The flexural strength of composite deck-slabs must be calculated per ANSI/SDI C-2017 or ANSI/SDI SD-2022.

4.2 Installation:

4.2.1 General: The deck panels must be installed in accordance with this report, ANSI/SDI C-2017, and New Millennium's published installation guidelines and instructions. If there is a conflict between New Millennium's published installation guidelines and instructions and this report, this report governs.

4.2.2 Deck Side Lap Connections: The side laps of the adjacent deck panels must be connected using the proprietary New Millennium Dek-Lok™ HSL clinching tool at a maximum spacing of 18 in. on center, as shown in Figure 2. Side lap screws can be installed in addition to the Dek-Lok™ HSL connections. The presence or absence of screws does not affect the values presented in this report.

4.2.3 Reinforcement: Reinforcement for crack control due to temperature and shrinkage shall be provided in accordance with ANSI/SDI C-2017.

5.0 CONDITIONS OF USE

The New Millennium steel floor deck panels described in this report comply with, or are suitable alternatives to what is specified in, the code indicated in Section 1.0 of this report, subject to the following conditions:

5.1 The design base-metal thicknesses for all steel deck panels are indicated in Table 1. The thickness delivered to the jobsite must be at least 95 percent of the thickness noted in the tables.

5.2 The minimum loads of IBC Chapter 16 in addition to the construction loads required by references in IBC Section 2210.1.1 must be considered by the design professional based on the specific occupancy or use, as applicable.

5.3 Special inspections must be provided in accordance with Chapter 17 of the IBC.

5.4 Calculations and details demonstrating that the loads applied to the decks comply with this report must be submitted to the code official for approval. Calculations and drawings must be prepared, signed, and sealed by a registered design professional where required by the statutes of the jurisdiction in which the project is to be constructed.

5.5 The steel deck panels are fabricated in Memphis, Tennessee under an approved quality program with inspections by ICC-ES.

6.0 EVIDENCE SUBMITTED

Data in accordance with the ICC-ES Acceptance Criteria for Steel Deck Roof and Floor Systems (AC43), dated February 2020 (editorially revised February 2021).

7.0 IDENTIFICATION

Each bundle of the New Millennium steel deck panels described in this report is identified by a labeling bearing the manufacturer's name (New Millennium Building Systems, LLC); the deck panel profile name; the design thickness; the minimum specified yield strength; the cover width of the panel; and the evaluation report number (ESR-2839). The Deep-Dek® Composite steel deck panel labeling also includes the manufacturing location (MD—Memphis, Tennessee).

7.1 The report holder's contact information is the following:

NEW MILLENNIUM BUILDING SYSTEMS, LLC
7575 WEST JEFFERSON BOULEVARD
FORT WAYNE, INDIANA 46804
(260) 969-3500
www.newmill.com

SYMBOLS AND DEFINITIONS

Symbol	Definition
h	Flat dimension of web measured in plane of web
I_{DM}	Effective moment of inertia for multi-span deck for deflection calculations under uniform load
I_{DS}	Effective moment of inertia for single-span deck for deflection calculations under uniform load
I_{gx}	Moment of inertia of full unreduced section (considering perforations for acoustical deck)
I_{oi}	Effective moment of inertia in inverted (negative) bending
I_{on}	Effective moment of inertia in normal (positive) bending
k_1, k_2, k_3, k_4	Shear bond coefficients for deck panels (See Appendix B)
K_{ce}, k_{red}	Adjustment Factors (See Appendix A)
N	Deck bearing length, in.
P_n	Nominal web crippling strength calculated with AISI S100-16(2020) w/S2-20 Eq. G5-1 for the fastened to support condition with one-flange loading or reaction load case (See Appendix A)
$P_{n,ce}$	Nominal web crippling strength of deck panels with closed ends for the fastened to support condition with one-flange loading or reaction load case (Section A1.0)
$P_{n,DDC7.5,20GA}$	Nominal web crippling strength of DDC7.5, DDC7.5C, and DDC7.5CA deck panels with the design thickness of No. 20 GA for the fastened to support condition with one-flange loading or reaction load case
R	Inside bend radius
S_{ei}	Effective section modulus in inverted (negative) bending
S_{en}	Effective section modulus in normal (positive) bending
t	Base steel thickness of deck panel
θ	Web angle

TABLE 1—SECTION PROPERTIES[1,2,3,4,5]

DECK PANEL	GAGE	t (in.)	I_{gx} (in.^{4}/ft)	I_{on} (in.^{4}/ft)	I_{oi} (in.^{4}/ft)	S_{en} (in.^{3}/ft)	S_{ei} (in.^{3}/ft)	I_{DS} (in.^{4}/ft)	I_{DM} (in.^{4}/ft)	h (in.)
Deep-Dek® Composite 4.5	20	0.0358	2.978	2.526	2.978	0.928	1.162	2.677	2.978	4.360
	18	0.0474	3.939	3.649	3.939	1.414	1.596	3.745	3.939	4.349
	16	0.0598	4.963	4.925	4.963	1.947	2.011	4.938	4.963	4.337
	14	0.0747	6.191	6.191	6.191	2.480	2.507	6.191	6.191	4.323
Deep-Dek® Composite 6	20	0.0358	5.747	4.925	5.629	1.240	1.667	5.199	5.668	5.862
	18	0.0474	7.601	7.055	7.601	2.068	2.358	7.237	7.601	5.851
	16	0.0598	9.579	9.494	9.579	2.878	2.971	9.522	9.579	5.839
	14	0.0747	11.950	11.950	11.950	3.675	3.705	11.950	11.950	5.825
Deep-Dek® Composite 7.5	20	0.0358	9.593	7.961	9.131	1.558	2.101	8.505	9.285	7.364
	18	0.0474	12.689	11.819	12.420	2.631	2.994	12.109	12.510	7.353
	16	0.0598	15.992	15.846	15.992	3.884	4.009	15.895	15.992	7.341
	14	0.0747	19.952	19.952	19.952	4.965	5.000	19.952	19.952	7.327
Deep-Dek® Composite 4.5 Cellular	20/20	0.0358 / 0.0358	4.826	3.825	3.938	0.967	1.513	4.159	4.234	4.360
	20/18	0.0358 / 0.0474	5.229	4.051	4.538	0.974	1.581	4.444	4.768	4.360
	18/20	0.0474 / 0.0358	5.922	5.403	4.860	1.589	1.964	5.576	5.576	4.349
	18/18	0.0474 / 0.0474	6.413	5.833	5.519	1.590	2.043	6.027	6.027	4.349
	18/16	0.0474 / 0.0598	6.863	6.190	6.197	1.594	2.118	6.415	6.419	4.349
	16/18	0.0598 / 0.0474	7.594	7.418	6.541	2.319	2.532	7.477	7.477	4.337
	16/16	0.0598 / 0.0598	8.123	7.931	7.293	2.366	2.618	7.995	7.995	4.337
	16/14	0.0598 / 0.0747	8.680	8.471	8.091	2.383	2.706	8.541	8.541	4.337
	14/16	0.0747 / 0.0598	9.545	9.545	8.555	3.198	3.211	9.545	9.545	4.323
	14/14	0.0747 / 0.0747	10.195	10.195	9.433	3.262	3.315	10.195	10.195	4.323
Deep-Dek® Composite 6 Cellular	20/20	0.0358 / 0.0358	8.991	6.881	7.503	1.296	2.166	7.585	7.999	5.862
	20/18	0.0358 / 0.0474	9.729	7.258	8.515	1.301	2.256	8.082	8.920	5.862
	18/20	0.0474 / 0.0358	11.044	10.020	9.277	2.140	2.811	10.361	10.361	5.851
	18/18	0.0474 / 0.0474	11.937	10.607	10.395	2.139	2.918	11.051	11.051	5.851
	18/16	0.0474 / 0.0598	12.756	11.136	11.534	2.141	3.015	11.676	11.941	5.851
	16/18	0.0598 / 0.0474	14.145	13.854	12.353	3.227	3.616	13.951	13.951	5.839
	16/16	0.0598 / 0.0598	15.104	14.786	13.611	3.217	3.728	14.892	14.892	5.839
	16/14	0.0598 / 0.0747	16.113	15.724	15.026	3.214	3.845	15.853	15.853	5.839
	14/16	0.0747 / 0.0598	17.762	17.762	16.004	4.569	4.574	17.762	17.762	5.825
	14/14	0.0747 / 0.0747	18.934	18.934	17.535	4.658	4.710	18.934	18.934	5.825
Deep-Dek® Composite 7.5 Cellular	20/20	0.0358 / 0.0358	14.677	10.873	12.313	1.630	2.876	12.141	13.101	7.364
	20/18	0.0358 / 0.0474	15.881	11.442	13.890	1.634	2.994	12.921	14.554	7.364
	18/20	0.0474 / 0.0358	18.029	15.878	15.263	2.696	3.730	16.595	16.595	7.353
	18/18	0.0474 / 0.0474	19.474	16.780	16.988	2.696	3.870	17.678	17.816	7.353
	18/16	0.0474 / 0.0598	20.806	17.586	18.770	2.697	4.000	18.659	19.449	7.353
	16/18	0.0598 / 0.0474	23.078	22.579	20.221	4.069	4.793	22.745	22.745	7.341
	16/16	0.0598 / 0.0598	24.625	23.694	22.171	4.059	4.943	24.004	24.004	7.341
	16/14	0.0598 / 0.0747	26.258	24.855	24.406	4.055	5.099	25.323	25.323	7.341
	14/16	0.0747 / 0.0598	28.960	28.960	26.078	5.980	6.058	28.960	28.960	7.327
	14/14	0.0747 / 0.0747	30.845	30.845	28.504	5.948	6.234	30.845	30.845	7.327
Deep-Dek® Composite 4.5 Cellular Acoustical	20/20	0.0358 / 0.0358	4.504	3.639	3.741	0.964	1.488	3.927	3.995	4.360
	20/18	0.0358 / 0.0474	4.876	3.854	4.262	0.969	1.550	4.195	4.467	4.360
	18/20	0.0474 / 0.0358	5.541	5.068	4.655	1.584	1.937	5.225	5.225	4.349
	18/18	0.0474 / 0.0474	5.983	5.456	5.219	1.589	2.008	5.632	5.632	4.349
	18/16	0.0474 / 0.0598	6.398	5.819	5.810	1.591	2.076	6.012	6.012	4.349
	16/18	0.0598 / 0.0474	7.098	6.937	6.227	2.272	2.492	6.991	6.991	4.337
	16/16	0.0598 / 0.0598	7.575	7.400	6.876	2.317	2.570	7.458	7.458	4.337
	16/14	0.0598 / 0.0747	8.088	7.898	7.554	2.365	2.652	7.961	7.961	4.337
	14/16	0.0747 / 0.0598	8.917	8.917	8.114	3.133	3.157	8.917	8.917	4.323
	14/14	0.0747 / 0.0747	9.504	9.504	8.858	3.194	3.252	9.504	9.504	4.323
Deep-Dek® Composite 6 Cellular Acoustical	20/20	0.0358 / 0.0358	8.410	6.569	7.166	1.292	2.134	7.183	7.581	5.862
	20/18	0.0358 / 0.0474	9.089	6.929	8.043	1.296	2.216	7.649	8.392	5.862
	18/20	0.0474 / 0.0358	10.362	9.537	8.925	2.141	2.775	9.812	9.812	5.851
	18/18	0.0474 / 0.0474	11.162	10.094	9.885	2.137	2.871	10.450	10.450	5.851
	18/16	0.0474 / 0.0598	11.913	10.589	10.862	2.138	2.959	11.030	11.212	5.851
	16/18	0.0598 / 0.0474	13.259	12.991	11.819	3.232	3.565	13.080	13.080	5.839
	16/16	0.0598 / 0.0598	14.119	13.828	12.888	3.224	3.664	13.925	13.925	5.839
	16/14	0.0598 / 0.0747	15.044	14.727	14.075	3.217	3.770	14.833	14.833	5.839
	14/16	0.0747 / 0.0598	16.641	16.641	15.253	4.476	4.503	16.641	16.641	5.825
	14/14	0.0747 / 0.0747	17.693	17.693	16.522	4.561	4.626	17.693	17.693	5.825

TABLE 1—SECTION PROPERTIES (Continued)[1,2,3,4,5]

DECK PANEL	GAGE	t (in.)	I_{qx} (in.^{4}/ft)	I_{on} (in.^{4}/ft)	I_{oi} (in.^{4}/ft)	S_{en} (in.^{3}/ft)	S_{ei} (in.^{3}/ft)	I_{DS} (in.^{4}/ft)	I_{DM} (in.^{4}/ft)	h (in.)
Deep-Dek® Composite 7.5 Cellular Acoustical	20/20	0.0358 / 0.0358	13.743	10.403	11.799	1.626	2.835	11.516	12.447	7.364
	20/18	0.0358 / 0.0474	14.845	10.947	13.156	1.630	2.943	12.246	13.719	7.364
	18/20	0.0474 / 0.0358	16.944	15.175	14.726	2.695	3.684	15.765	15.765	7.353
	18/18	0.0474 / 0.0474	18.231	15.998	16.199	2.693	3.809	16.742	16.876	7.353
	18/16	0.0474 / 0.0598	19.445	16.755	17.718	2.694	3.926	17.652	18.294	7.353
	16/18	0.0598 / 0.0474	21.666	21.266	19.399	4.078	4.727	21.399	21.399	7.341
	16/16	0.0598 / 0.0598	23.047	22.550	21.047	4.065	4.859	22.715	22.715	7.341
	16/14	0.0598 / 0.0747	24.535	23.625	22.929	4.057	4.999	23.928	23.928	7.341
	14/16	0.0747 / 0.0598	27.176	27.176	24.918	5.956	5.968	27.176	27.176	7.327
	14/14	0.0747 / 0.0747	28.859	28.859	26.918	5.976	6.127	28.859	28.859	7.327

For **SI** dimensions: 1 inch = 25.4 mm; 1 foot = 304.8 mm.

1 Effective properties are based on a yield stress of 50 ksi.

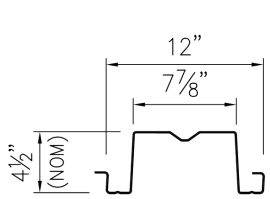
2 The design thickness is the uncoated base-metal thickness of the deck panel.

3 For the cellular deck panels, the first number is the design base metal thickness of the profiled deck panel and the second number is the design base metal thickness of the bottom liner panel.

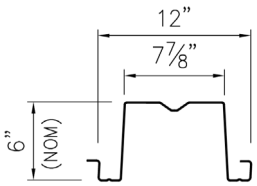
4 Under uniform loads:

- I_D for a simple span is permitted to be equal to $(I_{gx} + 2*I_{on})/3$ or I_{on}.
- I_D for multiple spans is permitted to be equal to $(I_{gx} + 2*I_{oi})/3$, $(I_{gx} + 2*I_{on})/3$ or the minimum of I_{on} and I_{oi}.

5 For all deck panels, the web angle, θ, is equal to 87° from the horizontal plan, and the inside bend radius at the web-flange junctions, R, is equal to 0.125 in.



DEEP-DEK® COMPOSITE 4.5



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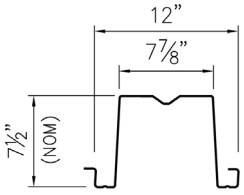
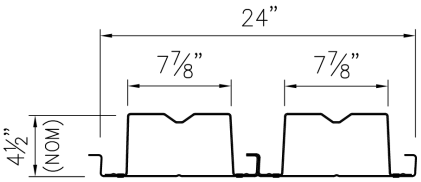
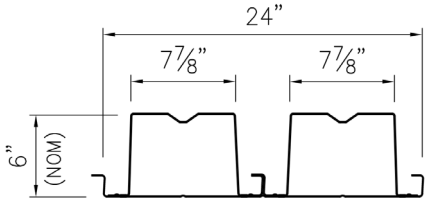


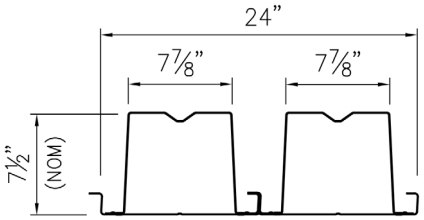
DEEP-DEK® COMPOSITE 7.5



DEEP-DEK® COMPOSITE 4.5 CELLULAR



DEEP-DEK® COMPOSITE 6 CELLULAR



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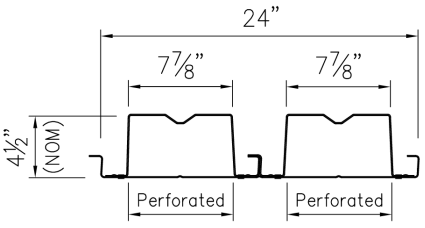
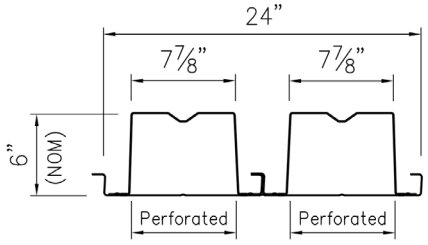
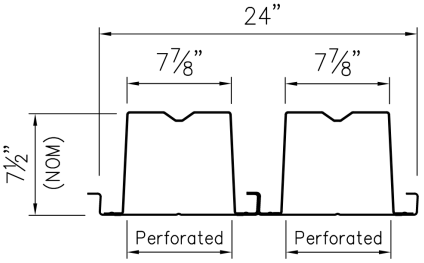


DEEP-DEK® COMPOSITE 4.5 CELLULAR ACOUSTICAL



DEEP-DEK® COMPOSITE 6 CELLULAR ACOUSTICAL



DEEP-DEK® COMPOSITE 7.5 CELLULAR ACOUSTICAL

FIGURE 1—STEEL DECK PANEL PROFILES

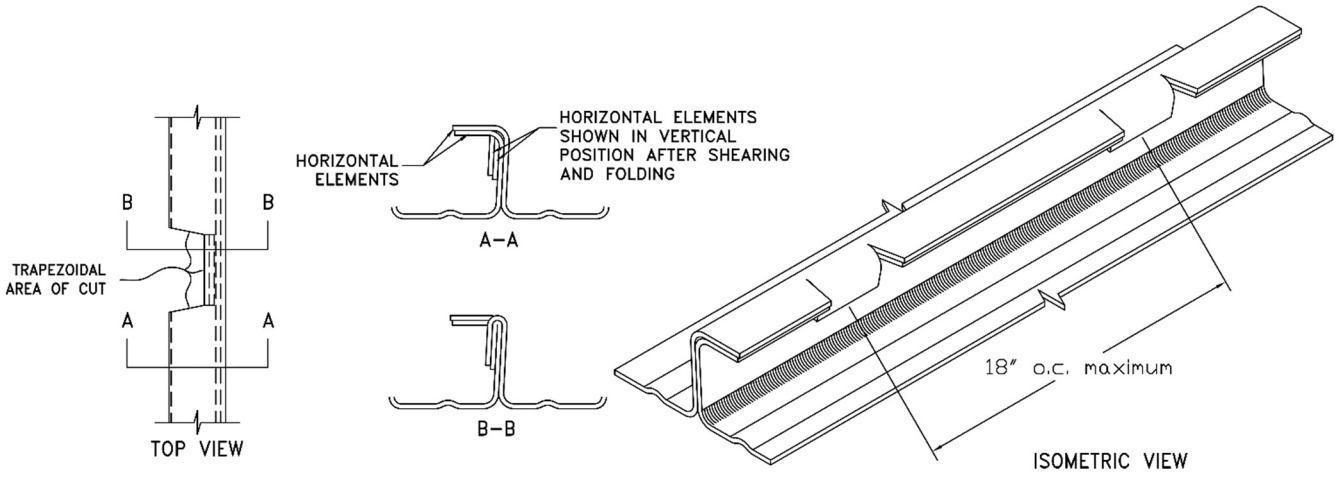


FIGURE 2—DEK-LOK™ HSL DETAILS

APPENDIX A

Web Crippling Strength Calculations

A1.0 Web Crippling Strength of Deck Panels with Closed Ends (DDC4.5, DDC6, DDC4.5C, DDC6C, DDC4.5CA, and DDC6CA)

The nominal web crippling strength of deck panels with closed ends, $P_{n,ce}$, for the fastened to support condition with one-flange loading or reaction load case, must be calculated as follows:

$$P_{n,ce} = k_{ce} P_n \quad \text{(Eq. A-1)}$$

where, P_n is the nominal web crippling strength calculated with AISI S100-16(2020) w/S2-20 Eq. G5-1 and k_{ce} is determined as follows:

$$k_{ce} = \begin{cases} 2.95 \text{ for end loading or reaction and } N \leq 2.0 \text{ in.} \\ 3.55 - 0.3N \text{ for end loading or reaction and } 2.0 < N \leq 4.0 \text{ in.} \\ 1.0 \text{ for end loading or reaction and } N > 4.0 \text{ in.} \\ 1.0 \text{ for interior loading or reaction} \end{cases}$$

where, N is deck bearing length, in.

The safety and resistance factors (Ω and ϕ, respectively) shall be in accordance with AISI S100-16 (2020) w/S2-20. For $k_{ce} > 1$, Ω must not be less than 1.77.

A2.0 Web Crippling Strength of DDC7.5, DDC7.5C, and DDC7.5CA Deck Panels with the Design Thickness of No. 20 gage [0.0358 inch (0.909 mm)]

The nominal web crippling strength of DDC7.5, DDC7.5C, and DDC7.5CA deck panels with the design thickness of No. 20 gage [0.0358 inch (0.909 mm)] and *h*/*t*=206, which exceeds the AISI S100-16(2020) w/S2-20 limit of 200, for the fastened to support condition with one-flange loading or reaction load case, must be calculated as follows:

$$P_{n,DDC7.5,20GA} = k_{red} P_n \quad \text{(Eq. A-2)}$$

where, P_n is the nominal web crippling strength calculated with AISI S100-16(2020) w/S2-20 Eq. G5-1, neglecting the *h*/*t* limitation, and k_{red} determined as follows.

$$k_{red} = \begin{cases} 1.00 \text{ for end loading or reaction and } N \leq 1.75 \text{ in.} \\ 1.16N^{-0.26} \text{ for end loading or reaction and } N > 1.75 \text{ in.} \\ 0.73 \text{ for interior loading or reaction} \end{cases} \quad \text{(Eq. A-3)}$$

where, N is deck bearing length, in.

The safety and resistance factors shall be in accordance with AISI S100-16(2020) w/S2-20.

APPENDIX B

Shear Bond Coefficients

Shear bond coefficients for deck panels are presented in Table B.1.

TABLE B.1—Shear Bond Coefficients

Deck Panel	k_1	k_2	k_3	k_4
DDC4.5, DDC4.5C, and DDC4.5CA [1]	-3780.08	213.91	217.53	-6.00
DDC6, DDC6C, and DDC6CA [2]	-194.40	37.44	116.09	0.75
DDC7.5, DDC7.5C, and DDC7.5CA [3]	-2179.91	190.37	129.10	-1.90

[1] Provided coefficients are for overall slab depth range of 7 – 10.5 inches (178 – 267 mm). For shear span (l') less than 24 inches (610 mm), use l' = 24 inches for the calculation of the nominal shear bond resistance, V_t, using Eq 10-1 in SDI T-CD-2017.
[2] Provided coefficients are for overall slab depth range of 8.5 – 12 inches (216 – 305 mm). For shear span (l') less than 24 inches (610 mm), use l' = 24 inches for the calculation of the nominal shear bond resistance, V_t, using Eq 10-1 in SDI T-CD-2017.
[3] Provided coefficients are for overall slab depth range of 9.625 – 13 inches (244 – 330 mm). For shear span (l') less than 39 inches (991 mm), use l' = 39 inches for the calculation of the nominal shear bond resistance, V_t, using Eq 10-1 in SDI T-CD-2017.

DIVISION: 05 00 00—METALS
Section: 05 31 00—Steel Decking

REPORT HOLDER:

NEW MILLENNIUM BUILDING SYSTEMS, LLC

EVALUATION SUBJECT:

NEW MILLENNIUM STEEL ROOF DECK PANELS

1.0 REPORT PURPOSE AND SCOPE

Purpose:

The purpose of this evaluation report supplement is to indicate that steel deck panels, described in ICC-ES evaluation report ESR-2839, have also been evaluated for compliance with the codes noted below as adopted by the Los Angeles Department of Building and Safety (LADBS).

Applicable code editions:

- 2020 *City of Los Angeles Building Code* (LABC)

2.0 CONCLUSIONS

The steel deck panels, described in Sections 2.0 through 7.0 of the ICC-ES evaluation report ESR-2839, comply with the LABC Chapter 22, and are subject to the conditions of use described in this supplement.

3.0 CONDITIONS OF USE

The steel deck panels described in this evaluation report supplement must comply with all of the following conditions:

- The design, installation, conditions of use and identification of the *steel deck panels* are in accordance with the 2018 *International Building Code®* (IBC) provisions noted in the evaluation report ESR-2839.
- The design, installation and inspection are in accordance with additional requirements of LABC Chapters 16 and 17, as applicable.
- When exposed to weather, the deck units shall be galvanized.

This supplement expires concurrently with the evaluation report, reissued May 2022, and revised July 2022.

DIVISION: 05 00 00—METALS
Section: 05 31 00—Steel Decking

REPORT HOLDER:

NEW MILLENNIUM BUILDING SYSTEMS, LLC

EVALUATION SUBJECT:

NEW MILLENNIUM COMPOSITE FLOOR DECK PANELS

1.0 REPORT PURPOSE AND SCOPE

Purpose:

The purpose of this evaluation report supplement is to indicate that the New Millennium steel roof deck panels in ICC-ES evaluation report ESR-2839 have also been evaluated for compliance with the code noted below.

Applicable code edition:

2022 and 2019 *California Building Code* (CBC)

For evaluation of applicable chapters adopted by the California Office of Statewide Health Planning and Development (OSHPD) AKA: California Department of Health Care Access and Information (HCAI) and the Division of State Architect (DSA), see Sections 2.1 and 2.2 below.

2.0 CONCLUSIONS

The New Millennium roof deck panels, described in Sections 2.0 through 7.0 of the ICC-ES evaluation report ESR-2839, comply with CBC Chapter 22, provided the design and installation are in accordance with the 2021 and 2018 *International Building Code*® (IBC) provisions noted in the evaluation report and the additional requirements of the CBC Chapters 16 and 17, as applicable.

2.1 OSHPD: The applicable OSHPD Sections and Chapters of the CBC are beyond the scope of this supplement.

2.2 DSA: The applicable DSA Sections and Chapters of the CBC are beyond the scope of this supplement.

This supplement expires concurrently with the evaluation report, reissued May 2022, and revised July 2022.

DIVISION: 05 00 00—METALS
Section: 05 31 00—Steel Decking

REPORT HOLDER:

NEW MILLENNIUM BUILDING SYSTEMS, LLC

EVALUATION SUBJECT:

NEW MILLENNIUM COMPOSITE FLOOR DECK PANELS

1.0 REPORT PURPOSE AND SCOPE

Purpose:

The purpose of this evaluation report supplement is to indicate that New Millennium steel floor deck panels, recognized in ICC-ES evaluation report ESR-2839, has also been evaluated for compliance with the code noted below.

Applicable code edition:

- 2020 *Florida Building Code—Building*

2.0 CONCLUSIONS

The steel deck panels, described in Sections 2.0 through 7.0 of ICC-ES evaluation report ESR-2839, comply with the Florida Building Code-Building. The design requirements shall be determined in accordance with the *Florida Building Code-Building*. The installation requirements noted in ICC-ES evaluation report ESR-2839 for the 2018 *International Building Code®* meet the requirements of the *Florida Building Code-Building*.

Use of the steel deck panels has also been found to be in compliance with the High-Velocity Hurricane Zone provisions of the *Florida Building Code-Building* except that the 22 gage steel deck panels must have a minimum G90 galvanized coating in accordance with 2222.6.1 of the *Florida Building Code*-Building.

For products falling under Florida Rule 61G20-3, verification that the report holder's quality assurance program is audited by a quality assurance entity approved by the Florida Building Commission for the type of inspections being conducted is the responsibility of an approved validation entity (or the code official when the report holder does not possess an approval by the Commission).

This supplement expires concurrently with the evaluation report, reissued May 2022, and revised July 2022.