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APPROVAL REPORT

Project No: 3051022

Supplements Project No.: N/A

Class: 4451

Product Name: PLB-36, HSB-36, HSB-36-SS, PLB-36 AC, HSB-36 AC, HSB-36-SS AC, PLB-36-CD, HSB-36-CD, PLB-36-CD AC, HSB-36-CD AC, PLN-24, N-24, N-24-SS, PLN-24 AC, N-24 AC, N-24-SS AC, PLN-24-CD, N-24-CD, PLN-24-CD AC, N-24-CD AC, PLN3, HSN3, HSN3-SS, PLN3 AC, HSN3 AC, HSN3-SS AC, PLN3-CD, HSN3-CD, PLN3-CD AC, HSN3-CD AC

Name of Listing Company: Verco Decking Inc - A NUCOR Company

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Date of Approval

1 INTRODUCTION

1.1 Verco Decking Inc - A NUCOR Company requested Approval re-examination of their PLB-36, HSB-36, HSB-36-SS, PLB-36 AC, HSB-36 AC, HSB-36-SS AC, PLB-36-CD, HSB-36-CD, PLB-36-CD AC, HSB-36-CD AC, PLN-24, N-24, N-24-SS, PLN-24 AC, N-24 AC, N-24-SS AC, PLN-24-CD, N-24-CD, PLN-24-CD AC, N-24-CD AC steel roof decks and Approval examination of their PLN3, HSN3, HSN3-SS, PLN3 AC, HSN3 AC, HSN3-SS AC, PLN3-CD, HSN3-CD, PLN3-CD AC, HSN3-CD AC steel roof decks to determine if they meet the Approval requirements of the Standard listed in Section 1.3.

1.2 This report may be freely reproduced only in its entirety and without modification.

1.3 Standards

Title	Number	Issue Date
Approval Standard for Profiled Steel Panels for Use as Decking in Class 1 Insulated Roof Construction	4451	6/2012

1.4 Listing

The products will be listed in RoofNav, an on-line resource of FM Approvals. Formulations, drawings and specifications are on file at FM Approvals.

2 DESCRIPTION

2.1 The PLN3, HSN3, and HSN3-SS steel roof decks are available in the thickness of 22 ga., 20 ga., 18 ga., and 16 ga. (0.0299 in., 0.0359 in., 0.0478 in., and 0.0598 in. [0.76 mm, 0.91 mm, 1.21 mm, and 1.52 mm]). The deck is 3 in. (76 mm) deep with 8 in. (203 mm) module spacing. The steel deck is rolled from coil steel meeting the requirements of ASTM A653, A1063, A1008, or A1039 Structural Steel (SS) minimum Grade 50 or HSLAS minimum Grade 50 having a minimum yield strength of 50 ksi (345 MPa) and a minimum tensile strength of 65 ksi (448 MPa). The manufactured width of the deck is 32 in. (813 mm) and is supplied in various lengths. The PLN3, HSN3 steel decks have an interlocking side lap on the bottom rib. The HSN3-SS steel roof deck has a screw fastened side lap on the bottom rib. The minimum delivered uncoated steel thickness of the deck shall never be less than 95% of the design thickness.

2.2 The PLN3 AC, HSN3 AC, and HSN3-SS AC acoustical steel roof decks have the same profile, thickness, and strength characteristics as PLN3, HSN3, and HSN3-SS, respectively. The webs of the acoustical decks have a series of 5/32 in. (4 mm) diameter holes spaced on horizontal staggered centers of 0.750 in. (19 mm) and staggered vertical centers of 0.437 in. (11 mm). During building construction, either 1 layer of 3-1/4 in. (83 mm) wide by 3 in. (76 mm) high, or 2 layers of 3-1/4 in. (83 mm) wide by 1-1/2 in. (38 mm) high (or a single layer of 2-3/8 in. (60 mm) wide by 3 in. (76 mm) high) by 0.75 lb/ft³ (12 kg/m³) fiberglass batt insulation is placed in the bottom ribs.

2.3 The PLN3-CD and HSN3-CD cellular steel roof decks are available in combinations of 20/20, 20/18, 20/16, 18/20, 18/18, 18/16, 16/18, and 16/16 where the first number is the gage of the top fluted section, and the second number is the gage of the bottom flat plate. The top fluted section has the same profile, thickness, and strength characteristics as PLN3 and HSN3, respectively, and is attached to the bottom flat plate with resistance spot welds located 6 in. (152 mm) on center having a minimum nominal diameter of ¼ in.

(6.4 mm), not to exceed 9/16 in. (14 mm). The minimum delivered uncoated steel thickness of the deck shall never be less than 95% of the design thickness.

- 2.4 The PLN3-CD AC and HSN3-CD AC cellular acoustic steel roof decks are available in the same combinations as PLN3-CD and HSN3-CD, respectively. The top fluted section has the same profile, thickness, and strength characteristics as PLN3 AC and HSN3 AC, respectively. The bottom panels have a series of 5/32 in. (4 mm) diameter holes spaced on horizontal staggered centers of 0.750 in. (19 mm) and staggered vertical centers of 0.437 in. (11 mm). One layer of 5-1/4 in. (133 mm) wide by 1-1/2 in. (38 mm) high by 1.5 lb/ft³ (12 kg/m³) fiberglass batt insulation is placed in each cell at the factory.
- 2.5 All other products are as described in RoofNav. Formulations, drawings and specifications are on file at FM Approvals.

3 EXAMINATIONS AND TESTS

- 3.1 All components, except those in Sections 2.1 – 2.4, were produced under the FM Approvals Surveillance Audit program as indicated by FM Approvals labels. All samples were considered to be representative of standard production and were examined and tested as indicated below. Components incorporated into test samples were selected by FM Approvals personnel. Test samples were prepared by, or under the supervision of, FM Approvals personnel. All data is on file at FM Approvals along with other documents and correspondence applicable to this program.
- 3.2 Several performance requirements and tests required by the Standard have been waived due to previous successful testing. See Table 1 below for details.

Table 1

FM Standard 4451 Performance Requirement	Submissions Required / Waivers
	Re-Exam products
	N3 New Product Approval
Allowable Live Load Deflection (Calculation)	Re-exam: Included
	N3: Included
Combustibility From Below the Roof Deck	Re-exam: Waived, see 3033477
	N3: Included
Combination pull out / pull over resistance of fasteners (Testing)	Re-exam: Waived ¹
	N3: Waived ¹
Pull over resistance of fasteners (Calculation)	Re-exam: Waived ¹
	N3: Waived ¹
Combination pull off / pull over resistance of arc spot welds (Calculation)	Re-exam: Included
	N3: Included
Side lap fastener and side lap crimping and interlocking resistance	Re-exam: Waived see 3033477
	N3: Lap design identical to previously Approved steel roof decks, waived see 3033477
Fastener pull out resistance for above deck components	Re-exam: Waived ¹
	N3: Waived ¹
Steel Deck Bending Stresses Under Service Wind Loads	Re-exam: Included
	N3: Included
Wind Uplift Ratings Greater	Re-exam: Not requested

FM Standard 4451 Performance Requirement	Submissions Required / Waivers
	Re-Exam products
	N3 New Product Approval
Than Class 1-90 and all assemblies that utilize steel deck with a design thickness less than 0.0295 in. (0.75 mm)	N3: Not requested
Foot Traffic Resistance of Insulation	Waived, see 3033477
	N3: Included
Bearing Capacity of Insulation	Re-exam: Waived, not applicable
	N3: Waived, not applicable
Corrosion Resistance Test (Optional Test)	Re-exam: Not requested
	N3: Not requested
Drivability Evaluation of Fasteners	Re-exam: Waived ¹
	Re-exam: Waived ¹

¹ All fasteners are Approved by the OEM, no new fasteners included.

3.3 Combustibility From Below the Roof Deck

3.3.1 The fire testing from below the roof deck was conducted using the FM Approvals Construction Materials Calorimeter which measures the maximum rate of fuel contribution by the sample roof, also expressed as maximum heat release rate (HRR); e.g., for a Class 1 rating, the assembly must exhibit a HRR no greater than 410 Btu/ft²/min (77.6 kW/m²) in any 3 minute time frame during the 30 minute fire exposure.

3.3.2 One (1) 4-1/2 by 5 ft. (1.4 by 1.5 m) sample was prepared. The components and sequence of installation were as follows:

Sample 1: 22 gauge Verco Decking Inc. HSN3 AC steel deck
 2 layers of 2-3/8 in. (60 mm) wide by 1-1/2 in. (38 mm) high by 0.75 lb/ft³ (12 kg/m³) fiberglass batt insulation
 0.5 in. (13 mm) Georgia-Pacific Gypsum LLC Dens Deck Prime loose laid on the steel deck
 2.0 in. (51 mm) Hunter Panels H-Shield
 4-ply glass felt BUR, adhered with hot asphalt, applied at 25 lbs/sq (1.2 kg/m²)

3.3.3 The calorimeter test showed the test panel to have fuel contribution rates below the maximum permissible rates for Class 1 construction. The rates and the Class 1 limits are noted below:

Maximum Average Rate of Fuel Contribution
 for Various Time Intervals
 Btu/ft²/min (kW/m²)

Time Interval	3 min	5 min	10 min	Average
Class 1 Standard	410 (77.6)	390 (73.8)	360 (68.1)	285 (54.0)
Sample No. 1	97 (18.4)	97 (18.4)	97 (18.4)	72 (13.6)

3.4 Foot Traffic Resistance of Insulation

3.4.1 Testing was conducted to evaluate the ability of the insulation to resist simulated foot traffic without damage when spanning the rib opening of the deck.

3.4.2 A 76 mm (3 in.) round plate was centered on the 305 mm (12 in.) square horizontal test panel and positioned over the center rib opening. A 91 kg (200 lb.) load was imposed on the plate and then removed. This cycle was repeated four additional times. Penetration and residual readings were taken after each cycle without removing the plate. The insulation board was inspected for damage at the plate interface after the last cycle.

3.4.3 There must be no breaking of the insulation board due to the wide rib opening of the deck.

3.4.4 Two (2) samples were prepared. The components and sequence of installation were as follows:

Sample No. 1: 22 gauge Verco Decking Inc. PLN3 steel deck
0.5 in. (13 mm) Georgia-Pacific Gypsum LLC Dens Deck Prime loose
laid on the steel deck

Sample No. 2: 22 gauge Verco Decking Inc. PLN3 steel deck
2.0 in. (51 mm) Hunter Panels H-Shield

3.4.5 The insulation samples did not break under the simulated foot traffic load.

4 MARKING

4.1 The manufacturer shall mark each product and/or packaging with the manufacturer's name and product trade name. In addition, product and/or packaging must be marked with the Approval Mark of FM Approvals.

4.2 Markings denoting Approval by FM Approvals shall be applied by the manufacturer only within and on the premises of manufacturing locations under the FM Approvals Surveillance Audit program.

4.3 The manufacturer agrees that use of the FM Approvals name or Approval Mark is subject to the conditions and limitations of the Approval by FM Approvals. Such conditions and limitations must be included in all references to Approval by FM Approvals.

5 REMARKS

5.1 The securement of the roof system must be enhanced at the building corners and perimeter as outlined in FM Global Property Loss Prevention Data Sheet 1-29.

5.2 The roof cover must be installed using a roof perimeter flashing system Approved by FM Approvals. See RoofNav.

6 SURVEILLANCE AUDIT

- 6.1** The manufacturing facilities at the following locations shall be visited on a routine basis. The facility processes and quality control procedures in place have been determined to be satisfactory to manufacture products identical to that tested and Approved. A Form 797 shall be submitted to FM Approvals for requesting to manufacture products at any additional or alternate manufacturing facilities which are not listed below.

Audit Locations

607 Wilbur Avenue
Antioch, CA 94509
United States

8333 Lime Street
Fontana, CA 92334
United States

4340 North 42nd Avenue
Phoenix, AZ 85019
United States

7 MANUFACTURER'S RESPONSIBILITIES

- 7.1** The manufacturer shall notify FM Approvals of any planned change in the Approved products, prior to general sale or distribution, using Form 797, Approved Product Revision Report. No changes of any nature shall be made unless notice of the proposed change has been given and written authorization obtained from FM Approvals.
- 7.2** To ensure compliance with his procedures in the field, the manufacturer shall supply to the installer such necessary instruction or assistance required to produce the desired performance achieved in the tests.
- 7.3** In accordance with the Master Agreement, the manufacturer shall make full and immediate disclosure to FM Approvals of all information concerning any defect in, or potential hazard of, the product or service manufactured or provided by the Customer which is Approved by, or being examined by, FM Approvals. The manufacturer shall make all necessary arrangements for the investigation of complaints / anomalies applicable to this approval and shall keep records of all complaints / anomalies including actions taken.

8 DOCUMENTATION

- 8.1** The following document describes the PLB-36, HSB-36, HSB-36-SS, PLB-36 AC, HSB-36 AC, HSB-36-SS AC, PLB-36-CD, HSB-36-CD, PLB-36-CD AC, HSB-36-CD AC, PLN-24, N-24, N-24-SS, PLN-24 AC, N-24 AC, N-24-SS AC, PLN-24-CD, N-24-CD, PLN-24-CD AC, N-24-CD AC, PLN3, HSN3, HSN3-SS, PLN3 AC, HSN3 AC, HSN3-SS AC, PLN3-CD, HSN3-CD, PLN3-CD AC, HSN3-CD AC steel roof decks and is on file at FM Approvals.

Document Title	Issue Date
Surveillance Audit Manual	August 2014

9 CONCLUSIONS

9.1 Evaluation from this and prior projects indicates that Verco Decking Inc - A NUCOR Company steel roof decks meet the Approval requirements of FM Approval Standard 4451 for use as a component in Class 1-60, Class 1-75, and Class 1-90 wind uplift rated insulated steel deck roof constructions as described below and when installed as described in RoofNav, an on-line resource of FM Approvals.

9.1.1 Verco Decking Inc - A NUCOR Company steel roof deck is secured to the building structural supports with FM Approved steel deck fasteners spaced at the maximum center to center span as determined by the lesser of the values shown in the tables as follows or as specified within listings of the FM Approved steel deck fastener. The side laps of steel decks designated by –SS are secured using fasteners FM Approved for securing steel deck laps. The side laps of PLB and HSB steel decks are secured with the Verco PunchLok tool and button punch, respectively, spaced at maximum 36 in. (914 mm) on center. An FM Approved fully or partially adhered roof covering or mechanically attached roof covering when the in-row fastener spacing is less than or equal to one-half of the deck span is applied per proprietary listings. Refer to the use of steel roof decks and fasteners throughout listings for details and limitations. Meets maximum Class 1-90 or per proprietary listings.

9.1.1.1 Verco Decking Inc - A NUCOR Company PLB-36, HSB-36, or HSB-36-SS steel roof deck is secured to the building structural supports spaced at the maximum center to center spans shown in the tables as follows.

Deck Design Thickness, MSG (in. [mm])	Maximum Allowable, One Span, in., mm					
	Wind Rating					
	1-60		1-75		1-90	
	in.	mm	in.	mm	in.	mm
22 (0.0299 [0.76])	72	1829	72	1829	72	1829
20 (0.0359 [0.91])	80	2032	80	2032	80	2032
18 (0.0478 [1.21])	94	2388	94	2388	94	2388
16 (0.0598 [1.52])	106	2692	106	2692	106	2692
Deck Design Thickness, MSG (in. [mm])	Maximum Allowable, Two or More Spans, in., mm					
	Wind Rating					
	1-60		1-75		1-90	
	in.	mm	in.	mm	in.	mm
22 (0.0299 [0.76])	89	2261	89	2261	89	2261
20 (0.0359 [0.91])	97	2464	97	2464	97	2464
18 (0.0478 [1.21])	112	2845	112	2845	112	2845
16 (0.0598 [1.52])	125	3175	125	3175	125	3175

9.1.1.2 Verco Decking Inc - A NUCOR Company PLB-36 AC, HSB-36 AC, or HSB-36-SS AC steel roof deck is secured to the building structural supports spaced at the maximum center to center spans shown in the tables as follows.

Deck Design Thickness, MSG (in. [mm])	Maximum Allowable, One Span, in., mm					
	Wind Rating					
	1-60		1-75		1-90	
	in.	mm	in.	mm	in.	mm
22 (0.0299 [0.76])	71	1803	71	1803	71	1803
20 (0.0359 [0.91])	80	2032	80	2032	80	2032
18 (0.0478 [1.21])	93	2362	93	2362	93	2362
16 (0.0598 [1.52])	105	2667	105	2667	105	2667

Deck Design Thickness, MSG (in. [mm])	Maximum Allowable, Two or More Spans, in., mm					
	Wind Rating					
	1-60		1-75		1-90	
	in.	mm	in.	mm	in.	mm
22 (0.0299 [0.76])	88	2235	88	2235	88	2235
20 (0.0359 [0.91])	96	2438	96	2438	96	2438
18 (0.0478 [1.21])	111	2819	111	2819	111	2819
16 (0.0598 [1.52])	124	3150	124	3150	124	3150

9.1.1.3 Verco Decking Inc - A NUCOR Company 20/20 ga., 20/18 ga., 20/16 ga., 18/20 ga., 18/18 ga., 18/16 ga., 16/18 ga., or 16/16 ga. PLB-36-CD or HSB-36-CD steel roof deck is secured to the building structural supports spaced at the maximum center to center spans shown in the tables as follows.

Deck Design Thickness, MSG (in. [mm])	Maximum Allowable, One Span, in., mm					
	Wind Rating					
	1-60		1-75		1-90	
	in.	mm	in.	mm	in.	mm
20/20 (0.0359/0.0359 [0.91/0.91])	111	2819	111	2819	111	2819
20/18 (0.0359/0.0478 [0.91/1.21])	116	2946	116	2946	116	2946
20/16 (0.0359/0.0598 [0.91/1.52])	126	3200	126	3200	126	3200
18/20 (0.0478/0.0359 [1.21/0.91])	126	3200	126	3200	126	3200
18/18 (0.0478/0.0478 [1.21/1.21])	131	3327	131	3327	131	3327
18/16 (0.0478/0.0598 [1.21/1.52])	136	3454	136	3454	136	3454
16/18 (0.0598/0.0478 [1.52/1.21])	144	3658	144	3658	144	3658
16/16 (0.0598/0.0598 [1.52/1.52])	150	3810	150	3810	150	3810

Deck Design Thickness, MSG (in. [mm])	Maximum Allowable, Two Span, in., mm					
	Wind Rating					
	1-60		1-75		1-90	
	in.	mm	in.	mm	in.	mm
20/20 (0.0359/0.0359 [0.91/0.91])	130	3302	130	3302	130	3302
20/18 (0.0359/0.0478 [0.91/1.21])	136	3454	136	3454	135	3429
20/16 (0.0359/0.0598 [0.91/1.52])	148	3759	148	3759	141	3581
18/20 (0.0478/0.0359 [1.21/0.91])	148	3759	148	3759	148	3759
18/18 (0.0478/0.0478 [1.21/1.21])	155	3937	155	3937	155	3937
18/16 (0.0478/0.0598 [1.21/1.52])	161	4089	161	4089	161	4089
16/18 (0.0598/0.0478 [1.52/1.21])	170	4318	170	4318	170	4318
16/16 (0.0598/0.0598 [1.52/1.52])	176	4470	176	4470	176	4470

Deck Design Thickness, MSG (in. [mm])	Maximum Allowable, Three or More Span, in., mm					
	Wind Rating					
	1-60		1-75		1-90	
	in.	mm	in.	mm	in.	mm
20/20 (0.0359/0.0359 [0.91/0.91])	130	3302	130	3302	130	3302
20/18 (0.0359/0.0478 [0.91/1.21])	136	3454	136	3454	136	3454
20/16 (0.0359/0.0598 [0.91/1.52])	148	3759	148	3759	148	3759
18/20 (0.0478/0.0359 [1.21/0.91])	148	3759	148	3759	148	3759
18/18 (0.0478/0.0478 [1.21/1.21])	155	3937	155	3937	155	3937
18/16 (0.0478/0.0598 [1.21/1.52])	161	4089	161	4089	161	4089
16/18 (0.0598/0.0478 [1.52/1.21])	170	4318	170	4318	170	4318
16/16 (0.0598/0.0598 [1.52/1.52])	176	4470	176	4470	176	4470

9.1.1.4 Verco Decking Inc - A NUCOR Company 20/20 ga., 20/18 ga., 20/16 ga., 18/20 ga., 18/18 ga., 18/16 ga., 16/18 ga., or 16/16 ga. PLB-36-CD AC, or HSB-36-CD AC steel roof deck is secured to the building structural supports spaced at the maximum center to center spans shown in the tables as follows.

Deck Design Thickness, MSG (in. [mm])	Maximum Allowable, One Span, in., mm					
	Wind Rating					
	1-60		1-75		1-90	
	in.	mm	in.	mm	in.	mm
20/20 (0.0359/0.0359 [0.91/0.91])	109	2769	109	2769	109	2769
20/18 (0.0359/0.0478 [0.91/1.21])	114	2896	114	2896	114	2896
20/16 (0.0359/0.0598 [0.91/1.52])	124	3150	124	3150	124	3150
18/20 (0.0478/0.0359 [1.21/0.91])	124	3150	124	3150	124	3150
18/18 (0.0478/0.0478 [1.21/1.21])	129	3277	129	3277	129	3277
18/16 (0.0478/0.0598 [1.21/1.52])	134	3404	134	3404	134	3404
16/18 (0.0598/0.0478 [1.52/1.21])	142	3607	142	3607	142	3607
16/16 (0.0598/0.0598 [1.52/1.52])	147	3734	147	3734	147	3734

Deck Design Thickness, MSG (in. [mm])	Maximum Allowable, Two Span, in., mm					
	Wind Rating					
	1-60		1-75		1-90	
	in.	mm	in.	mm	in.	mm
20/20 (0.0359/0.0359 [0.91/0.91])	129	3277	129	3277	129	3277
20/18 (0.0359/0.0478 [0.91/1.21])	134	3404	134	3404	134	3404
20/16 (0.0359/0.0598 [0.91/1.52])	146	3708	146	3708	140	3556
18/20 (0.0478/0.0359 [1.21/0.91])	146	3708	146	3708	146	3708
18/18 (0.0478/0.0478 [1.21/1.21])	153	3886	153	3886	153	3886
18/16 (0.0478/0.0598 [1.21/1.52])	158	4013	158	4013	158	4013
16/18 (0.0598/0.0478 [1.52/1.21])	167	4242	167	4242	167	4242
16/16 (0.0598/0.0598 [1.52/1.52])	174	4420	174	4420	174	4420

Deck Design Thickness, MSG (in. [mm])	Maximum Allowable, Three or More Span, in., mm					
	Wind Rating					
	1-60		1-75		1-90	
	in.	mm	in.	mm	in.	mm
20/20 (0.0359/0.0359 [0.91/0.91])	129	3277	129	3277	129	3277
20/18 (0.0359/0.0478 [0.91/1.21])	134	3404	134	3404	134	3404
20/16 (0.0359/0.0598 [0.91/1.52])	146	3708	146	3708	146	3708
18/20 (0.0478/0.0359 [1.21/0.91])	146	3708	146	3708	146	3708
18/18 (0.0478/0.0478 [1.21/1.21])	153	3886	153	3886	153	3886
18/16 (0.0478/0.0598 [1.21/1.52])	158	4013	158	4013	158	4013
16/18 (0.0598/0.0478 [1.52/1.21])	167	4242	167	4242	167	4242
16/16 (0.0598/0.0598 [1.52/1.52])	174	4420	174	4420	174	4420

9.1.1.5 Verco Decking Inc - A NUCOR Company PLN-24, N-24, or N-24-SS steel roof deck is secured to the building structural supports spaced at the maximum center to center spans shown in the tables as follows.

Deck Design Thickness, MSG (in. [mm])	Maximum Allowable, One Span, in., mm					
	Wind Rating					
	1-60		1-75		1-90	
	in.	mm	in.	mm	in.	mm
22 (0.0299 [0.76])	147	3734	147	3734	147	3734
20 (0.0359 [0.91])	164	4166	164	4166	164	4166
18 (0.0478 [1.21])	193	4902	193	4902	193	4902
16 (0.0598 [1.52])	220	5588	220	5588	220	5588

Deck Design Thickness, MSG (in. [mm])	Maximum Allowable, Two Spans, in., mm					
	Wind Rating					
	1-60		1-75		1-90	
	in.	mm	in.	mm	in.	mm
22 (0.0299 [0.76])	182	4623	162	4115	148	3759
20 (0.0359 [0.91])	206	5232	184	4674	168	4267
18 (0.0478 [1.21])	237	6020	224	5690	204	5182
16 (0.0598 [1.52])	264	6706	253	6426	231	5867

Deck Design Thickness, MSG (in. [mm])	Maximum Allowable, Three or More Spans, in., mm					
	Wind Rating					
	1-60		1-75		1-90	
	in.	mm	in.	mm	in.	mm
22 (0.0299 [0.76])	187	4750	182	4623	166	4216
20 (0.0359 [0.91])	206	5232	206	5232	188	4775
18 (0.0478 [1.21])	237	6020	237	6020	228	5791
16 (0.0598 [1.52])	264	6706	264	6706	259	6579

9.1.1.6 Verco Decking Inc - A NUCOR Company PLN-24 AC, N-24 AC, or N-24-SS AC steel roof deck is secured to the building structural supports spaced at the maximum center to center spans shown in the tables as follows.

Deck Design Thickness, MSG (in. [mm])	Maximum Allowable, One Span, in., mm					
	Wind Rating					
	1-60		1-75		1-90	
	in.	mm	in.	mm	in.	mm
22 (0.0299 [0.76])	142	3607	142	3607	142	3607
20 (0.0359 [0.91])	159	4039	159	4039	159	4039
18 (0.0478 [1.21])	187	4750	187	4750	187	4750
16 (0.0598 [1.52])	213	5410	213	5410	213	5410

Deck Design Thickness, MSG (in. [mm])	Maximum Allowable, Two Spans, in., mm					
	Wind Rating					
	1-60		1-75		1-90	
	in.	mm	in.	mm	in.	mm
22 (0.0299 [0.76])	174	4420	156	3962	142	3607
20 (0.0359 [0.91])	198	5029	177	4496	161	4089
18 (0.0478 [1.21])	231	5867	215	5461	196	4978
16 (0.0598 [1.52])	258	6553	243	6172	222	5639

Deck Design Thickness, MSG (in. [mm])	Maximum Allowable, Three or More Spans, in., mm					
	Wind Rating					
	1-60		1-75		1-90	
	in.	mm	in.	mm	in.	mm
22 (0.0299 [0.76])	183	4648	174	4420	159	4039
20 (0.0359 [0.91])	200	5080	198	5029	181	4597
18 (0.0478 [1.21])	231	5867	231	5867	219	5563
16 (0.0598 [1.52])	258	6553	258	6553	248	6299

9.1.1.7 Verco Decking Inc - A NUCOR Company 20/20 ga., 20/18 ga., 20/16 ga., 18/20 ga., 18/18 ga., 18/16 ga., 16/18 ga., or 16/16 ga. PLN-24-CD or N-24-CD steel roof deck is secured to the building structural supports spaced at the maximum center to center spans shown in the tables as follows.

Deck Design Thickness, MSG (in. [mm])	Maximum Allowable, One Span, in., mm					
	Wind Rating					
	1-60		1-75		1-90	
	in.	mm	in.	mm	in.	mm
20/20 (0.0359/0.0359 [0.91/0.91])	223	5664	223	5664	212	5385
20/18 (0.0359/0.0478 [0.91/1.21])	233	5918	233	5918	233	5918
20/16 (0.0359/0.0598 [0.91/1.52])	232	5893	232	5893	232	5893
18/20 (0.0478/0.0359 [1.21/0.91])	252	6401	252	6401	233	5918
18/18 (0.0478/0.0478 [1.21/1.21])	264	6706	264	6706	260	6604
18/16 (0.0478/0.0598 [1.21/1.52])	274	6960	274	6960	274	6960
16/18 (0.0598/0.0478 [1.52/1.21])	291	7391	291	7391	277	7036
16/16 (0.0598/0.0598 [1.52/1.52])	303	7696	303	7696	303	7696

Deck Design Thickness, MSG (in. [mm])	Maximum Allowable, Two Span, in., mm					
	Wind Rating					
	1-60		1-75		1-90	
	in.	mm	in.	mm	in.	mm
20/20 (0.0359/0.0359 [0.91/0.91])	223	5664	199	5055	182	4623
20/18 (0.0359/0.0478 [0.91/1.21])	222	5639	199	5055	181	4597
20/16 (0.0359/0.0598 [0.91/1.52])	240	6096	215	5461	196	4978
18/20 (0.0478/0.0359 [1.21/0.91])	278	7061	249	6325	227	5766
18/18 (0.0478/0.0478 [1.21/1.21])	281	7137	252	6401	230	5842
18/16 (0.0478/0.0598 [1.21/1.52])	284	7214	254	6452	232	5893
16/18 (0.0598/0.0478 [1.52/1.21])	328	8331	293	7442	268	6807
16/16 (0.0598/0.0598 [1.52/1.52])	331	8407	296	7518	270	6858

Deck Design Thickness, MSG (in. [mm])	Maximum Allowable, Three or More Span, in., mm					
	Wind Rating					
	1-60		1-75		1-90	
	in.	mm	in.	mm	in.	mm
20/20 (0.0359/0.0359 [0.91/0.91])	249	6325	223	5664	203	5156
20/18 (0.0359/0.0478 [0.91/1.21])	248	6299	222	5639	203	5156
20/16 (0.0359/0.0598 [0.91/1.52])	268	6807	240	6096	219	5563
18/20 (0.0478/0.0359 [1.21/0.91])	297	7544	278	7061	254	6452
18/18 (0.0478/0.0478 [1.21/1.21])	311	7899	281	7137	257	6528
18/16 (0.0478/0.0598 [1.21/1.52])	318	8077	284	7214	260	6604
16/18 (0.0598/0.0478 [1.52/1.21])	343	8712	328	8331	299	7595
16/16 (0.0598/0.0598 [1.52/1.52])	357	9068	331	8407	302	7671

9.1.1.8 Verco Decking Inc - A NUCOR Company 20/20 ga., 20/18 ga., 20/16 ga., 18/20 ga., 18/18 ga., 18/16 ga., 16/18 ga., or 16/16 ga. PLN-24-CD AC or N-24-CD AC steel roof deck is secured to the building structural supports spaced at the maximum center to center spans shown in the tables as follows.

Deck Design Thickness, MSG (in. [mm])	Maximum Allowable, One Span, in., mm					
	Wind Rating					
	1-60		1-75		1-90	
	in.	mm	in.	mm	in.	mm
20/20 (0.0359/0.0359 [0.91/0.91])	219	5563	219	5563	212	5385
20/18 (0.0359/0.0478 [0.91/1.21])	229	5817	229	5817	229	5817
20/16 (0.0359/0.0598 [0.91/1.52])	229	5817	229	5817	229	5817
18/20 (0.0478/0.0359 [1.21/0.91])	248	6299	248	6299	233	5918
18/18 (0.0478/0.0478 [1.21/1.21])	260	6604	260	6604	260	6604
18/16 (0.0478/0.0598 [1.21/1.52])	270	6858	270	6858	270	6858
16/18 (0.0598/0.0478 [1.52/1.21])	287	7290	287	7290	277	7036
16/16 (0.0598/0.0598 [1.52/1.52])	298	7569	298	7569	298	7569

Deck Design Thickness, MSG (in. [mm])	Maximum Allowable, Two Span, in., mm					
	Wind Rating					
	1-60		1-75		1-90	
	in.	mm	in.	mm	in.	mm
20/20 (0.0359/0.0359 [0.91/0.91])	222	5639	198	5029	181	4597
20/18 (0.0359/0.0478 [0.91/1.21])	221	5613	198	5029	181	4597
20/16 (0.0359/0.0598 [0.91/1.52])	239	6071	214	5436	195	4953
18/20 (0.0478/0.0359 [1.21/0.91])	277	7036	247	6274	226	5740
18/18 (0.0478/0.0478 [1.21/1.21])	280	7112	251	6375	229	5817
18/16 (0.0478/0.0598 [1.21/1.52])	283	7188	253	6426	231	5867
16/18 (0.0598/0.0478 [1.52/1.21])	326	8280	292	7417	266	6756
16/16 (0.0598/0.0598 [1.52/1.52])	330	8382	295	7493	269	6833

Deck Design Thickness, MSG (in. [mm])	Maximum Allowable, Three or More Span, in., mm					
	Wind Rating					
	1-60		1-75		1-90	
	in.	mm	in.	mm	in.	mm
20/20 (0.0359/0.0359 [0.91/0.91])	248	6299	222	5639	202	5131
20/18 (0.0359/0.0478 [0.91/1.21])	247	6274	221	5613	202	5131
20/16 (0.0359/0.0598 [0.91/1.52])	267	6782	239	6071	218	5537
18/20 (0.0478/0.0359 [1.21/0.91])	293	7442	277	7036	252	6401
18/18 (0.0478/0.0478 [1.21/1.21])	307	7798	280	7112	256	6502
18/16 (0.0478/0.0598 [1.21/1.52])	316	8026	283	7188	258	6553
16/18 (0.0598/0.0478 [1.52/1.21])	338	8585	326	8280	298	7569
16/16 (0.0598/0.0598 [1.52/1.52])	351	8915	330	8382	301	7645

9.1.1.9 Verco Decking Inc - A NUCOR Company 16 ga., 18 ga., 20 ga., or 22 ga. PLN3, HSN3, or HSN3-SS steel roof deck is secured to the building structural supports spaced at the maximum center to center spans shown in the tables as follows.

Deck Design Thickness, MSG (in. [mm])	Maximum Allowable, One Span, in., mm					
	Wind Rating					
	1-60		1-75		1-90	
	in.	mm	in.	mm	in.	mm
22 (0.0299 [0.76])	146	3708	146	3708	146	3708
20 (0.0359 [0.91])	162	4115	162	4115	162	4115
18 (0.0478 [1.21])	190	4826	190	4826	190	4826
16 (0.0598 [1.52])	215	5461	215	5461	215	5461

Deck Design Thickness, MSG (in. [mm])	Maximum Allowable, Two Spans, in., mm					
	Wind Rating					
	1-60		1-75		1-90	
	in.	mm	in.	mm	in.	mm
22 (0.0299 [0.76])	179	4547	165	4191	150	3810
20 (0.0359 [0.91])	197	5004	186	4724	170	4318
18 (0.0478 [1.21])	228	5791	227	5766	207	5258
16 (0.0598 [1.52])	255	6477	255	6477	238	6045

Deck Design Thickness, MSG (in. [mm])	Maximum Allowable, Three or More Spans, in., mm					
	Wind Rating					
	1-60		1-75		1-90	
	in.	mm	in.	mm	in.	mm
22 (0.0299 [0.76])	179	4547	179	4547	168	4267
20 (0.0359 [0.91])	197	5004	197	5004	190	4826
18 (0.0478 [1.21])	228	5791	228	5791	228	5791
16 (0.0598 [1.52])	255	6477	255	6477	255	6477

9.1.1.10 Vercor Decking Inc - A NUCOR Company PLN3 AC, HSN3 AC, or HSN3-SS AC steel roof deck is secured to the building structural supports spaced at the maximum center to center spans shown in the tables as follows.

Deck Design Thickness, MSG (in. [mm])	Maximum Allowable, One Span, in., mm					
	Wind Rating					
	1-60		1-75		1-90	
	in.	mm	in.	mm	in.	mm
22 (0.0299 [0.76])	130	3302	130	3302	130	3302
20 (0.0359 [0.91])	145	3683	145	3683	145	3683
18 (0.0478 [1.21])	170	4318	170	4318	170	4318
16 (0.0598 [1.52])	192	4877	192	4877	192	4877

Deck Design Thickness, MSG (in. [mm])	Maximum Allowable, Two Spans, in., mm					
	Wind Rating					
	1-60		1-75		1-90	
	in.	mm	in.	mm	in.	mm
22 (0.0299 [0.76])	160	4064	157	3988	143	3632
20 (0.0359 [0.91])	177	4496	177	4496	162	4115
18 (0.0478 [1.21])	204	5182	204	5182	198	5029
16 (0.0598 [1.52])	228	5791	228	5791	227	5766

Deck Design Thickness, MSG (in. [mm])	Maximum Allowable, Three or More Spans, in., mm					
	Wind Rating					
	1-60		1-75		1-90	
	in.	mm	in.	mm	in.	mm
22 (0.0299 [0.76])	160	4064	160	4064	160	4064
20 (0.0359 [0.91])	177	4496	177	4496	177	4496
18 (0.0478 [1.21])	204	5182	204	5182	204	5182
16 (0.0598 [1.52])	228	5791	228	5791	228	5791

9.1.1.11 Vercor Decking Inc - A NUCOR Company 20/20 ga., 20/18 ga., 20/16 ga., 18/20 ga., 18/18 ga., 18/16 ga., 16/18 ga., or 16/16 ga. PLN3-CD or HSN3-CD steel roof deck is secured to the building structural supports spaced at the maximum center to center spans shown in the tables as follows.

Deck Design Thickness, MSG (in. [mm])	Maximum Allowable, One Span, in., mm					
	Wind Rating					
	1-60		1-75		1-90	
	in.	mm	in.	mm	in.	mm
20/20 (0.0359/0.0359 [0.91/0.91])	216	5486	216	5486	213	5410
20/18 (0.0359/0.0478 [0.91/1.21])	225	5715	225	5715	225	5715
20/16 (0.0359/0.0598 [0.91/1.52])	269	6833	253	6426	231	5867
18/20 (0.0478/0.0359 [1.21/0.91])	244	6198	244	6198	236	5994
18/18 (0.0478/0.0478 [1.21/1.21])	254	6452	254	6452	254	6452
18/16 (0.0478/0.0598 [1.21/1.52])	263	6680	263	6680	262	6655
16/18 (0.0598/0.0478 [1.52/1.21])	280	7112	280	7112	278	7061
16/16 (0.0598/0.0598 [1.52/1.52])	289	7341	289	7341	289	7341

Deck Design Thickness, MSG (in. [mm])	Maximum Allowable, Two Span, in., mm					
	Wind Rating					
	1-60		1-75		1-90	
	in.	mm	in.	mm	in.	mm
20/20 (0.0359/0.0359 [0.91/0.91])	220	5588	197	5004	180	4572
20/18 (0.0359/0.0478 [0.91/1.21])	220	5588	196	4978	179	4547
20/16 (0.0359/0.0598 [0.91/1.52])	228	5791	204	5182	186	4724
18/20 (0.0478/0.0359 [1.21/0.91])	278	7061	248	6299	227	5766
18/18 (0.0478/0.0478 [1.21/1.21])	281	7137	251	6375	230	5842
18/16 (0.0478/0.0598 [1.21/1.52])	282	7163	252	6401	230	5842
16/18 (0.0598/0.0478 [1.52/1.21])	326	8280	291	7391	266	6756
16/16 (0.0598/0.0598 [1.52/1.52])	329	8357	294	7468	269	6833

Deck Design Thickness, MSG (in. [mm])	Maximum Allowable, Three or More Span, in., mm					
	Wind Rating					
	1-60		1-75		1-90	
	in.	mm	in.	mm	in.	mm
20/20 (0.0359/0.0359 [0.91/0.91])	246	6248	220	5588	201	5105
20/18 (0.0359/0.0478 [0.91/1.21])	246	6248	220	5588	200	5080
20/16 (0.0359/0.0598 [0.91/1.52])	255	6477	228	5791	208	5283
18/20 (0.0478/0.0359 [1.21/0.91])	287	7290	278	7061	254	6452
18/18 (0.0478/0.0478 [1.21/1.21])	300	7620	281	7137	257	6528
18/16 (0.0478/0.0598 [1.21/1.52])	310	7874	282	7163	257	6528
16/18 (0.0598/0.0478 [1.52/1.21])	329	8357	326	8280	297	7544
16/16 (0.0598/0.0598 [1.52/1.52])	341	8661	329	8357	300	7620

9.1.1.12 Vercor Decking Inc - A NUCOR Company 20/20 ga., 20/18 ga., 20/16 ga., 18/20 ga., 18/18 ga., 18/16 ga., 16/18 ga., or 16/16 ga. PLN3-CD AC or HSN3-CD AC steel roof deck is secured to the building structural supports spaced at the maximum center to center spans shown in the tables as follows.

Deck Design Thickness, MSG (in. [mm])	Maximum Allowable, One Span, in., mm					
	Wind Rating					
	1-60		1-75		1-90	
	in.	mm	in.	mm	in.	mm
20/20 (0.0359/0.0359 [0.91/0.91])	212	5385	212	5385	212	5385
20/18 (0.0359/0.0478 [0.91/1.21])	222	5639	222	5639	222	5639
20/16 (0.0359/0.0598 [0.91/1.52])	265	6731	253	6426	231	5867
18/20 (0.0478/0.0359 [1.21/0.91])	240	6096	240	6096	236	5994
18/18 (0.0478/0.0478 [1.21/1.21])	250	6350	250	6350	250	6350
18/16 (0.0478/0.0598 [1.21/1.52])	259	6579	259	6579	259	6579
16/18 (0.0598/0.0478 [1.52/1.21])	275	6985	275	6985	275	6985
16/16 (0.0598/0.0598 [1.52/1.52])	285	7239	285	7239	285	7239

Deck Design Thickness, MSG (in. [mm])	Maximum Allowable, Two Span, in., mm					
	Wind Rating					
	1-60		1-75		1-90	
	in.	mm	in.	mm	in.	mm
20/20 (0.0359/0.0359 [0.91/0.91])	219	5563	196	4978	179	4547
20/18 (0.0359/0.0478 [0.91/1.21])	219	5563	195	4953	178	4521
20/16 (0.0359/0.0598 [0.91/1.52])	227	5766	203	5156	185	4699
18/20 (0.0478/0.0359 [1.21/0.91])	276	7010	247	6274	226	5740
18/18 (0.0478/0.0478 [1.21/1.21])	280	7112	250	6350	228	5791
18/16 (0.0478/0.0598 [1.21/1.52])	281	7137	251	6375	229	5817
16/18 (0.0598/0.0478 [1.52/1.21])	324	8230	290	7366	265	6731
16/16 (0.0598/0.0598 [1.52/1.52])	328	8331	293	7442	267	6782

Deck Design Thickness, MSG (in. [mm])	Maximum Allowable, Three or More Span, in., mm					
	Wind Rating					
	1-60		1-75		1-90	
	in.	mm	in.	mm	in.	mm
20/20 (0.0359/0.0359 [0.91/0.91])	245	6223	219	5563	200	5080
20/18 (0.0359/0.0478 [0.91/1.21])	244	6198	219	5563	200	5080
20/16 (0.0359/0.0598 [0.91/1.52])	254	6452	227	5766	207	5258
18/20 (0.0478/0.0359 [1.21/0.91])	283	7188	276	7010	252	6401
18/18 (0.0478/0.0478 [1.21/1.21])	295	7493	280	7112	255	6477
18/16 (0.0478/0.0598 [1.21/1.52])	305	7747	281	7137	256	6502
16/18 (0.0598/0.0478 [1.52/1.21])	325	8255	324	8230	296	7518
16/16 (0.0598/0.0598 [1.52/1.52])	336	8534	328	8331	299	7595

9.1.2 Verco Decking Inc - A NUCOR Company steel roof deck is secured with puddle welds to the building structural supports spaced at the maximum center to center span shown in the tables as follows. Puddle welds are minimum 0.75 in. (19 mm) in diameter, spaced as noted in the following tables, and located at bottom ribs and at supports where deck sides lap. The side laps of steel decks designated by –SS are secured using fasteners FM Approved for securing steel deck laps. The side laps of PLB and HSB steel decks are secured with the Verco PunchLok tool and button punch, respectively, spaced at maximum 36 in. (914 mm) on center. An FM Approved fully or partially adhered roof covering or mechanically attached roof covering when the in-row fastener spacing is less than or equal to one-half of the deck span is applied per proprietary listings. Refer to the use of steel roof decks and fasteners throughout listings for details and limitations. Meets maximum Class 1-90 or as specified or per proprietary listings.

9.1.2.1 Verco Decking Inc - A NUCOR Company PLB-36, HSB-36, or HSB-36-SS steel roof deck is secured to the building structural supports at the maximum center to center spans as noted in the tables below.

Weld Pattern	Deck Design Thickness, MSG (in. [mm])	Maximum Allowable, One Span, in., mm					
		Wind Rating					
		1-60		1-75		1-90	
		in.	mm	in.	mm	in.	mm
36/4, 36/5, 36/6, 36/7, 36/9	22 (0.0299 [0.76])	72	1829	72	1829	72	1829
	20 (0.0359 [0.91])	80	2032	80	2032	80	2032
	18 (0.0478 [1.21])	94	2388	94	2388	94	2388
	16 (0.0598 [1.52])	106	2692	106	2692	106	2692

Weld Pattern	Deck Design Thickness, MSG (in. [mm])	Maximum Allowable, Two or More Spans, in., mm					
		Wind Rating					
		1-60		1-75		1-90	
		in.	mm	in.	mm	in.	mm
36/4, 36/5	22 (0.0299 [0.76])	88	2235	88	2235	88*	2235*
	20 (0.0359 [0.91])	97	2464	97	2464	97**	2464**
	18 (0.0478 [1.21])	112	2845	112	2845	112	2845
	16 (0.0598 [1.52])	125	3175	125	3175	125	3175

*maximum allowable span for two-span configuration is 80 in (2032 mm) for maximum Class 1-90.

** maximum allowable span for two-span configuration is 96 in (2438 mm) for maximum Class 1-90

Weld Pattern	Deck Design Thickness, MSG (in. [mm])	Maximum Allowable, Two or More Spans, in., mm					
		Wind Rating					
		1-60		1-75		1-90	
		in.	mm	in.	mm	in.	mm
36/6, 36/7, 36/9	22 (0.0299 [0.76])	89	2261	89	2261	89	2261
	20 (0.0359 [0.91])	97	2464	97	2464	97	2464
	18 (0.0478 [1.21])	112	2845	112	2845	112	2845
	16 (0.0598 [1.52])	125	3175	125	3175	125	3175

9.1.2.2 Verco Decking Inc - A NUCOR Company PLB-36 AC, HSB-36 AC, or HSB-36-SS AC steel roof deck is secured to the building structural supports at the maximum center to center spans as noted in the tables below.

Weld Pattern	Deck Design Thickness, MSG (in. [mm])	Maximum Allowable, One Span, in., mm					
		Wind Rating					
		1-60		1-75		1-90	
		in.	mm	in.	mm	in.	mm
36/4, 36/5, 36/6, 36/7, 36/9	22 (0.0299 [0.76])	71	1803	71	1803	71	1803
	20 (0.0359 [0.91])	80	2032	80	2032	80	2032
	18 (0.0478 [1.21])	93	2362	93	2362	93	2362
	16 (0.0598 [1.52])	105	2667	105	2667	105	2667

Weld Pattern	Deck Design Thickness, MSG (in. [mm])	Maximum Allowable, Two or More Spans, in., mm					
		Wind Rating					
		1-60		1-75		1-90	
		in.	mm	in.	mm	in.	mm
36/4, 36/5, 36/6	22 (0.0299 [0.76])	88	2235	88	2235	88*	2235*
	20 (0.0359 [0.91])	96	2438	96	2438	96	2438
	18 (0.0478 [1.21])	111	2819	111	2819	111	2819
	16 (0.0598 [1.52])	124	3150	124	3150	124	3150

* maximum allowable span for two-span configuration with weld pattern 36/4, 36/5 is 80 in (2032 mm) for maximum Class 1-90.

Weld Pattern	Deck Design Thickness, MSG (in. [mm])	Maximum Allowable, Two or More Spans, in., mm					
		Wind Rating					
		1-60		1-75		1-90	
		in.	mm	in.	mm	in.	mm
36/7, 36/9	22 (0.0299 [0.76])	88	2235	88	2235	88	2235
	20 (0.0359 [0.91])	96	2438	96	2438	96	2438
	18 (0.0478 [1.21])	111	2819	111	2819	111	2819
	16 (0.0598 [1.52])	124	3150	124	3150	124	3150

9.1.2.3 Verco Decking Inc - A NUCOR Company 20/20 ga., 20/18 ga., 20/16 ga., 18/20 ga., 18/18 ga., 18/16 ga., 16/18 ga., or 16/16 ga. PLB-36-CD or HSB-36-CD steel roof deck is secured to the building structural supports at the maximum center to center spans as noted in the tables below.

Weld Pattern	Deck Design Thickness, MSG (in. [mm])	Maximum Allowable, One Span, in., mm					
		Wind Rating					
		1-60		1-75		1-90	
		in.	mm	in.	mm	in.	mm
36/4, 36/5, 36/6, 36/7, 36/9	20/20 (0.0359/0.0359 [0.91/0.91])	111	2819	111	2819	111	2819
	20/18 (0.0359/0.0478 [0.91/1.21])	116	2946	116	2946	116	2946
	20/16 (0.0359/0.0598 [0.91/1.52])	126	3200	126	3200	126	3200
	18/20 (0.0478/0.0359 [1.21/0.91])	126	3200	126	3200	126	3200
	18/18 (0.0478/0.0478 [1.21/1.21])	131	3327	131	3327	131	3327
	18/16 (0.0478/0.0598 [1.21/1.52])	136	3454	136	3454	136	3454
	16/18 (0.0598/0.0478 [1.52/1.21])	144	3658	144	3658	144	3658
	16/16 (0.0598/0.0598 [1.52/1.52])	150	3810	150	3810	150	3810

Weld Pattern	Deck Design Thickness, MSG (in. [mm])	Maximum Allowable, Two or More Span, in., mm					
		Wind Rating					
		1-60		1-75		1-90	
		in.	mm	in.	mm	in.	mm
36/4, 36/5	20/20 (0.0359/0.0359 [0.91/0.91])	130	3302	130	3302	130	3302
	20/18 (0.0359/0.0478 [0.91/1.21])	136	3454	136	3454	136*	3454*
	20/16 (0.0359/0.0598 [0.91/1.52])	148	3759	148	3759	148**	3759**
	18/20 (0.0478/0.0359 [1.21/0.91])	148	3759	148	3759	148	3759
	18/18 (0.0478/0.0478 [1.21/1.21])	155	3937	155	3937	155	3937
	18/16 (0.0478/0.0598 [1.21/1.52])	161	4089	161	4089	161	4089
	16/18 (0.0598/0.0478 [1.52/1.21])	170	4318	170	4318	170	4318
	16/16 (0.0598/0.0598 [1.52/1.52])	176	4470	176	4470	176***	4470***

* maximum allowable span for two-span configuration is 135 in (3429 mm)

** maximum allowable span for two-span configuration is 141 in (3581 mm)

*** maximum allowable span for two-span configuration is 173 in (4394 mm) for maximum Class 1-90

Weld Pattern	Deck Design Thickness, MSG (in. [mm])	Maximum Allowable, Two or More Span, in., mm					
		Wind Rating					
		1-60		1-75		1-90	
		in.	mm	in.	mm	in.	mm
36/6, 36/7, 36/9	20/20 (0.0359/0.0359 [0.91/0.91])	130	3302	130	3302	130	3302
	20/18 (0.0359/0.0478 [0.91/1.21])	136	3454	136	3454	136*	3454*
	20/16 (0.0359/0.0598 [0.91/1.52])	148	3759	148	3759	141	3581
	18/20 (0.0478/0.0359 [1.21/0.91])	148	3759	148	3759	148	3759
	18/18 (0.0478/0.0478 [1.21/1.21])	155	3937	155	3937	155	3937
	18/16 (0.0478/0.0598 [1.21/1.52])	161	4089	161	4089	161	4089
	16/18 (0.0598/0.0478 [1.52/1.21])	170	4318	170	4318	170	4318
	16/16 (0.0598/0.0598 [1.52/1.52])	176	4470	176	4470	176	4470

* maximum allowable span for two-span configuration is 135 in (3429 mm)

9.1.2.4 Verco Decking Inc - A NUCOR Company 20/20 ga., 20/18 ga., 20/16 ga., 18/20 ga., 18/18 ga., 18/16 ga., 16/18 ga., or 16/16 ga. PLB-36-CD AC, or HSB-36-CD AC steel roof deck is secured to the building structural supports at the maximum center to center spans as noted in the tables below.

Weld Pattern	Deck Design Thickness, MSG (in. [mm])	Maximum Allowable, One Span, in., mm					
		Wind Rating					
		1-60		1-75		1-90	
		in.	mm	in.	mm	in.	mm
36/4, 36/5, 36/6, 36/7, 36/9	20/20 (0.0359/0.0359 [0.91/0.91])	109	2769	109	2769	109	2769
	20/18 (0.0359/0.0478 [0.91/1.21])	114	2896	114	2896	114	2896
	20/16 (0.0359/0.0598 [0.91/1.52])	124	3150	124	3150	124	3150
	18/20 (0.0478/0.0359 [1.21/0.91])	124	3150	124	3150	124	3150
	18/18 (0.0478/0.0478 [1.21/1.21])	129	3277	129	3277	129	3277
	18/16 (0.0478/0.0598 [1.21/1.52])	134	3404	134	3404	134	3404
	16/18 (0.0598/0.0478 [1.52/1.21])	142	3607	142	3607	142	3607
	16/16 (0.0598/0.0598 [1.52/1.52])	147	3734	147	3734	147	3734

Weld Pattern	Deck Design Thickness, MSG (in. [mm])	Maximum Allowable, Two or More Span, in., mm					
		Wind Rating					
		1-60		1-75		1-90	
		in.	mm	in.	mm	in.	mm
36/4, 36/5, 36/6, 36/7, 36/9	20/20 (0.0359/0.0359 [0.91/0.91])	129	3277	129	3277	129	3277
	20/18 (0.0359/0.0478 [0.91/1.21])	134	3404	134	3404	134	3404
	20/16 (0.0359/0.0598 [0.91/1.52])	146	3708	146	3708	140	3556
	18/20 (0.0478/0.0359 [1.21/0.91])	146	3708	146	3708	146	3708
	18/18 (0.0478/0.0478 [1.21/1.21])	153	3886	153	3886	153	3886
	18/16 (0.0478/0.0598 [1.21/1.52])	158	4013	158	4013	158	4013
	16/18 (0.0598/0.0478 [1.52/1.21])	167	4242	167	4242	167	4242
	16/16 (0.0598/0.0598 [1.52/1.52])	174	4420	174	4420	174	4420

9.1.2.5 Verco Decking Inc - A NUCOR Company 16 ga., 18 ga., 20 ga., or 22 ga. PLN-24, N-24, or N-24-SS steel roof deck is secured to the building structural supports at the maximum center to center spans as noted in the tables below.

Weld Pattern	Deck Design Thickness, MSG (in. [mm])	Maximum Allowable, One Span, in., mm					
		Wind Rating					
		1-60		1-75		1-90	
		in.	mm	in.	mm	in.	mm
24/3, 24/4, 24/6	22 (0.0299 [0.76])	147	3734	147	3734	147	3734
	20 (0.0359 [0.91])	164	4166	164	4166	164	4166
	18 (0.0478 [1.21])	193	4902	193	4902	193	4902
	16 (0.0598 [1.52])	220	5588	220	5588	220	5588

Weld Pattern	Deck Design Thickness, MSG (in. [mm])	Maximum Allowable, Two or More Spans, in., mm					
		Wind Rating					
		1-60		1-75		1-90	
		in.	mm	in.	mm	in.	mm
24/3, 24/4, 24/6	22 (0.0299 [0.76])	187*	4750*	162*	4115*	148*	3759*
	20 (0.0359 [0.91])	206	5232	184**	4674**	168**	4267**
	18 (0.0478 [1.21])	237	6020	224	5690	204***	5182***
	16 (0.0598 [1.52])	264	6706	253	6426	231	5867

* maximum allowable span for two-span configuration is 182 in (4623 mm) for maximum Class 1-60, 145 in (3683 mm) for maximum Class 1-75, 121 in. (3073 mm) for maximum Class 1-90.

** maximum allowable span for two-span configuration is 173 in (4394 mm) for maximum Class 1-75, 144 in. (3658 mm) for maximum Class 1-90.

*** maximum allowable span for two-span configuration is 188 in (4775 mm) for maximum Class 1-90.

9.1.2.6 Verco Decking Inc - A NUCOR Company PLN-24 AC, N-24 AC, or N-24-SS AC steel roof deck is secured to the building structural supports at the maximum center to center spans as noted in the tables below.

Weld Pattern	Deck Design Thickness, MSG (in. [mm])	Maximum Allowable, One Span, in., mm					
		Wind Rating					
		1-60		1-75		1-90	
		in.	mm	in.	mm	in.	mm
24/3, 24/4, 24/6	22 (0.0299 [0.76])	132	3353	118	2997	108	2743
	20 (0.0359 [0.91])	149	3785	133	3378	121	3073
	18 (0.0478 [1.21])	176	4470	157	3988	143	3632
	16 (0.0598 [1.52])	195	4953	175	4445	160	4064

Weld Pattern	Deck Design Thickness, MSG (in. [mm])	Maximum Allowable, Two or More Spans, in., mm					
		Wind Rating					
		1-60		1-75		1-90	
		in.	mm	in.	mm	in.	mm
24/3, 24/4, 24/6	22 (0.0299 [0.76])	174	4420	156*	3962	142*	3607*
	20 (0.0359 [0.91])	198	5029	177**	4496	161**	4089**
	18 (0.0478 [1.21])	231	5867	215	5461	196***	4978***
	16 (0.0598 [1.52])	258	6553	243	6172	222	5639

* maximum allowable span for two-span configuration is 145 in (3683 mm) for maximum Class 1-75, 121 in. (3073 mm) for maximum Class 1-90.

** maximum allowable span for two-span configuration is 173 in (4394 mm) for maximum Class 1-75, 144 in. (3658 mm) for maximum Class 1-90.

*** maximum allowable span for two-span configuration is 188 in (4775 mm) for maximum Class 1-90.

9.1.2.7 Verco Decking Inc - A NUCOR Company 20/20 ga., 20/18 ga., 20/16 ga., 18/20 ga., 18/18 ga., 18/16 ga., 16/18 ga., or 16/16 ga. PLN-24-CD or N-24-CD steel roof deck is secured to the building structural supports at the maximum center to center spans as noted in the tables below.

Weld Pattern	Deck Design Thickness, MSG (in. [mm])	Maximum Allowable, One Span, in., mm					
		Wind Rating					
		1-60		1-75		1-90	
		in.	mm	in.	mm	in.	mm
24/3, 24/4, 24/6	20/20 (0.0359/0.0359 [0.91/0.91])	191	4851	164	4166	183	4648
	20/18 (0.0359/0.0478 [0.91/1.21])	203	5156	166	4216	186	4724
	20/16 (0.0359/0.0598 [0.91/1.52])	208	5283	172	4369	193	4902
	18/20 (0.0478/0.0359 [1.21/0.91])	209	5309	200	5080	224	5690
	18/18 (0.0478/0.0478 [1.21/1.21])	230	5842	203	5156	227	5766
	18/16 (0.0478/0.0598 [1.21/1.52])	235	5969	205	5207	229	5817
	16/18 (0.0598/0.0478 [1.52/1.21])	246	6248	237	6020	265	6731
16/16 (0.0598/0.0598 [1.52/1.52])	259	6579	240	6096	268	6807	

Weld Pattern	Deck Design Thickness, MSG (in. [mm])	Maximum Allowable, Two or More Span, in., mm					
		Wind Rating					
		1-60		1-75		1-90	
		in.	mm	in.	mm	in.	mm
24/3, 24/4, 24/6	20/20 (0.0359/0.0359 [0.91/0.91])	223	5664	199	5055	182	4623
	20/18 (0.0359/0.0478 [0.91/1.21])	222	5639	199	5055	181	4597
	20/16 (0.0359/0.0598 [0.91/1.52])	240	6096	215	5461	196	4978
	18/20 (0.0478/0.0359 [1.21/0.91])	278	7061	249	6325	227	5766
	18/18 (0.0478/0.0478 [1.21/1.21])	281	7137	252	6401	230	5842
	18/16 (0.0478/0.0598 [1.21/1.52])	284	7214	254	6452	232	5893
	16/18 (0.0598/0.0478 [1.52/1.21])	328	8331	293	7442	268*	6807*
16/16 (0.0598/0.0598 [1.52/1.52])	331	8407	296	7518	270*	6858*	

* maximum allowable span for two-span configuration is 259 in (6579 mm) for maximum Class 1-90.

9.1.2.8 Verco Decking Inc - A NUCOR Company 20/20 ga., 20/18 ga., 20/16 ga., 18/20 ga., 18/18 ga., 18/16 ga., 16/18 ga., or 16/16 ga. PLN-24-CD AC or N-24-CD AC steel roof deck is secured to the building structural supports at the maximum center to center spans as noted in the tables below.

Weld Pattern	Deck Design Thickness, MSG (in. [mm])	Maximum Allowable, One Span, in., mm					
		Wind Rating					
		1-60		1-75		1-90	
		in.	mm	in.	mm	in.	mm
24/3, 24/4, 24/6	20/20 (0.0359/0.0359 [0.91/0.91])	191	4851	171	4343	156	3962
	20/18 (0.0359/0.0478 [0.91/1.21])	203	5156	181	4597	166	4216
	20/16 (0.0359/0.0598 [0.91/1.52])	208	5283	186	4724	170	4318
	18/20 (0.0478/0.0359 [1.21/0.91])	209	5309	187	4750	170	4318
	18/18 (0.0478/0.0478 [1.21/1.21])	230	5842	206	5232	188	4775
	18/16 (0.0478/0.0598 [1.21/1.52])	235	5969	210	5334	192	4877
	16/18 (0.0598/0.0478 [1.52/1.21])	246	6248	220	5588	201	5105
16/16 (0.0598/0.0598 [1.52/1.52])	259	6579	232	5893	212	5385	

Weld Pattern	Deck Design Thickness, MSG (in. [mm])	Maximum Allowable, Two or More Span, in., mm					
		Wind Rating					
		1-60		1-75		1-90	
		in.	mm	in.	mm	in.	mm
24/3, 24/4, 24/6	20/20 (0.0359/0.0359 [0.91/0.91])	222	5639	198	5029	181	4597
	20/18 (0.0359/0.0478 [0.91/1.21])	221	5613	198	5029	181	4597
	20/16 (0.0359/0.0598 [0.91/1.52])	239	6071	214	5436	195	4953
	18/20 (0.0478/0.0359 [1.21/0.91])	277	7036	247	6274	226	5740
	18/18 (0.0478/0.0478 [1.21/1.21])	280	7112	251	6375	229	5817
	18/16 (0.0478/0.0598 [1.21/1.52])	283	7188	253	6426	231	5867
	16/18 (0.0598/0.0478 [1.52/1.21])	326	8280	292	7417	266*	6756*
16/16 (0.0598/0.0598 [1.52/1.52])	330	8382	295	7493	269*	6833*	

* maximum allowable span for two-span configuration is 259 in (6579 mm) for maximum Class 1-90.

9.1.2.9 Verco Decking Inc - A NUCOR Company PLN3, HSN3, or HSN3-SS steel roof deck is secured to the building structural supports at the maximum center to center spans as noted in the tables below.

Weld Pattern	Deck Design Thickness, MSG (in. [mm])	Maximum Allowable, One Span, in., mm					
		Wind Rating					
		1-60		1-75		1-90	
		in.	mm	in.	mm	in.	mm
32/3	22 (0.0299 [0.76])	119	3023	95	2413	79	2007
	20 (0.0359 [0.91])	141	3581	113	2870	94	2388
	18 (0.0478 [1.21])	185	4699	148	3759	123	3124
	16 (0.0598 [1.52])	215	5461	182	4623	152	3861

Weld Pattern	Deck Design Thickness, MSG (in. [mm])	Maximum Allowable, Two Spans, in., mm					
		Wind Rating					
		1-60		1-75		1-90	
		in.	mm	in.	mm	in.	mm
32/3	22 (0.0299 [0.76])	91	2311	73	1854	60	1524
	20 (0.0359 [0.91])	108	2743	86	2184	72	1829
	18 (0.0478 [1.21])	141	3581	113	2870	94	2388
	16 (0.0598 [1.52])	174	4420	139	3531	116	2946

Weld Pattern	Deck Design Thickness, MSG (in. [mm])	Maximum Allowable, Three or More Spans, in., mm					
		Wind Rating					
		1-60		1-75		1-90	
		in.	mm	in.	mm	in.	mm
32/3	22 (0.0299 [0.76])	113	2870	91	2311	76	1930
	20 (0.0359 [0.91])	135	3429	108	2743	90	2286
	18 (0.0478 [1.21])	177	4496	141	3581	118	2997
	16 (0.0598 [1.52])	218	5537	174	4420	145	3683

Weld Pattern	Deck Design Thickness, MSG (in. [mm])	Maximum Allowable, One Span, in., mm					
		Wind Rating					
		1-60		1-75		1-90	
		in.	mm	in.	mm	in.	mm
32/5, 32/7	22 (0.0299 [0.76])	146	3708	146	3708	146	3708
	20 (0.0359 [0.91])	162	4115	162	4115	162	4115
	18 (0.0478 [1.21])	190	4826	190	4826	190	4826
	16 (0.0598 [1.52])	215	5461	215	5461	215	5461

Weld Pattern	Deck Design Thickness, MSG (in. [mm])	Maximum Allowable, Two or More Spans, in., mm					
		Wind Rating					
		1-60		1-75		1-90	
		in.	mm	in.	mm	in.	mm
32/5, 32/7	22 (0.0299 [0.76])	179	4547	165*	4191*	150*	3810*
	20 (0.0359 [0.91])	197	5004	186**	4724**	170**	4318**
	18 (0.0478 [1.21])	228	5791	227	5766	207***	5258***
	16 (0.0598 [1.52])	255	6477	255	6477	238****	6045****

* maximum allowable span for two-span configuration is 145 in (3683 mm) for maximum Class 1-75, 121 in. (3073 mm) for maximum Class 1-90.

** maximum allowable span for two-span configuration is 173 in (4394 mm) for maximum Class 1-75, 144 in. (3658 mm) for maximum Class 1-90.

*** maximum allowable span for two-span configuration is 189 in (4801 mm) for maximum Class 1-90.

**** maximum allowable span for two-span configuration is 232 in (5893 mm) for maximum Class 1-90

9.1.2.10 Verco Decking Inc - A NUCOR Company 16 ga., 18 ga., 20 ga., or 22 ga. PLN3 AC, HSN3 AC, or HSN3-SS AC steel roof deck is secured to the building structural supports at the maximum center to center spans as noted in the tables below.

Weld Pattern	Deck Design Thickness, MSG (in. [mm])	Maximum Allowable, One Span, in., mm					
		Wind Rating					
		1-60		1-75		1-90	
		in.	mm	in.	mm	in.	mm
32/3	22 (0.0299 [0.76])	119	3023	95	2413	79	2007
	20 (0.0359 [0.91])	141	3581	113	2870	94	2388
	18 (0.0478 [1.21])	170	4318	148	3759	123	3124
	16 (0.0598 [1.52])	192	4877	182	4623	152	3861

Weld Pattern	Deck Design Thickness, MSG (in. [mm])	Maximum Allowable, Two Spans, in., mm					
		Wind Rating					
		1-60		1-75		1-90	
		in.	mm	in.	mm	in.	mm
32/3	22 (0.0299 [0.76])	91	2311	73	1854	60	1524
	20 (0.0359 [0.91])	108	2743	86	2184	72	1829
	18 (0.0478 [1.21])	141	3581	113	2870	94	2388
	16 (0.0598 [1.52])	174	4420	139	3531	116	2946

Weld Pattern	Deck Design Thickness, MSG (in. [mm])	Maximum Allowable, Three or More Spans, in., mm					
		Wind Rating					
		1-60		1-75		1-90	
		in.	mm	in.	mm	in.	mm
32/3	22 (0.0299 [0.76])	113	2870	91	2311	76	1930
	20 (0.0359 [0.91])	135	3429	108	2743	90	2286
	18 (0.0478 [1.21])	177	4496	141	3581	118	2997
	16 (0.0598 [1.52])	218	5537	174	4420	145	3683

Weld Pattern	Deck Design Thickness, MSG (in. [mm])	Maximum Allowable, One Span, in., mm					
		Wind Rating					
		1-60		1-75		1-90	
		in.	mm	in.	mm	in.	mm
32/5, 32/7	22 (0.0299 [0.76])	130	3302	130	3302	130	3302
	20 (0.0359 [0.91])	145	3683	145	3683	145	3683
	18 (0.0478 [1.21])	170	4318	170	4318	170	4318
	16 (0.0598 [1.52])	192	4877	192	4877	192	4877

Weld Pattern	Deck Design Thickness, MSG (in. [mm])	Maximum Allowable, Two or More Spans, in., mm					
		Wind Rating					
		1-60		1-75		1-90	
		in.	mm	in.	mm	in.	mm
32/5, 32/7	22 (0.0299 [0.76])	160	4064	157*	3988*	143*	3632*
	20 (0.0359 [0.91])	177	4496	177**	4496**	162**	4115**
	18 (0.0478 [1.21])	204	5182	204	5182	198***	5029***
	16 (0.0598 [1.52])	228	5791	228	5791	227	5766

* maximum allowable span for two-span configuration is 145 in (3683 mm) for maximum Class 1-75, 121 in. (3073 mm) for maximum Class 1-90.

** maximum allowable span for two-span configuration is 173 in (4394 mm) for maximum Class 1-75, 144 in. (3658 mm) for maximum Class 1-90.

*** maximum allowable span for two-span configuration is 189 in (4801 mm) for maximum Class 1-90.

9.1.2.11 Vercor Decking Inc - A NUCOR Company 20/20 ga., 20/18 ga., 20/16 ga., 18/20 ga., 18/18 ga., 18/16 ga., 16/18 ga., or 16/16 ga. PLN3-CD or HSN3-CD steel roof deck is secured to the building structural supports at the maximum center to center spans as noted in the tables below.

Weld Pattern	Deck Design Thickness, MSG (in. [mm])	Maximum Allowable, One Span, in., mm					
		Wind Rating					
		1-60		1-75		1-90	
		in.	mm	in.	mm	in.	mm
32/3	20/20 (0.0359/0.0359 [0.91/0.91])	216	5486	204	5182	170	4318
	20/18 (0.0359/0.0478 [0.91/1.21])	225	5715	204	5182	170	4318
	20/16 (0.0359/0.0598 [0.91/1.52])	255	6477	204	5182	170	4318
	18/20 (0.0478/0.0359 [1.21/0.91])	244	6198	204	5182	170	4318
	18/18 (0.0478/0.0478 [1.21/1.21])	254	6452	204	5182	170	4318
	18/16 (0.0478/0.0598 [1.21/1.52])	255	6477	204	5182	170	4318
	16/18 (0.0598/0.0478 [1.52/1.21])	255	6477	204	5182	170	4318
	16/16 (0.0598/0.0598 [1.52/1.52])	255	6477	204	5182	170	4318

Weld Pattern	Deck Design Thickness, MSG (in. [mm])	Maximum Allowable, Two Span, in., mm					
		Wind Rating					
		1-60		1-75		1-90	
		in.	mm	in.	mm	in.	mm
32/3	20/20 (0.0359/0.0359 [0.91/0.91])	195	4953	156	3962	130	3302
	20/18 (0.0359/0.0478 [0.91/1.21])	195	4953	156	3962	130	3302
	20/16 (0.0359/0.0598 [0.91/1.52])	195	4953	156	3962	130	3302
	18/20 (0.0478/0.0359 [1.21/0.91])	195	4953	156	3962	130	3302
	18/18 (0.0478/0.0478 [1.21/1.21])	195	4953	156	3962	130	3302
	18/16 (0.0478/0.0598 [1.21/1.52])	195	4953	156	3962	130	3302
	16/18 (0.0598/0.0478 [1.52/1.21])	195	4953	156	3962	130	3302
	16/16 (0.0598/0.0598 [1.52/1.52])	195	4953	156	3962	130	3302

Weld Pattern	Deck Design Thickness, MSG (in. [mm])	Maximum Allowable, Three or More Span, in., mm					
		Wind Rating					
		1-60		1-75		1-90	
		in.	mm	in.	mm	in.	mm
32/3	20/20 (0.0359/0.0359 [0.91/0.91])	243	6172	195	4953	162	4115
	20/18 (0.0359/0.0478 [0.91/1.21])	243	6172	195	4953	162	4115
	20/16 (0.0359/0.0598 [0.91/1.52])	243	6172	195	4953	162	4115
	18/20 (0.0478/0.0359 [1.21/0.91])	243	6172	195	4953	162	4115
	18/18 (0.0478/0.0478 [1.21/1.21])	243	6172	195	4953	162	4115
	18/16 (0.0478/0.0598 [1.21/1.52])	243	6172	195	4953	162	4115
	16/18 (0.0598/0.0478 [1.52/1.21])	243	6172	195	4953	162	4115
	16/16 (0.0598/0.0598 [1.52/1.52])	243	6172	195	4953	162	4115

Weld Pattern	Deck Design Thickness, MSG (in. [mm])	Maximum Allowable, One Span, in., mm					
		Wind Rating					
		1-60		1-75		1-90	
		in.	mm	in.	mm	in.	mm
32/5, 32/7	20/20 (0.0359/0.0359 [0.91/0.91])	216	5486	216	5486	213	5410
	20/18 (0.0359/0.0478 [0.91/1.21])	225	5715	225	5715	225	5715
	20/16 (0.0359/0.0598 [0.91/1.52])	269	6833	253	6426	231	5867
	18/20 (0.0478/0.0359 [1.21/0.91])	244	6198	244	6198	236	5994
	18/18 (0.0478/0.0478 [1.21/1.21])	254	6452	254	6452	254	6452
	18/16 (0.0478/0.0598 [1.21/1.52])	263	6680	263	6680	263	6680
	16/18 (0.0598/0.0478 [1.52/1.21])	280	7112	280	7112	278	7061
	16/16 (0.0598/0.0598 [1.52/1.52])	289	7341	289	7341	289	7341

Weld Pattern	Deck Design Thickness, MSG (in. [mm])	Maximum Allowable, Two or More Span, in., mm					
		Wind Rating					
		1-60		1-75		1-90	
		in.	mm	in.	mm	in.	mm
32/5, 32/7	20/20 (0.0359/0.0359 [0.91/0.91])	220	5588	197	5004	180	4572
	20/18 (0.0359/0.0478 [0.91/1.21])	220	5588	196	4978	179	4547
	20/16 (0.0359/0.0598 [0.91/1.52])	228	5791	204	5182	186	4724
	18/20 (0.0478/0.0359 [1.21/0.91])	278	7061	248	6299	227	5766
	18/18 (0.0478/0.0478 [1.21/1.21])	281	7137	251	6375	230	5842
	18/16 (0.0478/0.0598 [1.21/1.52])	282	7163	252	6401	230	5842
	16/18 (0.0598/0.0478 [1.52/1.21])	326	8280	291	7391	266*	6756*
	16/16 (0.0598/0.0598 [1.52/1.52])	329	8357	294	7468	269*	6833*

* maximum allowable span for two-span configuration is 189 in (4801 mm) for maximum Class 1-90.

9.1.2.12 Verco Decking Inc - A NUCOR Company 20/20 ga., 20/18 ga., 20/16 ga., 18/20 ga., 18/18 ga., 18/16 ga., 16/18 ga., or 16/16 ga. PLN3-CD AC or HSN3-CD AC steel roof deck is secured to the building structural supports at the maximum center to center spans as noted in the tables below.

Weld Pattern	Deck Design Thickness, MSG (in. [mm])	Maximum Allowable, One Span, in., mm					
		Wind Rating					
		1-60		1-75		1-90	
		in.	mm	in.	mm	in.	mm
32/3	20/20 (0.0359/0.0359 [0.91/0.91])	212	5385	204	5182	170	4318
	20/18 (0.0359/0.0478 [0.91/1.21])	222	5639	204	5182	170	4318
	20/16 (0.0359/0.0598 [0.91/1.52])	255	6477	204	5182	170	4318
	18/20 (0.0478/0.0359 [1.21/0.91])	240	6096	204	5182	170	4318
	18/18 (0.0478/0.0478 [1.21/1.21])	250	6350	204	5182	170	4318
	18/16 (0.0478/0.0598 [1.21/1.52])	255	6477	204	5182	170	4318
	16/18 (0.0598/0.0478 [1.52/1.21])	255	6477	204	5182	170	4318
	16/16 (0.0598/0.0598 [1.52/1.52])	255	6477	204	5182	170	4318

Weld Pattern	Deck Design Thickness, MSG (in. [mm])	Maximum Allowable, Two Span, in., mm					
		Wind Rating					
		1-60		1-75		1-90	
		in.	mm	in.	mm	in.	mm
32/3	20/20 (0.0359/0.0359 [0.91/0.91])	195	4953	156	3962	130	3302
	20/18 (0.0359/0.0478 [0.91/1.21])	195	4953	156	3962	130	3302
	20/16 (0.0359/0.0598 [0.91/1.52])	195	4953	156	3962	130	3302
	18/20 (0.0478/0.0359 [1.21/0.91])	195	4953	156	3962	130	3302
	18/18 (0.0478/0.0478 [1.21/1.21])	195	4953	156	3962	130	3302
	18/16 (0.0478/0.0598 [1.21/1.52])	195	4953	156	3962	130	3302
	16/18 (0.0598/0.0478 [1.52/1.21])	195	4953	156	3962	130	3302
	16/16 (0.0598/0.0598 [1.52/1.52])	195	4953	156	3962	130	3302

Weld Pattern	Deck Design Thickness, MSG (in. [mm])	Maximum Allowable, Three or More Span, in., mm					
		Wind Rating					
		1-60		1-75		1-90	
		in.	mm	in.	mm	in.	mm
32/3	20/20 (0.0359/0.0359 [0.91/0.91])	243	6172	195	4953	162	4115
	20/18 (0.0359/0.0478 [0.91/1.21])	243	6172	195	4953	162	4115
	20/16 (0.0359/0.0598 [0.91/1.52])	243	6172	195	4953	162	4115
	18/20 (0.0478/0.0359 [1.21/0.91])	243	6172	195	4953	162	4115
	18/18 (0.0478/0.0478 [1.21/1.21])	243	6172	195	4953	162	4115
	18/16 (0.0478/0.0598 [1.21/1.52])	243	6172	195	4953	162	4115
	16/18 (0.0598/0.0478 [1.52/1.21])	243	6172	195	4953	162	4115
	16/16 (0.0598/0.0598 [1.52/1.52])	243	6172	195	4953	162	4115

Weld Pattern	Deck Design Thickness, MSG (in. [mm])	Maximum Allowable, One Span, in., mm					
		Wind Rating					
		1-60		1-75		1-90	
		in.	mm	in.	mm	in.	mm
32/5, 32/7	20/20 (0.0359/0.0359 [0.91/0.91])	212	5385	212	5385	212	5385
	20/18 (0.0359/0.0478 [0.91/1.21])	222	5639	222	5639	222	5639
	20/16 (0.0359/0.0598 [0.91/1.52])	265	6731	253	6426	231	5867
	18/20 (0.0478/0.0359 [1.21/0.91])	240	6096	240	6096	236	5994
	18/18 (0.0478/0.0478 [1.21/1.21])	250	6350	250	6350	250	6350
	18/16 (0.0478/0.0598 [1.21/1.52])	259	6579	259	6579	259	6579
	16/18 (0.0598/0.0478 [1.52/1.21])	275	6985	275	6985	275	6985
	16/16 (0.0598/0.0598 [1.52/1.52])	285	7239	285	7239	285	7239

Weld Pattern	Deck Design Thickness, MSG (in. [mm])	Maximum Allowable, Two or More Span, in., mm					
		Wind Rating					
		1-60		1-75		1-90	
		in.	mm	in.	mm	in.	mm
32/5, 32/7	20/20 (0.0359/0.0359 [0.91/0.91])	219	5563	196	4978	179	4547
	20/18 (0.0359/0.0478 [0.91/1.21])	219	5563	195	4953	178	4521
	20/16 (0.0359/0.0598 [0.91/1.52])	227	5766	203	5156	185	4699
	18/20 (0.0478/0.0359 [1.21/0.91])	276	7010	247	6274	226	5740
	18/18 (0.0478/0.0478 [1.21/1.21])	280	7112	250	6350	228	5791
	18/16 (0.0478/0.0598 [1.21/1.52])	281	7137	251	6375	229	5817
	16/18 (0.0598/0.0478 [1.52/1.21])	324	8230	290	7366	265*	6731*
16/16 (0.0598/0.0598 [1.52/1.52])	328	8331	293	7442	267*	6782*	

* maximum allowable span for two-span configuration is 189 in (4801 mm) for maximum Class 1-90.

- 9.2 Tests show that the tested roof constructions in and of themselves would not create a need for automatic sprinklers.
- 9.3 Since a duly signed Master Agreement is on file for this customer, Approval is effective as of the date of this report.
- 9.4 Continued Approval will depend upon satisfactory field experience and periodic Facilities and Procedures Audits.

PROJECT DATA RECORD: 3051022

ATTACHMENTS:

ORIGINAL TEST DATA See PDR(s) for project(s) in Table 1