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ICC-ES Evaluation Report

ESR-5046

DIVISION: 07 00 00—THERMAL AND MOISTURE

PROTECTION

Section: 07 41 13—Metal Roof Panels

REPORT HOLDER:

TAYLOR METAL, INC. (dba TAYLOR METAL PRODUCTS)

EVALUATION SUBJECT:

TMP METAL ROOFING PANELS

1.0 EVALUATION SCOPE

1.1 Compliance with the following codes:

- 2021 and 2018 International Building Code® (IBC)
- 2021 and 2018 International Residential Code® (IRC)

For evaluation for compliance with codes adopted by Los Angeles Department of Building Safety (LADBS), see <u>ESR-5046 LABC Supplement</u>.

For evaluation for compliance with codes adopted by 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 ESR-5046 CBC Supplement

Properties evaluated:

- Weather resistance
- Fire classification
- Structural
- Wind uplift resistance

1.2 Evaluation of the following green code:

 2019 California Green Building Standards Code (CALGreen), Title 24, Part 11

Attributes verified:

See Section 3.1.

2.0 USES

The TMP metal roofing panels are used as roof coverings over solid or closely fitted decking and spaced supports.

Issued November 2022

This report is subject to renewal November 2023.

3.0 DESCRIPTION

3.1 General:

The TMP metal roofing panels are cold-formed from steel and/or aluminum conforming to the product specifications, galvalume or zinc coatings, and base-metal thicknesses noted in Table 1. The clips used to attach the standing seam metal roof panels to the supporting roof structure are made from materials conforming to the product specifications and base metal thicknesses noted in Table 2. See Figures 1 and 2 for panel and clip details, respectively.

The attributes of the metal roofing panels have been verified as conforming to the provisions of CALGreen Section A5.406.1.2 for reduced maintenance. Note that decisions on compliance for those areas rest with the user of this report. The user is advised of the project-specific provisions that may be contingent upon meeting specific conditions, and the verification of those conditions is outside the scope of this report. These codes or standards often provide supplemental information as guidance.

3.2 Deck Material:

Solid or closely fitted decking must be a minimum of ¹⁵/₃₂-inch-thick (11.9 mm) plywood or lumber sheathing complying with IBC Section 2304.8.2 or IRC Section R803, or minimum No. 22 gauge [0.030 inch thick (0.76 mm)] steel complying with IBC Section 2210.1.1.2.

3.3 Underlayment and Flashing:

Underlayment must be in accordance with IBC Section 1507.4.5 or IRC Section R905.10.5, as applicable. Where specified in Table 6, the underlayment is Versashield® Fire-Resistant Roof Deck Protection (ESR-2053) or Polystick XFR (ESR-1697). Flashing must be in accordance with IBC Section 1503.2 or IRC Section R903.2, as applicable.

3.4 Impact Resistance:

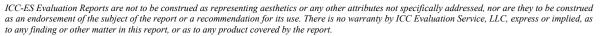
The MS 200 steel roof panels described in this report meet the requirements of 2021 IBC Section 1504.8 (2018 IBC Section 1504.7) for impact resistance when installed on roofs with a slope less than 2:12 (16.7 percent slope).

4.0 DESIGN AND INSTALLATION

4.1 Installation:

Installation of the TMP metal roof panels must be in accordance with this report, IBC Section 1507.4 or IRC Section R905.10, and the manufacturer's published





installation instructions. The manufacturer's installation instructions must be available at the jobsite at all times during installation.

The panels must be installed on roofs with a minimum slope of 2:12 (16.7-percent slope), except for MS 200 steel roof panels which can be installed in roof slopes greater than $\frac{1}{4}$: 12 (2 percent slope). Penetrations and terminations of the panels must be flashed and made weathertight in accordance with the manufacturer's published installation instructions and IBC Section 1503.2 or IRC Section R903.2, as applicable.

4.2 Uniform Gravity Loads:

When panels are installed over solid or closely fitted deck sheathing, the capacity is limited to the capacity of the sheathing.

When panels are installed on spaced supports as shown in Table 5, the panels are capable of withstanding the allowable uniform gravity loads and the minimum concentrated live load of 300 lbf (1.33 kN) per IBC Table 1607.1 as indicated in Table 5. The supporting structure must be design to resist the applicable forces.

4.3 Wind Uplift Resistance:

The allowable wind uplift pressures of the panels are provided in Table 4.

4.4 Fire Classification:

When installed as specified in Table 6, the metal roof panels are components of roof assemblies classified as Class A or B in accordance with ASTM E108 or UL790.

5.0 CONDITIONS OF USE

The Taylor Metal metal roof panels described in this report comply with, or are suitable alternatives to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

5.1 Installation must comply with the applicable code, this report and the manufacturer's published installation instructions. In the event of conflict between this report and the manufacturer's instructions, this report governs.

- 5.2 The metal panels must be installed only by applicators approved by Taylor Metals, Inc.
- 5.3 Design wind uplift pressure on any roof area, including edge and corner zones, must not exceed the allowable wind pressure for the system installed in that particular area. Refer to the allowable wind uplift pressure for the metal panels as listed in Table 4.
- 5.4 The allowable wind uplift pressures listed in Table 4 are for the roof covering only. The deck and framing to which the roof covering is attached must be designed for the applicable components and cladding wind loads in accordance with the IBC or IRC, as applicable.
- 5.5 Calculations demonstrating that the required wind resistance is less than the allowable wind resistance must be submitted to the code official.
- 5.6 See Table 1 for panel manufacturing location. The manufacturing is under a quality-control program with inspections by ICC-ES.

6.0 EVIDENCE SUBMITTED

Data in accordance with the ICC-ES Acceptance Criteria for Metal Roof Coverings (AC166), dated February 2021.

7.0 IDENTIFICATION

- 7.1 The panels are identified with a label bearing the product name, the material type, the manufacturer's name (dba: Taylor Metal Products), and the evaluation report number (ESR-5046).
- **7.2** The report holder's contact information is the following:

TAYLOR METAL, INC. (dba TAYLOR METAL PRODUCTS)
4566 RIDGE DRIVE NE
SALEM, OREGON 97301
(503) 581-8338
www.taylormetal.com

TABLE 1—MANUFACTURING FACILITIES

MANUFACTURING FACILITY

TMP-Riverside 4880 Felspar Street Riverside, California 92509

TABLE 2—TAYLOR METAL ROOF PANEL SPECIFICATIONS

DANEL		MATERIAL		MIN. BASE METAL
PANEL	Specification	Classification	Coating	THICKNESS (inch)
Versa Span 12"-14"-16"-18" Widths	ASTM A792	SS Grade 50	AZ 50- Painted AZ55-Unpainted	0.0224 (24 gauge) 0.0281 (22 gauge)
	ASTM B209	3003-H14	N/A	0.032
MS-150	ASTM A792	SS Grade 50	AZ 50- Painted AZ55-Unpainted	0.018 (26 gauge) 0.0224 (24 gauge) 0.0281 (22 gauge)
12"-16"-18" Widths	ASTM B209	3003-H14	N/A	0.032 0.040
MS-200 12"-14"-16"-18" Widths	ASTM A792	SS Grade 50	AZ 50- Painted AZ55-Unpainted	0.0224 (24 gauge) 0.0281 (22 gauge)
12 - 14 - 16 - 18 Widths	ASTM B209	3003-H14	N/A	0.032 0.040
PBR 36" Width	ASTM A792	SS Grade 50 SS Grade 80 (26 gauge only)	AZ 50- Painted AZ55-Unpainted	0.018 (26 gauge) 0.0224 (24 gauge) 0.0281 (22 gauge)
36 Widin	ASTM B209	3003-H14	N/A	0.032
HR-34 34" Width	ASTM A792	SS Grade 50 SS Grade 80 (26 gauge only) SS Grade 33 (20 gauge only)	AZ 50- Painted AZ55-Unpainted	0.018 (26 gauge) 0.0224 (24 gauge) 0.0281 (22 gauge) 0.0341 (20 gauge)
	ASTM B209	3003-H14	N/A	0.032 0.040
Classic 7/8 Corrugated 37.33" Width	ASTM A792	SS Grade 50 SS Grade 80 (26 gauge only)	AZ 50- Painted AZ55-Unpainted	0.018 (26 gauge) 0.0224 (24 gauge) 0.0281 (22 gauge)
O7.00 WIGHT	ASTM B209	3003-H14	N/A	0.032
BR-36	ASTM A792	SS Grade 50 SS Grade 33 (20 gauge only)	AZ 50- Painted AZ55-Unpainted	0.0224 (24 gauge) 0.0281 (22 gauge) 0.0341 (20 gauge)
36" Width	ASTM B209	3003-H14	N/A	0.032 0.040

For **SI:** 1 inch = 25.4 mm.

TABLE 3—TAYLOR METAL ROOF PANEL CLIP SPECIFICATIONS

		MATERIAL			
CLIP	Specification Classification		Coating	STEEL THICKNESS (inch)	
Versa Span Snap Lock Manufactured by SFS, Clip Master, and AMSI	Galvanized Steel	18 ga. steel ASTM A653 Grade 50	G90	0.046	
MS150 Fixed Clip Manufactured by SFS, Clip Master, and AMSI MS 150 Floating Clip Manufactured by SFS, Clip Master, and AMSI	Galvanized Steel	22 ga. steel (fixed) 18/22 ga. (floating) ASTM A653 Grade 50	G90	0.046 (BASE)- 0.028 (FIXED AND TOP)	
MS200 Fixed Clip Manufactured by SFS, Clip Master, and AMSI	Galvanized Steel	22 ga. steel ASTM A653 Grade 50	G90	0.028	
2" Float Engineered Panel Floating Clip Manufactured by SFS	Galvanized Steel	16 ga. Base/22 ga. Top- steel ASTM A653 Grade 50	G90	0.0575 (BASE) 0.028 (TOP)	

For **SI:** 1 inch = 25.4 mm.

TABLE 4—ALLOWABLE WIND UPLIFT PRESSURES

TAYLOR METAL ROOF PANEL	SUPPORT	FASTENING PATTERN ¹	PANEL SPAN ² (inch)	ALLOWABLE UPLIFT PRESSURE (psf)
	Min. 30 mil steel		12	46.8
	deck -or-		18	42.4
16" wide Veres Cres	Min. 15/32-inch-	Versa Span Snap Lock fastened to supporting	24	38.1
16" wide Versa Span (0.032" Aluminum)	thick plywood -or-	structure with two (2) No. 10 phillip pancake self-	30	33.8
(0.032 Aldiffillull)	Min. 56 mil steel	drilling screws	36	29.4
	purlins (open		42	25.1
	framing)		48	20.8
	Min. 30 mil steel		12	54.6
	deck -or-		18	48.5
18" wide Versa Span	Min. 15/32-inch-	Versa Span Snap Lock fastened to supporting	24	42.4
(0.032" Aluminum)	thick plywood -or-	structure with two (2) No. 10 phillip pancake self-	30	36.4
(0.032 Aluminum)	Min. 56 mil steel	drilling screws	36	30.3
	purlins (open		42	24.2
	framing)		48	18.2
	Min. 30 mil steel		12	83.2
	deck -or-	Versa Span Snap Lock fastened to supporting	18	73.6
40"	Min. 15/32-inch-		24	64.1
16" wide Versa Span (24 ga. steel)	thick plywood -or-	structure with two (2) No. 10 phillip pancake self-	30	54.6
	Min. 56 mil steel	drilling screws	36	45.0
	purlins (open		42	35.5
	framing)		48	26.0
	Min. 30 mil steel	Versa Span Snap Lock fastened to supporting structure with two (2) No. 10 phillip pancake self-	12	93.6
	deck -or-		18	87.1
40" :1 1/ 0 /00	Min. 15/32-inch-		24	78.0
16" wide Versa Span (22 ga.	thick plywood -or-		30	68.9
steel)	Min. 56 mil steel		36	59.8
	purlins (open		42	50.7
	framing)		48	41.6
	Min. 30 mil steel		12	67.6
	deck -or-		18	59.8
40"	Min. 15/32-inch-	Versa Span Snap Lock fastened to supporting	24	52.0
18" wide Versa Span (24 ga.	thick plywood -or-	structure with two (2) No. 10 phillip pancake self-	30	44.2
steel)	Min. 56 mil steel	drilling screws	36	36.4
	purlins (open		42	28.6
	framing)		48	20.8
	Min. 30 mil steel		12	90.1
	deck -or-		18	79.8
40" :1 1/ 0 (00	Min. 15/32-inch-	Versa Span Snap Lock fastened to supporting	24	69.6
18" wide Versa Span (22 ga.	thick plywood -or-	structure with two (2) No. 10 phillip pancake self-	30	59.3
steel)	Min. 56 mil steel	drilling screws	36	49.1
	purlins (open		42	38.8
	framing)		48	286

TAYLOR METAL ROOF PANEL	SUPPORT	FASTENING PATTERN ¹	PANEL SPAN ² (inch)	ALLOWABLE UPLIFT PRESSURE (psf)
40.75% wide NO450.00	Min. 30 mil steel deck -or-	TMD MO 450 Oliv fortura III	12 18	36.4 32.5
16.75" wide MS150-90	Min. 15/32-inch-	TMP MS 150 Clip fastened to supporting structure	24	28.6
degree seam (0.032" and	thick plywood -or-	with two (2) No. 10 pancake head self-drilling	30	24.7
0.040" aluminum)	Min. 56 mil steel purlins (open	screwis	36	20.8
	framing)	-	42	16.9
	• .		48 12	13.0
	Min. 30 mil steel	-	18	13.0 12.1
	deck -or-	TAMP AND AFO Olive for the second of the sec		
16.75" wide MS150-90	Min. 15/32-inch-	TMP MS 150 Clip fastened to supporting structure	24	11.3
degree seam (24 ga. steel)	thick plywood -or-	with two (2) No. 10 pancake head self-drilling screwis	30	10.4
, , , ,	Min. 56 mil steel purlins (open	Sciewis	36	9.5
	framing)		42	8.7
			48	7.8
	Min. 30 mil steel		12	57.3
	deck -or-		18	50.4
16.75" wide MS150-90	Min. 15/32-inch-	TMP MS 150 Clip fastened to supporting structure	24	43.4
degree seam (22 ga. steel)	thick plywood -or-	with two (2) No. 10 pancake head self-drilling	30	36.5
9 (9/	Min. 56 mil steel	screwis	36	29.5
	purlins (open	<u> </u>	42	22.6
	framing)		48	15.6
	Min. 30 mil steel		12	111.9
	deck -or-		18	100.1
12.625" wide MS150-180	Min. 15/32-inch-	TMP MS 150 Clip fastened to supporting structure	24	88.4
degree seem (0.032" and	thick plywood -or-	with two (2) No. 10 pancake head self-drilling	30	76.7
0.040" aluminum)	Min. 56 mil steel	screwis	36	65.0
	purlins (open		42	53.3
	framing)		48	41.6
	Min. 30 mil steel		12	137.9
	deck -or-	TMP MS 150 Clip fastened to supporting structure with two (2) No. 10 pancake head self-drilling screwis	18	124.0
12.625" wide MS150-180 degree/double lock seam (24 ga. steel)	Min. 15/32-inch- thick plywood -or- Min. 56 mil steel		24	110.2
			30	96.3
			36	82.4
	purlins (open		42	68.6
	framing)		48	54.7
	Min. 30 mil steel	TMP MS 150 Clip fastened to supporting structure	12	182.2
	deck -or- Min. 15/32-inch- thick plywood -or-		18	161.8
12" wide MS150-180			24	141.4
degree/double lock seam		with two (2) No. 10 pancake head self-drilling	30	121.1
(22 ga. steel)	Min. 56 mil steel	screwis	36	100.7
(== 9)	purlins (open	Solicino	42	80.3
	framing)		48	59.9
	0,		12	119.7
	Min. 30 mil steel deck -or-		18	107.1
16.625" wide MS150-180	Min. 15/32-inch-	TMP MS 150 Clip fastened to supporting structure	24	94.5
degree/double lock seam	thick plywood -or-	with two (2) No. 10 pancake head self-drilling	30	81.9
(24 ga. steel)	Min. 56 mil steel	screwis	36	69.4
(2 1 ga. 5(55)	purlins (open	Sciewis	42	56.8
	framing)		48	44.2
	Min. 30 mil steel		12	145.7
	deck -or-		18	128.8
16.625" wide MS150-180	Min. 15/32-inch-	TMP MS 150 Clip fastened to supporting structure	24	111.9
degree/double lock seam	thick plywood -or-	with two (2) No. 10 pancake head self-drilling	30	95.0
(22 ga. steel)	Min. 56 mil steel	screwis	36	78.0
(22 ga. 3001)	purlins (open	50.511.5	42	61.1
	framing)		48	44.2
	0,		12	83.3
	Min. 30 mil steel		18	73.7
18" wide MS150-180	deck -or-	TMD MS 450 Clip footoped to assess with a stand	24	64.2
degree/double lock seam	Min. 15/32-inch-	TMP MS 150 Clip fastened to supporting structure	30	54.6
(0.032"and 0.040"	thick plywood -or- Min. 56 mil steel	with two (2) No. 10 pancake head self-drilling screwis		
` aluminum)		SOLCANIS	36	45.1
,	purlins (open		42	35.5
	framing)		48	26.0
	Min. 30 mil steel		12	109.3
	deck -or-		18	97.1
18" wide MS150-180	Min. 15/32-inch-	TMP MS 150 Clip fastened to supporting structure	24	85.0
degree/double lock seam	thick plywood -or-	with two (2) No. 10 pancake head self-drilling	30	72.8
(24 ga. steel)	Min. 56 mil steel	screwis	36	60.7
	purlins (open		42	48.5
	framing)		48	36.4

TAYLOR METAL ROOF PANEL	SUPPORT	FASTENING PATTERN1	PANEL SPAN ² (inch)	ALLOWABLE UPLIFT PRESSURE (psf)
18" wide MS150-180 degree/double lock seam	Min. 30 mil steel deck -or- Min. 15/32-inch- thick plywood -or-	TMP MS 150 Clip fastened to supporting structure with two (2) No. 10 pancake head self-drilling	12 18 24 30	124.9 111.5 98.0 84.6
(22 ga. steel)	Min. 56 mil steel purlins (open framing)	screwis	36 42 48 12	71.1 57.7 44.2 36.4
18" wide MS200-90 degree/single lock seam	Min. 30 mil steel deck -or- Min. 15/32-inch- thick proposed -or-	TMP MS 200 Clip fastened to supporting structure with two (2) No. 10 pancake head self-drilling	18 24 30	32.5 28.6 24.7
(0.032" aluminum)	Min. 56 mil steel purlins (open framing) Min. 30 mil steel	screw	36 42 48 12	20.8 16.9 13.0 46.9
18" wide MS200-90 degree/single lock seam (0.040" aluminum)	deck -or- Min. 15/32-inch- thick plywood -or- Min. 56 mil steel purlins (open	TMP MS 200 Clip fastened to supporting structure with two (2) No. 10 pancake head self-drilling screw	18 24 30 36 42	42.6 38.2 33.4 29.5 25.2
18" wide MS200-90	framing) Min. 30 mil steel deck -or- Min. 15/32-inch-	TMP MS 200 Clip fastened to supporting structure	48 12 18 24	20.8 59.9 53.4 46.9
degree/single lock seam (24 ga. steel)	thick plywood -or- Min. 56 mil steel purlins (open framing)	with two (2) No. 10 pancake head self-drilling screw	30 36 42 48	40.4 33.8 27.3 20.8
18" wide MS200-90 degree/single lock seam single lock seam (22 ga.	Min. 30 mil steel deck -or- Min. 15/32-inch- thick plywood -or- Min. 56 mil steel purlins (open framing) Min. 30 mil steel deck -or- Min. 15/32-inch- thick plywood -or- Min. 56 mil steel purlins (open framing) Min. 30 mil steel deck -or- Min. 15/32-inch- thick plywood -or- Min. 56 mil steel deck -or- Min. 56 mil steel	TMP MS 200 Clip fastened to supporting structure with two (2) No. 10 pancake head self-drilling screw 2" float engineered panel clip connected to supporting structure with two (2) No. 14 screws 2" float engineered panel clip connected to supporting structure with two (2) No. 14 screws	12 18 24 30 36	98.9 88.1 77.2 66.4 55.5
steel)			42 48 12 18	44.7 33.8 161.3 147.6
16" wide MS200-180 degree/double lock seam (24 ga. steel)			24 30 36 42	134.0 120.3 106.7 93.0
			48 54 60 12 18	79.4 67.7 52.1 163.9
16" wide MS200-180 degree/double lock seam (22 ga. steel)			30 36 42	150.9 137.9 124.9 111.9 98.9
	purlins (open framing)		48 54 60 12	85.9 72.9 59.9 83.3
18" wide MS200-180 degree/double lock seam (0.032" aluminum)	Min. 30 mil steel deck -or- Min. 15/32-inch- thick plywood -or- Min. 56 mil steel	2" float engineered panel clip connected to supporting structure with two (2) No. 14 screws	18 24 30 36 42	77.4 71.5 65.7 59.8 54.0
	purlins (open framing)		48 54 60 12	48.1 42.3 36.4 109.3
18" wide MS200-180 degree/double lock seam	Min. 30 mil steel deck -or- Min. 15/32-inch- thick plywood -or-	2" float engineered panel clip connected to supporting structure with two (2) No. 14 screws	18 24 30 36	101.1 93.0 84.9 76.7
(24 ga. steel)	Min. 56 mil steel purlins (open framing)	5	42 48 54 60	68.6 60.5 52.3 44.2

TABLE 4—ALLOWABLE WIND UPLIFT PRESSURES (continued)					
TAYLOR METAL ROOF PANEL	SUPPORT	FASTENING PATTERN ¹	PANEL SPAN ² (inch)	ALLOWABLE UPLIFT PRESSURE (psf)	
			12	156.1	
	Min. 30 mil steel		18	143.4	
	deck -or-		24	130.7	
18" wide MS200-180	Min. 15/32-inch-		30	118.0	
degree/double lock seam	thick plywood -or-	2" float engineered panel clip connected to	36	105.4	
(22 ga. steel)	Min. 56 mil steel	supporting structure with two (2) No. 14 screws	42	92.7	
, ,	purlins (open		48	80.0	
	framing)		54	67.3	
			60	54.7	
	Min. 30 mil steel		24	187.5	
	deck -or-	Minimum six (6) No. 14 hex-head self-drilling	30	165.5	
	Min. 15/32-inch-	screws across the panel width at all supports	36	143.3	
36" wide PBR (0.032"	thick plywood -or-	301cW3 across the pariet width at all supports	42	121.3	
aluminum)	Min. 56 mil steel	Sidelap fasteners are No. 14 hex-head self-drilling	48	99.2	
	purlins (open	screws at 12" o.c.	54	77.1	
	framing)	5010410 41 12 0.0.	60	55.0	
	-,		24	100.0	
	Min. 30 mil steel	No. 1	30	92.5	
	deck -or-	Minimum six (6) No. 14 hex-head self-drilling			
00"id- DDD (00t1)	Min. 15/32-inch-	screws across the panel width at all supports	36	85.0	
36" wide PBR (26 ga. steel)	thick plywood -or- Min. 56 mil steel	Sidolon footonore are No. 44 have been a self-delities	42	77.5	
	purlins (open	Sidelap fasteners are No. 14 hex-head self-drilling screws at 12" o.c.	48	70.0	
	framing)	SUICWS at 12 U.U.	54	62.5	
	0,		60	55.0	
	Min. 30 mil steel	 	24	175.0	
	deck -or-	Minimum six (6) No. 14 hex-head self-drilling	30	156.7	
	Min. 15/32-inch-	screws across the panel width at all supports	36	138.3	
36" wide PBR (24 ga. steel)	thick plywood -or-	<u>- </u>	42	120.0	
	Min. 56 mil steel	Sidelap fasteners are No. 14 hex-head self-drilling	48	101.7	
	purlins (open	screws at 12" o.c.	54	83.3	
	framing)		60	65.0	
	Min. 30 mil steel		24	200.0	
	deck -or- Min. 15/32-inch- thick plywood -or- Min. 56 mil steel purlins (open framing)	Minimum six (6) No. 14 hex-head self-drilling	30	178.3	
		screws across the panel width at all supports	36	156.7	
36" wide PBR (22 ga. steel)		· · · · · · · · · · · · · · · · · · ·	42	135.0	
		Sidelap fasteners are No. 14 hex-head self-drilling screws at 12" o.c.	48	113.3	
			54	91.7	
			60	70.0	
	Min. 30 mil steel		24	112.5	
	deck -or-	Minimum three (3) No. 12 hex-head self-drilling screws across the panel width at all supports	30	100.8	
34" wide HR-34 (0.032"	Min. 15/32-inch-		36	89.7	
aluminum)	thick plywood -or-	1 0:11 6 6	42	78.5	
,	Min. 56 mil steel	Sidelap fasteners are No. 12 hex-head self-drilling screws at 12" o.c.	48	67.3	
	purlins (open		54	56.2	
	framing)	Ţ	60	45.0	
	Min. 30 mil steel		24	100.0	
	deck -or-	Minimum three (3) No. 12 hex-head self-drilling	30	90.0	
	Min. 15/32-inch-	screws across the panel width at all supports	36	80.0	
34" wide HR-34 (0.040"	thick plywood -or-		42	70.0	
aluminum)	Min. 56 mil steel	Sidelap fasteners are No. 12 hex-head self-drilling	48	60.0	
	purlins (open	screws at 12" o.c.	54	50.0	
	framing)		60	40.0	
	Min. 30 mil steel		24	87.5	
	deck -or-	Minimum three (3) No. 12 hex-head self-drilling	30	80.4	
	Min. 15/32-inch-	screws across the panel width at all supports	36	73.3	
34" wide HR-34 (26 ga.	thick plywood -or-	25.5.70 dologo tilo parioi widai at ali supporto	42	66.3	
steel)	Min. 56 mil steel	Sidelap fasteners are No. 12 hex-head self-drilling	48	59.2	
	purlins (open	screws at 12" o.c.	54	52.1	
	framing)	 	60	45.0	
	Min. 30 mil steel		24	100.0	
	deck -or-	Minimum three (3) No. 12 hex-head self-drilling	30	90.8	
	Min. 15/32-inch-	screws across the panel width at all supports	36	81.7	
34" wide HR-34 (24 ga.	thick plywood -or-	oorows across the patier within at all supports	42	72.5	
steel)	Min. 56 mil steel	Sidelap fasteners are No. 12 hex-head self-drilling	48	63.3	
	purlins (open	screws at 12" o.c.	48 54	54.2	
	framing)	55,5,75 dt 12 0.0.	54 60	45.0	
			24	100.0	
	Min. 30 mil steel	Minimum three (2) No 40 beaute 1 15 199	30		
	deck -or-	Minimum three (3) No. 12 hex-head self-drilling	36	90.8	
34" wide HR-34 (22 ga.	Min. 15/32-inch-	screws across the panel width at all supports		81.7	
steel)	thick plywood -or-	Sidolon factorors are No. 40 have been a self-delities	42	72.5	
<i>'</i>	Min. 56 mil steel	Sidelap fasteners are No. 12 hex-head self-drilling screws at 12" o.c.	48	63.3	
	purlins (open	SCIEWS at 12 U.C.	54	54.2	
	framing)		60	45.0	

TABLE 4—ALLOWABLE WIND UPLIFT PRESSURES (continued)						
TAYLOR METAL ROOF PANEL	SUPPORT	FASTENING PATTERN ¹	SPAN ² (inch)	ALLOWABLE UPLIFT PRESSURE (psf)		
	Min. 30 mil steel		24	105.0		
	deck -or-	Minimum three (3) No. 12 hex-head self-drilling	30	95.8		
34" wide HR-34 (20 ga.	Min. 15/32-inch-	screws across the panel width at all supports	36	86.7		
steel)	thick plywood -or-		42	77.5		
steet)	Min. 56 mil steel	Sidelap fasteners are No. 12 hex-head self-drilling	48	68.3		
	purlins (open	screws at 12" o.c.	54	59.2		
	framing)		60	50.0		
	Min. 30 mil steel		24	120.0		
	deck -or-	Minimum five (5) No. 12 hex-head self-drilling	30	108.3		
34" wide HR-34 (0.032"	Min. 15/32-inch-	screws across the panel width at all supports	36	96.7		
aluminum)	thick plywood -or-		42	85.0		
alullillulli)	Min. 56 mil steel	Sidelap fasteners are No. 12 hex-head self-drilling	48	73.3		
	purlins (open	screws at 12" o.c.	54	61.7		
	framing)		60	50.0		
	Min. 30 mil steel		24	200.0		
	deck -or-	Minimum five (5) No. 12 hex-head self-drilling	30	177.1		
24" wide LID 24 (0.040"	Min. 15/32-inch-	screws across the panel width at all supports	36	154.2		
34" wide HR-34 (0.040"	thick plywood -or-		42	131.1		
aluminum)	Min. 56 mil steel	Sidelap fasteners are No. 12 hex-head self-drilling	48	108.3		
	purlins (open	screws at 12" o.c.	54	85.4		
	framing)		60	62.5		
	Min. 30 mil steel		24	175.0		
	deck -or-	Minimum five (5) No. 12 hex-head self-drilling	30	157.5		
	Min. 15/32-inch-	screws across the panel width at all supports	36	140.0		
34" wide HR-34 (26 ga.	thick plywood -or-	Solews doloss the pariet width at all supports	42	122.5		
steel)	Min. 56 mil steel	Sidelap fasteners are No. 12 hex-head self-drilling	48	105.0		
	purlins (open	screws at 12" o.c.	54	87.5		
	framing)		60	70.0		
			24	200.0		
	Min. 30 mil steel deck -or- Min. 15/32-inch-	Minimum five (F) No. 12 how head calf drilling	30	180.0		
34" wide HR-34 (24 ga. steel)		Minimum five (5) No. 12 hex-head self-drilling	36	160.0		
	thick plywood -or-	screws across the panel width at all supports	42	140.0		
	Min. 56 mil steel	Sidelap fasteners are No. 12 hex-head self-drilling screws at 12" o.c.	48	120.0		
	purlins (open		46 54	100.0		
	framing)	301CW3 at 12 0.0.	60	80.0		
			24	200.0		
	Min. 30 mil steel	Minimum five (5) No. 12 hex-head self-drilling screws across the panel width at all supports Sidelap fasteners are No. 12 hex-head self-drilling screws at 12" o.c.				
	deck -or-		30 36	178.3		
34" wide HR-34 (22 ga.	Min. 15/32-inch-		42	156.7		
steel)	thick plywood -or- Min. 56 mil steel			135.0		
			48	113.3		
	purlins (open framing)		54	91.7		
	0,		60	70.0		
	Min. 30 mil steel	<u>-</u>	24	200.0		
	deck -or- Min. 15/32-inch- thick plywood -or-	Minimum five (5) No. 12 hex-head self-drilling	30	179.2		
34" wide HR-34 (20 ga.		screws across the panel width at all supports	36	158.3		
steel)		O:	42	137.5		
,	Min. 56 mil steel	Sidelap fasteners are No. 12 hex-head self-drilling	48	116.7		
	purlins (open	screws at 12" o.c.	54	95.8		
	framing)		60	75.0		
	Min. 30 mil steel	<u> </u>	24	55.0		
	deck -or-	Minimum five (5) No. 12 hex-head self-drilling	30	50.8		
37.33" wide Classic 7/8	Min. 15/32-inch-	screws across the panel width at all supports	36	46.7		
Corrugated (0.032"	thick plywood -or-	a., , , , , , , , , , , , , , , , , , ,	42	42.5		
aluminum)	Min. 56 mil steel	Sidelap fasteners are No. 12 hex-head self-drilling	48	38.3		
	purlins (open	screws at 12" o.c.	54	34.2		
	framing)		60	30.0		
	Min. 30 mil steel		24	110.0		
	deck -or-	Minimum five (5) No. 12 hex-head self-drilling	30	100.4		
37.33" wide Classic 7/8	Min. 15/32-inch-	screws across the panel width at all supports	36	90.8		
Corrugated (26 ga. steel)	thick plywood -or-		42	81.3		
Corragatod (20 ga. stoel)	Min. 56 mil steel	Sidelap fasteners are No. 12 hex-head self-drilling	48	71.7		
	purlins (open	screws at 12" o.c.	54	62.1		
	framing)		60	52.5		
	Min. 30 mil steel		24	117.5		
	deck -or-	Minimum five (5) No. 12 hex-head self-drilling	30	108.3		
27 22"	Min. 15/32-inch-	screws across the panel width at all supports	36	99.2		
37.33" wide Classic 7/8	thick plywood -or-	'' F	42	90.0		
Corrugated (24 ga. steel)	Min. 56 mil steel	Sidelap fasteners are No. 12 hex-head self-drilling	48	80.8		
	purlins (open	screws at 12" o.c.	54	71.7		
	framing)		60	62.5		

	TABLE 4—A	LLOWABLE WIND UPLIFT PRESSURES (continu	PANEL	1
TAYLOR METAL ROOF PANEL	SUPPORT	FASTENING PATTERN ¹	SPAN ² (inch)	ALLOWABLE UPLIFT PRESSURE (psf)
	Min. 30 mil steel		24	150.0
	deck -or-	Minimum five (5) No. 12 hex-head self-drilling	30	135.4
07.00":- - 0 :- 7/0	Min. 15/32-inch-	screws across the panel width at all supports	36	120.8
37.33" wide Classic 7/8	thick plywood -or-		42	106.3
Corrugated (22 ga. steel)	Min. 56 mil steel	Sidelap fasteners are No. 12 hex-head self-drilling	48	91.7
	purlins (open	screws at 12" o.c.	54	77.1
	framing)		60	62.5
	Min. 30 mil steel		24	175.0
	deck -or-	Minimum seven (7) No. 12 hex-head self-drilling	30	155.0
37.33" wide Classic 7/8	Min. 15/32-inch-	screws across the panel width at all supports	36	135.0
Corrugated (0.032"	thick plywood -or-	·	42	115.0
aluminum)	Min. 56 mil steel	Sidelap fasteners are No. 12 hex-head self-drilling	48	95.0
,	purlins (open	screws at 12" o.c.	54	75.0
	framing)	Ī	60	55.0
	Min. 30 mil steel		24	162.5
	deck -or-	Minimum seven (7) No. 12 hex-head self-drilling	30	162.5
	Min. 15/32-inch-	screws across the panel width at all supports	36	162.5
37.33" wide Classic 7/8	thick plywood -or-		42	162.5
Corrugated (26 ga. steel)	Min. 56 mil steel	Sidelap fasteners are No. 12 hex-head self-drilling	48	162.5
	purlins (open	screws at 12" o.c.	54	162.5
	framing)		60	162.5
	Min. 30 mil steel		24	162.5
	deck -or-	Minimum seven (7) No. 12 hex-head self-drilling	30	102.3
	Min. 15/32-inch-	screws across the panel width at all supports	36	99.2
37.33" wide Classic 7/8	thick plywood -or-	screws across the pariet width at all supports	42	90.0
Corrugated (24 ga. steel)	Min. 56 mil steel	Sidelap fasteners are No. 12 hex-head self-drilling	48	80.8
	purlins (open	screws at 12" o.c.	54	71.7
	framing)	Sciews at 12 o.c.		
			60	75.0
	Min. 30 mil steel		24	175.0
	deck -or-	Minimum seven (7) No. 12 hex-head self-drilling	30	135.4
37.33" wide Classic 7/8 Corrugated (22 ga. steel)	Min. 15/32-inch- thick plywood -or- Min. 56 mil steel	screws across the panel width at all supports	36	120.8
		Sidelap fasteners are No. 12 hex-head self-drilling screws at 12" o.c.	42	106.3
			48	91.7
	purlins (open		54	77.1
	framing)		60	75.0
	Min. 30 mil steel deck -or- Min. 15/32-inch- thick plywood -or-	Minimum three (3) No. 12 hex-head self-drilling screws across the panel width at all supports Sidelap fasteners are No. 12 hex-head self-drilling screws at 12" o.c.	24	55.0
			30	51.7
00"i-l- DD 00 (0 000"			36	48.3
36" wide BR-36 (0.032"			42	45.0
aluminum)	Min. 56 mil steel		48	41.7
	purlins (open framing)		54	38.3
			60	35.0
	Ψ,		24	75.0
	Min. 30 mil steel	-	30	69.2
	deck -or-	Minimum three (3) No. 12 hex-head self-drilling	36	63.3
00" ' DD 00 (0 0 40"	Min. 15/32-inch-	screws across the panel width at all supports		
36" wide BR-36 (0.040"	thick plywood -or-	· · · · · ·	42	57.5
aluminum)	Min. 56 mil steel	Sidelap fasteners are No. 12 hex-head self-drilling	48	51.7
	purlins (open	screws at 12" o.c.	54	45.8
	framing)		60	40.0
	Min. 30 mil steel		24	137.5
	deck -or-	Minimum three (3) No. 12 hex-head self-drilling	30	122.1
	Min. 15/32-inch-	screws across the panel width at all supports	36	106.7
36" wide BR-36 (24 ga.	thick plywood -or-	Solows across the parter width at all supports	42	91.3
steel)	Min. 56 mil steel	Sidelap fasteners are No. 12 hex-head self-drilling	48	75.8
	purlins (open	screws at 12" o.c.	54	60.4
	framing)	0.0.000 41.12 0.00	60	45.0
	5,		24	100.0
	Min. 30 mil steel			
	deck -or-	Minimum three (3) No. 12 hex-head self-drilling	30	90.0
36" wide BR-36 (22 ga.	Min. 15/32-inch-	screws across the panel width at all supports	36	80.0
steel)	thick plywood -or-	0.11	42	70.0
5.55.,	Min. 56 mil steel	Sidelap fasteners are No. 12 hex-head self-drilling	48	60.0
	purlins (open	screws at 12" o.c.	54	50.0
	framing)		60	40.0
	Min. 30 mil steel		24	100.0
	deck -or-	Minimum three (3) No. 12 hex-head self-drilling	30	89.8
001 11 05 /	Min. 15/32-inch-	screws across the panel width at all supports	36	79.7
36" wide BR-36 (20 ga.	thick plywood -or-		42	69.5
steel)	Min. 56 mil steel	Sidelap fasteners are No. 12 hex-head self-drilling	48	59.3
	purlins (open	screws at 12" o.c.	54	49.2
	framing)	 	60	39.0
	3/	1		00.0

TAYLOR METAL ROOF PANEL	SUPPORT	FASTENING PATTERN ¹	PANEL SPAN ² (inch)	ALLOWABLE UPLIFT PRESSURE (psf)
	Min. 30 mil steel		24	135.0
	deck -or-	Minimum five (5) No. 12 hex-head self-drilling	30	122.7
	Min. 15/32-inch-	screws across the panel width at all supports	36	110.3
36" wide BR-36 (0.032"	thick plywood -or-	corone derece the pariet matri at an eapporte	42	98.0
aluminum)	Min. 56 mil steel	Sidelap fasteners are No. 12 hex-head self-drilling	48	85.7
	purlins (open	screws at 12" o.c.	54	73.3
	framing)		60	61.0
	Min. 30 mil steel		24	171.0
	deck -or-	Minimum five (5) No. 12 hex-head self-drilling	30	150.8
	Min. 15/32-inch-	screws across the panel width at all supports	36	130.7
36" wide BR-36 (0.040"	thick plywood -or-	301cW3 across the pariet width at all supports	42	110.5
aluminum)	Min. 56 mil steel	Sidelap fasteners are No. 12 hex-head self-drilling	48	90.3
	purlins (open	screws at 12" o.c.	54	70.2
	framing)		60	50.0
	Min. 30 mil steel deck -or- Min. 15/32-inch- thick plywood -or- Min. 56 mil steel purlins (open framing)	Minimum five (5) No. 12 hex-head self-drilling screws across the panel width at all supports Sidelap fasteners are No. 12 hex-head self-drilling screws at 12" o.c.	24	200.0
			30	179.2
			36	158.3
36" wide BR-36 (24 ga.			42	137.5
steel)			48	116.7
			54	95.8
			60	75.0
	Min. 30 mil steel		24	200.0
	deck -or-	Minimum five (5) No. 12 hex-head self-drilling	30	180.0
36" wide BR-36 (22 ga.	Min. 15/32-inch-	screws across the panel width at all supports	36	160.0
steel)	thick plywood -or-		42	140.0
Jicon)	Min. 56 mil steel	Sidelap fasteners are No. 12 hex-head self-drilling	48	120.0
	purlins (open	screws at 12" o.c.	54	100.0
	framing)		60	80.0
	Min. 30 mil steel		24	170
	deck -or-	Minimum five (5) No. 12 hex-head self-drilling	30	153.1
00" wid- DD 00 (00	Min. 15/32-inch-	screws across the panel width at all supports	36	136.2
36" wide BR-36 (20 ga.	thick plywood -or-		42	119.3
steel)	Min. 56 mil steel	Sidelap fasteners are No. 12 hex-head self-drilling	48	102.3
	purlins (open	screws at 12" o.c.	54	85.4
	framing)		60	68.5

For **SI:** 1 inch = 25.4 mm, 1 psf = 0.0479 kPa.

TABLE 5- ALLOWABLE UNIFORM GRAVITY LOADS FOR METAL ROOF PANELS INSTALLED ON SPACED SUPPORTS^{1,2}

TAYLOR METAL ROOF PANEL	SUPPORT	FASTENING PATTERN	MAXIMUM SUPPORT SPACING (inches)	ALLOWABLE UNIFORM LOAD (psf)
16" wide Veres Cres	Min O E in ab wild a		24	37.7
16" wide Versa Span (0.032" Aluminum)	Min 2.5-inch wide support ³	See Table 4	30	30.2
(0.032 Aldifillidifi)	support		36	25.2
			24	33.6
18" wide Versa Span (0.032" Aluminum)	Min 2.5-inch wide support ³	See Table 4	30	26.9
	• •		36	22.4
			24	208.6
	Min 2.5-inch wide support ³	See Table 4	30	166.9
			36	133.3
16" wide Versa Span (24			42	98.0
ga. steel)			48	75.0
			54	59.3
			60	48.0
			24	440.0
			30	330.8
			36	229.7
40":	Min 2.5-inch wide		42	168.8
16" wide Versa Span (22		See Table 4	48	129.2
ga. steel)	support ³		54	102.1
			60	82.7
			66	68.4
			72	57.4

¹Tabulated values do not consider panel clip connection to supporting structure, which must be determined by registered design professional. Tabulated values do not consider pry effect applied to the fastener by the clip base, which must be performed by registered design professional.

²The panel span for the Versa Span, MS150 and MS200 standing seam metal roof panels represent the maximum clip spacing along the seam. The panel span for the PBR, HR-34, Classic Corrugated 7/8 and BR-36 metal roof panels represent the maximum support member spacing.

TABLE 5- ALLOWABLE UNIFORM GRAVITY LOADS FOR METAL ROOF PANELS INSTALLED ON SPACED SUPPORTS^{1,2} (continued)

	UNIFORM GRAVITY LOADS			
TAYLOR METAL ROOF PANEL	SUPPORT	FASTENING PATTERN	MAXIMUM SUPPORT SPACING (inches)	ALLOWABLE UNIFORM LOAD (psf)
NOO! I ANLL		IAIIEM	24	185.5
			30	148.4
			36	118.3
18" wide Versa Span (24	Min 2.5-inch wide	See Table 4	42	86.9
ga. Steel)	support ³		48	66.6
			54	52.6
			60	42.6
16" wide MS150 (0.032" aluminum) single and double lock	Min 2.5-inch wide support ³	See Table 4	24	22.4
16" wide MS150 (0.040"	Min 2.5-inch wide		24	34.6
aluminum) single and double lock	support ³	See Table 4	30	22.2
			24	209.6
			30	167.6
			36	139.7
16" wide MS150 (24 ga.	Min 2.5-inch wide		42	119.7
Steel) single and double lock	support ³	See Table 4	48	104.8
IOCK			54 60	93.1 77.7
			66 72	64.2 54.0
			24	303.2
			30	242.6
			36	202.1
			42	173.3
16" wide MS150 (22 ga.			48	147.0
Steel) single and double	Min 2.5-inch wide	See Table 4	54	116.2
lock	support ³	Occ Table 4	60	94.1
			66	77.8
			72	65.4
12" wide MS150 (0.032"			24	39.3
aluminum) single and	Min 2.5-inch wide	See Table 4		
double lock	support ³		30	25.5
			24	279.6
			30	223.6
			36	186.4
12" wide MS150 (24 ga.	Min 2.5-inch wide		42	159.7
Steel) single and double	support ³	See Table 4	48	138.8
lock	Зарроп		54	124.2
			60	106.8
			66	88.3
			72	74.2
			24	404.6
			30	323.6
			36	269.7
12" wide MS150 (22 ga.	Min 2.5-inch wide		42	225.3
Steel) single and double	support ³	See Table 4	48	172.5
lock			54	136.3
			60	110.4
			66	91.2
			72	76.7
			24	125.5
			30	100.4
18" wide MS150 (24 ga.	Min 2.5-inch wide		36 42	83.6 71.7
Steel) single and double	support ³	See Table 4	42	62.7
lock			54	55.8
			60	50.2
			24	269.6
			30	215.6
			36	179.7
18" wide MS150 (22 ga.	Min 2.5-inch wide		42	154.0
Steel) single and double	support ³	See Table 4	48	131.1
lock	Зирроп		54	103.6
			60	83.9
			66	69.3
			72	58.3
	-			

TABLE 5- ALLOWABLE UNIFORM GRAVITY LOADS FOR METAL ROOF PANELS INSTALLED ON SPACED SUPPORTS^{1,2} (continued)

PATERN SUPPORT PATERN SPACING (Inches) UNIFORM LOAD (pgf)	TAYLOR METAL	SUPPORT	FASTENING	MAXIMUM SUPPORT	ALLOWABLE
18" wide MS200 (24 gas steel) single and double book 24 26.2			PATTERN	SPACING (inches)	UNIFORM LOAD (psf)
See Table 4 30 26.1	aluminum) single and double lock		See Table 4		
18" wide MS200 (24 ga. steel) single and double lock 16" wide MS200 (24 ga. steel) single and double support* 16" wide MS200 (24 ga. steel) single and double lock 16" wide MS200 (24 ga. steel) single and double lock 16" wide MS200 (24 ga. steel) single and double support* 16" wide MS200 (24 ga. steel) single and double support* 16" wide MS200 (24 ga. steel) single and double support* 16" wide MS200 (24 ga. steel) single and double support* 16" wide MS200 (24 ga. steel) single and double support* 16" wide MS200 (24 ga. steel) single and double support* 16" wide MS200 (24 ga. steel) single and double support* 16" wide MS200 (24 ga. steel) single and double support* 16" wide MS200 (24 ga. steel) single and double support* 16" wide MS200 (24 ga. steel) single and double support* 16" wide MS200 (24 ga. steel) single and double support* 16" wide MS200 (24 ga. steel) single and double support* 16" wide MS200 (24 ga. steel) single and double support* 16" wide			See Table 4		
18" wide MS200 (24 ga. steel) single and double lock Min 2.5-inch wide support* See Table 4 Min 2.5-inch wide support* Min 2.5-inch wide support* Min 2.5-inch wide support* See Table 4 See Ta		support ³	000 14510 1		-
18' wide MS200 (24 ga ateel) single and double lock Min 2.5-inch wide support* See Table 4					
16' wide MS200 (24 ga. steel) single and double lock 18' wide MS200 (22 ga. steel) single and double lock Min 2.5-inch wide support* Min 2.5-inch wide support* See Table 4 See Table					
See Table 4	10" wide MC200 (24 me				
16" wide MS200 (22 ga. steel) single and double lock			See Table 4		
18" wide MS200 (22 ga steel) single and double lock Min 2.5-inch wide support* See Table 4 S		support		_	
18" wide MS200 (22 ga. steel) single and double lock					
18" wide MS200 (22 ga. steet) single and double lock				72	61.4
16" wide MS200 (22 ga. steel) single and double lock					
18" wide MS200 (22 ga. steel) single and double lock Min 2.5-inch wide supports Min 2.5-inch wide supports Min 2.5-inch wide MS200 (24 ga. steel) single and double lock Min 2.5-inch wide supports See Table 4 See Table 4 See Table 4 Min 2.5-inch wide supports Min 2.5-inch wide supports See Table 4 Min 2.5-inch wide supports Min 2.5-inch wide supports See Table 4 See Table 4 See Table 4 See Table 4 Min 2.5-inch wide supports See Table 4 See Table 4 See Table 4 Min 2.5-inch wide supports See Table 4 Min 2.5-inch wide supports See Table 4 Min 2.5-inch wide supports See Table 4 See Table 4 See Table 4 See Table 4 Min 2.5-inch wide supports See Table 4 Min 2.5-inch wide supports See Table 4 Min 2.5-inch wide supports See Table 4 See Table					
### See Table 4 ### Se					
Support	18" wide MS200 (22		See Table 4	48	133.4
16' wide MS200 (24 ga. steel) single and double lock Min 2.5-inch wide support* See Table 4		support ³	See Table 4		
16" wide MS200 (24 ga. steel) single and double lock Min 2.5-inch wide support* See Table 4 24 118.4 48 103.6 60 82.9 66 75.4 72 69.1 60 82.9 66 75.4 72 69.1 72 69.1 72 69.1 72 73 75.0 75 75 75 75 75 75 75 7					
16" wide MS200 (24 ga. steel) single and double lock					
Min 2.5-inch wide support See Table 4					
16" wide MS200 (24 ga. steel) single and double lock Min 2.5-inch wide support3 Min					
16" wide MS200 (24 ga. steel) single and double lock Min 2.5-inch wide supports					
See Table 4	40" ' 1 140000 (04				
Support			See Table 4		
16" wide MS200 (22 ga. steel) single and double lock 24 300.5 30 2240.4 36 200.3 42 171.7 36" wide PBR (0.032" aluminum) 36" wide PBR (26 ga. steel) 36" wide PBR (26 ga. steel) 36" wide PBR (24 ga. steel) 36" wide PBR		support ³	000 14510 1		
16" wide MS200 (22 ga. steel) single and double lock Min 2.5-inch wide supports					
16" wide MS200 (22 ga. steel) single and double lock Min 2.5-inch wide support3 See Table 4 See Table 4 See Table 4 48 150.2					
16" wide MS200 (22 ga. steel) single and double lock Min 2.5-inch wide support3 See Table 4 See Table 4 See Table 4 133.5 60 120.2 66 100.8 72 84.7 96 47.7 96 47.7 96 47.7 48 40.4					
16" wide MS200 (22 ga. steel) single and double lock Min 2.5-inch wide support3 See Table 4 42 171.7 133.5 150.2					
See Table 4					
Support	16" wide MS200 (22 ga.	Min 2.5-inch wide	Soo Toblo 4		
36" wide PBR (24 ga. steel) Min 2.5-inch wide support3 36" wide PBR (24 ga. steel) Min 2.5-inch wide support3 36" wide PBR (24 ga. steel) Min 2.5-inch wide support3 36" wide PBR (24 ga. steel) Min 2.5-inch wide support3 36" wide PBR (24 ga. steel) Min 2.5-inch wide support3 36" wide PBR (24 ga. steel) Min 2.5-inch wide support3 36" wide PBR (24 ga. steel) Min 2.5-inch wide support3 36" wide PBR (24 ga. steel) 36" wide PBR (24 ga. steel) Min 2.5-inch wide support3 36" wide PBR (24 ga. steel) 36" wide PBR (24 ga.		support ³	See Table 4	_	
36" wide PBR (0.032" aluminum) 36" wide PBR (0.032" aluminum) Min 2.5-inch wide support3 See Table 4 See					
See Table 4 24 40.4 30 32.3 32.3 36 26.9 24 192.3 30 153.8 36 26.9 24 192.3 30 153.8 36 26.9 24 192.3 30 153.8 36 26.9 24 192.3 30 153.8 36 128.2 24 109.9 36 36 36 36 36 36 36 3					
See Table 4					
See Table 4	36" wide PBR (0.032"	Min 2.5-inch wide	Con Toble 4		
36" wide PBR (26 ga. steel) Min 2.5-inch wide support3 See Table 4	aluminum)	support ³	See Table 4		
36" wide PBR (26 ga. steel) Min 2.5-inch wide support3 See Table 4 36" wide PBR (24 ga. steel) Min 2.5-inch wide support3 Min 2.5-inch wide support3 Min 2.5-inch wide support3 See Table 4					
Min 2.5-inch wide support See Table 4 42 109.9 48 96.1 54 77.2 60 62.6 66 51.7 191.4					
See Table 4 48 96.1 77.2 60 60 62.6 66 51.7 24 191.4 30 153.1 36" wide PBR (24 ga. steel) Min 2.5-inch wide support³ See Table 4	36" wide PRR (26 ga	Min 2 5-inch wide			
See Table 4			See Table 4		
Min 2.5-inch wide support3 See Table 4				_	
36" wide PBR (24 ga. steel) Min 2.5-inch wide support3 See Table 4 See Table 4 See Table 4 See Table 4 24 191.4 30 153.1 36 127.6 42 109.4 48 86.4 54 60 55.3 24 306.4 30 245.1 36 204.2 36 37 38 38 39 30 30 30 30 30 30 30 30 30					
36" wide PBR (24 ga. steel) Min 2.5-inch wide support3 See Table 4 30 153.1 36 127.6 42 109.4 48 86.4 54 60 55.3 24 306.4 30 245.1 36 30 245.1 36 30 42 30 42 30 42 30 42 30 42 153.3 See Table 4					
See Table 4 42 109.4				30	153.1
See Table 4 See Table 4 42 109.4	36" wide PBR (24 ga.	Min 2.5-inch wide	0.7		
See Table 4		=	See Table 4		
Min 2.5-inch wide support3 See Table 4 60 55.3 24 306.4 30 245.1 36 204.2 42 153.3 17.3 54 92.7 60 75.1 66 62.1					
36" wide PBR (24 ga. steel) Min 2.5-inch wide support ³ See Table 4 See Table 4 See Table 4 30 245.1 36 204.2 42 153.3 54 92.7 60 75.1 66 62.1					55.3
36" wide PBR (24 ga. steel) Min 2.5-inch wide support ³ See Table 4 See Table 4 36 204.2 42 153.3 48 117.3 54 92.7 60 75.1 66 62.1					
36" wide PBR (24 ga. steel) Min 2.5-inch wide support ³ See Table 4 42 153.3 48 117.3 54 92.7 60 75.1 66 62.1					
See Table 4 48 117.3 92.7 60 75.1 66 62.1	26" wide DDD (04	Min 2 E inchide			
54 92.7 60 75.1 66 62.1			See Table 4		117.3
66 62.1	,			_	

TABLE 5- ALLOWABLE UNIFORM GRAVITY LOADS FOR METAL ROOF PANELS INSTALLED ON SPACED SUPPORTS^{1,2} (continued)

	UNIFORM GRAVITY LOADS		NELS INSTALLED ON SPACED S	
TAYLOR METAL	SUPPORT	FASTENING	MAXIMUM SUPPORT	ALLOWABLE
ROOF PANEL		PATTERN	SPACING (inches)	UNIFORM LOAD (psf) 63.2
34" wide HR-34 (0.032"	Min 2.5-inch wide	See Table 4	30	50.6
aluminum)	support ³	OCC TUDIC 4	36	42.1
34" wide HR-34 (0.032" aluminum)			24	98.6
	Min O E in all suide		30	78.9
	Min 2.5-inch wide support ³	See Table 4	36	65.8
aidiffiliati)	support		42	56.4
			48	49.3
		See Table 4	24	234.6
			30	187.6 156.4
	Min 2.5-inch wide		42	134.0
34" wide HR-34 (26 ga.			48	117.3
steel)	support ³		54	104.2
			60	93.8
			66	85.3
			72	85.3
	1		24	318.2
			30	254.6 212.1
			42	181.8
34" wide HR-34 (24 ga.	Min 2.5-inch wide		48	159.1
steel)	support ³	See Table 4	54	141.4
			60	123.3
			66	101.9
			72	85.6
			96	48.2
			24 30	361.8 289.5
			36	241.2
			42	206.8
34" wide HR-34 (22 ga.	Min 2.5-inch wide	See Table 4	48	206.8 180.9 152.2
steel)	support ³	See Table 4	54	152.2
			60	127.3
			66	115.7
			72 96	106.1 60.1
			24	380.0
			30	304.0
			36	253.3
			42	217.1
34" wide HR-34 (20 ga.	Min 2.5-inch wide	See Table 4	48	190.0
steel)	support ³	Gee Table 4	54	168.9
			60	142.7
			66	117.9 99.1
			96	55.7
			24	244.6
07.00	Min 2.5-inch wide support ³	See Table 4	30	156.6
37.33" wide Classic 7/8 Corrugated (0.032"			36	108.7
aluminum)		OCC TABLE 4	42	79.9
G.G.M.			48	61.2
			52	48.3
			24 30	356.3 228.0
37.33" wide Classic 7/8 Corrugated (26 ga. steel)			36	158.3
	Min 2.5-inch wide	See Table 4	42	116.3
	support ³		48	89.1
			52	70.4
			60	57.0
		See Table 4	24	485.6
			30	310.8
			42	215.8 158.6
	Min 2.5-inch wide		48	121.4
Corrugated (24 ga. steel)	support ³		52	95.9
			60	77.7
			66	64.2
			72	54.0

TABLE 5- ALLOWABLE UNIFORM GRAVITY LOADS FOR METAL ROOF PANELS INSTALLED ON SPACED SUPPORTS ^{1,2} (continued)				
TAYLOR METAL ROOF PANEL	SUPPORT	FASTENING PATTERN	MAXIMUM SUPPORT SPACING (inches)	ALLOWABLE UNIFORM LOAD (psf)
	24 30 36			571.3
			30	365.6
		36	253.9	
	Mire O. E. in all and de		42	365.6 253.9 186.5 142.8 112.8 91.4 75.5 63.5 106.7 68.3 47.4 128.2 102.6 73.8 54.2 490 392 280.6 206.1 157.8 124.7 101.0 83.5 70.1 676.8 520.0 361.1 265.3 203.1 160.5
37.33" wide Classic 7/8	Min 2.5-inch wide	See Table 4	48	142.8
Corrugated (24 ga. steel)	support ³		52	
			60	91.4
			66	75.5
			72	63.5
36" wide BR-36 (0.032"		See Table 4	24	106.7
aluminum) ²	Min 2.5-inch wide		30	68.3
alaminam)	support ³	Coo rabio r	36	47.4
			24	128.2
36" wide BR-36 (0.040"	Min 2.5-inch wide		30	102.6
aluminum) ²	support ³	See Table 4	36	73.8
,	23,4233		42	
			24	
			30	
			36	
			42	
36" wide BR-36 (24	Min 2.5-inch wide	Caa Tabla 4	48	
gage steel) ²	support ³	I See Lable /I I		
,				
			72	70.1
		30 520 36 361 42 265 Min 2.5-inch wide Can Table 4 8 203	24	676.8
			30	520.0
			36	361.1
			42	
36" wide BR-36 (22			203.1	
gage steel) ²	support ³		160.5	
			60	130.0
			66	107.4
			72	90.3
			96	50.8
36" wide BR-36 (20			24	656.0
	<u> </u>		30	514.8
			36	357.5
			42	262.7
	(20 Min 2.5-inch wide support ³ See	See Table 4	48	201.1
gage steel) ²		CCC TABIC T	54	158.9
			60	128.7
			66	106.4
			72	89.4
			96	50.3

For **SI:** 1 inch = 25.4 mm, 1 psf = 0.0479 kPa.

TABLE 6-FIRE CLASSIFICATION ASSEMBLIES

ROOF CLASSIFICATION	SUBSTRATE	MAX. ROOF SLOPE	ASSEMBLY DETAILS	
A Nor	Noncombustible	Unlimited	Panels:	Versa Span, MS150, MS200, PBR, HR-34, Classic Corrugated 7/8 and BR-36 steel roof panels
			Insulation:	Any UL Classified roofing insulation, except for foam plastic insulation, minimum 1-inch-thick
			Panels:	Versa Span, MS150, MS200, PBR, HR-34, Classic Corrugated 7/8 and BR-36 steel roof panels
A	Noncombustible	Unlimited	Barrier Board:	Min. 15/32-inch-thick plywood
			Ply Sheet (optional):	Min. one ply ASTM D226 Type I (No. 115) or Type II (No. 30) asphalt saturated felt or UL Certified Type G1 mechanically fastened

¹Tabulated load values are based on panels uniformly loaded and installed on three or more equal span conditions. ²The tabulated spans are able to resist the concentrated roof live load of 300 lbf (1.33 kN) indicated in IBC Table 1607.1.

³ The structural support must be designed to resist the applicable forces. When panels are installled over solid or closely fitted deck sheathing, the capacity is limited to the capacity of the underlying sheathing.

TABLE 6-FIRE CLASSIFICATION ASSEMBLIES (continued)

ROOF CLASSIFICATION	SUBSTRATE	MAX. ROOF SLOPE	ASSEMBLY DETAILS		
CLASSIFICATION		JLUFE	Versa Span, MS150, MS200, PBR, HR-34,		
			Panels:	Classic Corrugated 7/8 and BR-36 steel roof panels	
А	Combustible	Unlimited	Barrier Board:	Georgia Pacific ¼ inch minimum DensDeck board or ¼ inch minimum United States Gypsum Co SECUROCK Glass-Mat Roof Board (Type SGMRX), National Gypsum DEXcell Glass Mat Roof Board or DEXcell FV Glass Mat Roof Board, CertainTeed Gypsum GlasRoc or ½ inch minimum UL Certified gypsum board with all joints staggered a minimum of 6 inches from the plywood joints	
			Ply Sheet (optional):	Min. one ply ASTM D226 Type I (No. 115) or Type II (No. 30) asphalt saturated felt or any UL Certified Type G1, G2 or G3 base or ply sheet mechanically fastened	
			Panels:	Versa Span, MS150, MS200, PBR, HR-34, Classic Corrugated 7/8 and BR-36 steel roof panels	
Α	Noncombustible	Unlimited	Insulation:	Min. 1-inch-thick Perlite (ASTM C728) or wood fiber (ASTM C208, Type II	
Λ,		O TIME O	Ply Sheet (optional):	Min. one ply ASTM D226 Type I (No. 115) or Type II (No. 30) asphalt saturated felt or any UL Certified Type G1, G2 or G3 base or ply sheet mechanically fastened	
A	Noncombustible	Unlimited	Panels:	Versa Span, MS150, MS200, PBR, HR-34, Classic Corrugated 7/8 and BR-36 steel roof panels	
			Barrier Board:	Georgia Pacific ¼ inch minimum DensDeck board or ¼ inch minimum United States Gypsum Co SECUROCK Glass-Mat Roof Board (Type SGMRX), National Gypsum DEXcell Glass Mat Roof Board or DEXcell FV Glass Mat Roof Board, CertainTeed Gypsum GlasRoc or ½ inch minimum UL Certified gypsum board with all joints staggered a minimum of 6 inches from the plywood joints	
			Ply Sheet (optional):	Min. one ply ASTM D226 Type I (No. 115) or Type II (No. 30) asphalt saturated felt or any UL Certified Type G1, G2 or G3 base or ply sheet mechanically fastened	
			Panels:	Versa Span, MS150, MS200, PBR, HR-34, Classic Corrugated 7/8 and BR-36 steel roof panels	
А	Combustible	Unlimited	Underlayment:	One layer Versashield Fire-resistant Roof Deck Protection mechanically fastened per ESR-2053 -or- One layer Polystick XFR self-adhered installed per ESR-1697	
			Ply Sheet (optional):	Min. one ply ASTM D226 Type I (No. 15) or Type II (No. 30) asphalt saturated felt or any UL Certified Type G1, G2 or G3 base or ply sheet mechanically fastened	
A (reroofing)	Combustible	Unlimited	Panels:	Versa Span, MS150, MS200, PBR, HR-34, Classic Corrugated 7/8 and BR-36 steel roof panels	
			Existing Roof System:	Any Class A UL listed asphalt shingle	
			Slip sheet:	One layer Versashield Fire-resistant Roof Deck Protection mechanically fastened per ESR-2053-or- One layer Polystick XFR self-adhered installed per ESR-1697	
А	Noncombustible	Unlimited	Panels:	Versa Span, MS150, MS200, PBR, HR-34, Classic Corrugated 7/8 and BR-36 aluminum roof panels	

TABLE 6-FIRE CLASSIFICATION ASSEMBLIES (continued)

ROOF CLASSIFICATION	SUBSTRATE	MAX. ROOF SLOPE	ASSEMBLY DETAILS	
A	Combustible	Unlimited	Panels:	Versa Span, MS150, MS200, PBR, HR-34, Classic Corrugated 7/8 and BR-36 aluminum roof panels
			Underlayment:	Two layers Versashield Fire-resistant Roof Deck Protection mechanically fastened per ESR-2053-or- One layer Polystick XFR self-adhered installed per ESR-1697
В	Combustible	Unlimited	Panels:	Versa Span, MS150, MS200, PBR, HR-34, Classic Corrugated 7/8 and BR-36 aluminum roof panels
			Underlayment:	One layer Versashield Fire-resistant Roof Deck Protection mechanically fastened per ESR-2053

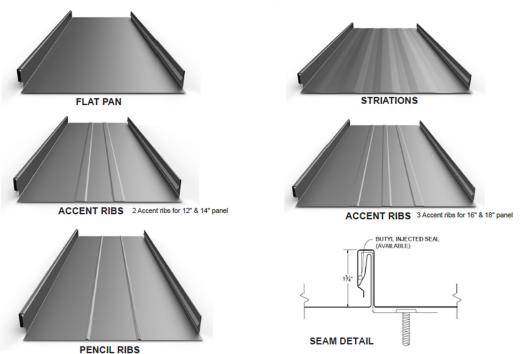
¹Wood deck must be minimum 15/32-inch-thick plywood or non-veneer APA-rated 7/16-inch-thick oriented-strand board (OSB) or spaced sheathing. Steel deck must be a minimum of No. 22 gauge galvanized steel.

³Polyglass USA Polystick XFR self-adhered underlayment is evaluated under ICC-ES evaluation report ESR-1697 and must be installed in accordance with that report.



PANEL PROFILES

12", 14", 16", 18" coverage options



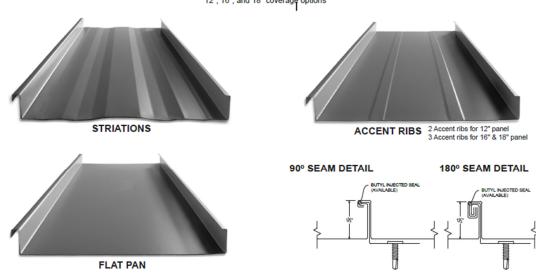
²GAF's VersaShield® Fire-Resistant Roof Deck Protection is evaluated under ICC-ES evaluation report ESR-2053 and must be installed in accordance with that report.



MS-150 TM MECHANICALLY SEAMED

PANEL PROFILES

12", 16", and 18" coverage options





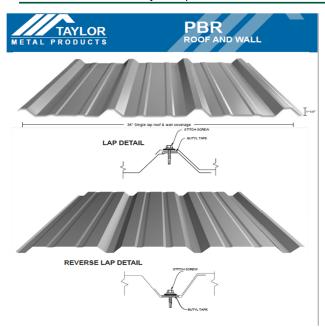
MS-200 TM MECHANICALLY SEAMED

PANEL PROFILES

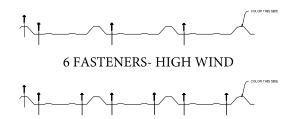
12", 14", 16", and 18" coverage options



FIGURE 1- TAYLOR METAL PRODUCTS METAL ROOF PANELS (continued)



ROOFING/SIDING PANEL APPLICATION 3 FASTENERS



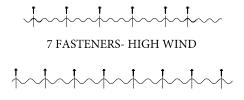
REVERSED SIDING PANEL APPLICATION



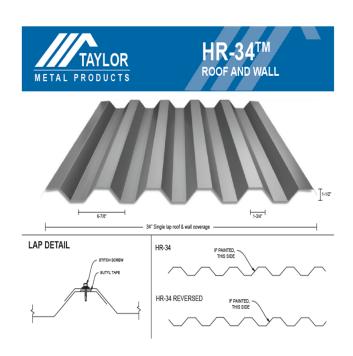


ROOF PANEL APPLICATION

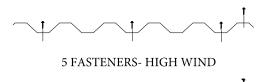
5 FASTENERS

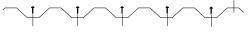


SIDING PANEL APPLICATION

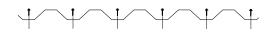


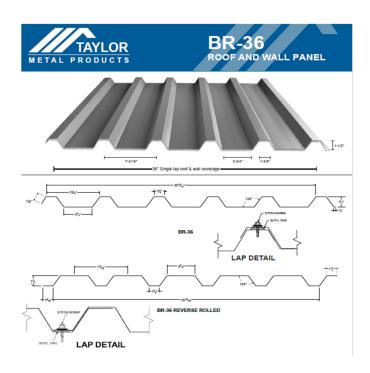
ROOFING/SIDING PANEL APPLICATION 3 FASTENERS





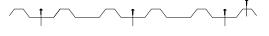
REVERSED SIDING PANEL APPLICATION



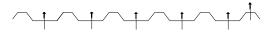


ROOFING/SIDING PANEL APPLICATION

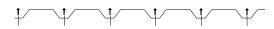
3 FASTENERS



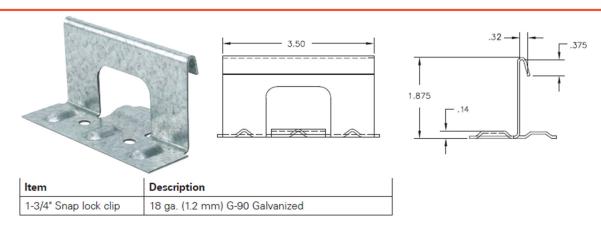
5 FASTENERS- HIGH WIND



REVERSED SIDING PANEL APPLICATION

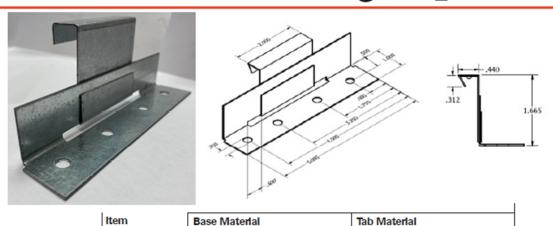


1-3/4" Versa-Span Snap Lock Panel Clip



Manufactured by: Clip Master SFS AMSI

1-1/2" MS-150 Floating Clips



18 ga. (1.5 mm) G-90 Galvanized

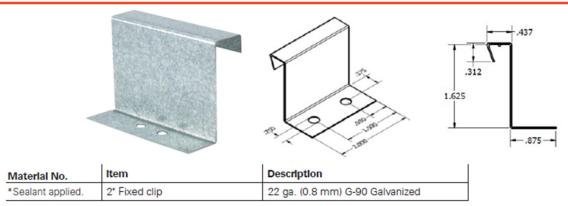
22 ga. (0.8 mm) G-90 Galvanized

Manufactured by: Clip Master AMSI

*Sealant applied.

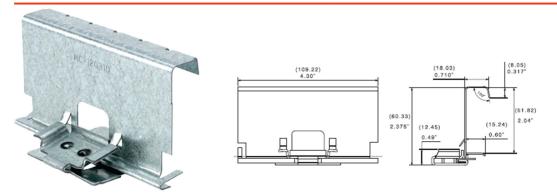
1-1/2" Float clip

1-1/2" MS-150 Fixed Clip



Manufactured by: Clip Master SFS AMSI

2" MS-200 Floating Clip



Material No.	Item	Base Material	Tab Material
1184718*	2" Float clip	16 ga. (1.5 mm) G-90 Galvanized	22 ga. (0.8 mm) G-90 Galvanized

^{*}Sealant applied.

Manufactured by: SFS

2" MS-200 Fixed Clip



Manufactured by: Clip Master SFS AMSI

FIGURE 2- TAYLOR METAL PRODUCTS PANEL CLIPS FOR STANDING SEAM METAL ROOF PANELS (continued)



ICC-ES Evaluation Report

ESR-5046 LABC and LARC Supplement

Issued November 2022

This report is subject to renewal November 2023.

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A Subsidiary of the International Code Council®

DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION

Section: 07 41 13—Metal Roof Panels

REPORT HOLDER:

TAYLOR METAL INC. (dba TAYLOR METAL PRODUCTS)

EVALUATION SUBJECT:

TMP METAL ROOFING PANELS

1.0 REPORT PURPOSE AND SCOPE

Purpose:

The purpose of this evaluation report supplement is to indicate that the TMP metal roofing panels, described in ICC-ES evaluation report <u>ESR-5046</u>, 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)
- 2020 City of Los Angeles Residential Code (LARC)

2.0 CONCLUSIONS

The TMP metal roofing panels, described in Sections 2.0 through 7.0 of the evaluation report <u>ESR-5046</u>, comply with the LABC Chapter 15, and the LARC Chapter 9, and are subject to the conditions of use described in this supplement.

3.0 CONDITIONS OF USE

The TMP metal roofing panels described in this evaluation report supplement must comply with all of the following conditions:

- All applicable sections in the evaluation report ESR-5046.
- The design, installation, conditions of use and identification of the TMP metal roofing panels are in accordance with the 2018 International Building Code® (IBC) provisions noted in the evaluation report ESR-5046.
- The design, installation and inspection are in accordance with additional requirements of LABC Chapters 16 and 17, as applicable.
- The TMP metal roofing panels must not be installed over existing wood shakes or wood shingles in accordance with LABC Section 1511.
- The installation of the TMP Metal roofing panels must comply with City of Los Angeles Information Bulletin P/BC 2020-16, "Dwellings in High Wind Velocity Areas (HWA)".

This supplement expires concurrently with the evaluation report issued November 2022.





ICC-ES Evaluation Report

ESR-5046 CBC and CRC Supplement

Issued November 2022

This report is subject to renewal November 2023.

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A Subsidiary of the International Code Council®

DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION

Section: 07 41 13—Metal Roof Panels

REPORT HOLDER:

TAYLOR METAL INC. (dba TAYLOR METAL PRODUCTS)

EVALUATION SUBJECT:

TMP METAL ROOFING PANELS

1.0 REPORT PURPOSE AND SCOPE

Purpose:

The purpose of this evaluation report supplement is to indicate that the TMP metal roofing panels, described in ICC-ES evaluation report ESR-5046, have also been evaluated for compliance with the codes noted below.

Applicable code editions:

■ 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 2.1.1 and 2.1.2 below.

■ 2022 and 2019 California Residential Code (CRC)

2.0 CONCLUSIONS

2.1 CBC:

The TMP metal roofing panels, described in Sections 2.0 through 7.0 of the evaluation report ESR-5046, may be used where the CBC requires a Class A roof covering complying with 2022 or 2019 CBC Section 1505.1.1, a Class B roof covering complying with 2019 CBC Section 1505.1.2, or a Class C roof covering complying with 2022 CBC Section 1505.1.2 or 2019 CBC Section 1505.1.3, 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 CBC Chapters 16 and 17 as applicable.

- **2.1.1 OSHPD:** The TMP metal roofing panels, described in Sections 2.0 through 7.0 of the evaluation report ESR-5046, comply with CBC Chapter 15 with applicable amendments [OSHPD 1, 1R, 2, 3, 4 and 5], 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 in CBC Chapters 16, 16A, 17 and 17A, as applicable.
- **2.1.2 DSA:** The TMP metal roofing panels, described in Sections 2.0 through 7.0 of the evaluation report ESR-5046, comply with CBC Chapter 15 with applicable amendments [DSA-SS, DSA-SS/CC], 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 in CBC Chapters 16, 16A and 17A, as applicable.

2.2 CRC:

The TMP metal roofing panels, described in Sections 2.0 through 7.0 of the evaluation report ESR-5046, may be used where the CRC requires a Class A roof covering complying with 2022 or 2019 CRC Section R902.1.1, a Class B roof covering complying with 2019 CRC Section R902.1.2, or a Class C roof covering complying with 2022 CRC Section R902.1.2 or 2019 CRC Section R902.1.3, provided the design and installation are in accordance with the 2021 and 2018 *International Residential Code*® (IRC) provisions noted in the evaluation report and the additional requirements of CRC Section R905.4.

This supplement expires concurrently with the evaluation report, issued November 2022.

