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This section includes editing notes to assist the user in editing the section to suit project requirements. These notes are included as hidden text, and can be revealed or hidden by the following method in Microsoft Word:

 Display the FILE tab on the ribbon, click OPTIONS, then DISPLAY. Select or deselect HIDDEN TEXT.

This guide specification section has been prepared by Morin Corporation for use in the preparation of a project specification section covering Symmetry structural standing seam metal roof panels.

For mounting of solar panels on metal roofs please contact Morin Corporation.

The following should be noted in using this specification:

Hypertext links to manufacturer websites are included after manufacturer names to assist in product selection and further research. Hypertext links are contained in blue, e.g.:

 [www.morincorp.com](http://www.morincorp.com)

Optional text requiring a selection by the user is enclosed within brackets and as red text, e.g.: Color: [Red.] [Black.]"

Items requiring user input are enclosed within brackets and as red text, e.g.: "Section [\_\_ \_\_ \_\_ - \_\_\_\_\_\_\_\_]."

Optional paragraphs are separated by an "OR" statement included as red text, e.g.:

\*\*\*\* OR \*\*\*\*

For assistance in the use of products in this section, contact Morin Corporation by calling 800-640-9501 or visit their website at [www.morincorp.com](http://www.morincorp.com/)

This specification has been prepared based on SimpleSpecs™ specification templates. The SimpleSpecs™ Master Guide Specification system comprises a full architectural master specification that can be used to specify all project requirements. For additional information on SimpleSpecs™ products visit the ZeroDocs.com website at [www.zerodocs.com](http://www.zerodocs.com).

SECTION 07 41 13 - METAL ROOF PANELS

 GENERAL

 SUBMITTALS

 Action Submittals.

 Shop Drawings: Illustrate products, installation, and relationship to adjacent construction.

 Product Data: Manufacturer’s descriptive data and product attributes for metal panels.

 Samples: Selection samples.

 Informational Submittals:

 Panel Calculations: Structural calculations prepared by qualified professional engineer licensed in State of [\_\_\_\_].

 Certificate of Compliance: Certification that installed products meet specified design and performance requirements.

 ADMINISTRATIVE REQUIREMENTS

Retain the following for a pre-installation conference. Delete for smaller, less complex projects.

 Pre-Installation Conference:

 Attendance: [Design Professional,] [Owner,] [Contractor,] [Construction Manager,] installer, and related trades.

 Review: Project conditions, manufacturer requirements, delivery and storage, staging and sequencing, and protection of completed work.

 SYSTEM DESCRIPTION

 Design Requirements:

 Live and dead loads in accordance with Building Code.

 Minimum wind pressure [of [\_\_] PSF,] [as indicated on Drawings,] [in accordance with [ASCE 7,] [Building Code,] [\_\_\_\_,] with maximum allowable deflection of [L/180] [L/240] [\_\_], tested to ASTM E1592.

 Movement caused by an ambient temperature range of [120] [\_\_] degrees F and a surface temperature range of [160] [\_\_] degrees F.

In the following paragraph select 0.006 for steel panels and 0.048 for aluminum panels.

 Performance Requirements:

 Air leakage: Maximum [0.006] [0.048] CFM per square foot of roof area, measured at reference differential pressure across assembly of 40.0 PSF, tested to ASTM E1680.

 Water leakage: None, tested to ASTM E1646 at test pressure of 40.0 PSF.

 QUALITY ASSURANCE

 Installer Qualifications: Firm specializing in work of this Section with minimum [5] [\_\_] years’ experience.

Retain the following for a full-scale site mockup. Delete for smaller, less complex projects.

 Mockup: [8 x 8] [\_\_ x \_\_] feet. Approved mockup [may] [may not] remain as part of the Work.

 Roof System:

 Wind uplift resistance: Class 90, tested to UL 580.

Retain the following for projects requiring a Solar Reflectance Index (SRI) rating.

 Solar Reflectance Index (SRI): Minimum [29,] [78,] tested to ASTM C1549 and calculated in accordance with ASTM E1980.

 Energy Star certified for [steep] [low] slope.

 Fire hazard classification: Class A, tested to ASTM E108.

 WARRANTIES

 Manufacturer’s 2 year warranty against defects in materials and workmanship.

 Manufacturer’s 20 year warranty against chipping, cracking, fading, or delamination of panel finish.

 Manufacturer’s 20 year warranty against defects in materials and workmanship resulting in water leakage through roofing system.

 Installer’s 5 year warranty against water leakage through roofing system.

 PRODUCTS

 MANUFACTURERS

 Contract Documents are based on products by Morin Corporation, [www.morincorp.com](http://www.morincorp.com/)

Edit the following to indicate whether substitutions will be allowed for the products in this section.

 Substitutions: [Refer to Division 01.] [Not permitted.]

 MATERIALS

Retain the following for aluminum-zinc alloy (Galvalume/Zincalume) steel sheet. AZ50 is the coating used for coated panels; AZ55 is used for uncoated (Galvalume Plus) panels.

 Aluminum-Zinc Alloy Coated Steel Sheet: ASTM A792, [AZ50] [AZ55] [\_\_] coating class.

\*\*\*\* OR \*\*\*\*

Retain the following for aluminum sheet.

 Aluminum Sheet: ASTM B209, 3003-H14 alloy and temper.

 ACCESSORIES

Retain the following for self-adhering rubberized asphalt underlayment where additional protection from water infiltration is desired.

 Rubberized Asphalt Underlayment: ASTM D1970; minimum [30] [40] [\_\_] mil thick polymer modified asphalt laminated to slip-resistant polyethylene film, self-adhering, formulated for extended high in-service temperatures up to [260] [\_\_] degrees F.

 \*\*\*\* OR \*\*\*\*

Retain the following for a proprietary synthetic underlayment.

 Synthetic Underlayment: [\_\_\_\_] by [\_\_\_\_] [or approved substitute.]

 Concealed Anchor Clips: Floating single piece anchor clip.

 Closure Strips: Closed cell rubber, minimum 1 inch thick, to match panel profile.

Retain the following for snow guards for areas having snow accumulation. Verify acceptable snow guards with Morin Corporation. Note that snow guards must be engineered by the manufacturer or design professional to resist applied loads without damage to the guards, metal panels, or supporting construction.

 Snow Guards:

 Source: [\_\_\_\_] by [\_\_\_\_] [or approved substitute].

 Material: [Aluminum.] [Brass.]

 Finish: [\_\_\_\_].

 Clamp: Type approved by metal roof panel manufacturer.

 Tapes and Sealers: Type recommended by panel manufacturer.

 FABRICATION

 Roll form panels from minimum [[20] [22] [24] gage aluminum-zinc alloy coated steel sheet.] [[0.032] 0.040] [0.050] inch thick aluminum sheet.]

Contact Morin for other panel options.

 Roof Panels:

* + - 1. Profile: Symmetry SYM-[\_\_\_\_].

Ribbed panels are available in 16 and 18 inch widths only.

 Panel width: [12] [16] [18] inches.

 Seam height: [1-1/2] [2] [2-1/2] [3] inches.

 Panel type: [With clip relief.] [Without clip relief.] [Ribbed.] [Striated.]

 Panel sealant: Holt melt type.

* + - 1. Seam type: Mechanically seamed.

 FINISHES

Contact Morin Corporation for other available coating systems.

Retain the following for an uncoated aluminum-zinc alloy (Galvalume Plus/Zincalume Plus) steel panel.

 Panels and Trim: Mill finish; apply temporary protective coating.

 \*\*\*\* OR \*\*\*\*

Retain the following for a standard PVDF coating system for aluminum-zinc allow coated steel sheet and aluminum sheet. Refer to Morin Corporation technical data for current colors.

 Panels and Trim:

 Coating type: Fluropon PVDF.

 Color:

* + - * 1. Exposed surfaces: [\_\_\_\_.] [Custom color.]
				2. Concealed surfaces: [Off-white wash coat.] [\_\_\_\_.] [Custom color.]

 \*\*\*\* OR \*\*\*\*

Retain the following for a premium color mica PVDF coating system for aluminum-zinc allow coated steel sheet and aluminum sheet. Refer to Morin Corporation technical data for current colors.

 Panels and Trim:

 Coating type: Fluropon Classic II PVDF.

 Color:

* + - * 1. Exposed surfaces: [\_\_\_\_.] [Custom color.]
				2. Concealed surfaces: [Off-white wash coat.] [\_\_\_\_.] [Custom color.]

 \*\*\*\* OR \*\*\*\*

Retain the following for a premium color metallic PVDF coating system for aluminum-zinc allow coated steel sheet and aluminum sheet. Refer to Morin Corporation technical data for current colors.

 Panels and Trim:

 Coating type: Fluropon Classic PVDF.

 Color:

* + - * 1. Exposed surfaces: [\_\_\_\_.] [Custom color.]
				2. Concealed surfaces: [Off-white wash coat.] [\_\_\_\_.] [Custom color.]

 \*\*\*\* OR \*\*\*\*

Retain the following for a coastal PVDF coating system for aluminum-zinc alloy coated steel sheet for projects located within 1500 feet of salt water environments. Refer to Morin Corporation technical data for current colors.

 Panels and Trim:

 Coating type: Fluorothane Coastal.

 Color:

* + - * 1. Exposed surfaces: [\_\_\_\_.] [Custom color.]
				2. Concealed surfaces: [Coastal off-white wash coat.] [\_\_\_\_.] [Custom color.]

 EXECUTION

 INSTALLATION OF UNDERLAYMENT

 Apply [one ply] [two plies] underlayment horizontally over substrate.

Retain the following for mechanically fastened underlayment.

 Fasten each strip under overlapping strip to hold strip in position until roofing panels are installed.

 \*\*\*\* OR \*\*\*\*

Retain the following for self-adhering underlayment.

 Press to full bond with substrate.

 INSTALLATION OF METAL PANELS

 Install in accordance with manufacturer's instructions and approved Shop Drawings.

 Fasten panels using concealed panel clips.

 Install panels in continuous lengths from eave to ridge without end joints.

 Form seams using portable seaming machine.

 Install closure strips at exposed panel edges.

Retain the following for snow guards for areas having snow accumulation.

 Install snow guards [at locations indicated.] [where roofs terminate over walkways or entries.] [\_\_\_\_.]

 Installation Tolerances:

 Maximum variation from plane: [1/4] [\_\_] inch in 20 feet, noncumulative.

END OF SECTION