

SECTION 07721.01

SNOW GUARDS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Snow guards for metal roofs.
 - 2. [Non-penetrating] [Face fastened] attachment system.
 - 3. Color-matched metal strips.
- B. Related Sections:
 - 1. Division 1: Administrative, procedural, and temporary work requirements.
 - 2. Section [07410 - Metal Roof Panels:] [07610 - Sheet Metal Roofing:] [_____ - _____:] Metal roof panels.
 - 3. Section 07730 - Roof Accessory Attachment System.

1.2 REFERENCES

- A. Aluminum Association (AA) - Aluminum Standards and Data, 2003 Edition.
- B. ASTM International (ASTM):
 - 1. B85-03 - Standard Specification for Aluminum-Alloy Die Castings.
 - 2. B221-04a - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.

1.3 SYSTEM DESCRIPTION

- A. Attachment system to provide attachment to standing seam metal roofs:
 - 1. With only minor dimpling of panel seams.
 - 2. Without penetrations through roof seams or panels.
 - 3. Without use of sealers or adhesives.
 - 4. Without voiding roof warranty.
- B. Loading: Design snow guard system to resist minimum in-service vector load of [] pounds per linear foot of eave.
- C. Factor of safety: Utilize a factor of safety \geq [2] [] to determine allowable loads from ultimate tested clamp tensile load values.

1.4 SUBMITTALS

- A. Submittals for Review:
 - 1. Shop Drawings: Show locations of snow guards on roof and attachment spacing.
 - 2. Product Data: Include product description and installation instructions.
 - 3. Samples:
 - a. Clamp samples.
 - b. 24 inch long cross member samples including color-matched metal strip, splice connector, and other hardware.
- B. Quality Control Submittals:
 - 1. Test results: Results of product load testing, issued by a recognized independent testing laboratory, showing load-to-failure value of attachment.
- C. Sustainable Design Submittals:
 - 1. Regionally manufactured products: Certify location of material manufacturer and distance from manufacturer to project site.
- D. Closeout Submittals:

1. Certification: Installer's certification that snow guard system was installed in accordance with manufacturer's instructions and approved Shop Drawings.

1.5 QUALITY ASSURANCE

- A. Mockup:
 1. Size: Minimum [8] [] feet long.
 2. Show: Snow guard attachment, cross members, and accessories.
 3. Locate [where directed.] [].
 4. Approved mockup may remain as part of the Work.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Contract Documents are based on S-5! ColorGard by Metal Roof Innovations, Ltd.
- B. Substitutions: [Under provisions of Division 1.] [Not permitted.]

2.2 COMPONENTS

- A. Clamps:
 1. Manufactured from 6061-T6 aluminum extrusions conforming to ASTM B221 or aluminum castings conforming to ASTM B85 and to AA Aluminum Standards and Data.
 2. Clamp model: No. [S-5-U.] [S-5-T.] [S-5-Z.] [S-5-E.] [S-5-K.] [S-5-R.] [S-5-T2.]
 3. Set screws: 300 Series stainless steel, 18-8 alloy, 3/8 inch diameter, with round nose point.
 4. Attachment bolts: 300 Series stainless steel, 18-8 alloy, 10 mm diameter, with flat washers.

**** OR ****

- B. Brackets:
 1. Manufactured from 6061-T6 alloy and temper aluminum extrusions conforming to ASTM B221 and AA Aluminum Standards and Data or cast aluminum.
 2. Model: VersaBracket.
 3. Screws for attachment of brackets to roof: [Stainless steel,] [], of type best suited to application.
- C. Cross Members:
 1. Manufactured from 6061-T6 alloy and temper aluminum extrusions conforming to ASTM B221 and AA Aluminum Standards and Data.
 2. Receptacle in face to receive color-matched metal strips.
 3. Provide splice connectors ensuring alignment and structural continuity at end joints.
- D. Color Strips: Same material and finish as roof panels; obtained from roof panel manufacturer.
- E. Snow and Ice Clips: Aluminum, with rubber foot, minimum 3 inches wide.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Prior to beginning installation, verify that:
 1. Panel seaming is complete.
 2. Panel attachment is sufficient to withstand loads applied by snow guard system.
 3. Installation will not impeded roof drainage.

**** OR ****

- B. Prior to beginning installation, verify that:
 - 1. Roof attachment is sufficient to withstand loads applied by snow guard system.
 - 2. Installation will not impeded roof drainage.

3.2 PREPARATION

- A. Clean areas to receive attachments; remove loose and foreign matter that could interfere with installation or performance.

3.3 INSTALLATION

- A. Install system in accordance with manufacturer's instructions and approved Shop Drawings.
- B. Place clamps at maximum 32 inches on center or as required by in-service loads.
- C. Place clamps in straight, aligned rows.
- D. Place both set screws on same side of clamp.
- E. Tighten set screws to manufacturer's recommended torque. Randomly test set screw torque using calibrated torque wrench.
- F. Insert color-matched metal strips into cross members, staggering strips to cover cross member joints.
- G. Attach cross members to clamps; tighten bolts to manufacturer's recommended torque.
- H. Install splice connectors at cross member end joints.
- I. Do not cantilever cross members more than 4 inches beyond last clamp at ends.
- J. Install [one SnoClip] [two SnoClips] per panel between panel seams.

**** OR ****

3.4 INSTALLATION

- A. Install system in accordance with manufacturer's instructions and approved Shop Drawings.
- B. Place clamps at maximum 32 inches on center or as required by in-service loads.
- C. Place clamps in straight, aligned rows.
- D. Insert color-matched metal strips into cross members.
- E. Attach cross members to brackets using self-tapping screws provided.
- F. Install splice connectors at cross member end joints.
- G. Do not cantilever cross members more than 4 inches beyond last VersaBracket at ends.
- H. Install SnoClips at spacings indicated on Shop Drawings.

END OF SECTION