SECTION 074113 - METAL ROOF PANELS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Architectural roofing system of preformed steel panels.
   1. The specified architectural standing seam roof panels are to be factory fabricated in one piece. No mid-span lapped horizontal seaming will be accepted.

B. Soffit Panels.

C. Gutters and Downspouts.

D. Attachment system.

E. Finishes.

F. Accessories.

1.02 RELATED REQUIREMENTS

A. Section 061000 - Rough Carpentry: Roof blocking.

B. Section 079005 - Joint Sealers: Field-installed sealants.

C. Section 092116 - Gypsum Board Assemblies: Hat channels for soffit panel support.

1.03 REFERENCE STANDARDS

A. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2015.

B. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2015a.

C. ASTM E1592 - Standard Test Method for Structural Performance of Sheet Metal Roof and Siding Systems by Uniform Static Air Pressure Difference; 2005 (Reapproved 2012).

D. ASTM E1646 - Standard Test Method for Water Penetration of Exterior Metal Roof Panel Systems by Uniform Static Air Pressure Difference; 1995 (Reapproved 2011).

E. ASTM E1680 - Standard Test Method for Rate of Air Leakage Through Exterior Metal Roof Panel Systems; 2011.

1.04 SUBMITTALS

A. Product Data: Manufacturer's data sheets on each product to be used, including:
   1. Storage and handling requirements and recommendations.
   2. Installation methods.
   3. Specimen warranty.

B. Shop Drawings: Include layouts of roof panels, details of edge and penetration conditions, spacing and type of connections, flashings, underlayments, and special conditions.
   1. Show work to be field-fabricated or field-assembled.

C. Selection Samples: For each roofing system specified, submit color chips representing manufacturer's full range of available colors and patterns. Submit actual samples not photo reproductions.

D. Test Reports: Indicate compliance of metal roofing system to specified requirements.

E. Warranty: Submit specified manufacturer's 20 year finish and 20 year weathertightness warranty and ensure that forms have been completed in Owner's name and are registered with manufacturer.

F. Manufacturer certificate, located at the end of this Section, to be submitted within 24 hours of the bid, for the proposed metal roof panel system confirming that the metal roof panel system installer is approved to install the proposed metal roof panel system.

1.05 COMPLETION MEETING

A. A meeting shall be held at the completion of the project and attended by all parties that were present at the pre-job conference. A punch list of items required for completion shall be compiled by the Contractor and the Manufacturer's representative. The Contractor shall complete all punch list items and acquire Manufacturer's warranty for final submittal to Architect.

1.06 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section, with not less than five years of documented experience.

B. Installer Qualifications: Company trained and authorized by roofing system manufacturer, with minimum (5) five years of experience, in type of work specified.

1.07 DELIVERY, STORAGE, AND HANDLING

A. Store roofing panels on site in protective packaging to prevent damage prior to installation.

1.08 WARRANTY

A. General Warranty: The warranties specified in this Article shall not deprive the Owner of other rights the Owner may have under other provisions of the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by the Contractor under requirements of the Contract Documents. Three executed copies of all warranties must be submitted to the Architect.

B. Finish Warranty: Manufacturer's 20-year finish warranty stating products to be free of corrosion, checking, crazing, chalking, discoloring, fading, oxidation, and that exposed finish surface will not peel, crack, chip, or spall.
   1. Excessive color change/fading greater than 5 NBS (Hunter) units and passing 5000 hrs per ASTM D 2249-85, ASTM D 2244 and ASTM D 822-85 respectively.
   2. Chalking shall not be less than a rating of No. 8 per ASTM D 659 and ASTM D 4214.
   3. Cracking, checking, peeling, or failure of paint to adhere to bare metal.

C. Manufacturer's "No Monetary Limit" Warranty: The entire installation from the deck up, including but not limited to insulation, hat channels, fasteners, metal roofing and edge metals shall be warranted against defects in material and workmanship as evidenced by leaks, as required to maintain roofing system in a watertight condition for the period stated below starting from the date of final acceptance by the Owner as herein before specified. Should leak occur, the manufacturer shall repair or replace the roof material as required to provide a watertight condition at its own expense, with no dollar limit or prorated amount. The warranty shall cover fully and completely the entire roofing system and the requirements as specified herein. This warranty shall be jointly signed by the Manufacturer of the primary roofing material and the authorized installer. The guarantee is for a complete system and shall not be limited by any previous work accomplished on the roof prior to this contract and elected to remain as a part of the system herein specified:
   1. Total Systems Warranty shall be for a period of twenty (20) years from the date of substantial completion.
   2. Repairs and replacements required because of events beyond the Contractor's / Installer's / Manufacturer's control and beyond the limits specified herein shall be completed by the Contractor / Installer and paid for by the Owner.
   3. Installer shall provide a typed certificate stating the following:
      a. Type of roof.
      b. Installer.
      c. Installer's address and telephone number.

d. Manufacturer.
e. Manufacturer's address and telephone number.
f. Who to contact in case of roof failure.
g. Warranty period with beginning and ending dates. Certificate shall be framed and bolted (not hung) on the wall as directed by Architect. Copies of certificate shall be included with manufacturer's written warranty and submitted to Architect
h. Any representative who inspects the roof must copy all inspection reports to the office of Ross-Tarrant Architects, Inc. for the life of the roof.

D. Structural Performance: Provide warranty by roof panel system manufacturer against perforation or structural failure of roof panels for period of twenty (20) years.

E. All warranties shall commence on Date of Substantial Completion for building.

F. Contractor's Warranty: Roofing contractor shall provide a written two year warranty for materials and workmanship commencing with the date of substantial completion. The warranty shall cover all labor and all material necessary to maintain complete water tightness, including that required to repair and all roof leaks and water infiltration through the roof, flashings, and wall copings in any configuration including standing water at no additional cost to the Owner.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Subject to compliance with requirements, manufacturers offering the following products that may be incorporated into the work include:

B. Basis of Design: Design concept and the drawings indicate the size, profiles, dimensional requirements and aesthetics of the following:
1. DMI - Span Lock SL20 (2 inch rib height) Continuous mechanically seamed connections with concealed anchor clips. Exposed fasteners in the panel ends will NOT be accepted.

C. Products by other manufacturers may be considered provided deviations in dimensions and profiles are minor and do not change the design concept as judged by the Architect.
1. ATAS International, Inc: www.atas.com.
2. Berridge Manufacturing Company: www.berridge.com/#sle.
3. Nucor IPG/Centria: www.centria.com
4. DMI: www.dmimetals.com
5. Englert, Inc: www.englertinc.com.
6. Holcim Elevate (formerly Firestone Building Products LLC): www.holcimelevate.com.
7. Nucor IPG/Metl-Span: www.metlspan.com/#sle.
8. Innovative Metals Co.: www.imetco.com
9. Cornerstone Building Brands/MBCI: www.mbci.com

2.02 PERFORMANCE REQUIREMENTS

A. Metal Roof Panels: Provide complete roofing assemblies, including roof panels, clips, fasteners, connectors, and miscellaneous accessories, tested for compliance with the following minimum standards:
1. Structural Design Criteria: Provide panel assemblies designed to safely support design loads at support spacing indicated, with deflection not to exceed L/180 of span length(L) when tested in accordance with ASTM E1592.
2. Overall: Complete weathertight system tested and approved in accordance with ASTM E1592.
3. Thermal Movement: Design system to accommodate without deformation anticipated thermal movement over ambient temperature range of 100 degrees F.

2.03 ARCHITECTURAL METAL ROOF PANELS

A. Architectural Metal Roofing: Provide complete engineered system complying with specified requirements and capable of remaining weathertight while withstanding anticipated movement of substrate and thermally induced movement of roofing system.

B. Metal Panels: Factory-formed panels with factory-applied finish.
   1. Steel Panels:
      a. Zinc-coated steel conforming to ASTM A 654; minimum G90 galvanizing or ASTM 792 Galvalume.
      b. Steel Thickness: Minimum .023 inch (24 gauge)
   2. Profile: Standing seam, with minimum 2.0 inch seam height; concealed fastener system for field seaming with special tool.
   3. Texture: Smooth, with intermediate ribs for added stiffness.
   4. Length: Full length of roof slope, without lapped horizontal joints.
   5. Width: Maximum panel coverage of 16 to 18 inches.

2.04 SOFFIT PANELS

A. Preformed Metal Soffit Panels: Pre-finished, perforated, .032 ga. aluminum:
   1. Basis of Design: Design concept and the drawings indicate the size, profiles, dimensional requirements and aesthetics of the following:
      a. DMI - FP10
   2. Panels to have concealed fasteners.
   3. Profile to be flush, 12" wide.
   4. Panels to be vented. Refer to drawings for vented panel locations.
   5. Color: Selected by Architect from same color choices as metal roof panel.

2.05 VAPOR BARRIER

A. 8-mil thick, reinforced three-ply polyethylene vapor barrier, coated both sides, with a .04 perm rating.
   1. Raven Industries: Dura-Skrim 8WB: www.ravenfd.com

B. Provide and install if required by the roofing mnaufacturer for the requirements of the full system warranty.

2.06 ROOF UNDERLAYMENT

A. Contractor to coordinate with metal roof panel manufacturer on use of asphalt felt or synthetic felt as part of the total system warranty.
   1. Type II (30#) asphalt saturated, non-perforated felt underlayment.
      a. Roof Pitch 3:12 to 4:12: Two layers.
      b. Roof Pitch 4:12 or above: One layer.

B. Synthetic Felt Underlayment: Meet Class A Fire ASTM E108 and ASTM D226
   1. Synthetic felt underlayment is not to be used as a replacement for self-adhered waterproof underlayment.
      a. Interwrap, Inc - Titanium UDL 30: www.interwrap.com
      b. Other manufacturers approved by the metal roof panel manufacturer to meet full system warranty requirements.

2.07 SELF ADHERED WATERPROOF UNDERLAYMENT

A. Install for a dimension of 72" up the slope from the eave, rake edges, valleys, and 72" in from the gables or as required by roofing manufacturer based on roof slope. Synthetic felt underlayment is not to be used as a replacement for self-adhered waterproof underlayment. Acceptable manufacturers offering the following products that may be incorporated into the work include:
   1. W.R. Grace-Ice and Water Shield.
   2. DMI DynaClad Ultra HT Wind and Water Seal.

3. GAF-Ice and Water Shield.
4. Firestone Clad-Gard SA.
5. Mid-States Asphalt (MSA): Quik Stick HT: www.msaroof.com
6. Polyglass USA, Inc: Polystick MTS High Temperature: www.polyglass.com
7. Protecto Wrap Company: Jiffy Seal Ice and Water Guard HT: www.protectowrap.com
8. Other manufacturers approved by the metal roof panel manufacturer to meet the full system warranty requirements.

2.08 GUTTERS AND DOWNSPOUTS

A. Provide gutters and downspouts in shapes and sizes indicated, fabricated in longest continuous length possible. Include steel straps formed from at least 0.028-inch- (0.7-mm-) thick, galvanized steel sheet; hangers or other attachment devices; end plates; and trim and other accessories indicated or required for complete installation. Expansion joints are to be utilized so as to not have lapped gutter joints.

B. Provide gutters and downspouts fabricated from the following metal:
   1. Prefinished formed-steel sheet in thickness indicated, but not less than the following:
      a. Thickness: 22 ga. for gutters.
      b. Thickness: 22 ga. for downspouts.

C. Gutters and downspout sizes:
   1. Gutter to be profile and size as shown on the drawings.
   2. Downspouts: Refer to the drawings for size and location.

D. Gutter and Downspout Anchors and Supports:
   1. Gutter Supports: Straps and Hangers. 1 inch wide, 0.050 inch thick internal aluminum strap at 30 inch on center at top of gutter. Alternate location with 1 inch wide 0.125 inch thick external hanger at bottom location 30 inch on center for support of gutter.
   2. Downspout Supports: Straps. Provide three anchor straps per 10 foot section.

E. Color: Selected by Architect from same color choices as metal roof panel.

F. Wire Ball Downspout Strainer: Provide a wire ball downspout strainer at every downspout location.

2.09 ATTACHMENT SYSTEM

A. Concealed System: Provide manufacturer's standard stainless steel or nylon-coated aluminum concealed anchor clips designed for specific roofing system and engineered to meet performance requirements, including anticipated thermal movement.

B. Based upon Contractor's choice of standing seam panel manufacturer, it is the Contractor's option to either provide wood blocking or support plate (gauge per manufacturers requirement) at all ridge, valley, rake and eaves to provide a complete warranted system.

2.10 FABRICATION

A. Panels: Provide factory fabricated panels and accessory items, using manufacturer's standard processes as required to achieve specified appearance and performance requirements.
   1. Panels to be manufactured on a fixed base, multi-station roll former with a minimum of 26 stations.
   2. Coil to be tension leveled prior to being received by the panel manufacturer.
   3. Metal coil to be tension leveled by the panel manufacturer prior to the start of panel fabrication.

B. Joints: Provide captive gaskets, sealants, or separator strips at panel joints to ensure weathertight seals, eliminate metal-to-metal contact, and minimize noise from panel movements.

2.11 FINISHES: PANEL, TRIM, GUTTER, DOWNSPOUT AND VISIBLE ACCESSORIES

A. PVDF (Polyvinylidene Fluoride) Coating: Superior Performance Organic Finish, AAMA 2605; multiple coat, thermally cured fluoropolymer finish system.

1. Minimum total dry film thickness of 0.9 mil; color and gloss as selected from manufacturer's standards.

2.12 ACCESSORIES

A. Miscellaneous Sheet Metal Items: Provide flashings, gutters, downspouts, trim, moldings, closure strips, preformed crickets, caps, and equipment curbs of the same material, thickness, and finish as used for the roofing panels. Items completely concealed after installation may optionally be made of stainless steel.

B. Rib and Ridge Closures: Provide prefabricated, close-fitting components of steel with corrosion resistant finish or combination steel and closed-cell foam.

C. High Temperature Pipes and Penetrations: Provide high-temp rated boots or sheet metal collars with clamping rings and sealant to separate pipes from roofing.

D. Sealants:
1. Exposed Sealant: Elastomeric; silicone, polyurethane, or silyl-terminated polyether/polyurethane.
2. Concealed Sealant: Non-curing butyl sealant or tape sealant.
3. Seam Sealant: Factory-applied, non-skinning, non-drying type.

E. Snow Guards: Non-penetrating attachment system. Clamps to match standing seam profile and height. Brackets and cross members to be provided in color to match standing seam roof panel. Color as selected by Architect.
1. Basis of Design: Design concept and the drawings indicate the size, profiles, dimensional requirements and aesthetics of the following:
   a. SnoGem, Inc.: 2" SnoGem iClad SnoCube Snow Retention System with 1 inch Blockade Plates.
2. Manufacturer: Subject to compliance with requirements, manufacturers offering the following products that may be incorporated into the work include:
   a. Alpine Snowguards: SnowMax: www.alpinesnowguards.com
   b. Metal Roof Innovations Ltd/Dynamic Fastener.: Dyna-Clamp, Dyna-Guard, Sno-Dam, Dyna-Clip www.dynamicfastener.com
   c. SnoBlox Snow Guards: Color Rail with IceStopper: www.snoblox.com
   d. Sno-Gem, Inc.: www.snogem.com

2.13 FABRICATION

A. Panels: Fabricate panels and accessory items at factory, using manufacturers standard processes as required to achieve specified appearance and performance requirements.
1. Panels to be manufactured on a fixed base, multi-station roll former with a minimum of 26 stations.
2. Coil to be tension leveled prior to being received by the panel manufacturer.
3. Metal coil to be tension leveled by the panel manufacturer prior to the start of panel fabrication.

PART 3 EXECUTION

3.01 EXAMINATION

A. Do not begin installation of preformed metal roof panels until substrates have been properly prepared.

B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.02 INSTALLATION

A. Overall: Install roofing system in accordance with approved shop drawings and panel manufacturer's instructions and recommendations, as applicable to specific project conditions. Anchor all components of roofing system securely in place while allowing for thermal and structural movement.
   1. Install roofing system with concealed clips and fasteners, except as otherwise recommended by manufacturer for specific circumstances.
   2. Minimize field cutting of panels. Where field cutting is absolutely required, use methods that will not distort panel profiles. Use of torches for field cutting is absolutely prohibited.

B. Accessories: Install all components required for a complete roofing assembly, including flashings, gutters, downspouts, trim, moldings, closure strips, preformed crickets, caps, equipment curbs, rib closures, ridge closures, and similar roof accessory items.

C. Roof Panels: Install panels in strict accordance with manufacturer's instructions, minimizing transverse joints except at junction with penetrations.
   1. Form weathertight standing seams incorporating concealed clips, using an automatic mechanical seaming device approved by the panel manufacturer.
   2. Provide sealant tape or other approved joint sealer at lapped panel joints.
   3. Install sealant or sealant tape, as recommended by panel manufacturer, at end laps and side joints.

3.03 CLEANING AND PROTECTION

A. Clean exposed sheet metal work at completion of installation. Remove grease and oil films, excess joint sealer, handling marks, and debris from installation, leaving the work clean and unmarked, free from dents, creases, waves, scratch marks, or other damage to the finish.

B. Do not permit storage of materials or roof traffic on installed roof panels. Provide temporary walkways or planks as necessary to avoid damage to completed work. Protect roofing until completion of project.

C. Touch-up, repair, or replace damaged roof panels or accessories before Date of Substantial Completion.

END OF SECTION 074113

260115 Simpson Co CTE Tennis Court RR Bldg Hardware Changes

January 15th, 2026

1. Assign new Door P001 to new HW Set 07 as follows:

Hardware Set 07

(1)	Mortise Cylinder		613	BES
	Note: Hardware Supplier to coordinate cam type for proper operation.			
(1)	SFIC Cylinder Core		626	BES

Note 1: All hardware including lockset to accept Best mortise cylinder by door supplier.

2. Assign new Doors P002.1 and P004 to new HW Set 08 as follows:

Hardware Set 08

(3)	Butt Hinges	BB1191 4.5 X 4.5	630	HAG
(1)	Classroom/Double Cyl Deadbolt	314-1/4ST x Less Cylinders	626	YAL
(1)	Push Plate	1809-4 x RC x CFC	630	TRI
(1)	Pull Plate	1014-3B x RC x CFC x CFT	630	TRI
(2)	Mortise Cylinder		613	BES
(1)	Closer, Regular Arm	4040XP Reg	689	LCN
(1)	Kick Plate	KO050 8 x 2LDW x CS x B4E	630	TRI
(1)	Mop Plate	KM050 4 x 1LDW x CS x B4E	630	TRI
(1)	Wall Stop, Convex	1270CX	626	TRI
(1)	Lock Guard, In-swinging	ILP 212 - CP	652	DJO
(1)	Cat H Jamb Seal Set	5924	628	LEG
(1)	Door Bottom	7111	628	LEG
(1)	¼" Saddle Threshold	3545 x RCE	628	LEG

Note 1: 3/8" door undercut required for proper mating of door bottom with seal integral to threshold.

3. Assign new Door P002.2 to new HW Set 02C as follows:

Hardware Set 02C

(3)	Butt Hinges	BB1191 4.5 X 4.5	630	HAG
(1)	Storeroom Lock	93K7D-15D-S3	626	BES
(1)	SFIC Cylinder Core		626	BES
(1)	Mop Plate	KM050 4 x 1LDW x CS x B4E	630	TRI
	Note: Install on pull side of door.			
(1)	Wall Stop, Convex	1270CX	626	TRI

4. Assign new Door P003 to new HW Set 02D as follows:

Hardware Set 02D

(3)	Butt Hinges	BB1191 4.5 X 4.5	630	HAG
(1)	Storeroom Lock	93K7D-15D-S3	626	BES
(1)	SFIC Cylinder Core		626	BES

(1)	Closer, HD Parallel Arm	4040XP EDA	689	LCN
(1)	Closer Spacer	51875-52250		LEG

Note 1: Do not cut top jamb seal for closer arm bracket. Lower the closer on the door and mount closer shoe to jamb seal. Use spacer for 5th closer screw.

(1)	Kick Plate	KO050 8 x 2LDW x CS x B4E	630	TRI
(1)	Wall Stop, Convex	1270CX	626	TRI
(1)	Lock Guard, Cylindrical Lock	1082-6S	630	TRI
(1)	Cat H Jamb Seal Set	5924	628	LEG
(1)	Panic Threshold	356MA x RCE	628	LEG

5. Assign new Door P005 to new HW Set 02E as follows:

Hardware Set 02E

(3)	Butt Hinges	BB1191 4.5 X 4.5	630	HAG
(1)	Storeroom Lock	93K7D-15D-S3	626	BES
(1)	SFIC Cylinder Core		626	BES
(1)	Closer, Regular Arm	4040XP Reg	689	LCN
(1)	Kick Plate	KO050 16 x 2LDW x CS x B4E	630	TRI
(1)	Wall Stop/Holder w/Shim	1283-6S x (1) Z900-35643.628 1" Shim	628	TRI
	Note: Locate in inverted "U" orientation approx. 4" down and in from top lock corner of door.			
(1)	Lock Guard, In-swinging	ILP 212 - CP	652	DJO
(1)	Cat H Jamb Seal Set	5924	628	LEG
(1)	Door Bottom	7111	628	LEG
(1)	¼" Saddle Threshold	3545 x RCE	628	LEG

Note 1: 3/8" door undercut required for proper mating of door bottom with seal integral to threshold.

END OF DOCUMENT

FACPAC Contract Change Order Supplemental Information Form (Ref# 64963)

Form Status: Saved

Tier 1 Project: CTE Improvements, Alternative School Addition, SES Roadway & Paving
BG Number: 23-425 District: Simpson County (HB678) (535)
Status: Active Phase: Project Initiation (View Checklist)

Contract: Gunter Construction Roofing Inc. , 0075, Roofing
Type: CM Bid Package Proposed

Change Order Number	1
Time Extension Required	No
Date Of Change Order	5/7/2026
Change Order Amount To Date	Increase

Construction Contingency

Calculations below are project wide. Remaining negative Construction Contingency may require the submission of a revised BG1.

Current Approved Amount	$624,967.72
Net Approved COs	$282,502.17
Remaining After Approved COs	$342,465.55
Net All COs	$875,030.85
Remaining After All COs	$-250,063.13

This Requested Change Order Amount $36,730.00
+/-
Change In A/E Fee This Change Order
+/-
Change In CM Fee This Change Order $0.00
+/-
Remaining Construction Contingency Balance ($250,063.13)
Contract Change Requested By Local Board of Education
Contract Change Reason Code Expansion of Scope

Change Order Description And Justification
Cost associated with PR 004.

Cost Benefit To Owner
The cost of this change order has been reviewed and determined to be reasonable.

Contract unit prices have been utilized to support the cost associated with this change order. No

Detailed Cost Breakdown

Contract unit prices have not been utilized, provide a detailed cost breakdown which separates labor, material, profit and overhead.

Detail Item	Amount	Percent of Total
Labor	$13,851.00	37.71%
Materials	$20,157.20	54.88%
Profit and Overhead	$2,721.80	7.41%
Bond Insurance		0.00%
Cost Breakdown Total:	$36,730.00	

Cost for this Change Order supported by an alternate bid or competitive price quote: No

Explain Why

Executed contract with contractors.

Change Order Supplemental Information Form Signature Page (Online Form Ref# 64963)

Architect	Date
Construction Manager	Date
Finance Officer	Date
Local Board of Education Designee	Date