

LAFORUCHE PARISH FIRE DISTRICT NO. 3

HURRICANE IDA DAMAGES RESTORATION

WEST LAROSE FIRE STATION NO. 3

HURRICANE IDA RECOVERY NUMBER: HIR-WL03

FEMA DI-NUMBER: 1209211

LAROSE, LAFOURCHE PARISH, LOUISIANA

ADDENDUM NO. 3

Date Issued: August 25, 2022

This Addendum No. 3 shall be part of the above referenced project.

Acknowledge receipt of this Addendum No. 3 by inserting its number in the space provided in the Louisiana Uniform Public Work Bid Form of the Request for Proposals. Failure to do so may subject the bidder to disqualification.


Kevan D. Keiser, P.E.
GIS Engineering, LLC.



8/26/22

**LAFORUCHE PARISH FIRE DISTRICT NO. 3
HURRICANE IDA DAMAGES RESTORATION
WEST LAROSE FIRE STATION NO. 3
HURRICANE IDA REVOERY NUMBER: HIR-WL03
FEMA DI-NUMBER: 1209211
LAROSE, LAFOURCHE PARISH, LOUISIANA**

This Addendum is issued for the purpose of modifying, clarifying, or revising, as applicable, the specified items of the original Contract Documents. It is also issued for the purpose of adding, as applicable, the attached specified items to the original Contract Documents, or deleting, as applicable, the attached specified items from the original Contract Documents. The Addendum and attachments shall be construed as much a part of the original Contract Documents as contained therein. Changes made by Addenda shall take precedence over original Contract Documents.

PART I – WRITTEN CONTRACTOR’S QUESTIONS

Contractors Written Questions and Engineer’s Responses

PART II – MODIFICATIONS TO CONTRACT DOCUMENTS TECHNICAL SPECIFICATIONS, PLANS, AND OTHER DOCUMENTS

Modifications to Contract Documents and Specifications.

PART III – ATTACHMENTS

1. Section D – Bid Form (Revised as Per Addendum No. 3)
2. Technical Specification No. 13 34 19 – Metal Building System (Revised as Per Addendum No. 3)

PART I – Written Contractor’s Questions

NOTE – The responses presented in PART I may differ from those presented in the Pre-Bid Conference. The responses in PART I are current as of the date of this Addendum and if different supersede those provided at the Pre-Bid Conference or any previous addenda.

Contractor’s General Questions Received

1. Page 07 of the Site Plan calls for the entire metal roof to be changed. Upon a site visit, I noticed the bottom side of the roof panels have blown in insulation/fireproofing. I didn’t see this item in the scope of work, is this something we have to pick up?

Response: A section for the Blown-In Insulation has been added to the Specifications. The Insulation shall be paid under Bid Item No. ER-01. The Bid Form and Section 13 34 19 – “Metal Building System” of the Specifications have been revised and reissued as part of this Addendum No. 3.

2. Specs call to remove/replace two 24” octagon shaped attic vents. Site visit shows vents to be nonexistent.

Response: These attic vents have been removed from the Specifications. Section 13 34 19 – “Metal Building System” of the Specifications has been revised and reissued as part of this Addendum No. 3.

PART II – Modifications to Contract Documents, Technical Specifications, Plans, and Other Documents

Contract Documents:

1. Section D – Bid Form
 - a. Please replace with the revised Section D provided in this addendum.

Technical Specifications:

1. Technical Specification No. 13 34 19 – Metal Building System
 - a. Please replace with revised Technical Specification No. 13 34 19 provided in this Addendum.
Revision include, but are not limited to:
 - i. Remove Paragraph 2.6 “Gable Vent”
 - ii. Added Paragraph 2.6 “Insulation”

Plans:

NONE

PART III - ATTACHMENTS

Section D – Bid Form

LOUISIANA UNIFORM PUBLIC WORK BID FORM

TO: Lafourche Parish Fire District 3
17462 W. Main St., Cut Off, LA 70345

BID FOR: Hurricane Ida Recovery Project:
West Larose Fire Station No. 3 Restoration
HIR-WL-03
161 West 25th Street, Larose, LA 70373

The undersigned bidder hereby declares and represents that she/he: a) has carefully examined and understands the Bidding Documents, b) has not received, relied on, or based his bid on any verbal instructions contrary to the Bidding Documents or any addenda, c) has personally inspected and is familiar with the project site, and hereby proposes to provide all labor, materials, tools, appliances and facilities as required to perform, in a workmanlike manner, all work and services for the construction and completion of the referenced project, all in strict accordance with the Bidding Documents prepared by: GIS Engineering, LLC, 197 Elysian Drive, Houma, LA 70363 and dated: August 2022.

Bidders must acknowledge all addenda. The Bidder acknowledges receipt of the following **ADDENDA:** (Enter the number the Designer has assigned to each of the addenda that the Bidder is acknowledging) _____ .

TOTAL BASE BID: For all work required by the Bidding Documents (including any and all unit prices designated "Base Bid" * but not alternates) the sum of:

_____ Dollars (\$ _____)

ALTERNATES: For any and all work required by the Bidding Documents for Alternates including any and all unit prices designated as alternates in the unit price description.

Alternate No. 1 (*Remove and Replace Exterior Lighting (Includes Moving of Electrical; Move as per Drawings and Replace with LED Light Fixture)*) for the lump sum of:

_____ Dollars (\$ _____)

Alternate No. 2 (*Repaint Sheet Metal on Fire Station (Including Trim)*) for the lump sum of:

_____ Dollars (\$ _____)

Alternate No. 3 (*Owner to provide description of alternate and state whether add or deduct*) for the lump sum of:

_____ NA _____ Dollars (\$ _____ NA _____)

NAME OF BIDDER: _____

ADDRESS OF BIDDER: _____

LOUISIANA CONTRACTOR'S LICENSE NUMBER: _____

NAME OF AUTHORIZED SIGNATORY OF BIDDER: _____

TITLE OF AUTHORIZED SIGNATORY OF BIDDER: _____

SIGNATURE OF AUTHORIZED SIGNATORY OF BIDDER **: _____

DATE: _____

THE FOLLOWING ITEMS ARE TO BE INCLUDED WITH THE SUBMISSION OF THIS LOUISIANA UNIFORM PUBLIC WORK BID FORM:

* The Unit Price Form shall be used if the contract includes unit prices. Otherwise it is not required and need not be included with the form. The number of unit prices that may be included is not limited and additional sheets may be included if needed.

** **A CORPORATE RESOLUTION OR WRITTEN EVIDENCE** of the authority of the person signing the bid for the public work as prescribed by LA R.S. 38:2212(B)(5).

BID SECURITY in the form of a bid bond, certified check or cashier's check as prescribed by LA R.S. 38:2218(A) attached to and made a part of this bid.

LOUISIANA UNIFORM PUBLIC WORK BID FORM

UNIT PRICE FORM

TO: Lafourche Parish Fire District 3
17462 W. Main St., Cut Off, LA 70345

BID FOR: Hurricane Ida Recovery Project:
West Larose Fire Station No. 3 Restoration
HIR-WL-03
161 West 25th Street, Larose, LA 70373

UNIT PRICES: This form shall be used for any and all work required by the Bidding Documents and described as unit prices. Amounts shall be stated in figures and only in figures.

DESCRIPTION:	<input checked="" type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.# ____ Mobilization and Demobilization			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
G-01	1	LS		

DESCRIPTION:	<input checked="" type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.# ____ Remove and Upgrade 12' x 12' Sectional Door and Door Operator			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
FS-01	2	EA		

DESCRIPTION:	<input checked="" type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.# ____ Remove and Replace Security Camera			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
FS-02	1	EA		

DESCRIPTION:	<input checked="" type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.# ____ Remove and Replace Gutters			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
LS-01	37	LF		

DESCRIPTION:	<input checked="" type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.# ____ Remove and Replace Fascia			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
LS-02	37	LF		

DESCRIPTION:	<input checked="" type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.# ____ Replace Gutters			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
RS-01	37	LF		

DESCRIPTION:	<input checked="" type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.# ____ Remove and Replace Downspouts			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
RS-02	30	LF		

DESCRIPTION:	<input checked="" type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.# ____ Replace Fascia			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
RS-03	37	LF		

DESCRIPTION:	<input checked="" type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.# ____ Remove and Replace 30 Amp Disconnect Box (Including Conduit, Wiring, and Service)			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
RS-04	1	EA		

DESCRIPTION:	<input checked="" type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.# ____ Remove and Upgrade Steel Siding (26 Gauge; includes wall insulation)			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
BS-01	178	SF		

DESCRIPTION:	<input checked="" type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.# ____ Remove and Replace Security Camera			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
BS-02	1	EA		

DESCRIPTION:	<input checked="" type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.# ____ Remove and Replace Metal Roof (26 Gauge; includes ceiling insulation)			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
ER-01	1,820	SF		

DESCRIPTION:	<input checked="" type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.# ____ Remove and Replace Ridge Cap			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
ER-02	37	LF		

DESCRIPTION:	<input checked="" type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.# ____ Remove and Dispose of Large Tree on Fire Station			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
ER-03	1	EA		

DESCRIPTION:	<input checked="" type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.# ____ Remove and Replace Acoustical Ceiling Tile (1' x 1' Tile) (Meeting Area)			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
I-01	60	SF		

DESCRIPTION:	<input checked="" type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.# ____ Remove and Replace Acoustical Ceiling Tile (1' x 1' Tile) (Bathroom Area)			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
I-02	40	SF		

DESCRIPTION:	<input checked="" type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.# ____ Clean Floors Throughout Building			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
I-03	1,795	EA		

DESCRIPTION:	<input checked="" type="checkbox"/> Base Bid or <input type="checkbox"/> Alt.# ____ Mold Testing and Clean-Up			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
R-01	1	EA		

ALTERNATE NO. 1				
DESCRIPTION:	<input type="checkbox"/> Base Bid or <input checked="" type="checkbox"/> Alt.# _1_ Remove and Replace Exterior Lighting (Includes Moving of Electrical; Move as per Drawings and Replace with LED Light Fixture)			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
ALT-01	1	EA		

ALTERNATE NO. 2				
DESCRIPTION:	<input type="checkbox"/> Base Bid or <input checked="" type="checkbox"/> Alt.# _2_ Repaint Sheet Metal on Fire Station (Including Trim)			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION (<i>Quantity times Unit Price</i>)
ALT-02	2,060	SF		

Wording for “DESCRIPTION” is to be provided by the Owner.

All quantities are estimated. The contractor will be paid based upon actual quantities as verified by the Owner.

PART III - ATTACHMENTS

Section 13 34 19 – Metal Building System

SECTION 13 34 19
METAL BUILDING SYSTEMS

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 DESCRIPTION OF WORK

- A. The work consists of designing, furnishing, and erecting one pre-engineered metal building with appurtenances (doors, windows, gutters, vents) in accordance with these specifications, and in conformance with the dimensions and grades shown on the plans or established by the Engineer.
- B. The building shall include all frames, columns, rafters, endwall columns, purlins, girts, struts, connectors, bracing, covering, flashing, fasteners, closures, and miscellaneous items necessary for a weathertight structure.

1.3 REFERENCES

- A. The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only. The most recent edition shall be used.

AMERICAN IRON AND STEEL INSTITUTE (AISI)

AISI	Specification for the Design of Cold Formed Steel Structural Members
------	--

AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC)

AISC	Specification for Steel Structural Buildings
------	--

AISC	Steel Design Guide Series 3: Serviceability Design Considerations for Low Rise Buildings
------	--

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

ANSI 115	Door and Hardware Preparation
----------	-------------------------------

ANSI/SDI-100	Steel Door Institute
--------------	----------------------

ASTM INTERNATIONAL (ASTM)

ASTM A36-92	Standard Specification for Structural Steel
-------------	---

ASTM A123-82	Standard Specification for Zinc (Hot Dip Galvanized) Coatings on Iron and Steel Products
--------------	--

ASTM A307-92A	Standard Specification for Carbon Steel Bolts and Studs (60,000 psi Tensile)
ASTM A325-92A	Standard Specification for High Strength Bolts for Structural Steel Joints
ASTM A446-91	Standard Specification for Steel Sheet, Zinc-Coated (Hot Dip Galvanized), Structural
ASTM A463-88	Standard Specification Steel Sheet Cold Rolled Aluminum Coated Type I and Type II
ASTM A490-92A	Standard Specification for Quenched and Tempered Alloy Steel Bolts for Structural Steel Joints
ASTM A500-92	Standard Specification Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes
ASTM A501-92	Standard Specification for Hot Formed Welded and Seamless Carbon Steel Structural Tubing
ASTM A525-91B	Standard Specification for Steel Sheet, Zinc-Coated (Hot Dip Galvanized), General Requirements
ASTM A529-92A	Standard Specification for Structural Steel with 50,000 psi Minimum Yield Point
ASTM A570-92	Standard Specification for Hot-Rolled Carbon Steel Sheet and Strip, Structural Quality
ASTM A572-92B	Standard Specification for High Strength Low-Alloy Colum- bium-Vanadium Steels of Structural Quality
ASTM A792-89	Standard Specification for Steel Sheet, Zinc-Coated (Hot Dip Galvanized), General Requirements
ASTM C665-91	Standard Specification for Mineral Fiber Blanket Thermal In- sulation for Light Frame Construction and Manufactured Housing
ASTM D1494-92	Standard Specification for Test Method for Diffused Light Transmission Factor of Reinforced Plastic Panels
ASTM E1514-93	Standard Specification for Specification for Structural Standing Seam Steel Roof Panel Systems

AMERICAN WELDING SOCIETY (AWS)

AWS A2.4-93	Standard Welding Symbols
AWS D1.1-94	Structural Welding Code - Steel
AWS D1.3-89	Structural Welding Code - Sheet Steel

METAL BUILDING MANUFACTURERS ASSOCIATION (MBMA)

MBMA	Low Rise Building System Manual
------	---------------------------------

NORTH AMERICAN ISULATION MANUFACTURERS ASSOCIATION (NAIMA)

NAIMA 202-92	Standard Specification for Flexible Fiberglass Insulation Systems in Metal Buildings
--------------	--

STEEL JOIST INSTITUTE (SJI)

SJI	Standard Specifications, Load Tables and Weight Tables for Steel Joists and Joist Girders
-----	---

STEEL STRUCTURES PAINTING COUNCIL (SSPC)

SP-2-89	Specification for Hand Tool Cleaning
---------	--------------------------------------

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NRPA-101	Life Safety Codes
NFPA-80	Fire Doors and Windows

UNDERWRITERS LABORATORY (UL)

UL 10C	Positive Pressure Fire Testing
--------	--------------------------------

1.4 SYSTEM DESCRIPTION

- A. **RIGID FRAME:** The design of this building type shall be clear span, gabled, rigid frame. This system shall also provide flush girts. The roof slope shall be as shown on the Drawings. Bay spacing shall be as specified on drawings.
- B. **BUILDING GEOMETRY:** The building width shall be the distance between the outside flanges of the sidewall girts. The building height shall be the distance from the base of a sidewall column to the outside top corner of the eave strut. The building length shall be the distance between the outside flanges of the endwall girts and shall be a multiple of the bay spacing. The bay spacing shall be the distance between the interior transverse frames.

1.5 DESIGN REQUIREMENTS

- A. All building components shall follow recommendations of the Metal Building Manufacturer's Association unless surpassed elsewhere within these plans and specifications.
- B. All structural steel sections and welded plate members shall be designed in accordance with the allowable stresses and design requirement sections of the latest edition of the A.I.S.C. Specifications for the Design, Fabrication, and Erection of Steel for Buildings.
- C. All cold formed members including exterior covering shall be designed in accordance with the allowable stresses and design requirement sections of the latest edition of the A.I.S.I. Specifications for the Design of Cold Formed Steel Structural Members.
- D. Members to withstand building system loads as shown on the plans. All loads shall be proportioned and applied in accordance with the MBMA Low Rise Building Systems Manual and the International Building Code.
- E. Anchor bolts shall be sized to resist all shears and uplift induced by the structure and shall not be less than the sizes shown on the metal building manufacturer's anchor bolt size chart and anchor bolt layout drawing. All anchor bolts shall be unpainted hot dipped galvanized to bond with the concrete and shall be set in strict accordance with the metal building manufacturer's drawings. All anchor bolts shall be grease sealed after the columns have been installed.

1.6 SUBMITTALS

- A. Drawings and Certifications:
 - 1. The steel door and frame supplier will furnish to the Engineer (4) complete copies of the proposed steel door and frames schedule and/or shop drawings, using the same reference number for details and openings as those on the contract drawings. After receipt of the approved door schedule the steel door and frame supplier will make any corrections and submit to the Engineer (2) sets of corrected schedules.
 - 2. Finish hardware supplier is to furnish templates, template reference number and/or physical hardware to the steel door and frame supplier in order to prepare the doors and frames to receive the finish hardware items.
 - 3. Contractor shall submit with shop drawings or manufacturer's literature evidence that the thresholds and weatherstripping required for exterior doors have been considered and that all doors and frames will accommodate the required thresholds and weatherstripping properly.

PART 2 PRODUCTS

2.1 MATERIALS

- A. All structural plate and bar stock shall have be fabricated of ASTM A529, A570, or A572 steel. All cold formed structural material shall have be fabricated of ASTM A607, Grade 50 steel. All hot rolled sections shall have be fabricated of ASTM A36 or A572 steel. All pipe structural columns shall have a minimum yield strength of 50,000 psi. All rods used as structural bracing shall have a minimum yield strength of 50,000 psi. All cable bracing shall be extra high strength galvanized ("A" Coat) steel (Left-hand Lay). All cold formed panel material shall have a minimum yield strength of 50,000 psi. All bolts used in primary structural connections shall be zinc plated high tensile (ASTM A325) bolts with a yellow dichromate dip. All bolts used in secondary structural connections shall be standard cadmium plated machine bolts (ASTM A307 Grade 2).
- B. All structural members (primary and secondary) shall be hot dip galvanized.

2.2 COMPONENT DESCRIPTION AND USAGE

- A. Hot rolled primary framing members shall be fabricated in accordance with AISC Specification for pipe, tube, and rolled structural shapes. Built-up members shall be fabricated in accordance with MBMA Low Rise Building Systems Manual, Common Industry Practices.
- B. Purlins and girts shall be a minimum of 8" x 2-1/2" Z Sections, precision roll formed or cold formed from U.S. Standard 16, 14, or 12 gauge steel, and hot dip galvanized. Exterior mounted, simple span purlins and girts shall have a 6" nominal end lap for alignment purposes. The continuous span purlins and girts shall have a 1'-9, 3'-0, or 4'-3 nominal end lap to develop continuity. All girts on flush girt buildings shall be simple span and shall be mounted so that the outside flange of the girt is flush with the outside flange of the columns. Purlins and girts shall be attached to the primary framing with two 1/2" diameter hot dip galvanized (ASTM A307, Grade 2) bolts and nuts at each end. Continuous purlins shall have four 1/2" diameter hot dip galvanized (ASTM A307, Grade 2) bolts and nuts in the web to interlock the sections for continuity.
- C. Eave struts shall be a minimum of 8" C Sections, precision cold formed from U.S. Standard 14 or 12 gauge steel. The upper and lower flanges shall slope with the building roof slope, and the web shall be vertical and free to receive the sidewall covering. The eave struts shall be connected to the primary framing with two 1/2" diameter hot dip galvanized (ASTM A307, Grade 2) bolts at each end.
- D. Wind bracing shall be as shown on the building manufacturer's erection drawings and shall be accomplished by diagonal cable bracing, rod bracing, or other means necessary to satisfy roof and wall wind loads. All diagonal wind bracing shall include necessary beveled washers and adjustment nuts at each end. No bracing shall be exposed to open areas such as windows, doors, or vents.
- E. Flanged braces shall be steel angles attached to the purlins and/or girts and primary framing. The quality and location of all brace angles shall be as dictated by the building design and shall be located and erected as shown and noted on the metal building manufacturer's erection drawings. Flange braces shall be connected to the primary and secondary framing with 1/2" machine (ASTM A307, Grade 2) bolts and nuts.
- F. Gable Angles shall be a minimum of 4" x 4" angles, precision cold formed from U.S. Standard 16 gauge steel. Gable angles shall be provided to be attached to the purlins along the building rake. The gable angles shall be attached to each purlin with one (1) = 14 x 3/4 self-tapping screw. The gable angles shall be installed to provide a surface to attach the endwall panels along the rake of the building.
- G. Connection Clips shall be provided by the building manufacturer, as necessary, to facilitate the assembly of the building components. The connection clips shall be located as shown by the building manufacturer's erection drawings.
- H. "Built-up" end frames shall consist of Hot-rolled or Welded-up Plate Section Columns with Flush Girts and Cold Form Channel Rafters. The Column-to-Rafter and Rafter-to-Rafter connection shall be simple span condition, bolted with high tensile (ASTM A325) bolts and nuts.

2.3 PANELS

- A. PERFORMANCE REQUIREMENTS
- B. General: Provide metal panel system meeting performance requirements as determined by application of specified tests by a qualified testing facility on manufacturer's standard assemblies.
- C. Structural Performance: Provide metal panel assemblies capable of withstanding the effects of indicated loads and stresses within limits and under conditions indicated, as determined by ASTM E1592:
 - Wind Loads: Determine loads based on uniform pressure, importance factor, exposure category, and basic wind speed indicated on drawings.
 - Wind Negative Pressure: Certify capacity of metal panels by actual testing of proposed assembly.

- Deflection Limits: Withstand inward and outward wind-load design pressures in accordance with applicable building code with maximum deflection of 1/120 of the span with no evidence of failure.
 - Seismic Performance: Comply with ASCE 7 Sections 9, "Earthquake Loads."
 - Roof Wind Uplift Resistance: Comply with UL 580 for wind-uplift class UL-60.
 - Florida State Building Code Compliance: Comply with requirements of Florida State Building Code. www.floridabuilding.org/pr/pr_app_srch.aspx
- D. Wall Panel Air Infiltration, ASTM E283:
- 0.002 cfm/sq. ft. air infiltration at static-air-pressure difference of 6.24 lbf/sq. ft. (300 Pa).
 - 0.003 cfm/sq. ft. air infiltration at static-air-pressure difference of 12.00 lbf/sq. ft. (575 Pa).
- E. Roof Panel Air Infiltration, ASTM E 1680:
- Air Infiltration, ASTM E 1680: Maximum 0.25 cfm/sq. ft. (1.27 L/s per sq. m) at static-air-pressure difference of 6.24 lbf/sq. ft. (300 Pa).
- F. Wall Panel Water Penetration Static Pressure, ASTM E331: No uncontrolled water penetration at a static pressure of 20.00 lbf/sq. ft. (958 Pa).
- G. Roof Panel Water Penetration Static Pressure, ASTM E 1646: No uncontrolled water penetration at a static pressure of 12 lbf/sq. ft. (575 Pa).
- H. Thermal Movements: Allow for thermal movements from variations in both ambient and internal temperatures. Accommodate movement of support structure caused by thermal expansion and contraction. Allow for deflection and design for thermal stresses caused by temperature differences from one side of the panel to the other.
- I. EXTERIOR FORMED METAL WALL PANELS
- J. Large Tapered-Rib-Profile, Exposed Fastener Metal Roof Panels: Structural metal roof panel consisting of formed metal sheet with trapezoidal major ribs with intermediate stiffening ribs symmetrically placed between major ribs, installed by lapping edges of adjacent panels.
- Basis of Design: MBCI, PBR Panel.
 - Aluminum-Zinc Alloy-Coated Steel Sheet: ASTM A 792/A 792M, structural quality, Grade 50, Coating Class AZ50, prepainted by the coil-coating process per ASTM A 755/A 755M.
 - Nominal Coated Thickness: 22 gage.
 - Panel Surface: Smooth.
 - Exterior Finish: Modified silicone-polyester two-coat system (MBCI Signature 200 or prior approved equal in advance by Addendum).
 - Color: Ash Gray as designated by MBCI color chart, or approved equal in advance by Addendum.
 - Panel Width: 36 inches (914 mm).
 - Major Rib Spacing: 12 inches (305 mm).
 - Panel Rib Height: 1-1/4 inch (31.8 mm).
- K. METAL ROOF PANELS
- L. Large Tapered-Rib-Profile, Exposed Fastener Metal Roof Panels: Structural metal roof panel consisting of formed metal sheet with trapezoidal major ribs with intermediate stiffening ribs symmetrically placed between major ribs, installed by lapping edges of adjacent panels.
- Basis of Design: MBCI, PBR Panel.

- Aluminum-Zinc Alloy-Coated Steel Sheet: ASTM A 792/A 792M, structural quality, Grade 50, Coating Class AZ50, prepainted by the coil-coating process per ASTM A 755/A 755M.
 - Nominal Coated Thickness: 22 gage.
 - Panel Surface: Smooth.
 - Exterior Finish: Modified silicone-polyester two-coat system (MBCI Signature 200 or approved equal in advance by Addendum).
 - Color: Ash Gray as designated by MBCI color chart, or approved equal in advance by Addendum.
- Panel Width: 36 inches (914 mm).
- Major Rib Spacing: 12 inches (305 mm).
- Panel Rib Height: 1-1/4 inch (31.8 mm).

2.4 BUILDING TRIM

- A. General: Provide complete metal panel assemblies incorporating trim, copings, fascia, soffit, gutters and downspouts, and miscellaneous flashings. Provide required fasteners, closure strips, and sealants as indicated in manufacturer's written instructions.
- B. All building trim shall, in general, match material, thickness, and finish of metal panels. Color shall be Brite Red as designated by MBCI color chart, or approved equal in advance by Addendum. Flashing shall be provided at corners, gable end, eaves, and openings to assure a neat, water-tight structure.
- C. The junction of the roof panels and sidewall panels shall be adequately flashed. Eave flashing shall be eave gutters with downspouts.
- D. The juncture of sidewall panels and endwall panels shall be adequately flashed to provide weather-tightness and good appearance.
- E. Gutters and downspouts shall be designed to withstand a rainfall intensity of 8 inches per hour with a 10 minute duration. Eave gutter shall be a suspended box section formed to match the configuration of the eave gutter endwall rake flashing. Eave gutters shall have a minimum cross-section area of 18 square inches. Eave gutters shall be supported at 3' - 0 by a clip connecting directly to the eave strut and gutter. A secondary gutter strap shall be connected to the gutter and roof panel at 3' - 0 to align the face of the gutter. Standard pop rivets and sealant shall be used to secure and seal the gutter end laps.
- F. Downspouts shall be appropriately sized to accept the gutter flowrate. Spacing of the downspouts shall be as necessary to adequately remove rainwater as dictated on the drawings. Eave gutter outlets shall be provided to connect the downspouts to the eave gutter. Downspouts shall be piped into the PVC manifold and routed to the catch basin and culverts.
- G. Where necessary, accessories, which penetrate the wall panels shall be adequately flashed for weather-tightness and neat appearance.

2.5 PANEL AND TRIM FASTENERS

- A. All panel fasteners shall be zinc aluminum cap (ZAP), Type AB mill point screws with sealing washer.
- B. All flashing fasteners shall be 1/8" Diameter Dome Head, stainless steel, factory-colored to match panel colors, pop rivets with stainless steel mandrel.

2.6 INSULATION

- A. Upon the replacement of the metal roof panels, blown-in ceiling insulation shall be installed on the interior of the roof panels.

- B. The Blown-in Ceiling insulation shall be included in the bid item for the removal and replacement of the metal roof.
- C. The Blown-in Wall Insulation shall be included in the bid item for the removal and replacement of the steel siding.

PART 3 EXECUTION

3.1 SHOP FABRICATION

- A. All fabricated members shall be sheared, formed, punched, welded, rolled, and cold formed in the plant of the manufacturer. All holes and clips required to facilitate the attachment of secondary framing shall be provided by the metal building manufacturer.
- B. All shop welding shall be in accordance with the American Welding Society's Structural Welding Code (AWS D1.1-72 & AWS D1.1, Rev. 2-74), except for Sections 3.5 and 8.13. All welding shall be done by welders certified in accordance with AWS Code. Structural members fabricated of plate or bar stock shall have the flanges and webs joined by continuous automatic submerged Arc Welding Process. The web shall be joined to the flanges by a minimum of 50% web penetration. There shall be no field welding without prior approval by the Engineer.
- C. All fabricated or purchased items shall have an identifying number corresponding to marking shown on the erection drawings. The marking shall be stamped, stenciled or printed on these items.

3.2 ERECTION

- A. Erect framing in accordance with MBMA Low Rise Building Systems Manual, Common Industry Practices.
- B. The erector shall furnish temporary guys and bracing where needed for squaring, plumbing, and securing the structural framing against loads, such as wind loads acting on the exposed framing and seismic forces, as well as loads due to erection equipment and erection operation, but not including loads resulting from the performance of work by others. Bracing furnished by the manufacturer for the metal building system cannot be assumed to be adequate during erection. The temporary guys, braces, falseworks and cribbing are the property of the erector, and the erector shall remove them immediately upon completion of erection.
- C. Do not field cut or alter structural members without approval of the metal building manufacturer.
- D. After erection, prime welds, abrasions, and surfaces not galvanized.
- E. Install roof and wall panels in accordance with manufacturer's instructions.
- F. Exercise care when cutting prefinished material to ensure cuttings do not remain on finish surface.
- G. Fasten cladding system to structural supports, aligned level and plumb.
- H. Install gutters and downspouts in strict accordance with manufacturer's instructions.

3.3 EXTERIOR WALL METAL PANEL INSTALLTION

- A. Concealed-Fastener Formed Metal Panels: Install metal panel system in accordance with manufacturer's written instructions, approved shop drawings, project drawings, and referenced publications. Install metal panels in orientation, sizes, and locations indicated. Anchor panels and other components securely in place. Provide for thermal and structural movement.
- B. Fasten metal panels to supports with fasteners at each location indicated on approved shop drawings, at spacing and with fasteners recommended by manufacturer. Fasten panel to support structure through leading flange. Snap-fit back flange of subsequent panel into secured flange of previous panel.

- Cut panels in field where required using manufacturer's recommended methods.
 - Dissimilar Materials: Where elements of metal panel system will come into contact with dissimilar materials, treat faces and edges in contact with dissimilar materials as recommended by metal panel manufacturer.
- C. Attach panel flashing trim pieces to supports using recommended fasteners and joint sealers.
- D. Joint Sealers: Install liquid sealants where indicated and where required for weatherproof performance of metal panel assemblies.
- Seal panel base assembly, openings, panel head joints, and perimeter joints using joint sealers indicated in manufacturer's instructions.
 - Seal perimeter joints between window and door openings and adjacent panels using elastomeric joint sealer.

3.4 ROOF METAL PANEL INSTALLATION

- A. Mechanically-Seamed, Standing Seam Metal Roof Panels: Install weathertight metal panel system in accordance with manufacturer's written instructions, approved shop drawings, and project drawings. Install metal roof panels in orientation, sizes, and locations indicated, free of waves, warps, buckles, fastening stresses, and distortions. Anchor panels and other components securely in place. Provide for thermal and structural movement.
- B. Attach panels to supports using clips, screws, fasteners, and sealants recommended by manufacturer and indicated on approved shop drawings.
- Fasten metal panels to supports with concealed clips at each location indicated on approved shop drawings, with spacing and fasteners recommended by manufacturer.
 - Seamed Joint: Crimp standing seams with manufacturer-approved, motorized seamer tool so clip, metal roof panel, and factory-applied sealant are completely engaged.
 - Provide weatherproof jacks for pipe and conduit penetrating metal panels of types recommended by manufacturer.
 - Dissimilar Materials: Where elements of metal panel system will come into contact with dissimilar materials, treat faces and edges in contact with dissimilar materials as recommended by manufacturer.

3.5 ACCESSORY INSTALLATION

- A. General: Install metal panel accessories with positive anchorage to building and weather tight mounting; provide for thermal expansion. Coordinate installation with flashings and other components.
- Install components required for a complete metal panel assembly, including trim, copings, flashings, sealants, closure strips, and similar items.
 - Comply with details of assemblies utilized to establish compliance with performance requirements and manufacturer's written installation instructions.
 - Set units true to line and level as indicated. Install work with laps, joints, and seams that will be permanently weather resistant.
- B. Joint Sealers: Install joint sealers at roof panels and where indicated and where required for weathertight performance of metal panel assemblies, in accordance with manufacturer's written instructions.

3.6 FRAMED OPENINGS

- A. Framed openings shall consist of a minimum of 8 1/4" x 2" cold formed header and jambs designed and located to allow flush framing of wall girts. The header and jambs shall be 12 or 14 gauge steel and the jambs shall be connected to a 12 or 14 gauge eave strut or girt. The connection slips shall be self-tapped to the girt strut and bolted to the jambs. The juncture of the wall panels and framed opening jambs and header shall be adequately flashed to provide water-tightness and good appearance.
- B. Swing door frames shall be fabricated from 16 gauge galvanized steel with 12 gauge strike reinforcement and 9 gauge hinge reinforcement. Door frames shall be bonderized and cleaned to provide paint adhesion. The door frames shall be given one dip coat of primer followed by one spray coat of white enamel (1.7 to 2.1 mil dry film).

3.7 CLEANING AND PROTECTION

- A. Clean finished surfaces as recommended by metal panel manufacturer.
- B. Replace damaged panels and accessories that cannot be repaired to the satisfaction of the Engineer and Owner.

PART 4 MEASUREMENT AND PAYMENT

4.1 MEASUREMENT

- A. The contract unit price for Metal Building System shall include furnishing all labor, materials, tools, equipment and any incidental items required to complete the work required by the plans and as specified.

4.2 PAYMENT

- A. Payment for the items listed below shall include all materials, equipment, labor and incidentals necessary to complete the work as shown on the drawings, and shall be paid under:

Item No.	Pay Items	Pay Units
LS-01	Replace Gutters	Linear Feet
LS-02	Replace Fasica	Linear Feet
RS-01	Replace Gutters	Linear Feet
RS-02	Remove and Replace Downspouts	Linear Feet
RS-03	Replace Fasica	Linear Feet
BS-01	Remove and Replace Steel Siding (26 Gauge; includes wall insulation)	Square Feet
ER-01	Remove and Replace Metal Roof (26 Gauge; includes ceiling insulation)	Square Feet
ER-02	Remove and Replace Ridge Cap	Linear Feet

END OF SECTION 13 34 19