STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
16 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0016

Janet T. Mills
GOVERNOR

Bruce A. Van Note
COMMISSIONER

October 20, 2023
Subject: Construction of Maintenance Garage
State WIN: 027323.00F
Location: **Fort Fairfield**
Amendment No. 2

Dear Sir/Ms.:

The Bid Opening date for this contract has been changed to **November 1, 2023.** Any Bidders that have previously submitted Bids may choose **to** revise or **not to** revise their Bids. If the Bidder chooses to revise their Bid, they must resubmit a complete Bid Package including a Bid Bond and all other documents required. Upon request, the Bidder will have the original Bid returned to them otherwise it will be discarded. The Bid Package with the latest (newest) date shall replace all previously submitted packages.

Bids will be accepted on either the Contract Agreement Offer and Award contained in the original Bid Book or the one contained in this amendment. However, the Contract Completion Date will be the date specified in the attached revised Special Provision Section 107 Time and the attached revised Contract Agreement, Offer and Award.

Make the following changes to the bid documents:

In The Bid Book:

CHANGE on page 11, in the "**NOTICE TO CONTRACTORS**", the bid opening date in the first paragraph from "October 25, 2023" to read" **November 1, 2023**". Make this change in pen and ink.

CHANGE on page 33, in the "**SPECIAL PROVISION SECTION 107 TIME (Contract Time)**", the Specified Contract Completion Date in the second paragraph from "June 7, 2023" to read" **August 30, 2024**". Make this change in pen and ink.

REMOVE pages 14-21 "**CONTRACT AGREEMENT OFFER & AWARD**", two copies, and **REPLACE** with the attached revised "CONTRACT AGREEMENT OFFER & AWARD", two copies, 4 pages each, dated October 20, 2023.

REMOVE pages 193-200 **DIVISION 9 – FINSH SECTION 092900 FOR GYPSUM BOARD**.

REMOVE pages 187-192 **DIVISION 09 - FINISHES SECTION 092216 NON-STRUCTURAL METAL FRAMING.**

ADD the following attached Specifications:

- **SPECIAL PROVISION SECTION 07611 – METAL ROOFING**
- **SPECIAL PROVISION SECTION 07467 – METAL SIDING**
- **SPECIAL PROVISION SECTION 077253 - SNOW GUARDS**
- **SPECIAL PROVISION SECTION 072100 – THERMAL INSULATION**
- **DIVISION 7 – SECTION 072500 THERMAL AND MOISTURE PROTECTION**
- **DIVISION 7 – SECTION 074633 VINYL SIDING AND SOFFITS**

The following questions have been received:

Question: Has this contract been advertised a few times?

Response: No, a similar contract was advertised in 2021 under WIN 027323.00. Use the following link to the Bid Archives for more information: https://www.maine.gov/mdot/contractors/archives/

Question: Is there an estimated cost range for construction?

Response: The Department does not provide this information.

Question: Are there any delegated-design, third-party engineering requirements that the general contractor is required to carry?

Response: In of the Bid Book refer to Page 60 DIVISION 01 – GENERAL REQUIREMENTS SECTION 013300 SUBMITTAL PROCEDURES2.2 DELEGATED-DESIGN SERVICES "(A). Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated. 1. If criteria indicated are not sufficient to perform services or certification required, submit a written request for additional information to Owner.
(B). Delegated-Design Services Certification: In addition to Shop Drawings, Product Data, and other required submittals, submit digitally signed PDF electronic file and three paper copies of certificate, signed, and sealed by the responsible design professional, for each product and system specifically assigned to Contractor to be designed or certified by a design professional. 1. Indicate that products and systems comply with performance and design criteria in the Contract Documents. Include list of codes, loads, and other factors used in performing these services."

Question: What is the finish for the concrete slab?

Response: Concrete slab shall be power troweled for a smooth finish.

Question: Can you please confirm the insurance requirements e.g., is the general contractor responsible for procuring Builder's Risk Policy and / or an Owner Protective Liability policy?

Response: In the State of Maine Department of Transportation's Standard Specifications March 2020 Edition refer to **Section 110 - Indemnification, Bonding, and Insurance** at the following link: https://www.maine.gov/mdot/contractors/publications/standardspec/docs/2020/2020%20Standard%20Specification.pdf.

Question: What is the anticipated start date for the project?

Response: In the Bid Book refer to Page 33 **SPECIAL PROVISION SECTION 107 Time (Contract Time)** "The Contractor shall be allowed to commence Work on the Contract provided that the Contract has been awarded, all required plans/submittals have been received and approved by the Department and a preconstruction meeting has been held."

Question: Can an extension be provided on the completion date? Based on current bid date and completion date we will need to figure winter conditions?

Response: The Specified Contract Completion Date has been extended to August 30, 2024. Refer to and add the following attached specifications to the Bid Book: **Revised Contract Agreement Offer & Award Dated 10/20/2023.**

Question: Can all bid documents be emailed?

Response: No, Bids are not accepted by email or FAX. In the Bid Book refer to pages 3 & 4 Bidding Instructions.

Question: Could you provide specifications for type of metal roofing and metal siding you would like? What gauge and width of metal roofing? Will the metal siding be screw-down style 3' corrugated panels? Hi-Heat underlayment on the roof, do you want a self adhered ice and water shield?

Response: Refer to and add the following attached specifications to the Bid Book: **SPECIAL PROVISION SECTION 07611 – METAL ROOFING; & DIVISION 7 – THERMAL AND MOISTURE PROTECTION SECTION 072500 WEATHER BARRIERS**

Question: I do not see in the specifications what type of batt insulation will be used. I do not see a wall vapor barrier.

Response: Refer to and add the following attached specification to the Bid Book**: SPECIAL PROVISION SECTION 072100 - THERMAL INSULATION**

Wall vapor barrier is part of the Zip Board that is specified in the plan set. Refer to the Bid Book, on pages 132-133, **DIVISION 06 – WOOD, PLASTICS, AND COMPOSITES SECTION 061000 ROUGH CARPENTRY, PART 2 - PRODUCTS 2.2 Zip Sheathing.**

Question: Are the non-structural metal framing Division 9 section 092216 specifications used for this project?

Response: This does not apply to this project. In the Bid Book remove pages 187-192 **DIVISION 09 - FINISHES SECTION 092216 NON-STRUCTURAL METAL FRAMING.**

Question: Does Division 9 finish section 092900 for gypsum board apply to this project?

Response: This does not apply to this project. In the Bid Book remove pages 193-200 **DIVISION 9 – FINISH SECTION 092900 FOR GYPSUM BOARD**.

Question: Is there any further detail for soffit finishes?

Response: Refer to and add the following attached specifications to the Bid Book: **DIVISION 7 – THERMAL AND MOISTURE PROTECTION SECTION 072500 and DIVISION 7 – VINYL SIDING AND SOFFITS SECTION 074633.**

Consider these changes and information prior to submitting your bid on **November 1, 2023**.

Sincerely,

George M. A. Macdougall P.E.
Contracts & Specifications Engineer

SPECIAL PROVISION
SECTION 07611 – METAL ROOFING

PART 1 - GENERAL

1.1 Summary

A. Work included shall consist of installing a standing seam metal roofing complete with concealed fasteners and accessories for a water tight system. Metal roofing shall be continuous, contoured to the profile of the roof arch, with no butt seams.

1.2 Quality Assurance

A. Contractor shall be approved in writing by the roofing manufacturer and shall substantiate a minimum of three years experience installing standing seam roofing.

1.3 Submittals

A. Submit two copies of detailed shop drawings to the Department for review at least 15 calendar days prior to incorporation into the work. Shop drawings shall be approved and assigned a number by the manufacturer.
B. Shop drawings shall include the following:
    - Outline of roof and roof size.
    - Layout of panels
    - Location and types of proposed penetrations.
    - Perimeter details
    - Penetration details
    - Manufacturer's data on the proposed materials including panels, anchor clips and fasteners.
    - Calculations with registered engineer's seal, licensed in the State of Maine, verifying roof panel and attachment method resists applicable wind pressure imposed on it applicable with the IBC 2009.
C. Submit written approval of contractor by manufacturer.
D. Submit sample warranty and maintenance instructions.

1.4 Warranty

A. Provide manufacturer's written twenty year warranty for weather tightness against leaks in roof panels cause by ordinary wear and tear under normal weather conditions.
B. Roof finish coating shall be warranted against rust, peeling, chipping, cracking and blistering for a period of twenty years.

C. Contractor shall provide written three year warranty, guaranteeing the roof system to be watertight and free of defects.
D. Contractor shall provide detailed instructions for preventative maintenance and noting a list of harmful substances that may damage roofing.

PART 2 – PRODUCTS

2.1 Roof Panels

A. Roof panels shall be 24-gauge Grade C Galvalume ASTM 792-86, AZ 55.
B. Panels shall have a standing, interlocking seam, 16" wide with a seam height of 1.5".
C. Panels shall be roll-formed in continuous lengths from eave to ridge.
D. Roofing color will be Forest Green or as approved by the Department.

2.2 Fasteners

A. Panels shall be fastened to the substrate with a concealed clip system that accommodates thermal movement.
B. Fasteners shall be concealed.

2.3 Flashing

A. Flash all other roof penetrations.
B. Flashing shall be as recommended by the roofing manufacturer and as approved by the Department. Flashing shall be a minimum of 0.040 aluminum or 24 gauge galvanized steel.
C. Rubber boot pipe flashing shall be used around vent pipes.

2.4 Sealants

A. Sealants between roof panels shall be as recommended by the manufacturer.
B. Provide all required sealants at trim, roof penetrations, etc.
C. Sealants shall be non-drying elastomer based material.

2.5 Fascia, Trim and Accessories

A. Fascia and metal trim shall be prefinished 0.040 aluminum or 24 gauges galvanized steel.
B. Ridge cap shall be a continuous venting metal ridge cover, as provided by the roofing manufacturer.

2.6 Acceptable Manufacturers

A. Everlast Metals

B. Approved Equivalent

2.7 Provisions for Expansion/Contraction

A. End wall trim and roof transition flashings shall allow the roof to move relative to walls as the roof expands and contracts with temperature changes.
B. Movement of roof panels relative to other panels shall be accommodated by the use of clips that allow movement of up to 1" in either direction.
C. Ridge assembly shall be designed to allow roof panels to move lengthwise with expansion/contraction as the roof panel temperature changes. Parts shall be factory prepunched for correct field assembly. If panels are formed in the field by manufacturer, panels may be punched in field as required by manufacturer. Panel closures and interior reinforcing straps shall be installed to seal the panel ends at the ridge. The attachment fasteners shall not be exposed on the weather side. A lock seam plug shall be used to seal the lock seam portion of the panel. A hi-tensile steel ridge cover shall span from panel closure to panel closure and flex as the roof system expands and contracts.

PART 3 – EXECUTION

3.1 Inspection

A. Contractor shall inspect the substrate prior to installing metal roofing to insure that the surface is sound and uniform. Correct any irregularities prior to proceeding with the work.

3.2 Installation

A. Fasten metal panels to structural substrate with movable clips that are seamed into the standing seam side lap
B. Fasten clips to structural substrate in accordance with manufacturer's recommendations.
C. Panel to panel connections shall be made with a positive, standing lock seam, continuously locked or crimped together by mechanical means during installation.
D. All side lap sealant shall be factory applied.
E. Install accessories such as penetration flashings and eave closures in accordance with manufacturer's recommendations, as approved by the Department.

3.3 Final Inspection

A. A final inspection of the roofing system shall be made by the roofing manufacturer's representative as soon as construction is complete. Coordinate final manufacturer's inspection with the Department. Provide written certification that the metal roof system has been installed in accordance with the manufacturer's recommendations.

SPECIAL PROVISION
SECTION 07467 – METAL SIDING

PART 1 – GENERAL

1.1 Summary

A. Provide preformed metal siding and roofing where shown on the Drawings, as specified herein and as needed for a complete and proper installation.
B. Related Work: Documents affecting work of this Section include, but are not necessarily limited to, Section 06100 - Rough Carpentry and Section 06192- Laminated Lumber.

1.2 Quality Assurance

A. Use adequate number of skilled workmen who are thoroughly trained and experienced in the necessary crafts who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.

1.3 Submittals

A. Product Date: Within 15 calendar days after the Contractor has received the Department's notice to Proceed, submit:
    - Materials list of items proposed to be provided under this Section
    - Manufacturer's specifications and other data needed to prove compliance with the specified requirements.
    - Shop drawings in sufficient detail to show fabrication, installation, anchorage and interface of the work of this Section with the work of adjacent trades;
    - Sample of two (2) full panel widths by 6" length of finished exterior siding, interior liner and permanent trim pieces.
    - Sample of each fastener employed one each.
    - Manufacturer's recommended installation procedures which, when approved by the Department, will become the basis for accepting or rejecting actual installation procedures used on the work.

PART 2 – PRODUCTS

2.1 Preformed Metal Siding and Roofing

A. Metal Roofing/siding shall be 27 gauge, Everlast II with a Forest Green for roofing and Patina Green color finish for siding, or equivalent.

B. Panels shall be a maximum length possible to minimize end laps.

2.2 Accessory Items

A. Provide subgirts, perimeter trim, closures and other required components as needed to comprise the complete preformed metal siding system, using the materials and gauges recommended by the manufacturer and approved by the Department, and providing finish on exposed surfaces precisely matching the finish on the other exposed surfaces.
B. Provide fasteners, washers and sealants as recommended by the manufacturer.

PART 3 - EXECUTION

3.1 Surface Conditions

A. Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the work. Do not proceed until unsatisfactory conditions are corrected.

3.2 Installation

A. Install the work of this Section in strict accordance with the manufacturer's recommended installation procedures as approved by the Department.
B. Set siding plumb, level and true to line, without warp or rack, to a tolerance of 1 in 600.
C. Touch up mars, scratches, and cut edges to match original finish.

SPECIAL PROVISION
SECTION 077253 - SNOW GUARDS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:
   1. Rail-type, seam-mounted snow guards.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product, include construction details, material descriptions, dimensions of individual components and profiles, and finishes.

B. Shop Drawings: Include roof plans showing layouts and attachment details of snow guards.

   1. Include details of rail-type snow guards.

C. Delegated-Design Submittal: For snow guards, include analysis reports signed and sealed by the qualified professional engineer responsible for their preparation.

   1. Include calculation of number and location of snow guards.

1.4 INFORMATIONAL SUBMITTALS

A. Qualification Data: For professional engineer's experience with providing delegated design engineering services of the kind indicated, including documentation that the engineer is licensed in the state in which the Project is located.

B. Product Test Reports: For each type of snow guard, for tests performed by a qualified testing agency, indicating load at failure of attachment to roof system identical to roof system used on this Project.

1.5 FIELD CONDITIONS

A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit adhesive-mounted snow guards to be installed, and adhesive cured, according to adhesive manufacturer's written instructions.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Delegated Design: Engage a qualified professional engineer, as defined in Section 014000 "Quality Requirements," to design snow guards, including attachment to roofing material and roof deck, as applicable for attachment method, based on the following:

1. Roof snow load.
2. Snow drifting
3. Roof slope.
4. Roof type.
5. Roof dimensions.
6. Roofing substrate type and thickness.
7. Snow guard type.
8. Snow guard fastening method and strength.
9. Snow guard spacing.
10. Coefficient of Friction Between Snow and Roof Surface: 0.
11. Factor of Safety: 2.

B. Performance Requirements: Provide snow guards that withstand exposure to weather and resist thermally induced movement without failure, rattling, or fastener disengagement due to defective manufacture, fabrication, installation, or other defects in construction.

1. Temperature Change: 120 deg F, ambient; 180 deg F, material surfaces.

C. Structural Performance: Snow guards shall withstand the effects of gravity loads and the following loads and stresses within limits and under conditions indicated.

1. Snow Loads: As indicated on Drawings.

2.2 RAIL-TYPE SNOW GUARDS

A. Rail-Type, Seam-Mounted Snow Guards:

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:

a. S-5! Metal Roof Innovations, Ltd., basis of design

2. Description: Snow guard rails fabricated from metal pipes, bars, or extrusions, anchored to brackets and equipped with one rail.
3. Cross Members: Manufactured from Type 300 Series stainless steel conforming to ASTM A581/A581M or ASTM A 582.

4. Seam clamps: ASTM B221 aluminum extrusion or ASTM B85/B85M aluminum casting with stainless steel set screws incorporating round nonpenetrating point; designed for use with applicable roofing system to which clamp is attached.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates and conditions, with Installer present, for compliance with requirements for installation tolerances, snow guard attachment, and other conditions affecting performance of the Work.

1. Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Clean and prepare substrates for bonding snow guards.

B. Prime substrates according to snow guard manufacturer's written instructions.

3.3 INSTALLATION

A. Install snow guards according to manufacturer's written instructions.
1. Space rows as recommended by manufacturer and in areas indicated in Drawings.

B. Attachment for Standing-Seam Metal Roofing:

1. Do not use fasteners that will penetrate metal roofing or fastening methods that void metal roofing finish warranty.

2. Rail-Type, Seam-Mounted Snow Guards:

a. Install brackets to vertical ribs in straight rows.
b. Secure with stainless steel set screws, incorporating round nonpenetrating point, on same side of standing seam.
c. Torque set screw according to manufacturer's instructions.
d. Install cross members to brackets.

END OF SECTION 077253

SPECIAL PROVISION
SECTION 072100 - THERMAL INSULATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:
   1. Molded (expanded) polystyrene foam-plastic board insulation.
   2. Polyisocyanurate foam-plastic board insulation.
   3. Glass-fiber blanket insulation.
   4. Loose-fill insulation.
   5. Sprayed foam insulation

B. Related Requirements:
   1. Section 061600 "Sheathing" for foam-plastic board sheathing installed directly over wood.
   2. Section 072119 "Foamed-in-Place Insulation" for spray-applied polyurethane foam insulation.
   3. Section 092900 "Gypsum Board" for sound attenuation blanket used as acoustic insulation.

1.3 ACTION SUBMITTALS

A. Product Data: For the following:
   1. Molded (expanded) polystyrene foam-plastic board insulation.
   2. Polyisocyanurate foam-plastic board insulation.
   3. Glass-fiber blanket insulation.
   4. Loose-fill insulation.
   5. Sprayed foam insulation.

1.4 INFORMATIONAL SUBMITTALS

A. Installer's Certification: Listing type, manufacturer, and R-value of insulation installed in each element of the building thermal envelope.

   1. For blown-in loose-fill insulation, indicate initial installed thickness, settled thickness, settled R-value, installed density, coverage area, and number of bags installed.
   2. Sign, date, and post the certification in a conspicuous location on Project site.

B. Product Test Reports: For each product, for tests performed by a qualified testing agency.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Protect insulation materials from physical damage and from deterioration due to moisture, soiling, and other sources. Store inside and in a dry location. Comply with manufacturer's written instructions for handling, storing, and protecting during installation.

PART 2 - PRODUCTS

2.1 MOLDED (EXPANDED) POLYSTYRENE FOAM-PLASTIC BOARD INSULATION

A. Molded (Expanded) Polystyrene Board Insulation, Type I: ASTM C578, Type I, 10-psi minimum compressive strength.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:

    a. Atlas Roofing Corporation - MPS.
    b. Insulfoam; Carlisle Construction Materials Company.
    c. Plymouth Foam, Inc.
2. Labeling: Provide identification of mark indicating R-value of each piece of insulation 12 inches and wider in width.
3. Application: Foundation and below slab insulation

2.2 POLYISOCYANURATE FOAM-PLASTIC BOARD INSULATION

A. Polyisocyanurate Board Insulation, Foil Faced: ASTM C1289, foil faced, Type I, Class 1 or 2.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

    a. Carlisle Coatings & Waterproofing Inc.
    b. Dow Chemical Company (The).
    c. Firestone Building Products.
    d. Hunter Panels.
    e. Johns Manville; a Berkshire Hathaway company.
2. Fire Propagation Characteristics: Passes NFPA 285 testing as part of an approved assembly.
3. Labeling: Provide identification of mark indicating R-value of each piece of insulation 12 inches and wider in width.
4. Application: Foundation walls

2.3 GLASS-FIBER BLANKET INSULATION

A. Glass-Fiber Blanket Insulation, Unfaced: ASTM C665, Type I; passing ASTM E136 for combustion characteristics.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:

    a. CertainTeed Corporation; Saint-Gobain North America.
    b. Johns Manville; a Berkshire Hathaway company.
    c. Owens Corning.

2. Flame-Spread Index: Not more than 25 when tested in accordance with ASTM E84.
3. Smoke-Developed Index: Not more than 50 when tested in accordance with ASTM E84.
4. Labeling: Provide identification of mark indicating R-value of each piece of insulation 12 inches and wider in width.
5. Application: Stud cavity and sound attenuation

2.4 MINERAL-WOOL BLANKET INSULATION

A. Mineral-Wool Blanket Insulation, Unfaced: ASTM C665, Type I (blankets without membrane facing); consisting of fibers; passing ASTM E136 for combustion characteristics.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:

    a. Johns Manville; a Berkshire Hathaway company.
    b. ROCKWOOL.

2. Flame-Spread Index: Not more than 25 when tested in accordance with ASTM E84.
3. Smoke-Developed Index: Not more than 50 when tested in accordance with ASTM E84.
4. Labeling: Provide identification of mark indicating R-value of each piece of insulation 12 inches and wider in width.
5. Application: Stud cavity and sound attenuation

2.5 LOOSE-FILL INSULATION

A. Cellulosic-Fiber Loose-Fill Insulation: ASTM C739, chemically treated for flame-resistance, processing, and handling characteristics.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:

a. GreenFiber.
b. Nu-Wool Co., Inc.

2. Application: Attic floor

2.6 SPRAYED FOAM INSULATION

A. Sprayed Polyurethane Foam Sealant for Perimeter of Doors and Windows: 1- or 2-component, foamed-in-place, polyurethane foam sealant, 1.5 to 2.0 lb/cu. ft. density; flame spread index of 25 or less according to ASTM E 162; with primer and noncorrosive substrate cleaner recommended by foam sealant manufacturer.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:

a. Great Stuff Window & Door by Dow
b. Froth-Pak by Insta-Foam Products, Inc.
c. Zerodraft Insulating Air Sealant by Zerodraft

2.7 ACCESSORIES

A. Insulation for Miscellaneous Voids:

1. Glass-Fiber Insulation: ASTM C764, Type II, loose fill; with maximum flame-spread and smoke-developed indexes of 5, per ASTM E84.
2. Spray Polyurethane Foam Insulation: ASTM C1029, Type II, closed cell, with maximum flame-spread and smoke-developed indexes of 75 and 450, respectively, per ASTM E84.
3. Polyurethane Pour-In-Place Insulation: Closed cell, with maximum flame-spread and smoke-developed indexes of 75 and 450, respectively, per ASTM E84, specifically formulated for pour-in-place applications.

B. Adhesive for Bonding Insulation: Product compatible with insulation and air and water barrier materials, and with demonstrated capability to bond insulation securely to substrates without damaging insulation and substrates.

C. Eave Ventilation Troughs: Preformed, rigid fiberboard or plastic sheets designed and sized to fit between roof framing members and to provide ventilation between insulated attic spaces and vented eaves.

PART 3 - EXECUTION

3.1 PREPARATION

A. Clean substrates of substances that are harmful to insulation, including removing projections capable of puncturing insulation or vapor retarders, or that interfere with insulation attachment.

3.2 INSTALLATION, GENERAL

A. Comply with insulation manufacturer's written instructions applicable to products and applications.

B. Install insulation that is undamaged, dry, and unsoiled and that has not been left exposed to ice, rain, or snow at any time.

C. Install insulation with manufacturer's R-value label exposed after insulation is installed.

D. Extend insulation to envelop entire area to be insulated. Fit tightly around obstructions and fill voids with insulation. Remove projections that interfere with placement.

E. Provide sizes to fit applications and selected from manufacturer's standard thicknesses, widths, and lengths. Apply single layer of insulation units unless multiple layers are otherwise shown or required to make up total thickness or to achieve R-value.

3.3 INSTALLATION OF SLAB INSULATION

A. On vertical slab edge and foundation surfaces, set insulation units using manufacturer's recommended adhesive according to manufacturer's written instructions.

B. On horizontal surfaces, loosely lay insulation units according to manufacturer's written instructions. Stagger end joints and tightly abut insulation units.

3.4 INSTALLATION OF FOUNDATION WALL INSULATION

A. Butt panels together for tight fit.

B. Adhesive Installation: Install with adhesive or press into tacky waterproofing or dampproofing according to manufacturer's written instructions.

3.5 INSTALLATION OF INSULATION IN FRAMED CONSTRUCTION

A. Blanket Insulation: Install in cavities formed by framing members according to the following requirements:

1. Use insulation widths and lengths that fill the cavities formed by framing members. If more than one length is required to fill the cavities, provide lengths that will produce a snug fit between ends.
2. Place insulation in cavities formed by framing members to produce a friction fit between edges of insulation and adjoining framing members.
3. Attics: Install eave ventilation troughs between roof framing members in insulated attic spaces at vented eaves.
4. For wood-framed construction, install blankets according to ASTM C1320 and as follows:

a. With faced blankets having stapling flanges, lap blanket flange over flange of adjacent blanket to maintain continuity of vapor retarder once finish material is installed over it.

B. Miscellaneous Voids: Install insulation in miscellaneous voids and cavity spaces where required to prevent gaps in insulation using the following materials:

1. Glass-Fiber Insulation: Compact to approximately 40 percent of normal maximum volume equaling a density of approximately 2.5 lb/cu. ft..
2. Spray Polyurethane Insulation: Apply according to manufacturer's written instructions.

C. Loose-Fill Insulation: Apply according to ASTM C1015 and manufacturer's written instructions.

1. Level horizontal applications to uniform thickness as indicated, lightly settle to uniform density, but do not compact excessively.
2. For cellulosic-fiber loose-fill insulation, comply with CIMA's Bulletin #2, "Standard Practice for Installing Cellulose Insulation."

3.6 PROTECTION

A. Protect installed insulation from damage due to harmful weather exposures, physical abuse, and other causes.

B. Provide temporary coverings or enclosures where insulation is subject to abuse and cannot be concealed and protected by permanent construction immediately after installation.

END OF SECTION 072100

DIVISION 7 – THERMAL AND MOISTURE PROTECTION

SECTION 072500 WEATHER BARRIERS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Building paper.
2. Building wrap.
3. Flexible flashing.
4. Drainage material.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. For building wrap, include data on air and water-vapor permeance based on testing according to referenced standards.

B. Shop Drawings: Show details of building wrap at terminations, openings, and penetrations. Show details of flexible flashing applications.

1.4 INFORMATIONAL SUBMITTALS

A. Evaluation Reports: For water-resistive barrier and flexible flashing, from ICC-ES.

PART 2 - PRODUCTS

2.1 WATER-RESISTIVE BARRIER

A. Building Wrap: ASTM E1677, Type I air barrier; with flame-spread and smoke-developed indexes of less than 25 and 450, respectively, when tested according to ASTM E84; UV stabilized; and acceptable to authorities having jurisdiction.

1. Water-Vapor Permeance: Not less than 20 perms per ASTM E96/E96M, Desiccant Method (Procedure A).
2. Air Permeance: Not more than (0.02 L/s x sq. m at 75 Pa) when tested according to ASTM E2178.
3. Allowable UV Exposure Time: Not less than three months.
4. Flame Propagation Test: Materials and construction shall be as tested according to NFPA 285.

B. Building-Wrap Tape: Pressure-sensitive plastic tape recommended by building-wrap manufacturer for sealing joints and penetrations in building wrap.

2.2 FLEXIBLE FLASHING

A. Butyl Rubber Flashing: Composite, self-adhesive, flashing product consisting of a pliable, butyl rubber compound, bonded to a high-density polyethylene film, aluminum foil, or spunbonded polyolefin to produce an overall thickness of not less than 0.025 inch (0.6 mm)

1. Flame Propagation Test: Materials and construction shall be as tested according to NFPA 285.

B. Rubberized-Asphalt Flashing: Composite, self-adhesive, flashing product consisting of a pliable, rubberized-asphalt compound, bonded to a high-density polyethylene film, aluminum foil, or spunbonded polyolefin to produce an overall thickness of not less than **0.030 inch (0.8 mm)**
1. Flame Propagation Test: Materials and construction shall be as tested according to NFPA 285.

C. Primer for Flexible Flashing: Product recommended in writing by flexible flashing manufacturer for substrate.

D. Nails and Staples: Product recommended in writing by flexible flashing manufacturer and complying with ASTM F1667.

PART 3 - EXECUTION

3.1 WATER-RESISTIVE BARRIER INSTALLATION

A. Cover exposed exterior surface of sheathing with water-resistive barrier securely fastened to framing immediately after sheathing is installed.

B. Cover sheathing with water-resistive barrier as follows:

1. Cut back barrier 1/2 inch (13 mm) on each side of the break in supporting members at expansion- or control-joint locations.
2. Apply barrier to cover vertical flashing with a minimum 4-inch (100-mm) overlap unless otherwise indicated.

C. Building Wrap: Comply with manufacturer's written instructions and warranty requirements.

1. Seal seams, edges, fasteners, and penetrations with tape.
2. Extend into jambs of openings and seal corners with tape.

3.2 FLEXIBLE FLASHING INSTALLATION

A. Apply flexible flashing where indicated to comply with manufacturer's written instructions.

1. Prime substrates as recommended by flashing manufacturer.
2. Lap seams and junctures with other materials at least 4 inches (100 mm) except that at flashing flanges of other construction, laps need not exceed flange width.
3. Lap flashing over water-resistive barrier at bottom and sides of openings.
4. Lap water-resistive barrier over flashing at heads of openings.
5. After flashing has been applied, roll surfaces with a hard rubber or metal roller to ensure that flashing is completely adhered to substrates.

3.3 DRAINAGE MATERIAL INSTALLATION

A. Install drainage material over building wrap and flashing to comply with manufacturer's written instructions.

END OF SECTION 072500

DIVISION 7 – THERMAL AND MOISTURE PROTECTION
SECTION 074633

VINYL SIDING AND SOFFITS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Vinyl soffits.

B. Vinyl trim and accessories.

1.2 RELATED SECTIONS

A. Section 06 10 00 - Rough Carpentry.

B. Section 07 90 00 - Joint Protection.

1.3 REFERENCES

A. ASTM International (ASTM):
1. ASTM D256 - Test Method for Determining the Pendulum Impact Resistance of Notched Specimens of Plastics.
2. ASTM D635 - Test Method for Rate of Burning and/or Extent and Time of Burning of Self-Supported Plastics in a Horizontal Position.
3. ASTM D638 - Test Method for Tensile Properties of Plastics.
4. ASTM D648 - Test Method for Deflection Temperature of Plastics Under Flexural Load.
5. ASTM D696 - Test Method for Coefficient of ylLinear Expansion of Plastics.
6. ASTM D790 - Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials.
7. ASTM D1929 - Test Method for Ignition Properties of Plastics.
8. ASTM D2843 - Test Method for Density of Smoke from the Burning or Decomposition of Plastics.
9. ASTM D3679 - Specification for Rigid Poly Vinyl Chloride (PVC) Siding.
10. ASTM D4226 - Test Methods for Impact Resistance of Rigid Poly Vinyl Chloride (PVC) Building Products.
11. ASTM D5206 - Standard Test Method for Windload Resistance of Rigid Plastic Siding.
12. ASTM D5420 - Standard Test Method for Impact Resistance of Flat, Rigid Plastic Specimen by Means of a Striker Impacted by a Falling Weight (Gardner Impact)
13. ASTM E84 - Test Method for Surface Burning Characteristics of Building Materials.
14. ASTM E662 - Standard Test Method for Specific Optical Density of Smoke Generated by Solid Materials.

1.4 SUBMITTALS

A. Submit under provisions of Section 01 30 00.

B. Samples: Soffit design, size, and color for approval.

C. Manufacturer's installation instructions.

D. Certificate: Manufacturer's certification that siding/soffit as supplied meets or exceeds the conditions specified herein.

1.5 QUALITY ASSURANCE

A. Manufacturer: Maintain rigorous production quality control standards to ensure that vinyl siding and soffit will perform as expected for its intended use.

B. Regulatory Requirements:
1. International Building Code – IBC 2015
2. ICC - ESR-1258, ESR 1133.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Store products in manufacturer's unopened packaging until ready for installation.

B. Pack siding and soffits two squares per carton and clearly mark each carton with manufacturer's name, siding style, color, identifying lot number, and VSI Certification Stamp.

C. Store vinyl siding, soffits, and accessories in clean, dry areas, out of direct sunlight.

D. Handle material to prevent damage. Do not allow cartons to crease.

1.7 WARRANTY

A. Upon completion, provide a written transferable, lifetime limited warranty.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturer: As selected by Architect from Manufacturer’s standards.

B. Requests for substitutions will be considered in accordance with the provisions of Section 01 60 00.

2.2 MATERIALS

A. Vinyl Siding and Soffits - General Requirements: Produced from polyvinyl chloride (PVC) compounds meeting ASTM D3679 requirements for compound class number 2.
1. Vinyl Siding Institute Certified.
2. Average Impact Strength: 3.86 ft. lbs./in. (26.61 kPa) of notch at 73.4 degrees F (23 degrees C), per ASTM D256.
3. Average Impact Strength: 2.4 ft. lbs./in. (16.55 kPa) of notch at 32 degrees F (0 degrees C), per ASTM D256.
4. Tensile Strength: 6,700 psi (46,195 kPa), per ASTM D638.
5. Modulus of Elasticity: 410,000 psi (2,826,850 kPa), per ASTM D638.
6. Deflection Temperature: 170 degrees F (77 degrees C), per ASTM D648.
7. Fire Properties:
    a. Average Time of Burning: Less than 5 seconds, when tested in accordance with ASTM D635.
    b. Average Extent of Burning: Less than 5 mm, when tested in accordance with ASTM D635.
    c. Flame Spread Index: 20 (Class A), when tested in accordance with ASTM E84.
    d. Smoke Developed Index: Less than 450, when tested in accordance with ASTM E84.
    e. Ignition Temperature: When tested in accordance with ASTM D1929, no self-ignition and no flaming; no smoldering at less than 680 degrees F (360 degrees C).
8. Typical Vinyl Siding Properties:
    a. Camber: sidings and soffits shall meet all requirements for camber per ASTM D3679.
    b. Heat Shrinkage: Sidings and soffits shall meet all requirements for heat shrinkage per ASTM D3679.

c. Impact Resistance: 60 in-lbf, per ASTM D4226, Procedure A, H.25.
d. Weatherability: No surface or structural defects such as peeling, cracking, or chipping when tested per ASTM D3679.
e. Coefficient of Linear Expansion: 3.05 by 10-5 in/in F, per ASTM D696.
f. Gloss: sidings and soffits shall meet all requirements.
g. Surface Distortion: No distortion at 120 degrees F (40.5 degrees C), per ASTM D3679.

9. Interlock: Post-form style lock with positive interlock; both ends of panels factory cut and notched for overlap.
10. Nail Slots: Elongated 1-inch (25 mm) slots spaced approximately 1/4 inch (6 mm) apart in nailing hem to allow for expansion and contraction.
11. Weep Holes: Small holes under the bottom butt of siding panels to prevent vapor build-up and allow accumulated moisture to escape.

2.3 SOFFIT

A. Vinyl Soffit:
1. Each 12 inch (305 mm) wide panel nominally configured as three 4 inch (102 mm) panels.
2. Panels: Solid.
3. Panels: Aerated. 7 sq inch (45 sq. cm) net free area per linear foot.
4. Length : 12 feet 6 inches (3.81 m).
5. Width 12 inches (305 mm)
6. Field Butt Height: 1/2 inch (13 mm)
7. Thickness: 0.040 inch (1.02 mm).
8. Texture: Natural wood grain.
9. Finish: Low gloss.
10. Color: As selected by Architect

2.4 ACCESSORIES

A. Standard Vinyl Installation Accessories:
1. Consistent with shape, size, and properties shown on the drawings and as required for complete installation.
2. Produced from the same compound materials and with comparable properties as the siding.
3. Color: Matching or color coordinated with siding.

B. Wide Pocket Accessories:
1. Traditional outside corner post with foam insert.
   a. Color: As selected by Architect from manufacturer's standards.
2. Inside Corner Post.
   a. Color: As selected by Architect from manufacturer's standards.
3. J-Channel.1-1/2 inch (38 mm).
   a. Color: As selected by Architect from manufacturer's standards.
4. 3-1/2 inch (89 mm) Lineal.
   a. Color: As selected by Architect from manufacturer's standards.
5. 3 inch (76 mm) Beaded Corner Starter. Color: As selected by Architect.
6. 2 Piece J-Channel - Receiver Piece.
   a. Color: White.
7. 2 Piece J-Channel - 1-1/2 inch (38 mm) Cover Piece.
   a. Color: As selected by Architect from manufacturer's standards.
8. Flexible J-Channel - 1-1/4 inch (32 mm).
   a. Color:As selected by Architect from manufacturer’s standards.
9. Flexible J-Channel - 1-1/2 inch (38 mm).

a. Color: As selected by Architect.

PART 3 EXECUTION

3.1 EXAMINATION

A. Confirm that all critical dimensions are as specified on the drawings.

B. Beginning installation indicates Installer's acceptance of substrate as suitable to accept siding and soffits.

3.2 PREPARATION

A. Repair substrate flaws or defects before applying siding or soffits.

B. Where necessary, fur surfaces to an even plane and free from obstructions before application.

3.3 INSTALLATION

A. Install siding and soffits in accordance with the latest edition of "Vinyl Siding Installation Manual," published by the Vinyl Siding Institute (VSI) and special details from the drawings.

B. Install vinyl siding, soffits, and accessories in accordance with best practice, with all joint members plumb and true.

3.4 FIELD QUALITY CONTROL

A. After installation of siding and soffits, check entire surface for obvious flaws or defects.

B. Replace and repair any problem areas, paying close attention to the substrate for causes of the problem.

3.5 CLEANING

A. After application of siding and soffits, clean as necessary to remove all fingerprints and soiled areas.

B. Upon completion of siding application, clean entire area, removing all scrap, packaging, and unused materials related to this work.

END OF SECTION

CONTRACT AGREEMENT, OFFER & AWARD

AGREEMENT made on the date last signed below, by and between the State of Maine, acting through and by its Department of Transportation (Department), an agency of state government with its principal administrative offices located at Child Street, Augusta, Maine, with a mailing address at 16 State House Station, Augusta, Maine 04333-0016, and _____(Contractor) a corporation or other legal entity organized under the laws of the State of _____, with its principal place of business located at _____ _____.

The Department and the Contractor, in consideration of the mutual promises set forth in this Agreement (the "Contract"), hereby agree as follows:

A. The Work.

The Contractor agrees to complete all Work as specified or indicated in the Contract including Extra Work in conformity with the Contract, **WIN 027323.00F for a Maintenance Garage in the town of Fort Fairfield, County of Aroostook,** Maine. The Work includes construction, maintenance during construction, warranty as provided in the Contract, and other incidental work.

The Contractor shall be responsible for furnishing all supervision, labor, equipment, tools supplies, permanent materials and temporary materials required to perform the Work including construction quality control including inspection, testing and documentation, all required documentation at the conclusion of the project, warranting its work and performing all other work indicated in the Contract.

The Department shall have the right to alter the nature and extent of the Work as provided in the Contract; payment to be made as provided in the same.

B. Time.

The Contractor agrees to complete all Work, except warranty work, on or before **August 30, 2024.** Further, the Department may deduct from moneys otherwise due the Contractor, not as a penalty, but as Liquidated Damages in accordance with Sections 107.7 and 107.8 of the *State of Maine Department of Transportation Standard Specifications, March 2020 Edition* and related Special Provisions.

C. Price.

The quantities given in the Schedule of Items of the Bid Package will be used as the basis for determining the original Contract amount and for determining the amounts of the required Performance Surety Bond and Payment Surety Bond, and that the amount of this offer is _____

_____

$_____ Performance Bond and Payment Bond each being 100% of the amount of this Contract.

D. Contract.

This Contract, which may be amended, modified, or supplemented in writing only, consists of the Contract documents as defined in the Plans, *Standard Specifications, March 2020 Edition, Standard Details March 2020 Edition* as updated through advertisement, Supplemental Specifications, Special Provisions, Contract Agreement; and Contract Bonds. It is agreed and understood that this Contract will be governed by the documents listed above.

E. Certifications.

By signing below, the Contractor hereby certifies that to the best of the Contractor's knowledge and belief:

1. All of the statements, representations, covenants, and/or certifications required or set forth in the Bid and the Bid Documents, including those in the Contract are still complete and accurate as of the date of this Agreement.

2. The Contractor knows of no legal, contractual, or financial impediment to entering into this Contract.

3. The person signing below is legally authorized by the Contractor to sign this Contract on behalf of the Contractor and to legally bind the Contractor to the terms of the Contract.

F. Offer.

The undersigned, having carefully examined the site of work, the Plans, *Standard Specifications March 2020 Edition, Standard Details March 2020 Edition* as updated through advertisement, Supplemental Specifications, Special Provisions, Contract Agreement; and Contract Bonds contained herein for construction of:

WIN 027323.00F for a Maintenance Garage in the town of Fort Fairfield, County of Aroostook,

State of Maine, on which bids will be received until the time specified in the "Notice to Contractors" do(es) hereby bid and offer to enter into this contract to supply all the materials, tools, equipment and labor to construct the whole of the Work in strict accordance with the terms and conditions of this Contract at the unit prices in the attached "Schedule of Items."

The Offeror agrees to perform the work required at the price specified above and in accordance with the bids provided in the attached "Schedule of Items" in strict accordance with the terms of this solicitation, and to provide the appropriate insurance and bonds if this offer is accepted by the Government in writing.

As Offeror also agrees:

First: To do any extra work, not covered by the attached "Schedule of Items," which may be ordered by the Resident, and to accept as full compensation the amount determined upon a "Force Account" basis as provided in the *Standard Specifications, March 2020 Edition*, and as addressed in the contract documents.

Second: That the bid bond at 5% of the bid amount or the official bank check, cashier's check, certificate of deposit or U. S. Postal Money Order in the amount given in the "Notice to Contractors", payable to the Treasurer of the State of Maine and accompanying this bid, shall be forfeited, as liquidated damages, if in case this bid is accepted, and the undersigned shall fail to abide by the terms and conditions of the offer and fail to furnish satisfactory insurance and Contract bonds under the conditions stipulated in the Specifications within 15 days of notice of intent to award the contract.

Third: To begin the Work as stated in Section 107.2 of the *Standard Specifications March 2020 Edition* and complete the Work within the time limits given in the Special Provisions of this Contract.

Fourth: That this offer shall remain open for 30 calendar days after the date of opening of bids.

Fifth: The Bidder hereby certifies, to the best of its knowledge and belief that: the Bidder has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of competitive bidding in connection with its bid, and its subsequent contract with the Department.

IN WITNESS WHEREOF, the Contractor, for itself, its successors and assigns, hereby execute this Agreement and thereby binds itself to all covenants, terms, and obligations contained in the Contract Documents.

CONTRACTOR

Date	(Signature of Legally Authorized Representative of the Contractor)
Witness	(Name and Title Printed)

G. Award.

Your offer is hereby accepted. This award consummates the Contract, and the documents referenced herein.

MAINE DEPARTMENT OF TRANSPORTATION

Date	By: Bruce A. Van Note, Commissioner
Witness	