

HARRIMAN

York High School  
Village Elementary School  
Window Replacement and  
Renovations  
York, Maine

Project No. 18426

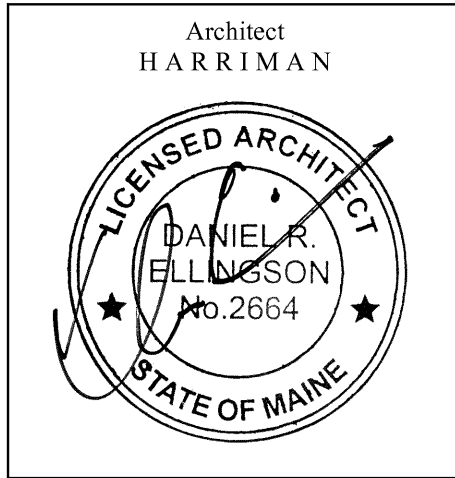
March 6, 2019

Construction Documents

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PROFESSIONAL SEAL PAGE



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YORK HIGH SCHOOL,  
VILLAGE ELEMENTARY SCHOOL  
WINDOW REPLACEMENT AND RENOVATIONS  
YORK, MAINE

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SECTION 1-A  
INSTRUCTIONS TO BIDDERS  
(PUBLIC SCHOOL PROJECT)

1. At the time of the opening of proposals, each bidder will be presumed to have inspected the site and to have read and be thoroughly familiar with the plans and contract documents, including all addenda. The failure or omission of any bidder to receive or examine any form, instrument, or document shall in no way relieve any bidder from any obligation in respect to his proposal. The Owner reserves the right to accept or reject any or all proposals as may best serve the interest of the Owner.

2. (a) General Contractors shall use the proposal form for General Contractor included in the specification. One (1) copy shall be filled out and signed and sent to the Owner in a sealed envelope to arrive on or before the time specified in the "Notice to Building Contractors" Section 2-A.

(b) Telegraphic proposal from the General Contractors will not be considered, but modifications by telegram of proposals already submitted will be considered, if received prior to the hour set for receipt of proposals. If the telegram discloses the amount of the proposal submitted, the proposal will be declared invalid.

3. Subject to the Owner's right, reserved herein, to accept or reject any or all proposals, the General Contractor will be selected on the basis of the sum of the lowest acceptable proposal plus such of the alternates as the Owner desires to use.

4. The Owner is exempt from the payment of Federal Excise Tax on articles not for resale and the Federal Transportation Tax on all shipments. The Contractor shall quote less these taxes.

5. Maine State Sales and Use Tax should not be included in your quotation as the Owner is exempt from the payment of such taxes. All Contractors and Sub-Contractors should refer to State of Maine, Bureau of Taxation "Sales and Use Tax Division" for latest bulletin covering Sales and Use Tax Regulations.

6. No proposal may be withdrawn during a period of thirty (30) calendar days immediately following the opening of the General contract proposals.

7. No contract may be assigned, sublet or transferred without the written consent of the Owner.

8. (a) All foreign corporations intending to do business in the State of Maine must comply with the provisions of Title 13-A M.R.S.A., Chapter 12. Any foreign corporation receiving notice of award of contract shall contact the Secretary of State for the purpose of complying with this statute.

(a) All individuals not residents of the State of Maine are subject to the provisions of Title 14, M.R.S.A., Section 704-A.

(b) It may be necessary for the General Contractor to submit to the Owner documentary evidence that the provisions have been complied with.

9. The selected General Contractor will be required to furnish a 100% performance bond and a 100% payment bond to cover the execution of his contract in conformity with the form of bonds shown in sections 2-C2 and 2-C3.

10. General Contractors may be required to furnish a statement of their business experience, record of accomplishments, and financial responsibility at the discretion of the Owner.

11. (a) The date of completion is stated in the proposal form section 2-B-1 and in the contract form section 2-E. If the Contractor finds it impossible to complete the work on or before the said date of completion, he may make a written request to the Owner for an extension of time setting forth therein the reasons for the request. If the Owner finds that the work was delayed because of conditions beyond the control and without the fault of the Contractor he may extend the date of completion in such amount as, in his judgment, the conditions warrant. The said new date of completion shall then be in full force and affect the same as though it were the original date of completion.

(b) Time is an essential element of the contract and it is important that the work be pressed vigorously to completion. The cost to the Owner of administration of the Contract, inspection and supervision will be increased as the time occupied in the work is lengthened.

12. (a) The proposal shall be based on the materials, methods, equipment and products as specified.

(b) Any materials, methods, equipment and products not herein specified but deemed worthy of consideration by any General Contractor or Sub-Contractor, may be introduced by a separate letter attached to his proposal. He shall state the cost comparison with the specified methods, equipment and products and the reason for the suggested substitution.

(c) It shall be understood by the General Contractor or Sub-Contractor that the attached letter describing the proposed change will not be used in determining the low General or Sub-Contract proposal submitted unless the General or Sub-Contractor shall have submitted their list of proposed changes to the Designer 10 days prior to the date set for the receipt of their respective proposals, the Designer shall have issued an addendum related to the change(s) proposed, and the Contractor shall have received written approval by the Designer.

13. Employment Practices

(a) Listing of job vacancies; [Executive Order No. 5, dated December 6, 1971](#), requires that "the Contractor, or any Sub-Contractor holding a contract directly under the Contractor, shall, to the maximum feasible, list all its suitable employment openings with the Maine Employment Security Commission."



(b) "This provision shall not apply to employment openings which the Contractor proposed to fill from its own organization."

(c) Two copies of a "Quarterly Report of New Hires" shall be prepared by the 7th of January, April, July and October for the calendar quarter to which data pertains and sent to the local office of the Maine Employment Security Commission.

(d) A copy of the reporting form is attached to these Instructions to Bidders. These may be obtained from the nearest [office of M.E.S.C.](#) serving the area.

14. Code of Fair Practices; [Executive Order No. 11, dated July 1, 1972](#), requires that every State contract for public works contain the following provisions: "During the performance of this contract, the Contractor agrees as follows:

(a) The Contractor will not discriminate against any employee or applicant for employment because of race, color, religious creed, sex, national origin, ancestry or age. Such action shall include, but not be limited to the following: employment upgrading, demotions, transfers, recruitment or recruitment advertising; layoffs or terminations; rates of pay or other forms of compensation; and selection of training including apprenticeship.

(b) The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the Contractor; state that all qualified applicants will receive consideration for employment without regard to race, color, religious creed, sex, national origin, ancestry or age.

(c) The Contractor will send to each labor union or representative of the workers with which he has a collective or bargaining agreement, or other contract or understanding, whereby he is furnished with labor for the performance of his contract, a notice, to be provided by the contracting department or agency, advising the said labor union or workers' representative of the Contractors commitment under this section and shall post copies of the notice in conspicuous places available to employees and to applicants for employment."

(d) The Contractor will cause the foregoing provisions to be inserted in all contracts for any work covered by this agreement so that such provisions will be binding upon each Sub-Contractor.

15. OSHA - Safety Regulations. This project is subject to compliance with all requirements of the Occupational Safety and Health Administration, Volume 36, No. 105 of the Federal Register, U.S. Department of Labor published Saturday, May 29, 1971 as amended.

16. Any proposal that contains an escalation clause will be invalid.

17. Any and all Designer interpretations and/or clarifications of bidding documents must be in the form of written addenda issued from the Designer office to all bidders who are on record at the Designer office not later than 72 hours prior to scheduled receipt of bids. (No verbal interpretations and/or clarifications shall be allowed as a substitute for written addenda.)

18. Questions by the bidder concerning alternate work descriptions/content/completeness and bidding process must be clarified with the Designer to assure the proper bidding and execution of all work intended under the alternate. This clarification must be in the form of a written addendum as described in item 19 above.

19. Preparation of General Contract Bid Proposal.

(a) General contract bidders are responsible for the completeness of their bid proposal on form issued with bidding document.

(b) Proposal must show cost of work specified including work specified; in any and all legally issued addenda.

(c) Any General contract proposal which fails to include the cost of work specified in an alternate may be declared informal if the Owner elects to include said alternate in the General contract.

(d) Proposal is to acknowledge all addenda that may have been legally issued. (Failure to acknowledge may be cause to have bid declared informal.)

(e) Indicate time for completion of the work, if required.

(f) Include corporate/partnership information as required.

(g) Proposal must be signed in ink.

(h) Proposal must be accompanied by required certified or cashier's check or a duly signed and executed bid bond.

SECTION 2-A

NOTICE TO BUILDING CONTRACTORS  
(PUBLIC SCHOOL PROJECTS)

Sealed proposals in envelopes plainly marked, Proposal For:

**York High School, Village Elementary School Window Replacement and Renovations**

Brief Job Description: The work consists of removal and replacement of windows at York High School and Village Elementary School, painting at both schools, and siding replacement at York High School.

Addressed to: Mr. Zak Harding  
York School Department  
469 US Route 1  
York, ME 03909

Email: [zharding@yorkschoools.org](mailto:zharding@yorkschoools.org)

Phone: (207) 363-3403 x10033

Proposals will be opened and read aloud at 2:30 pm on April 3, 2019, at the office of the Superintendent of Schools. Bids received after 2:30 pm will not be considered and will be returned unopened.

A mandatory pre-bid conference for General Contractors, to review project scope and bid requirements, will be held inside the main entrance of York High School on Thursday, March 21, 2019 at 2:30 p.m. The meeting will move to Village Elementary School after review of the high school portion of the project. Attendance is required by General Contractors to bid the project.

General contract proposals must be accompanied by a certified or cashier's check for 5% of the proposal or a satisfactory bid bond (2-C1) in a similar amount. The owner reserves the right to waive all formalities, and reject any and all proposals or to accept any proposal. Proposals shall be submitted upon the form provided by the architect.

The selected general contractor will be required to furnish a 100% contract performance bond and a 100% contract payment bond to cover the execution of the work which shall be in conformity with the form of bonds contained in section 2-C of the specifications and for the contract amount.

General Contractors and Subcontractors can download Bid Documents from the BGS site at <https://www.maine.gov/dafs/brem/business-opportunities>.

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SECTION 2-B1

PROPOSAL FORM FOR GENERAL CONTRACTORS  
(PUBLIC SCHOOL PROJECTS)

BIDDER: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

TO: Mr. Zak Harding  
York School Department  
469 US Route 1  
York, ME 03909

A. Having carefully examined the form of contract, general conditions, special provisions and plans and specifications dated March 6, 2019, Prepared by: Harriman, Architects + Engineers for the York High School, Village Elementary School Window Replacement and Renovations as well as the premises and conditions affecting the work, we the undersigned propose to furnish all labor, equipment, and materials necessary for and reasonably incidental to the construction and completion of this proposal for the amount of:

\_\_\_\_\_  
\_\_\_\_\_  
\$ \_\_\_\_\_

Allowances: The above amount includes the quantity and cash allowances contained in the bid documents.

Best Value Substantial Completion Date: Insert additional cost or cost savings as applicable extending the substantial completion date to August 20, 2019.

Add / Deduct Amount: (\$ \_\_\_\_\_ )

B. Alternate prices as follows:

Alternate No.1 Scrape and Paint Pipe Rail Add \$ \_\_\_\_\_

C. This proposal includes the following addenda to the drawings and specifications:

Addendum No. \_\_\_\_\_, Dated \_\_\_\_\_ Addendum No. \_\_\_\_\_, Dated \_\_\_\_\_  
Addendum No. \_\_\_\_\_, Dated \_\_\_\_\_ Addendum No. \_\_\_\_\_, Dated \_\_\_\_\_  
Addendum No. \_\_\_\_\_, Dated \_\_\_\_\_ Addendum No. \_\_\_\_\_, Dated \_\_\_\_\_

D. The undersigned agrees, if this proposal is accepted, to sign a contract and deliver it, along with the bonds and affidavits of all insurance specified within twelve (12) calendar days after the date of notification of such acceptance, except if the 12th day falls on a holiday, a Saturday or

Sunday, then the conditions will be fulfilled if the required documents are received before 12 o'clock noon on the day following the holiday, or the Monday following the Saturday or Sunday, and as a guarantee thereof, herewith submits a certified or cashier's check or bid bond as required.

- E. The undersigned agrees, if awarded the contract, to substantially complete the work in August 20, 2017 in accordance with Section 011000.
- F. This proposal includes the cost of a 100% performance bond and a 100% payment bond.

Signed \_\_\_\_\_

By \_\_\_\_\_

Address \_\_\_\_\_

\_\_\_\_\_

NOTE: If bidder is a corporation, write State of incorporation, and if a partnership, give full names of all partners.

**Contractor Bid Form**

**Bid Proposal Schedule of Values**

<b>Div.</b>	<b>Description of Work</b>	<b>Cost</b>
1	General Requirements	\$
2	Existing Conditions	\$
3	Concrete	\$
4	Masonry	\$
5	Steel	\$
6	Carpentry	\$
7	Thermal and Moisture Protection	\$
8	Openings	\$
9	Finishes	\$
10	Specialties	\$
11	Equipment	\$
12	Furnishings	\$
13	Special Construction	\$
14	Conveying Equipment	\$
21	Fire Suppression	\$
22	Plumbing	\$
23	HVAC	\$
26	Electrical	\$
27	Communications	\$
28	Electronic Safety and Security	\$
31	Earthwork	\$
32	Exterior Improvements	\$
33	Utilities	\$

Subtotal: \$

**Mark-Ups**

General Conditions	
Bonds and Insurances	

Subtotal: \$

**BASE BID SUBMISSION TOTAL: \$**

**Best Value Completion Date:**

**A. Contractors Proposed Substantial Completion :** \_\_\_\_\_ (\$ \_\_\_\_\_ )  
**Date** **Deduct**

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SECTION 2-C1  
SHORT FORM  
FORM OF GENERAL CONTRACT BID BOND  
(Public School Projects)

KNOW ALL MEN BY THESE PRESENTS, THAT WE, THE UNDERSIGNED

(1) \_\_\_\_\_,

(2) \_\_\_\_\_

OF \_\_\_\_\_ AND STATE OF \_\_\_\_\_

AS PRINCIPAL AND (3) \_\_\_\_\_

AS SURETY, ARE HEREBY HELD AND FIRMLY BOUND UNTO (4) \_\_\_\_\_

\_\_\_\_\_ IN THE PENAL SUM OF \_\_\_\_\_

FOR THE PAYMENT OF WHICH, WELL AND TRULY TO BE MADE, WE HEREBY JOINTLY AND SEVERALLY BIND OURSELVES, OUR HEIRS, EXECUTORS, ADMINISTRATORS, SUCCESSORS AND ASSIGNS, SIGNED THIS (5) \_\_\_\_\_ DAY OF \_\_\_\_\_ 20\_\_\_\_\_.

THE CONDITION OF THE ABOVE OBLIGATION IS SUCH THAT WHEREAS THE PRINCIPAL HAS SUBMITTED TO (6) OWNER \_\_\_\_\_

\_\_\_\_\_ A CERTAIN PROPOSAL, ATTACHED HERETO AND HEREBY MADE A PART HEREOF, TO ENTER INTO A CONTRACT IN WRITING, FOR THE CONSTRUCTION OF (7) \_\_\_\_\_

NOW THEREFORE:

(A) IF SAID PROPOSAL SHALL BE REJECTED, OR, IN THE ALTERNATE,

(B) IF SAID PROPOSAL SHALL BE ACCEPTED AND THE PRINCIPAL SHALL EXECUTE AND DELIVER

A CONTRACT IN THE FORM OF CONTRACT ATTACHED HERETO (PROPERLY COMPLETED IN

ACCORDANCE WITH SAID PROPOSAL) AND SHALL FURNISH A BOND FOR HIS FAITHFUL

PERFORMANCE OF SAID CONTRACT, AND FOR THE PAYMENT OF ALL PERSONS PERFORMING

LABOR OR FURNISHING MATERIAL IN CONNECTION THEREWITH, AND SHALL IN ALL OTHER

RESPECTS PERFORM THE AGREEMENT CREATED BY THE ACCEPTANCE OF SAID PROPOSAL, THEN

THIS OBLIGATION SHALL BE VOID, OTHERWISE THE SAME SHALL REMAIN IN FORCE AND EFFECT:

IT BEING EXPRESSLY UNDERSTOOD AND AGREED THAT THE LIABILITY OF THE SURETY FOR ANY  
PS-28/C-2/74 Page 1 of 2 Section 2-C1  
Rev 4-27-94, 2-5-02, 9-25-09, 2-21-12

AND ALL CLAIMS HEREUNDER SHALL, IN NO EVENT, EXCEED THE PENAL AMOUNT OF THIS OBLIGATION AS HEREIN STATED.

THE SURETY, FOR VALUE RECEIVED HEREBY STIPULATES AND AGREES THAT THE OBLIGATION OF SAID SURETY AND ITS BOND SHALL BE IN NO WAY IMPAIRED OR AFFECTED BY ANY EXTENSION OF TIME WITHIN WHICH THE PRINCIPAL MAY ACCEPT SUCH PROPOSAL: AND SAID SURETY DOES HEREBY WAIVE NOTICE OF ANY SUCH EXTENSION.

IN WITNESS WHEREOF, THE PRINCIPAL AND THE SURETY HAVE HEREUNTO SET THEIR HANDS AND SEALS, AND SUCH OF THEM AS ARE CORPORATIONS HAVE CAUSED THEIR CORPORATE SEALS TO BE HERETO AFFIXED AND THESE PRESENTS TO BE SIGNED BY THEIR PROPER OFFICES, THE DAY AND YEAR FIRST SET ABOVE.

SIGNED AND SEALED THIS (5) \_\_\_\_\_ DAY OF \_\_\_\_\_ 20\_\_.

WITNESS: \_\_\_\_\_ CONTRACTOR: \_\_\_\_\_

\_\_\_\_\_ By \_\_\_\_\_ (L.S.)

\_\_\_\_\_ By \_\_\_\_\_ (L.S.)

\_\_\_\_\_ By \_\_\_\_\_ (L.S.)

WITNESS: \_\_\_\_\_ SURETY: \_\_\_\_\_

\_\_\_\_\_ By \_\_\_\_\_ (L.S.)

\_\_\_\_\_ By \_\_\_\_\_ (L.S.)

APPROVED AS TO FORM \_\_\_\_\_, 20\_\_\_\_\_.

BY \_\_\_\_\_

(Owner's Attorney)

Legend

- (1) Correct name of contractor.
- (2) A corporation, a partnership, or an individual, as the case may be.
- (3) Correct name of surety.
- (4) Treasurer of the municipality or school administrative district, as the case may be.
- (5) Same date as that of proposal.
- (6) Owner shall be the municipality or school administrative district, as the case may be.
- (7) Name of project as designated in the contract documents.

If contractor is a partnership, all partners should execute bond. A power of attorney document, together with a statement that it still is in full force and effect shall be provided by the person executing this bond.

SECTION 2-C2

LONG FORM  
FORM OF GENERAL CONTRACT PERFORMANCE BOND  
(Public School Projects)

KNOW ALL MEN BY THESE PRESENTS THAT (1) \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
OF \_\_\_\_\_ AND STATE OF \_\_\_\_\_  
AS PRINCIPAL, AND (3) \_\_\_\_\_  
A CORPORATION DULY ORGANIZED UNDER THE LAWS OF THE STATE OF \_\_\_\_\_  
AND HAVING A USUAL PLACE OF BUSINESS IN \_\_\_\_\_ AS  
SURETY, ARE HELD AND FIRMLY BOUND UNTO THE (4) \_\_\_\_\_  
AS OBLIGEE, IN THE PENAL SUM OF \_\_\_\_\_ DOLLARS  
(\$ \_\_\_\_\_), TO BE PAID SAID \_\_\_\_\_  
OR HIS SUCCESSORS IN OFFICE, FOR WHICH PAYMENT WELL AND TRULY TO BE MADE,  
PRINCIPAL AND SURETY BIND THEMSELVES, THEIR HEIRS, EXECUTORS AND  
ADMINISTRATORS, SUCCESSORS AND ASSIGNS, JOINTLY AND SEVERALLY BY THESE  
PRESENTS.

THE CONDITION OF THIS OBLIGATION IS SUCH THAT IF THE PRINCIPAL SHALL  
PROMPTLY AND FAITHFULLY PERFORM THE CONTRACT ENTERED INTO ON THE  
(5) \_\_\_\_\_ DAY OF \_\_\_\_\_ A.D. 20\_\_\_\_ FOR THE  
CONSTRUCTION OF (6) \_\_\_\_\_  
\_\_\_\_\_

THEN THIS OBLIGATION SHALL BE NULL AND VOID: OTHERWISE IT SHALL REMAIN IN  
FULL FORCE AND EFFECT.

THE SURETY HEREBY WAIVES NOTICE OF ANY ALTERATION OR EXTENSION OF  
TIME MADE BY THE (7) OWNER.

SIGNED AND SEALED THIS (5) \_\_\_\_\_ DAY OF \_\_\_\_\_ 20\_\_\_\_\_

WITNESSES: \_\_\_\_\_ CONTRACTOR \_\_\_\_\_

\_\_\_\_\_ By \_\_\_\_\_ (L.S.)

\_\_\_\_\_ By \_\_\_\_\_ (L.S.)

\_\_\_\_\_ By \_\_\_\_\_ (L.S.)

WITNESSES: \_\_\_\_\_ SURETY: \_\_\_\_\_

\_\_\_\_\_ By \_\_\_\_\_ (L.S.)

\_\_\_\_\_ By \_\_\_\_\_ (L.S.)

APPROVED AS TO FORM \_\_\_\_\_, 20\_\_\_\_\_.

BY \_\_\_\_\_  
(Owner's Attorney)

Legend

- (1) Correct name of contractor.
- (2) A corporation, a partnership, or an individual, as the case may be.
- (3) Correct name of surety.
- (4) Treasurer of the State of Maine.
- (5) Same date as that of contract.
- (6) Name of project as designated in contract documents.
- (7) Owner shall be the State of Maine.

If contractor is a partnership, all partners should execute bond. A power of attorney document, together with a statement that it still is in full force and effect shall be provided by the person executing this bond.

SECTION 2-C3

SHORT FORM  
FORM OF GENERAL CONTRACT PAYMENT BOND  
(Public School Projects)

KNOW ALL MEN BY THESE PRESENTS THAT (1) \_\_\_\_\_  
 \_\_\_\_\_ (2) \_\_\_\_\_  
 OF \_\_\_\_\_ AND STATE OF \_\_\_\_\_  
 AS PRINCIPAL AND (3) \_\_\_\_\_  
 A CORPORATION DULY ORGANIZED UNDER THE LAWS OF THE STATE OF \_\_\_\_\_  
 AND HAVING A USUAL PLACE OF BUSINESS IN \_\_\_\_\_ AS SURETY ARE HELD AND  
 FIRMLY BOUND UNTO THE (4) \_\_\_\_\_ IN THE SUM OF  
 \_\_\_\_\_ DOLLARS, (\$ \_\_\_\_\_) FOR THE USE  
 AND BENEFITS OF CLAIMANTS\* AS HEREIN BELOW DEFINED, THE PAYMENT WHEREOF  
 PRINCIPAL AND SURETY BIND THEMSELVES, THEIR HEIRS, EXECUTORS AN ADMINISTRATORS,  
 SUCCESSORS AND ASSIGNS, JOINTLY AND SEVERALLY BY THESE PRESENTS. THE CONDITION OF  
 THIS OBLIGATION IS SUCH THAT IF THE PRINCIPAL SHALL PROMPTLY SATISFY ALL CLAIMS AND  
 DEMANDS INCURRED FOR ALL LABOR AND MATERIAL, USED OR REQUIRED BY HIM IN  
 CONNECTION WITH THE WORK CONTEMPLATED IN THE CONTRACT ENTERED INTO ON THE  
 (5) \_\_\_\_\_ DAY OF \_\_\_\_\_ A.D. 20\_\_ FOR THE CONSTRUCTION OF  
 (6) \_\_\_\_\_, AND SHALL FULLY  
 REIMBURSE THE OBLIGEE FOR ALL OUTLAY AND EXPENSE WHICH SAID OBLIGEE MAY INCUR IN  
 MAKING GOOD ANY DEFAULT OF SAID PRINCIPAL, THEN THIS OBLIGATION BE NULL AND VOID:  
 OTHERWISE, IT SHALL REMAIN IN FULL FORCE AND EFFECT.

\* A claimant is defined as one having a direct contract with the principal or with a subcontractor of the principal for labor, material, or both, used or reasonably required for use in the performance of the contract.

SIGNED AND SEALED THIS (5) \_\_\_\_\_ DAY OF \_\_\_\_\_ 20 \_\_\_\_\_

WITNESSES: \_\_\_\_\_ CONTRACTOR: \_\_\_\_\_

\_\_\_\_\_ BY \_\_\_\_\_ (L.S.)

\_\_\_\_\_ BY \_\_\_\_\_ (L.S.)

\_\_\_\_\_ BY \_\_\_\_\_ (L.S.)

WITNESSES: \_\_\_\_\_ SURETY \_\_\_\_\_ (L.S.)

\_\_\_\_\_ BY \_\_\_\_\_ (L.S.)

\_\_\_\_\_ BY \_\_\_\_\_ (L.S.)

APPROVED AS TO FORM \_\_\_\_\_, 20 \_\_\_\_\_.

BY \_\_\_\_\_  
(Owner's Attorney)

Legend

- (1) Correct name of contractor.
- (2) A corporation, a partnership, or an individual, as the case may be.
- (3) Correct name of surety.
- (4) Treasurer of the municipality or school administrative district, as the case may be.
- (5) Same date as that of contract.
- (6) Name of project as designated in the contract documents.

If the contractor is partnership, all partners should execute bond. A power of attorney document, together with a statement that it still is in full force and effect shall be provided by the person executing this bond.

SECTION 2-E

STATE OF MAINE  
CONSTRUCTION CONTRACT  
(Public School Project)

THIS AGREEMENT made the date of month in the year 2019 by and between the York School Department hereinafter called the *Owner*, and Contractor company name hereinafter called the *Contractor*.

WITNESSETH, That the *Owner* and the *Contractor* for the consideration hereinafter named agree as follows:

ARTICLE 1 SCOPE OF WORK

§ 1.1 The *Contractor* shall furnish all of the materials and perform all the work described in the specifications and shown on the drawings for the project entitled: York High School, Village Elementary School Window Replacement and Renovations.

§ 1.2 The specifications and the drawings have been prepared by Harriman, acting as Designer and named in the documents as the Architect or Engineer. This firm has responsibilities for defining the scope of work governed by their agreement with the *Owner*, the specifications and the drawings, and the General Conditions and Special Provisions of the contract.

ARTICLE 2 COMPLETION DATE

§ 2.1 The work to be performed under this contract shall be completed on or before August 20, 2019. For each calendar day the project remains uncompleted \$0.00 shall be charged as liquidated damages.

ARTICLE 3 CONTRACT SUM

§ 3.1 The *Owner* shall pay the *Contractor* for the performance of the contract, subject to additions and deductions provided by approved Change Orders in current funds as follows: amount in words dollars and 00cents, \$0.00

ARTICLE 4 CONTRACT BONDS

§ 4.1 Contract bonds are not required if the contract amount is less than \$100,000 unless bonds are specifically mandated by the contract documents.

§ 4.2 On this project, the *Contractor* shall furnish the *Owner* the appropriate contract bonds in the amount of 100% of the contract amount.

ARTICLE 5 PROGRESS PAYMENTS

§ 5.1 The *Owner* shall make payments on account of the contract as provided therein as follows: Each month 95% of the value, based on contract prices of labor and materials incorporated in the work and of materials suitably stored at the site thereof up to the first day of that month, as certified by the Architect or Engineer.

§ 5.2 The *Owner* may cause the *Contractor* to be paid such portion of the amount retained hereunder as he deems advisable.

**ARTICLE 6 FINAL PAYMENT**

§ 6.1 Final payment shall be due 60 days after completion and acceptance of the work, provided the *Contractor* has submitted evidence satisfactory to the *Owner* that all payrolls, material bills and other indebtedness connected with the work has been paid.

**ARTICLE 7 CONTRACT DOCUMENTS**

§ 7.1 The General Conditions of the contract, Special Provisions, the written specifications and the drawings, and any Addenda, together with this agreement, form the contract; they are as fully a part of the contract as if hereto attached or herein repeated.

§ 7.2 Specifications: *date of issuance*

§ 7.3 Drawings: *each sheet number and title*

§ 7.4 Addenda: *each addenda number and date, or "none"*

**ARTICLE 8 OTHER PROVISIONS**

§ 8.1 None

The *Owner* and the *Contractor* hereby agree to the full performance of the covenants herein.

IN WITNESS WHEREOF the parties hereby execute this agreement the day and year first above written.

OWNER

CONTRACTOR

\_\_\_\_\_  
(Signature) (Date)

\_\_\_\_\_  
(Signature) (Date)

\_\_\_\_\_  
(Printed name and title)

\_\_\_\_\_  
(Printed name and title)

York School Department

\_\_\_\_\_  
(School Administrative Unit name)

\_\_\_\_\_  
(Contractor company name)



SECTION 3-A

STATE OF MAINE

STANDARD GENERAL CONDITIONS  
AND  
CONTRACT WORK

For

PUBLIC SCHOOL PROJECTS

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October 17, 1988

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**ARTICLE 1. DEFINITIONS**

Whenever the following terms are used in these specifications or the contract, the intent and meaning shall be interpreted as follows:

**Designer:** The project Architect and/or Engineer whose name appears on the plans and/or specifications for the project, acting directly or through an authorized representative.

**Bid Security:** The security designated in the proposal, furnished by bidders as a guaranty of good faith to enter into a contract with the state, should a contract be awarded to that bidder.

**Bidder:** Any individual, partnership, or corporation submitting a proposal for the performance of the work described under the terms of the contract, acting directly or through a duly authorized representative.

**Bureau:** The Bureau of General Services.

**Calendar Days:** Consecutive days, as occurring on a calendar, taking into account the day of the week, month, year, and any religious, national or local holidays.

**Change Order:** A written agreement between the Owner and the Contractor, operating as a supplement to the contract, covering correction of: omissions, errors, and discrepancies between the plans and the proposal or estimates; or any alterations in the plans; or additional requirements; work, materials, and incidentals required to complete the construction of the project in an acceptable manner, and setting forth the basis of compensation for that supplemental work, if any. Before any change order modifies or becomes a part of the work, it must be duly signed by the Contractor, and the Owner, and approved by the Bureau of General Services and the Designer.

**Clerk of the Works:** The authorized representative of the Designer.

**Contract:** A written agreement between the Owner and the successful bidder, by which the Contractor is bound to perform the work specified, in accordance with plans, specifications, general conditions, and special provisions, that are a part of the contract documents, together with all supplemental agreements by which the Owner is bound to compensate the Contractor at mutually established and accepted rates or prices.

**Contract Bond:** The approved forms of security furnished by the Contractor and his surety, or sureties, which guarantee the faithful performance of all the terms of the contract and the payment of all bills, for labor, materials and equipment by the Contractor.

**Contract Documents:** The contract documents consist of the contract, general conditions, special provisions, the plans and specifications including all addenda, change orders, and all other modifications thereof, that were incorporated in the documents

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subsequent to their execution.

Contractor: The individual, partnership, or corporation undertaking the execution of the general contract work under the terms of the contract with the Owner, acting directly or through a duly authorized representative.

Director of the Bureau of General Services: The State Director of the Bureau of General Services or his/her duly authorized representative.

Final Completion: The stage of the Work when the Work has been fully completed in accordance with the terms and conditions of the Contract Documents.

Owner: School Administrative Unit, acting through its duly authorized representative.

Owner's Representative:

Plans: All official drawings or reproductions of drawings pertaining to the work provided for in the contract and such working plans as may be furnished or approved by the Owner or Designer from time to time.

Project: The entire improvement proposed by the Owner to be constructed in part or in whole pursuant to these specifications and contract documents. Where the word "Job" appears it shall mean the project.

Proposal or Bid: The written offer of the bidder, on a form prescribed to perform the work specified.

Provide: The word "provide" shall mean, "furnish and install," including connections to services if required, unless specified otherwise.

Sub-Contractor: The individual, the firm or corporation undertaking the execution of any part of the work under the terms of the contract by virtue of a written agreement between itself and the Contractor.

Substantial Completion: The stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents so the Owner can occupy or utilize the Work for its intended use. Minor corrections and repairs that can be performed while the Owner has occupied the building and without undue annoyance to personnel will be acceptable under the definition of Substantial Completion. It shall also include major final cleaning required under the Contract, removal of all surplus equipment and material not required for completion of remaining work, and the placement of remaining materials and equipment in convenient locations as approved by the Owner.

Superintendent: The representative of the Contractor, authorized by the Contractor to receive and fulfill instructions from the Designer.

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Supplemental Agreement: A supplemental agreement is any agreement entered into between the Contractor and the Owner with the approval of the Bureau and the Designer subsequent to the execution of the contract.

Surety: The individual, partnership, or corporation who is bound jointly and severally with the Contractor and sub-Contractor to insure his faithful performance of the contract and for his payment of the bills for labor, materials and equipment by the Contractor and Sub-Contractors.

Work: See Project.

## **ARTICLE 2. INTENT, CORRELATION AND EXECUTION OF DOCUMENTS**

The intent of the Contract Documents is to prescribe a complete work or improvement. The Plans, including all revisions, General Conditions for Contract Work, Special Provisions, Instructions to Bidders, Proposal, Contract, Contract Bonds, and all other sections of the specifications, including all addenda, all dated and on file in the Bureau of General Services, prior to the time set for receiving proposals as prepared by the Designer, shall each become a part of the Contract Documents, and all proposals must be based on a full compliance therewith. Any Supplemental Agreements entered into subsequent to the Contract will become a part of said Contract.

The contract documents are complementary, and what is called for by any one shall be as binding as if called for by all. The intention of the documents is that, unless otherwise specified, the Contractor shall furnish all labor, materials, equipment, items, articles, tools, transportation, insurance, services, necessary supplies, operations or methods and incidentals that may be reasonably required to construct and complete the project, facility or improvement in a manner necessary for the proper execution of the work. Any deviations from the plans which may be required by the exigencies of the construction, or because of error, will in all cases, be determined by the Designer, and authorized in writing subject to approval by the Owner and Bureau of General Services. Materials or work described in words, which so applied, have a well-known technical or trade meaning shall be held to refer to such recognized standards. Since the plans and specifications cover the dimensions and features of the work and do not set forth the analysis of the design, it is the duty of the Contractor fulfilling them to ascertain the true intent in any case where it is doubtful.

Work not covered under any heading, section, branch, class or trade of the specifications, shall not be supplied unless it is shown on the drawings or is reasonably inferable there from as being necessary to produce the intended results.

The Contractor shall take no advantage of any apparent error or omission in the plans and specifications, and the Designer shall be permitted to make such corrections and interpretations as may be deemed necessary for the fulfillment of the intent of the plans and specifications. Where errors or omissions appear in the contract documents, the Contractor shall promptly notify the Designer in writing of such errors or omissions. Inconsistencies in the contract documents are to be reported before proposals are received, whenever found.

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Should the Drawings or the Specifications disagree in themselves or with each other, the Contractor shall provide the better quality or greater quantity of work and/or materials unless otherwise directed by written addendum to the Contract Documents.

The Contractor shall, upon his acceptance of a contract and before commencing work, contact the Designer and request a preconstruction conference. The purpose of this conference shall be as follows:

1. To introduce the members of the Designer's firm and the representative of the Owner and define their responsibilities in connection with this project.
2. To emphasize any special provisions applicable to the project.
3. To establish the work progress schedule and set up procedures for prompt review of all required shop drawings. If the Contract Sum exceeds \$ 10,000,000, the Contractor shall supply the Owner with the planned Critical Path Method ("CPM") schedule prior to the submission of the first payment requisition. The Contractor shall supply the Owner monthly with CPM "as built" schedule updates. The update shall include the dates of activities' start and completion; percent of work remaining for activities started but not completed; narrative report indicating a listing of monthly progress; any changes to critical path activities from the prior update; sources of delay and potential problems; and work planned for the next month. If any date is more than fifteen (15) days behind, the Contractor must submit a recovery schedule. When a Change Order is proposed, the Contractor must identify all schedule impacts which result from the Change Order.
4. To provide the Contractor with opportunity to discuss points of doubt and any apparent inconsistencies noted in the plans and specifications before proceeding to purchase material or execute the work.

During the further progress of work, regular meetings will be held at time intervals appropriate in the judgment of the Designer to review the work progress schedule, general project progress and any other questions, which might affect the execution of this contract.

### **ARTICLE 3: DETAIL DRAWINGS AND INSTRUCTIONS**

The Designer shall furnish, with reasonable promptness, additional instructions by means of drawings or otherwise, that are necessary for the proper execution of the work. All such drawings and instruction shall be consistent with the contract documents, shall be true developments thereof, and shall be reasonably inferable there from.

The work shall be executed in conformity therewith and the Contractor shall do no work without proper drawings and instructions except as allowed by Article 13.

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Immediately after being awarded the contract, the Contractor shall prepare an estimated progress schedule and submit same for Designer's approval. It shall indicate the dates for starting and completion of the various stages of construction.

#### **ARTICLE 4: COPIES FURNISHED**

Unless otherwise provided in the contract documents the Contractor will be furnished, free of charge, 10 copies of all drawings, and specifications.

#### **ARTICLE 5: SHOP DRAWINGS**

The Contractor shall check and verify all field measurements and shall submit with such promptness as to cause no delay in the Contractor's own work or in that of any other Contractor, adequate copies, checked and approved by the Contractors of all shop drawings and schedules required for the work of the various trades. The Designer shall check and approve, with reasonable promptness, such scheduled drawings only for conformance with the design concept of the project and compliance with the information given in the contract documents. The Contractor shall make any corrections required by the Designer, and shall file with the Designer two corrected copies, and shall furnish such other copies as may be needed. The Designer's approval of such drawings or schedules shall not relieve the Contractor from responsibility for deviations from drawings or specifications, unless the Contractors have, in writing, called the Designer's attention to such deviations at the time of submission and secured the Designer's written approval; nor shall it relieve the Contractors from responsibility for errors in shop drawings or schedules.

#### **ARTICLE 6: DRAWINGS AND SPECIFICATIONS**

The Contractor shall keep, in good order, one copy of all drawings and specifications on the work, which will be made available to the Designer and to his representative.

#### **ARTICLE 7: OWNERSHIP OF DRAWINGS**

All drawings, specifications and copies thereof furnished by the Designer are the property of the Designer. They are not to be used on other work without written permission from the Designer, and, with the exception of the signed contract set, are to be returned to the Designer upon request, or at the completion of the work.

#### **ARTICLE 8: SAMPLES**

The Contractor shall furnish for review, with reasonable promptness, all samples as directed by the Designer. The Designer shall check and review such samples, with reasonable promptness, only for conformance with the design concept of the project and for compliance with the project and for compliance with the information given in the contract documents. The work shall be in accordance with reviewed samples.



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**ARTICLE 9: MATERIALS, APPLIANCE, EMPLOYEES**

Unless otherwise stipulated, the Contractor shall provide and pay for all materials, labor, water, tools, equipment, light, power, transportation and facilities necessary for the execution and completion of the work.

Whenever an article or material is defined by describing a proprietary product, or by using the name of a manufacturer, the term "Or Approved Equal", if not inserted, shall be implied. The specific article or material mentioned shall be understood to establish minimum standards as to the type, function, standard of design, durability, efficiency and quality desired and shall not be construed to exclude other manufacturers' products of comparable quality, design and efficiency.

Materials and models of items, which the Contractor alleges to be equal to the materials and methods of items named in the specifications, shall be subject to the written approval by the Designer. If the alleged equals are to receive consideration in the bid award, written approval shall be received from the Designer at least ten days prior to the established bid opening dates. The use of alternate items will not be permitted without the approval of the Owner and Designer. All approved substitutions shall be in writing and approved by the Designer. The Contractor shall not be relieved of the responsibility to furnish articles or materials equal in quality, design and efficiency to those specified because of the approval of such alternate items by the Designer. The Designer's approval or rejection of a proposed substitution may be based on any of the previous considerations, and his decision may or may not express reasons for rejection and shall be final. Requests for substitutions shall originate and be submitted by the Contractor, not a Sub-Contractor. The materials or equipment shall be sufficiently described to enable the Designer to easily identify salient features.

Any material or products not specified in the bidding documents but being worthy of consideration may be introduced by the Contractor, or Sub-Contractor. The Contractor's submission shall include a cost comparison with the specified material and the reason for the suggested substitution. The basic proposal shall be as specified.

It shall be understood by the general Contractor or Sub-Contractor that the attached letter describing the proposed changes will not be used in determining the low general Contractor or Sub-Contractor proposal submitted, unless the general Contractor or Sub-Contractor has submitted its list to the Designer 10 days prior to the date set for the receipt of their respective proposals and has received written approval by the Designer five days prior to the opening of the bid.

The Contractor shall guarantee his work against any defects in workmanship and materials for a period of one year from the date of the written acceptance of the project.

Materials and equipment shall be new, free from defects, perfect and complete, unless otherwise stipulated. Materials or equipment specified or shown on the drawings shall be applied or installed according to the directions with the manufacturer, or the recommendations of an association dealing primarily with the material, unless specifically designated otherwise. The scope of the direction furnished shall include the application of

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experienced personnel to each trade involved. In no case shall the installation be below the standard recommended by the manufacturer or association.

The Contractor shall be responsible to the Owner for the suitability of materials and equipment furnished and for full compliance with the specification.

The Contractor shall promptly pay all his employees when their pay is due, shall promptly pay when due all bills for materials, supplies and services going into the work, and all bills for insurance, workmen's compensation coverage, federal and state unemployment compensation, and Social Security charges applicable to said project.

Before final settlement is made, the Contractor shall furnish to the Owner affidavits that all said payments have been made.

The Contractor shall at all times enforce strict discipline and good order among his employees, and shall not employ on the work any unfit person or anyone not skilled in the work assigned to him.

#### **ARTICLE 10: ROYALTIES AND PATENTS**

The Contractor shall, for all time, secure to the Owner the free and undisputed right to the use of any and all patented articles or methods used in the work and shall defend at his own expense any and all suits for infringement or alleged infringement of such patents, and in the event of adverse award under patent suits, the Contractor shall pay such awards and hold the Owner harmless in connection with any patent suits that may arise as a result of installations made by the Contractor, or to any awards made thereunder.

#### **ARTICLE 11: SURVEYS, PERMITS, LAWS, TAXES AND REGULATIONS**

The Owner shall furnish all surveys unless otherwise specified.

Permits and licenses necessary for the prosecution of the work shall be secured and paid for by the Contractor. Easements for permanent structures or permanent changes in existing facilities shall be secured and paid for by the Owner, unless otherwise specified.

The Contractor shall give all notices and comply with all laws, ordinances, rules and regulations bearing on the conduct of the work as drawn and specified. If the Contractor observes that the drawings and specifications are at variance therewith, the Contractor shall promptly notify the Designer in writing and any necessary changes shall be adjusted as provided in the contract for changes in the work. If the Contractor performs any work knowing it to be contrary to such laws, ordinances, rules and regulations and without such notice to the Designer, the Contractor shall bear all costs arising there from.

Adherence to the Code of Federal Regulations 29 CFR Part 1926 and 29 CFR Part 1910 as adopted by the State Board of Occupational Safety and Health is required by statute.

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The State is exempt from the payment of Federal Excise Taxes on articles not for resale and for the Federal Transportation Tax on all shipments. All quotes from the Contractor and Sub-Contractors shall be free of these taxes. The State is exempt from the payment of Maine State Sales and Use Taxes. All quotes from the Contractor and Sub-Contractors shall be free of these taxes.

In execution and performance of the Contract, the Contractor and all subcontractors agree to be aware of and to comply with the requirements and regulations of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et. seq.)

#### **ARTICLE 12: LABOR AND WAGES**

All Contractors and Sub-Contractors shall conform to the labor laws of the State of Maine, and all other laws, ordinances and legal requirements affecting the Work in Maine.

In the employment of laborers, preference shall first be given to residents of the State of Maine who are qualified to perform the work to which the employment relates, and if they cannot be obtained in sufficient numbers, then to citizens of the United States, who may reside in other states.

#### **ARTICLE 13: CONDITIONS AND CARE OF SITE AND PROTECTION OF THE WORK**

The Contractor shall continuously maintain adequate protection of all work from damage and shall protect the property from injury or loss for the duration of this contract, and shall make good any such damage, injury or loss. He shall adequately protect adjacent property as provided by law and the contract documents.

The Contractor shall take all necessary precautions for the safety of employees on the work, and shall comply with all applicable provisions of federal, state and municipal safety laws and building codes, and shall prevent accidents or injury to persons on, about or adjacent to the premises where the work is being performed. The Contractor shall erect and properly maintain all necessary safeguards for the protection of workmen and the public at all times, as required by the condition and progress of the work, and shall post danger signs warning against all hazards created by the construction process, such as (but not limited to) protruding nails, hoists, well holes, elevator hatchways, scaffolding, window openings, stairways and falling materials. The Contractor shall designate a responsible member of his organization on the work, whose duty shall be the prevention of accidents. The Contractor shall report the name and position of any person so designated to the Designer.

The Contractor shall return to conditions existing prior to the start of work on the project, all aspects of the site that have not been altered, removed, or otherwise changed permanently by the work. The Contractor shall protect all existing buildings, structures, or other features from damage by any operation in connection with the project. Utilities encountered shall be protected and maintained in service until removed or abandoned.

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The Contractor shall exercise care in his work around such utilities as may be shown on the plot plan or otherwise found. Such utilities are not to be moved, replaced or abandoned.

The Contractor shall protect existing trees, and other aspects of the site, which will remain a permanent part of the site from damage during grading, excavation, filling, trucking, etc. If necessary, tree trunks shall be boxed, and barricades set up at sufficient distance to prevent damage to major tree branches.

Should the work or material of this or any other Contractor employed by the Owner become damaged when reasonably protected, the same shall be replaced by the Contractor causing the damage at no expense to the Owner.

In an emergency potentially affecting health or life or of serious damage to property or of adjoining property, the Contractor, without special instruction or authorization from the Designer or Owner, is hereby permitted to act on his own discretion, to prevent such threatened loss or injury, and the Contractor shall so act, without appeal, if so authorized or instructed. Any compensation claimed by the Contractor on account of emergency work, shall be determined by agreement.

#### **ARTICLE 14: INSPECTION OF WORK**

The Designer and his representatives, the Bureau of General Services representatives and the Owner, shall at all times have access to the work whenever it is in preparation or progress. The Contractor shall provide proper facilities for such access and for inspection.

If the specifications, the Designer's instructions, laws, ordinances or any public authority require any work to be specially tested or approved, the Contractor shall give the Designer timely notice of its readiness for observation by the Designer or inspection by another authority, and if the inspection is by another authority than the Designer, on the date fixed for such inspection, required certificates of inspection shall be secured by the Contractor. Observations by the Designer shall be promptly made, and where practicable, prior to work is covered or buried. If any work which will ultimately be covered, is covered prior to approval or consent of the Designer, it must, if requested by the Designer, be uncovered for examination at the Contractor's expense.

Re-examination of questioned work may be ordered by the Designer, and, if so ordered, the work must be uncovered by the Contractor. If such work were found in accordance with the contract documents, the Owner shall pay the cost of the reexamination and replacement. If such work were found not in accordance with the contract documents, the Contractor shall pay such cost, unless it is found that the defect in the work was caused by a Contractor employed as provided in Article 32, and in that event the Owner shall pay such cost.

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The Bureau of General Services, through its representatives shall make periodic inspections of the work during the course of construction and make recommendations to the Designer, when employed. The Designer shall provide adequate inspection of materials, equipment, methods and changes in plans on all projects under his supervision.

#### **ARTICLE 15: SUPERINTENDENCE: SUPERVISION**

The Contractor shall have, during the progress of all work, a competent superintendent and any necessary assistants. The superintendent shall not be changed except with the consent of the Owner unless a superintendent proves to be unsatisfactory to the Contractor and ceases to be in his employ. The superintendent shall represent the Contractor and all directions given to the superintendent in the absence of the Contractor shall be as binding as if given directly to the Contractor. Important directions shall be confirmed in writing to the Contractor. Other directions shall be confirmed on written request in each case. The Designer shall not be responsible for the acts or omissions of the superintendent or his assistants.

The Contractor shall give efficient supervision to the work using his best skill and attention. He shall carefully study and compare all drawings, specifications and other instructions and shall at once report to the Designer any error, inconsistency or omission which he may discover, but he shall not be liable to the Owner for any damage resulting from any errors or deficiencies in the contract documents or other instructions by the Designer.

#### **ARTICLE 16: CHANGES IN THE WORK**

The Owner reserves the right to increase or decrease any or all of the items of work indicated in the plans, proposal, and contract, or the elimination of any one or more of such items, without invalidating the contract. As the work progresses, the Owner may make such alterations in the plans, in the character of the work, or in the specified coordination of two or more concurrent contracts, as may be considered necessary or desirable in order to complete the construction. Such changes shall in no way invalidate the contract. All such work shall be executed under the conditions of the original contract except that any claim for extension of the time caused thereby shall be adjusted at the time of the ordering of such change.

In giving instructions, the Designer shall have authority to make minor changes in the work, not involving extra cost, and not inconsistent with the purposes of the building or project, but otherwise, except in an emergency endangering life or property, no extra work or change shall be made unless in pursuance of a duly signed change order.

Should the Contractor encounter during the progress of the work, latent conditions at the site materially differing from those shown on the drawings or in the specifications, or unknown conditions of an unusual nature differing materially from those already encountered in such work, the attention of the Designer shall be immediately called for such conditions before they are disturbed. The Designer shall promptly investigate the conditions and if they do so materially differ, the contract shall, with the approval of the Owner and the Bureau be modified by a change order to provide for any increase or decrease in cost resulting from such conditions

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Should such alterations be productive of increased unit cost, or result in decreased unit cost to the Contractor, a fair and equitable sum therefore shall be agreed upon in writing before such work is begun, and shall be added to or deducted from the contract amount, as the case may be, by means of a written change order. The change order shall state the nature of the change, the location, the itemized estimate of unit quantities, the basis for payment, and the reason for the change. Such change order to be on approved forms.

When the change order has been properly signed by all parties and encumbered, it shall become a part of the contract.

The value of any such extra work or change shall be determined in one or more of the following ways:

- A. By estimate and acceptance in a lump sum.
- B. By unit prices named in the contract or subsequently agreed upon.
- C. By cost and percentage or by cost and a fixed fee.

If none of the above methods is agreed upon, the Contractor, provided he receives an order as above, shall proceed with the work.

Under case (C.), he shall keep and present in such form as the Designer may direct, a correct account of the cost, together with vouchers. In any case, the Designer shall certify to the amount, including reasonable allowance for overhead and profit, due to the Contractor. Pending final determination of value, payments on account of changes shall be made on the Designer's certificate.

If the price of a change order cannot be agreed upon, nothing contained herein shall prevent the Designer, with approval from the Owner and BGS, from directing the Contractor to make a change in the work, with the price to be determined on either a cost and percentage basis or under the dispute resolution provision of this contract.

If the price of a change order cannot be agreed upon, an Owner and/or Designer initiated Construction Change Directive can order a change in the work prior to an agreement on the adjusted Contract Sum or Contract Time. The Cost of the work is to be determined by: 1) a cost and percentage basis 2) lump sum 3) unit prices or 4) under the Dispute Resolution provision of this contract.

When the subparagraphs (A) and (C) above are used to determine the value of the work, the allowance for overhead and profit combined, included in the total expense to the Owner, shall be based upon the following schedule:

For the Contractor, for any work performed by his own forces, 20% of the cost; For each Sub-Contractor, for work performed by his own forces, 20% of the cost; For the Contractor, for work performed by his Sub-Contractor, 10% of the amount due the Sub-Contractor.

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Cost shall be limited to the following: Cost of materials, cost of delivery, cost of labor, including Social Security, old age and unemployment insurance (labor cost may include a pro ratio share of foremen's time, only in case an extension of contract time is granted on account of the change); workmen's compensation insurance; rental value of power tools and equipment.

Overhead shall include the following; bond premium, supervision, wages of timekeepers, watchmen and clerks, small tools, incidental, general office expense, and all other expenses not included in "cost".

If the net value of a change results in a credit from the Contractor or Sub- Contractor the credit given shall be the net cost without overhead or profit. The cost as used herein shall include all items of labor, materials and equipment.

#### **ARTICLE 17: CLAIMS FOR EXTRA COST**

If the Contractor claims that any instructions by drawings or otherwise involve extra cost under this contract, he shall give the Designer written notice thereof within 10 days after the receipt of such instructions, and in any event before proceeding to execute the work, except in emergency endangering life or property, and the procedure shall then be as provided for in Section 16, "changes in work." No such claim shall be valid unless so made.

#### **ARTICLE 18: DEDUCTIONS FOR UNCORRECTED WORK**

If the Designer and Owner deem it inexpedient to correct work injured or done not in accordance with the contract, an equitable deduction from the contract amount shall be made therefore.

#### **ARTICLE 19: DELAYS AND EXTENSION OF TIME**

If the Contractor is delayed at any time in the progress of the work by any act or neglect of the Owner or the Designer, or of any employee of either, or by any separate Contractor employed by the Owner, or by changes ordered in the work or by strikes, lockouts, fire, unusual delay in transportation, unavoidable casualties Or by causes beyond the Contractor's control, or by any cause which the Designer shall decide to justify the delay, then the time of completion shall be extended for such reasonable time as the Designer may decide. Inclement weather or other natural causes shall not be reason to allow additional time under this contract.

No such extension shall be made for delay occurring more than seven days before claim therefore is made in writing to the Designer. In case of a continuing cause of delay, only one claim is necessary.

If no schedule or agreement stating the dates upon which drawings shall be furnished is made, then no claim for delay shall be allowed on account of failure to furnish drawings until two weeks after demand for such drawings and not then unless such claim be

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reasonable.

This article does not exclude the recovery of damages for delay by either party under other provisions in the contract document. The amount of Contractor's delay damages shall be limited to the Costs, overhead and profit items enumerated in Article

16. Recovery of delay damages is conditioned upon compliance with the notice requirements of Article 17.

**ARTICLE 20: CORRECTION OF WORK**

The Contractor shall promptly remove from the premises all work condemned by the Designer as failing to conform to the contract, whether incorporated or not, and the Contractor shall promptly replace and re-execute his own work in accordance with the contract and without expense to the Owner and shall bear the expense of making good all work of other Contractors destroyed or damaged by such removal or replacement.

If the Contractor does not remove such condemned work within a reasonable time, fixed by written notice, the Owner may remove it and may store the material at the expense of the Contractor. If the Contractor does not pay the expenses of such removal within ten days time, thereafter, the Owner may, upon ten days written notice, sell such materials at auction or at private sale and shall account for the net proceeds thereof, after deducting all the costs and expenses that should have been borne by the Contractor.

The Contractor shall remedy any defects due to faulty materials or workmanship and pay for any damage to other work resulting therefrom, which shall appear within a period of one year from the date of final payment, or from the date of the Owner's substantial usage or occupancy of the project, whichever is earlier, and in accordance with the terms of any special guarantees provided in the contract. The Owner shall give notice of observed defects with reasonable promptness. All questions arising under this article will be decided by the Designer, notwithstanding final payment.

**ARTICLE 21: OWNER'S RIGHT TO DO WORK**

If the Contractor should neglect to prosecute the work properly or fail to perform any provisions of this contract, the Owner, after three days written notice to the Contractor may, without prejudice to any other remedy may make good such deficiencies

and may deduct the cost thereof from the payment; then or thereafter due the Contractor, provided, however, that the Designer shall approve both such action and the amount charged to the Contractor.

**ARTICLE 22: OWNER'S RIGHT TO TERMINATE CONTRACT**

If the Contractor should be adjudged bankrupt, or if the Contractor should make a general assignment for the benefit of its creditors, or if a receiver should be appointed on account the Contractor's insolvency, or if the Contractor should persistently or repeatedly



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refuse or should fail, except in cases for which extension of time is provided, to supply enough properly skilled workmen or proper materials or if the Contractor should fail to make prompt payment to Sub-Contractors or for material, or labor, or persistently disregard laws, ordinance or the instructions of the Designer, or otherwise be guilty of a substantial violation of any provision of the contract, then the Owner, upon the certificate of the Designer that sufficient cause exists to justify such action, may without prejudice to any other right or remedy and after giving the Contractor and the Contractor's surety seven days written notice, terminate the employment of the Contractor and take possession of the premises and of all materials, tools and appliances thereon and finish the work by whatever method the Owner may deem expedient. In such case the Contractor shall not be entitled to receive any further payment until the work is finished. If the unpaid balance of the contract amount shall exceed the expense of finishing the work including compensation for additional Designer, managerial and administrative services, such excess shall be paid to the Contractor. If such expense shall exceed such unpaid balance, the Contractor shall pay the difference to the Owner. The expense incurred through the Contractor's default, shall be certified by the Designer.

#### **ARTICLE 23: THE CONTRACTOR'S RIGHT TO STOP WORK OR TERMINATE CONTRACT**

If the work should be stopped under an order of any court, or other public authority, for a period of thirty days, through no act or fault of the Contractor or of anyone employed by him, then the Contractor, may, upon seven days written notice to the Owner and the Designer, terminate this contract and recover from the Owner, payment for all work executed and any proven loss sustained upon any plant or materials and reasonable profit and damage.

Should the Designer fail to issue any certificate for payment, through no fault of the Contractor, within seven days after the Contractor's formal request for payment or if the Owner should fail to pay to the Contractor within 30 days after presentation, any sum certified by the Designer, then the Contractor may, upon seven days' written notice to the Owner and the Designer, stop the work or terminate this Contractor as set out in the preceding paragraph.

#### **ARTICLE 24: PAYMENTS**

The Contractor shall, before the first application for payment, submit to the Designer in triplicate a "contract cost breakdown" form acceptable to the Designer, if required, this form shall be supported by such evidence as to its correctness as the Designer may direct and, shall be reviewed by the Designer and unless found to be in error, used as a basis for payments.

The Contractor shall submit to the Designer an application for each payment on the latest revision of the BGS "Requisition for payment" form, and, if required, receipts or other vouchers, showing his payments of materials and labor, including payments to sub-Contractors as required by Article 34.

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Application for payment as the Work progresses may be made of the Owner but no more often than once a month, unless due to unusual circumstance the Owner may approve more frequent payment. Said requisition for payments shall be based on the proportionate quantities of the various classes of work completed or incorporated in the Work, in accordance with the Work progress schedule and the value thereof determined from the contract cost breakdown. Payments, upon authorization of the Designer, may be made on account of materials not incorporated in the Work but delivered and suitably stored at the site. Such payments shall be conditioned upon submission by the Contractor of bills of sale, or such other procedure as will adequately protect the Owner's interest including applicable insurance.

In the event any materials are delivered but not yet incorporated in the Work, have been included in any said "Requisition for Payment" and payment thereon made and said materials thereafter deteriorate, become damaged or destroyed or for any reason whatsoever become unsuitable or unavailable for use in the Work, then the full amount allowed therefore in any previous "Requisition for Payment", shall be deducted from the gross value of any subsequent payment or final payment unless the Contractor shall satisfactorily replace said material.

After said "Requisition for Payment" has been prepared by the Contractor in the required number of copies, it shall be submitted to the Designer for review. The Designer shall verify and approve the "Requisition for Payment", and forward all copies to the Owner for processing for payment by the Owner.

No certificate issued nor payment made to the Contractor, nor partial or entire use or occupancy of the Work by the Owner, shall be an acceptance of any Work or materials not in accordance with this contract. Except for those claims previously made by either party and still unsettled, the making and acceptance of the final payment shall constitute a waiver of all claims by the Owner, other than those arising from unsettled liens, those not complying with the requirements of the plans and specifications, those covered by warranties, and of all claims by the Contractor.

Title 5 M.R.S.A. Section 1746 as amended provides that in any contract awarded for any public improvement, the State shall withhold 5% of the money due the Contractor until the project under the contract has been accepted by or for the State, except that when the contract has been *substantially completed* the State may, upon request, further reduce the amounts withheld if it deems it desirable and prudent, or except when the Contractor elects to deposit with the Treasurer of the State certain Government Bonds as provided in Chapter 437, Public Laws of 1967.

With each monthly requisition the Contractor shall release and indemnify the owner from and against all liens on the project through the requisition date and shall supply partial lien waivers from all subcontractors through the date of the prior requisition.

All payments to be made in accordance with Title 10 MRSA Chapter 201-A "An Act to Ensure Prompt and Equitable Payment for Construction Services".

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**ARTICLE 25. PAYMENTS WITHHELD**

The Designer may withhold or, on account of subsequently discovered evidence, nullify the whole or a part of any certificate to such extent as may be necessary in his reasonable opinion to protect the Owner from loss on account of:

- A. Defective work not remedied.
- B. Claims filed or reasonable evidence indicating probable filing of claims.
- C. Failure of the Contractor to make payments properly to Sub-Contractors for materials or labor.
- D. A reasonable doubt that the contract can be completed for the balance then unpaid.
- E. Damage to another Contractor.
- F. Damage to the premises or Work.
- G. Failure to carry out the Work in accordance with the Contract Documents.

When the above grounds are removed, payments shall be made for amounts withheld because of them.

**ARTICLE 26. CONTRACTOR'S INSURANCE REQUIREMENTS**

The Contractor shall not commence work under this contract until the Contractor has obtained all insurance required under this article and such insurance has been approved by the Owner, nor shall the Contractor allow any Sub-Contractor to commence work on a subcontract until all similar insurance required of the Sub-Contractor has been so obtained and approved.

The State and the Owner does not warrant or represent that the insurance required under this paragraph constitutes an insurance portfolio which adequately addresses all risks faced by the Contractor or its Sub-Contractors. The Contractor and Sub-Contractors of every tier shall satisfy themselves as to the existence, extent and adequacy of insurance prior to commencement of work.

The Contractor and any Sub-Contractor shall procure and maintain for the duration of the Project insurance of the types and limits set forth under this paragraph and such insurance as will protect themselves from claims which may arise out of or result from the Contractor's or Sub-Contractor's execution of the work, whether such execution be by themselves or by anyone directly or indirectly employed by any of them or by anyone for whose acts any of them may be liable. The insurance coverage provided by the Contractor and any Sub-Contractor will be primary coverage. All required insurance coverages shall be placed with carriers authorized to conduct business in the State of Maine by the Maine Bureau of Insurance.

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A. Workers' Compensation Insurance

Worker's compensation insurance for all employees on site in accordance with the statutory workers' compensation law of the State of Maine.

Minimum acceptable limits for Employer's Liability are:

Bodily Injury By Accident	\$500,000
Bodily Injury by Disease	\$500,000 Each Employee
Bodily Injury by Disease	\$500,000 Policy Limit.

B. Liability Insurance

1. General Liability Insurance

General liability insurance shall be on a form providing coverage not less than that of the 1996 occurrence version of the Insurance Services Office (ISO) Commercial General Liability Policy. This insurance shall cover bodily injury and property damage liability for all hazards of the Project including premise and operations, products and completed operations, contractual, and personal injury liabilities. It shall include collapse and underground coverage - as well as explosion coverage if explosion hazards exist.

Aggregate limits shall apply on a per location or project basis.

Minimum acceptable limits are:

General aggregate limit:	\$2,000,000
Products and completed operations	\$1,000,000
Each occurrence limit:	\$1,000,000
Personal injury aggregate:	\$1,000,000

2. Automobile Liability Insurance

Automobile liability insurance against claims for bodily injury, death or property damage resulting from the maintenance, Ownership or use of all owned, nonowned and hired automobiles, trucks and trailers.

Minimum acceptable limit is \$1,000,000 any one accident or loss.

3. Owners Protective Liability

For Contracts exceeding \$50,000 in total Contract amount, Contractor shall secure an Owners Protective Liability policy naming the Owner as the Named Insured.

Minimum acceptable limits are:

General aggregate limit:	\$2,000,000
Each occurrence limit:	\$1,000,000

4. Pollution Liability

In the event that any disruption, handling, abatement, remediation, encapsulation, removal, transport, or disposal of contaminated or hazardous material is required, the

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Contractor or its Sub-Contractor shall secure a pollution liability policy in addition to any other coverages contained in this section. The insurance shall be provided on an occurrence based policy and shall remain in effect for the duration of the Project.

Minimum acceptable limit is \$1,000,000 per occurrence.

#### C. Property Insurance

Unless otherwise waived in writing by the Owner, the Contractor shall procure and maintain Builder's Risk insurance naming the Owner, Contractor and any Sub-Contractor as insureds as their interest may appear. Covered causes of loss form shall be all Risks of Direct Physical Loss, endorsed to include flood, earthquake, transit and sprinkler leakage where sprinkler coverage is applicable. Unless specifically authorized in writing by the Owner, the limit of insurance shall not be less than the initial contract amount and coverage shall apply during the entire contract period and until the work is accepted by the Owner.

#### D. Certificates of Insurance

Four original copies of all certificates of insurance in a form and issued by companies acceptable to the Owner shall be provided to the Designer prior to commencement of work. The certificates shall name the Owner as certificate holder and shall contain a provision that coverage afforded under the insurance policies will not be canceled or materially changed unless at least thirty (30) days prior written notice by registered letter has been given to the Owner.

### **ARTICLE 27: CONTRACT BONDS**

The Contractor shall furnish to the Owner and State upon execution of the contract, a contract performance bond and a contract payment bond; each for the full amount of the contract and issued by a surety company or surety companies authorized to do business in the State of Maine as approved by the Owner and State. The bonds shall be in accordance with and executed on the forms furnished in the specifications. The bonds shall allow for any addition or deductions to the contract.

The contract bonds shall continue in effect for the applicable periods limiting actions as provided by, as applicable, 14 MRSA Section 871 or Section 752 to protect the Owner's interest and to assure settlement of claims for the payment of all bills for labor, materials, and equipment by the Contractor.

The Contractor shall submit to the Bureau of General Services through the Designer, copies of the Contract Performance Bond and Contract Payment Bond for each of the Filed Sub-Bid Subcontractors that were required to submit Bid Bonds.

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**ARTICLE 28: DAMAGES**

1. The Contractor shall indemnify and hold harmless the Owner and the Designer and their agents and employees from and against all claims, damages, losses, and expenses including attorneys' fees arising out of or resulting from the performance of the work, provided that any such claim, damage, loss, or expense (a) is attributable to bodily injury sickness, disease or death, or injury to or destruction to tangible property (other than the work itself) including the loss of use resulting therefrom, and (b) is caused in whole or in part by a negligent act or omission of the Contractor, any Sub-Contractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in part by a party indemnified hereunder.

2. In any and all claims against the Owner or the Designer or any of their agents or employees, by any employee of the Contractor, any Sub-Contractor, anyone directly or indirectly employed by any of them, or anyone for whose acts any of them may be liable, the indemnification obligation under paragraph 1 shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for the Contractor or any Sub-Contractor under Workmen's Compensation Acts, disability benefit acts, or other employee benefit acts.

3. The obligations of the Contractor under paragraph 1 shall not exceed the liability of the Designer, the Designer's agents or employees arising out of:

(a) The preparation or approval of maps, drawings, opinions, reports, surveys, change orders, designs or specifications; or

(b) The giving of or the failure to give directions or instructions by the Designer, the Contractor, agents or employees provided such giving or failure to give is the primary cause of the injury or damage.

**ARTICLE 29: LIENS**

Neither the final payment nor any part of the retained percentage shall become due until the Contractor, shall deliver to the Owner a complete release of all liens arising out of this contract, or receipts in full in lieu thereof, and, an affidavit that so far as the Contractor has knowledge or information the releases and receipts include all the labor and material for which a lien could be filed; but the Contractor, may if any Sub- Contractor refuses to furnish a release or receipt in full, furnish a bond satisfactory to the Owner, to indemnify him against any lien. If any lien remains unsatisfied after all the payments are made, the Contractor shall refund to the Owner all moneys that the latter may be compelled to pay in discharging such lien, including all cost and reasonable attorney's fee.

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**ARTICLE 30: ASSIGNMENT**

Neither party to the contract shall assign the Contractor or sublet it as a whole without the written consent of the other, nor shall the Contractor assign any money due or to become due to him hereunder, without the previous written consent of the Owner.

**ARTICLE 31: MUTUAL RESPONSIBILITY OF CONTRACTORS**

Should the Contractor cause damage to any separate Contractor on the work, the Contractor agrees, upon due notice, to settle with such Contractor by agreement or arbitration, if he will so settle. If such separate Contractor sues the Owner or Designer on account of any damage alleged to have been so sustained, the Owner or Designer shall notify the Contractor, who shall defend such proceedings at the Contractor's expense and if any judgment against the Owner or Designer arises therefrom, the Contractor shall pay or satisfy it and pay all costs incurred by the Owner or Designer.

**ARTICLE 32: SEPARATE CONTRACTS**

The Owner reserves the right to let other contracts in connection with this work under similar general conditions. The Contractor shall afford other Contractors reasonable opportunity for the introduction and storage of their materials and the execution of their work, and shall properly connect and coordinate his work with theirs.

If any part of the Contractor's work depends on proper execution or results upon the work of any other Contractor, the Contractor shall inspect and promptly report to the Designer any defects in such work that render it unsuitable for such proper execution and results. The Contractor's failure so to inspect and report shall constitute an acceptance of the other Contractor's work as fit and proper for the reception of his work, except as to defects which may develop in Contractor's work after the execution of the Contractor's work.

To insure the proper execution of the Contractor's subsequent work the Contractor shall measure work already in place and shall at once report to the Designer any discrepancy between the executed work and the drawings.

**ARTICLE 33: SUBCONTRACTS**

The Contractor shall not sublet any part of this contract without the written permission of the Owner.

The Contractor shall submit in writing to the Designer for approval a complete list of the names of all particular items of work he proposes to furnish and the names of the Sub-Contractors to whom the Contractor proposes to sublet work. The Sub-Contractors named shall be reputable firms of recognized standings with a record of satisfactory work. The Contractor shall not employ any Sub-Contractor or use any material that requires approval by any Specification Section until they have been approved, or where there is reason to believe the work will not be accomplished in accordance with the contract documents. The complete list of Sub-Contractors and materials must be submitted for approval to the Designer and

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Owner.

The Designer shall, on request, furnish to any Sub-Contractor, wherever practicable, evidence of the amounts certified on his account.

The Contractor agrees that he is as fully responsible to the Owner for the acts and omissions of his Sub-Contractor and of persons either directly or indirectly employed by them, as he is for the acts and omissions of persons directly employed by him.

Nothing contained in the contract documents shall create any contractual relation between any Sub-Contractor and the Owner.

**ARTICLE 34: RELATIONS OF CONTRACTOR AND SUB-CONTRACTOR**

The Contractor agrees to bind every Sub-Contractor and every Sub-Contractor agrees to be bound by the terms of the contract documents, as far as they are applicable to his work, including the following provisions of this article, unless specifically noted to the contrary in a subcontract approved in writing as adequate by the Owner or Designer.

The Sub-Contractor agrees:

- A. To be bound to the Contractor by the terms of the contract documents, and to assume toward the Contractor all the obligations and responsibilities that the Contractor, by those documents, assumes toward the Owner.
- B. To submit to the Contractor applications for payment in such reasonable time as to enable the Contractor to apply for payment as specified.
- C. To make all claims for extras, for extensions of time and for damages for delays or otherwise, to the Contractor in the manner provided in the general conditions for like claims by the Contractor upon the Owner, except that the time for making claims for extra cost is one week.

The Contractor agrees:

- D. To be bound to the Sub-Contractor by all the obligations that the Owner assumes to the Contractor under the contract documents, and by all the provisions thereof affirming remedies and redress to the Contractor from the Owner.
- E. To pay the Sub-Contractor, upon the payment of certificates, the amount allowed to the Contractor on account of the Sub-Contractor's work to the extent of the Sub-Contractor's interest therein.
- F. To pay the Sub-Contractor, upon the payment of certificates, if issued otherwise as in section E above, so that at all times the Sub-Contractor's total payments shall be as large in proportion to the value of the work done by the Sub-



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Contractor.

G. To pay the Sub-Contractor to such extent as may be provided by the contract Documents or the subcontract, if either of these provide for earlier or larger payments than the above.

H. To pay the Sub-Contractor on demand for subcontract work or materials as far as executed and fixed in place, less the retained percentage, at the time the certificate should issue, even though the Designer fails to issue it for any cause not the fault of the Sub-Contractor.

I. To make no demand for liquidated damages or penalty for delay in any sum in excess of such amount as may be specifically named in the subcontract.

J. That no claim for services rendered or materials furnished by the Contractor to the Sub-Contractor shall be valid unless written notice thereof is given by the Contractor to the Sub-Contractor during the first ten days of the calendar month following that in which the claim originated.

K. To give the Sub-Contractor an opportunity to present and to submit evidence in any progress conference or disputes involving subcontract work.

L. To pay the Sub-Contractor a just share of any fire insurance money received by him, the Contractor, under Article 26 of the General Conditions.

**ARTICLE 35: DESIGNER'S STATUS**

The Designer shall be the Owner's representative during the construction period and he shall observe the work in progress on behalf of the Owner. He shall have authority to act on behalf of the Owner only to the extent expressly provided in the contract documents or otherwise in writing, which shall be shown to the Contractor. He shall have authority to stop the work whenever such stoppage may be necessary in his reasonable opinion to insure the proper execution of the contract.

The Designer shall be, in the first instance, the interpreter of the conditions of the contract and the judge of its performance. The Designer shall side neither with the Owner nor with the Contractor, but shall use the Designer's powers under the contract to enforce its faithful performance by both.

In case of the termination of the employment of the Designer, the Owner shall appoint a capable and reputable Designer whose status under the contract shall be that of the former Designer.

**ARTICLE 36: CASH ALLOWANCES**

The Contractor shall include the contract sum and all allowances named in the contract documents and shall cause the work so covered to be done by such Contractors and for such

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sums as the Designer may direct, the contract amount being adjusted in conformity therewith. The Contractor declares that the contract amount includes such sums for expenses and profit on account of cash allowances, as he deems proper. No demand for expenses or profit other than those included in the contract shall be allowed. The Contractor shall not be required to employ for any such work, persons against whom the Contractor has a reasonable objection.

#### **ARTICLE 37: USES OF PREMISES**

The Contractor shall confine his apparatus; the storage of materials and the operations of his workmen to limits indicated by law, ordinances, permits or directions of the Designer, and as required by the Contract Documents, and shall not unreasonably encumber the premises with his materials.

The Contractor shall not load or permit any part of the structure to be loaded with a weight which will endanger its safety. The Contractor shall enforce the Designer's instructions regarding signs, advertisements, fires, and smoking.

If any part of the building is completed and ready for occupancy, the Owner may, by written and mutual consent, without prejudice to any of the Owner's rights or the rights of the Contractor enter in and make use of such completed parts of the building. Such use or occupancy shall in no case be construed as an acceptance of any work or materials.

#### **ARTICLE 38: CUTTING, PATCHING AND DIGGING**

The Contractor shall do all cutting, fitting or patching of his work that may be required to make its several parts come together properly and fit it to receive or be received by work of other Contractors shown upon, or reasonable implied by, the drawings and specifications for the completed structure, and he shall make good after them as the Designer may direct.

Any cost caused by defective or ill-timed work shall be borne by the party responsible therefore. The Contractor shall not endanger any work by cutting, excavating or otherwise, and shall not cut or alter the work of any other Contractor save with the consent of the Designer. Cutting, drilling, or patching work of Contractors other than the general Contractor shall be done only with the permission and instruction of the general Contractor and Designer. Cutting of structural members must be approved by the Designer. All cutting, patching, and digging of other Contractors in or about the building shall be done under the supervision of the general Contractor who shall be responsible to see that the work is neatly done, and in a manner that will not endanger the structure or harm the component parts, and that patching and back filling shall be done to restore the structure and surfaces to its original condition.

#### **ARTICLE 39: LAYOUT OF WORK**

The Contractor shall be responsible for the correct staking out of the new work on the site, and shall employ a competent engineer/surveyor to locate the building on the site. He shall run the axis lines locating the work, establish correct datum points, and check each line

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and point on the site to insure their correctness. All such lines and points shall be carefully preserved throughout the construction.

The Contractor shall lay out all work from dimensions given on plans. The Contractor shall take measurements and verify dimensions of existing or old work, if any, that affect his work or to which his work is to be fitted. The Contractor alone shall be responsible for the correctness of all measurements and shall verify all grades, lines, levels, elevations and dimensions shown on the drawings and report any errors or inconsistencies to the Designer prior to commencing work.

#### **ARTICLE 40: WORKMANSHIP**

All workmanship, materials or equipment, either at the site or intended for it shall conform with all respects with the requirements of all the contract documents, and shall be strictly first class, workmanlike installation and the best obtainable from the crafts and trades. Incomplete or careless workmanship will not be allowed. In all cases the materials, equipment and work shall be equal to or better than the grade specified and the best of their kind that is obtainable for the purpose for which they are intended. The Designer's decision on the quality of work shall be final.

All labor shall be performed by mechanics skilled in their respective trades. Prior to submitting a proposal, the Contractor shall become familiar with the local labor conditions, skilled and unskilled.

If, in the opinion of the Contractor, any work is indicated on the drawings or specified in such manner as would make it impossible to produce work of the highest quality, or should discrepancies appear between drawings, or drawings and specifications, the Contractor shall refer the same in writing to the Designer for interpretation before proceeding with the work.

If the Contractor fails to make such reference, no excuse will be entertained thereafter for failure to carry out the work in the satisfactory manner.

The Contractor shall guarantee the Contractor's work against any defects in workmanship and materials for a period of one year from the date of the written final acceptance of the project.

#### **ARTICLE 41: CLEANING UP**

The Contractor shall at all times keep the premises free from accumulation of waste materials or rubbish caused by his employees or work, and at the completion of the work he shall remove all his rubbish from and about the building and all his tools, scaffolding and surplus materials and shall leave his work "Broom Clean" or its equivalent, unless more exactly specified.

In case of failure to comply by the Contractor, the Owner may perform the cleanup and deduct the cost from any monies due the Contractor.

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**ARTICLE 42: DISPUTE RESOLUTION**

If, in the performance of this contract, there arises a dispute between the Contractor and the Owner that cannot be resolved by the parties to the contract, the dispute shall be referred to the Director of the Bureau of General Services who, at his/her discretion, will submit the dispute to non-binding Alternate Dispute Resolution (ADR) or binding arbitration. If the parties in dispute are not satisfied with the results of ADR the Owner or the Contractor may resubmit the dispute to the Director of the Bureau of General Services for binding arbitration.

In any non-binding Alternative Dispute Resolution (ADR) or binding arbitration between the Owner and the Contractor, the Owner may elect to consolidate related claims between the Owner and the Designer. Any mediator and/or arbitrator shall be subject to the mutual approval of the Owner, the Contractor and, as applicable, the Designer, such approval not to be unreasonably withheld by any party.

**ARTICLE 43: COMPLETION TIME AND LIQUIDATED DAMAGES**

a) The Date(s) of Completion is stated in the Proposal Form Section 2-B and in the Contract Form Section 2-E. If the Contractor finds it impossible to complete the Work on or before the said Date(s) of Completion, he make a written request to the Owner for an Extension of Time setting forth therein the reasons for the request. If the Owner finds that the Work was delayed because of conditions beyond the control and without the fault of the Contractor he may extend the Date(s) of Completion which will then be in full force and effect, the same as though it was the original Date(s) of Completion. b) Time is an essential element of the Contract and it is important the Work be pressed vigorously to Completion. The cost to the Owner of Administration of the Contract, inspection and supervision will be increased as the time occupied in the Work, is lengthened. c) For each calendar day that the Work shall remain uncompleted after the Date(s) of Completion specified in the Contract, the amount per day, listed below in the Schedule of Liquidated damages, shall be deducted from any money due the Contractor, not as a penalty but as liquidated damages, provided, however that due account shall be taken of any adjustment of the Date(s) of Completion granted under the provisions of Paragraph (a) above. d) The Contractor shall expressly be prohibited from filing delay claims or attempting to recover damages for its scheduled early completion. The Owner and Designer have not requested accelerated schedules and cannot accommodate the Contractor if he chooses to accelerate the Work. The Owner and Designer have designed the Project to be done in an orderly fashion which allows for bad weather, minor changes in the Work, and an orderly submittal and review process of materials and workmanship. Any Contractor choosing to bid the project with accelerated completions, earlier than those allowed by the phasing plan, has a duty to inform the project owner of the Contractor's intention to achieve early completion and he shall also note early completion as a qualification on his bid form. The Owner reserves the right to reject all bids containing limitations or qualifications.

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SCHEDULE OF LIQUIDATED DAMAGES

Damages

Amount of Liquidated  
Per Day

Original Contract Amount

More than \$ 100,000 and less than \$ 3,000,000	\$ 750.00
More than \$ 3,000,000 and less than \$ 7,000,000	\$ 1000.00
More than \$ 7,000,000 and less than \$ 10,000,000	\$ 1500.00
More than \$ 10,000,000	\$ 1500.00 plus \$ 150 per \$ 1,000,000

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### 3-B - SUPPLEMENTARY CONDITIONS

These Supplementary Conditions supplement and, as applicable, amend The State of Maine Standard General Conditions and Contract Work for Public School Projects (the "General Conditions").

1. The parties recognize that the Project is locally funded, and that the role of the Bureau of General Services for locally funded projects is primarily advisory. Accordingly, notwithstanding anything to the contrary in the contract documents, submission to or review or approval by the Bureau of General Services shall not be required, except to the extent such submission, review or approval is required by state law or regulation for locally funded school construction projects. Furthermore, wherever used in the contract documents, "Bureau" and "Bureau of General Services" shall mean the Owner, unless the specific provision of the contract documents is in fulfillment of a state law or regulation that must be complied with in the case of a locally funded school construction project.
2. Revise the sixth paragraph of ARTICLE 9 to read "The Contractor warrants and guarantees his work against any defects in workmanship and materials for a period of one year from the date of the written acceptance of the project.
3. Revise last sentence in the first paragraph of Article 19 to read "Inclement weather or other natural causes shall not be reason to allow additional time under this contract, with the exception of tornado, earthquake, flood, or similar event that causes catastrophic damage and delay."
4. The release of liens required by Article 24, Payments, of the General Conditions shall be in the form of Exhibit A and Exhibit B to these Supplementary Conditions. Final lien waiver and accompanying affidavit required by Article 29, Liens, shall be substantially in the form of AIA Documents G706 and G706A and shall be accompanied by final releases of lien for each subcontractor and supplier as specified therein. Final releases for each Phase shall be submitted by the Contractor upon final completion of each of Phase 1 and of Phase 2, respectively.
5. ARTICLE 26: CONTRACTOR'S INSURANCE REQUIREMENTS, Paragraphs A, B, C and D are deleted in their entirety and replaced with the following:

**A. Workers' Compensation Insurance**

Worker's compensation insurance for all employees on site in accordance with the statutory workers' compensation law of the State of Maine. (Provide Owner as Additional Insured and Waiver of Subrogation endorsements if available from the insurance carrier)

Minimum acceptable limits for Employer's Liability are:

Bodily Injury By Accident	\$500,000
Bodily Injury by Disease	\$500,000 Each Employee
Bodily Injury by Disease	\$500,000 Policy Limit.

**B. Liability Insurance**

**1. General Liability Insurance**

General liability insurance shall be on a form providing coverage not less than that of the Insurance Services Office (ISO) Commercial General Liability Policy, CG 00 01 12 04, Endorsements: CG 2010 – Additional Insured (naming the City and School Dept.), CG2503- General Aggregate Per Project, and CG2404 ( if not included in form) Waiver of Transfer of Rights of recovery. This insurance shall cover bodily injury and property damage liability for all hazards of the Project including premise and operations, products and completed operations, contractual, and personal injury liabilities. It shall include collapse and underground coverage as well as explosion coverage if explosion hazards exist. Aggregate limits shall apply on a per location or project basis.

Minimum acceptable limits are:

General aggregate limit:	\$2,000,000
Products and completed operations aggregate:	\$1,000,000
Each occurrence limit:	\$1,000,000
Personal injury aggregate:	\$1,000,000

2. Automobile Liability Insurance

Automobile liability insurance against claims for bodily injury, death or property damage resulting from the maintenance, Ownership or use of all owned, nonowned and hired automobiles, trucks and trailers.

Minimum acceptable limit is \$1,000,000 any one accident or loss.

3. Owners Protective Liability

For Contracts exceeding \$50,000 in total Contract amount, Contractor shall secure an Owners Protective Liability policy naming the Owner as the Named Insured.

Minimum acceptable limits are:

General aggregate limit:	\$2,000,000
Each occurrence limit:	\$1,000,000

4. Pollution Liability

In the event that any disruption, handling, abatement, remediation, encapsulation, removal, transport, or disposal of contaminated or hazardous material is required, the Contractor or its Sub-Contractor shall secure a pollution liability policy in addition to any other coverages contained in this section. The insurance shall be provided on an occurrence based policy and shall remain in effect for the duration of the Project. If not available and a claims made policy is provided, include an extended reporting period of three years after project completion.

Minimum acceptable limit is \$1,000,000 per occurrence.

5. Commercial Umbrella/Excess Liability Insurance: \$10,000,000

C. Property Insurance

The Owner will provide the Builder's Risk insurance.

D. Certificates of Insurance

Four original copies of all certificates of insurance in a form and issued by companies acceptable to the Owner shall be provided to the Designer prior to commencement of work. The Owner shall be listed on the certificates as an additional insured, and certificate shall include Waiver of Subrogation in favor of the Owner. The certificates shall name the Owner as certificate holder and shall contain a provision that coverage afforded under the insurance policies will not be canceled or materially changed unless at least thirty (30) days prior written notice by registered letter has been given to the Owner. Cancellation Notice of 30 days shall be specifically endorsed to the policies."

7. ARTICLE 42: DISPUTE RESOLUTION, is deleted in its entirety and replaced with the following:

"ARTICLE 42: DISPUTE RESOLUTION

If, in the performance of this contract, there arises a dispute between the Contractor and the Owner that cannot be resolved by the parties to the contract, the parties shall submit the dispute to



a single mediator selected by parties. The parties agree to mediate the dispute in good faith for not more than one day at a date, time and place in Cumberland County, Maine specified by the mediator. The parties shall equally share the costs and fees of the mediator, but shall otherwise bear their own costs of mediation. If the parties are unable to agree upon a mediator or otherwise fail to resolve their differences through mediation, then either party may demand arbitration pursuant to the Maine Uniform Arbitration Act, 14, M.R.S.A. §5927-5949. There shall be one arbitrator selected by the parties. If the parties cannot agree upon an arbitrator within thirty (30) days of a demand for arbitration, then either party may apply to Maine Superior Court for selection of an arbitrator. The arbitrator selected shall conduct the arbitration proceeding. All issues which relate to the controversy or dispute shall be resolved in the arbitration, which shall be final and binding provided that in any arbitration the arbitrator shall be bound by and follow the substantive laws of Maine. The arbitration hearing shall be conducted in Maine and shall not exceed two days unless agreed by the parties or ordered by the arbitrator. The parties shall equally share the costs and fees of the arbitrator, but shall otherwise bear their own costs of arbitration except that if the arbitrator determines that either party has acted unreasonably or in bad faith, the arbitrator may require that party to reimburse the other party for its reasonable costs, including but not limited to arbitration costs and reasonable attorney's fees. In any binding arbitration between the Owner and the Contractor, the Owner may elect to consolidate related claims between the Owner and the Designer, in which case the selection of the arbitrator shall also be subject to approval of the Designer.”

8. **ARTICLE 43: COMPLETION TIME AND LIQUIDATED DAMAGES**

The Owner shall be entitled to actual damages if Owner's actual damages exceed the liquidated damages provided by Article 43 of the General Conditions.

**SECTION 3 - B**

**EXHIBIT A  
PARTIAL LIEN WAIVER**

The undersigned, \_\_\_\_\_ as Contractor under a Contract by and between the undersigned and the York School Department (“Owner”), has furnished or caused to be furnished labor or materials, or both, for the premises owned by Owner and located on or about York High School, Village Elementary School Window Replacement and Renovations Project, York, ME (“Premises”); and

The undersigned hereby certifies to the Owner that through the date set forth below, the sum of \$ \_\_\_\_\_ is now due and payable to the undersigned, with retainage due but not yet payable, in the amount of \$ \_\_\_\_\_ and with a balance of \$ \_\_\_\_\_ due upon completion (or as it becomes due) of the Contract by and between the undersigned and Owner, and

The undersigned certifies to the Owner that all subcontractors or suppliers of labor, services, material or equipment used, engaged or employed by the undersigned directly or indirectly, have been paid in full, or shall immediately be paid in full from the payment requisition submitted to Owner herewith, with respect to the labor materials furnished to the Premises through the date set forth below; and

The undersigned further certifies that the attached hereto are partial Lien Waivers obtained by the undersigned from all subcontractors or suppliers for whose work or materials partial payment is to be made from the payment requisition submitted herewith or who are otherwise entitled to payment and the undersigned hereby agrees to indemnify and hold Owner harmless from any and all claims by any party whatsoever in connection with the labor or materials furnished, caused to be furnished or intended to be furnished by or on behalf of the undersigned through the date set forth below; and

The undersigned does hereby acknowledge full performance by the Owner of all obligations due or owing to the undersigned in connection with the Premises and the project through the date set forth below; does hereby release the Owner of all claims, demands and actions arising out or in connection with the Premises and project through the date set forth below; and does hereby waive and release any lien or right to lien the Premises, including any building improvements, on account of any and all labor or materials, or both furnished for or incorporated into the Premises through the date set forth below.

\_\_\_\_\_  
Dated

\_\_\_\_\_  
Dated

\_\_\_\_\_  
Witness

\_\_\_\_\_  
Contractor

State of Maine  
County of \_\_\_\_\_

Then personally appeared before me the above-named Contractor and acknowledged the foregoing to be a free act and deed.

\_\_\_\_\_  
Notary Public

\_\_\_\_\_  
Dated

\_\_\_\_\_  
Print Name

Note: This Partial Lien Waiver and all attached Partial Lien Waivers from subcontractors and suppliers must be dated not more than ten (10) days before Contractor’s payment requisition.

**SECTION 3 - B**

**EXHIBIT B  
PARTIAL LIEN WAIVER  
(Subcontractor and Suppliers)**

The undersigned, \_\_\_\_\_ pursuant to a Contract or Agreement with \_\_\_\_\_ (“Contractor”), has furnished or caused to be furnished labor or materials, or both, for the premises owned by the York School Department and located on or about the York High School, Village Elementary School Window Replacement and Renovations Project, York, ME (“Premises”); and

The undersigned hereby certifies to the Owner that through the date set forth below, the sum of \$ \_\_\_\_\_ is now due and payable to the undersigned, with retainage due but not yet payable, in the amount of \$ \_\_\_\_\_ and with a balance of \$ \_\_\_\_\_ due upon completion (or as it becomes due) of the Contract or Agreement with the Contractor; and upon receipt of the sums now due the undersigned shall and does hereby release the Contractor from all claims, demands and actions on account of labor or materials to or for the Premises through the date set forth below; and

The undersigned certifies to the Owner that all Contractor that all subcontractors or suppliers of labor, services, material or equipment used, engaged or employed by the undersigned directly or indirectly, have been paid in full, or otherwise satisfied with respect to labor or materials furnished to the Premises through the date set forth below; and the undersigned hereby agrees to indemnify and hold the Owner and Contractor harmless from any and all claims by any party whatsoever in connection with the labor or materials furnished by the undersigned; and

The undersigned does hereby acknowledge full performance by the Owner of all obligations due or owing to the undersigned in connection with the Premises and the project through the date set forth below; does hereby release the Owner of all claims, demands and actions arising out or in connection with the Premises and project through the date set forth below; and does hereby waive and release any lien or right to lien the Premises, including any building improvements, on account of any and all labor or materials, or both furnished for or incorporated into the Premises through the date set forth below.

\_\_\_\_\_  
Dated

\_\_\_\_\_  
Dated

\_\_\_\_\_  
Witness

\_\_\_\_\_  
Subcontractor / Supplier

\_\_\_\_\_  
By: Its

Note: This Partial Lien Waiver and all attached Partial Lien Waivers from subcontractors and suppliers must be dated not more than ten (10) days before Contractor’s payment requisition.

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## SECTION 011000 - SUMMARY

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. This Section includes the following:
  1. Work covered by the Contract Documents.
  2. Type of the Contract.
  3. Work schedule.
  4. Work under other contracts.
  5. Owner-furnished products.
  6. Owner's occupancy requirements.
  7. Specification formats and conventions.

#### 1.3 WORK COVERED BY CONTRACT DOCUMENTS

- A. Project Identification: York High School and Village Elementary School Window Replacement and Renovations.
  1. Project Location: York, Maine.
- B. Owner: York School District.
- C. Architect: Harriman, Auburn Business Park, 46 Harriman Drive, Auburn, ME 04210.

#### 1.4 TYPE OF CONTRACT

- A. Project will be constructed under a single prime contract.

#### 1.5 WORK SCHEDULE

- A. Schedule:
  1. Work may begin on June 26, 2019 and all work shall be substantially complete on or before August 20, 2019.
- B. Do not disturb adjacent spaces during hours of operation.
- C. Time: The term "day" as used in the Contract Documents shall mean calendar day unless otherwise specifically defined.

#### 1.6 OWNER-FURNISHED PRODUCTS

- A. Owner will furnish products indicated and /or as specified. The Work includes providing support systems to receive Owner's equipment.
  1. Contractor is responsible for protecting Owner-furnished items from damage during storage and handling, including damage from exposure to the elements.

2. Contractor shall install and otherwise incorporate Owner-furnished items into the Work.

## 1.7 OWNER'S OCCUPANCY REQUIREMENTS

- A. Full Owner Occupancy: Owner will occupy site and premises during entire construction period with the exception of areas under construction. Cooperate with Owner during construction operations to minimize conflicts and facilitate Owner usage. Perform the Work so as not to interfere with Owner's day-to-day operations. Maintain existing exits, unless otherwise indicated.
  1. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities. Do not close or obstruct walkways, corridors, or other occupied or used facilities without written permission from Owner and authorities having jurisdiction.
  2. Provide not less than 72 hours' notice to Owner of activities that will affect Owner's operations.

## 1.8 SPECIFICATION FORMATS AND CONVENTIONS

- A. Specification Format: The Specifications are organized into Divisions and Sections using the CSI/CSC's "MasterFormat" numbering system.
  1. Section Identification: The Specifications use Section numbers and titles to help cross-referencing in the Contract Documents. Sections in the Project Manual are in numeric sequence; however, the sequence is incomplete because all available Section numbers are not used. Consult the table of contents at the beginning of the Project Manual to determine numbers and names of Sections in the Contract Documents.
  2. Division 01: Sections in Division 01 govern the execution of the Work of all Sections in the Specifications.
- B. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:
  1. Abbreviated Language: Language used in the Specifications and other Contract Documents is abbreviated. Words and meanings shall be interpreted as appropriate. Words implied, but not stated, shall be inferred as the sense requires. Singular words shall be interpreted as plural, and plural words shall be interpreted as singular where applicable as the context of the Contract Documents indicates.
  2. Imperative mood and streamlined language are generally used in the Specifications. Requirements expressed in the imperative mood are to be performed by Contractor. Occasionally, the indicative or subjunctive mood may be used in the Section Text for clarity to describe responsibilities that must be fulfilled indirectly by Contractor or by others when so noted.
    - a. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.

1.9 MISCELLANEOUS PROVISIONS

- A. Material safety data sheets shall be made available in accordance with OSHA requirements.
- B. No asbestos containing materials shall be used in the work.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 011000

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## SECTION 012300 - ALTERNATES

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for alternates.

#### 1.3 DEFINITIONS

- A. Alternate: An amount proposed by bidders and stated on the Bid Form for certain work defined in the Bidding Requirements that may be added to or deducted from the Base Bid amount if Owner decides to accept a corresponding change either in the amount of construction to be completed or in the products, materials, equipment, systems, or installation methods described in the Contract Documents.
  - 1. The cost or credit for each alternate is the net addition to or deduction from the Contract Sum to incorporate alternate into the Work. No other adjustments are made to the Contract Sum.
  - 2. Hold pricing for 45 days from date of bid to allow Owner time for project accounting. Alternates not accepted before contract signing may be added by Change Order later.

#### 1.4 PROCEDURES

- A. Coordination: Modify or adjust affected adjacent work as necessary to completely integrate work of the alternate into Project.
  - 1. Include as part of each alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not indicated as part of alternate.
- B. Notification: Immediately following award of the Contract, notify each party involved, in writing, of the status of each alternate. Indicate if alternates have been accepted, rejected, or deferred for later consideration. Include a complete description of negotiated modifications to alternates.
- C. Execute accepted alternates under the same conditions as other work of the Contract.
- D. Schedule: A Schedule of Alternates is included at the end of this Section.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 SCHEDULE OF ALTERNATES

A. Alternate #1: Scrape and paint exterior pipe rails as noted on plans.

1. ADD AMOUNT: \_\_\_\_\_

END OF SECTION 012300

## SECTION 024119 - SELECTIVE DEMOLITION

### 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. Demolition and removal of selected portions of building or structure.

#### 1.3 DEFINITIONS

- A. Remove: Detach items from existing construction and legally dispose of them off-site unless indicated to be removed and salvaged or removed and reinstalled.
- B. Remove and Salvage: Carefully detach from existing construction, in a manner to prevent damage, and deliver to Owner.
- C. Remove and Reinstall: Detach items from existing construction, prepare for reuse, and reinstall where indicated.
- D. Existing to Remain: Existing items of construction that are not to be permanently removed and that are not otherwise indicated to be removed, removed and salvaged, or removed and reinstalled.

#### 1.4 MATERIALS OWNERSHIP

- A. Unless otherwise indicated, demolition waste becomes property of Contractor.
- B. Historic items, relics, antiques, and similar objects including, but not limited to, cornerstones and their contents, commemorative plaques and tablets, and other items of interest or value to Owner that may be uncovered during demolition remain the property of Owner.
  - 1. Carefully salvage in a manner to prevent damage and promptly return to Owner.

#### 1.5 FIELD CONDITIONS

- A. Hazardous Materials: It is not expected that hazardous materials will be encountered in the Work.
  - 1. Hazardous materials will be removed by Owner before start of the Work.

2. If suspected hazardous materials are encountered, do not disturb; immediately notify Architect and Owner. Hazardous materials will be removed by Owner under a separate contract.

## PART 2 - EXECUTION

### 2.1 EXAMINATION

- A. When unanticipated mechanical, electrical, or structural elements that conflict with intended function or design are encountered, investigate and measure the nature and extent of conflict. Promptly submit a written report to Architect.

### 2.2 UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS

- A. Existing Services/Systems to Remain: Maintain services/systems indicated to remain and protect them against damage.

### 2.3 SELECTIVE DEMOLITION, GENERAL

- A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:
  1. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping, to minimize disturbance of adjacent surfaces. Temporarily cover openings to remain.
  2. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
  3. Remove decayed, vermin-infested, or otherwise dangerous or unsuitable materials and promptly dispose of off-site.
  4. Dispose of demolished items and materials promptly.
- B. Removed and Reinstalled Items:
  1. Clean and repair items to functional condition adequate for intended reuse.
  2. Protect items from damage during transport and storage.
- C. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by Architect, items may be removed to a suitable, protected storage location during selective demolition and reinstalled in their original locations after selective demolition operations are complete.

## 2.4 SELECTIVE DEMOLITION PROCEDURES FOR SPECIFIC MATERIALS

- A. Resilient Floor Coverings: Remove floor coverings and adhesive according to recommendations in RFCI's "Recommended Work Practices for the Removal of Resilient Floor Coverings."

## 2.5 DISPOSAL OF DEMOLISHED MATERIALS

- A. General: Except for items or materials indicated to be reused, salvaged, reinstalled, or otherwise indicated to remain Owner's property, remove demolished materials from Project site.
  - 1. Do not allow demolished materials to accumulate on-site.
  - 2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
  - 3. Remove debris from elevated portions of building by chute, hoist, or other device that will convey debris to grade level in a controlled descent.
- B. Burning: Do not burn demolished materials.
- C. Disposal: Transport demolished materials off Owner's property and legally dispose of them.

## 2.6 CLEANING

- A. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to condition existing before selective demolition operations began.

END OF SECTION 024119

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## SECTION 074213 - METAL WALL PANELS

### 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. This Section includes the following:
  - 1. Factory-formed and field-assembled, concealed-fastener, metal wall panels.
  - 2. Metal soffit (ceiling) panels.
  - 3. Formed sheet metal trim including, clips, drips and closures.
- B. Related Sections include the following:
  - 1. Division 07 Section "Sheet Metal Flashing and Trim" for counterflashings and other sheet metal work not part of metal wall panel assemblies.
- C. Products installed, but not furnished, under this Section include the following:
  - 1. Receiver flashing at base of metal wall panels for metal flashing, furnished under Division 07 Section "Sheet Metal Flashing and Trim."

#### 1.3 DEFINITION

- A. Metal Wall Panel Assembly: Metal wall panels, miscellaneous metal framing, and accessories necessary for a complete weathertight wall system.

#### 1.4 PERFORMANCE REQUIREMENTS

- A. General: Provide metal wall panel assemblies that comply with performance requirements specified as determined by testing manufacturers' standard assemblies similar to those indicated for this Project, by a qualified testing and inspecting agency.
- B. Structural Performance: Assemblies shall comply with the requirements of IBC 2009 and the following:
  - 1. Wind Speed and Exposure: 100 mph and Exposure B.
  - 2. Wind Pressure for Wall Panels:
    - a. Corner Pressures: Positive 21 lbf/sq. ft. and negative 28 lbf/sq. ft.
    - b. Field-of-Building Pressures: Positive 21 lbf/sq. ft. and negative 23 lbf/sq. ft.
- C. Thermal Movements: Provide metal wall panel assemblies that allow for thermal movements resulting from the following maximum change (range) in ambient and surface temperatures by preventing buckling, opening of joints, overstressing of components, failure of joint sealants, failure of connections, and other detrimental effects. Base engineering calculation on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.
  - 1. Temperature Change (Range): 120 deg F, ambient; 180 deg F, material surfaces.

## 1.5 SUBMITTALS

- A. Product Data: For each type of product indicated. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for each type of metal wall panel and accessory.
- B. Shop Drawings: Show fabrication and installation layouts of metal wall panels; details of edge conditions, joints, panel profiles, corners, anchorages, attachment system, trim, flashings, closures, and accessories; and special details. Distinguish between factory- and field-assembled work. Details shall be at a scale not less than 1-1/2 inches per 12 inches.
  - 1. Accessories: Include details of flashing and trim, at a scale of not less than 3 inches per 12 inches.
- C. Samples: For each type of exposed finish required, prepared on Samples of size indicated below.
  - 1. Metal Wall Panels: 12 inches long by actual panel width. Include fasteners, closures, and other metal wall panel accessories.
  - 2. Trim and Closures: 12 inches long. Include fasteners and other exposed accessories.
- D. Maintenance Data: For metal wall panels to include in maintenance manuals.
- E. Warranties: Special warranties specified in this Section.

## 1.6 QUALITY ASSURANCE

- A. Source Limitations: Obtain each type of metal wall panel through one source from a single manufacturer.
  - 1. Obtain metal for shop-formed trim from metal wall panel manufacturer to assure match to metal wall panel.
- B. Product Options: Drawings indicate size, profiles, and dimensional requirements of metal wall panels and trim.
  - 1. Do not modify intended aesthetic effects, as judged solely by Architect, except with Architect's approval. If modifications are proposed, submit comprehensive explanatory data to Architect for review.
- C. Fabricated Sheet Metal Standard: Comply with SMACNA's "Architectural Sheet Metal Manual." Conform to dimensions and profiles shown, unless more stringent requirements are indicated.
  - 1. Demolish and remove mockups when directed by Architect.

## 1.7 DELIVERY, STORAGE, AND HANDLING

- A. Deliver components, sheets, metal wall panels, and other manufactured items so as not to be damaged or deformed. Package metal wall panels for protection from damage, dirt, road grime, and similar soiling and weather affects during transportation and handling.



- B. Handling: Unload, store, and erect metal wall panels in a manner to prevent bending, warping, twisting, and surface damage. Cover fork truck tines and use protected rigging lifting devices to protect panels from marring and damage.
- C. Stack metal wall panels horizontally on platforms or pallets, covered with suitable weathertight and ventilated covering. Store metal wall panels to ensure dryness, with positive slope for drainage of water. Do not store metal wall panels in contact with other materials that might cause staining, denting, or other surface damage.
- D. Protect strippable protective covering on metal wall panels from exposure to sunlight and high humidity, except to extent necessary for period of metal wall panel installation.
- E. Flashing and Trim: Unload, store, and install sheet metal flashing materials and fabrications in a manner to prevent bending, warping, twisting, and surface damage. Stack materials on platforms or pallets, covered with suitable weathertight and ventilated covering. Do not store sheet metal flashing and trim materials in contact with other materials that might cause staining, denting, or other surface damage.

## 1.8 PROJECT CONDITIONS

- A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit assembly of metal wall panels to be performed according to manufacturers' written instructions and warranty requirements.

## 1.9 COORDINATION

- A. Coordinate metal wall panel assemblies and flashing and trim work of this Section with flashing, trim, and construction of other adjoining work to provide a leakproof, secure, and noncorrosive installation.

## 1.10 WARRANTY

- A. General: Special warranty specified in this Article shall not deprive Owner of other rights 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.
- B. Special Warranty on Panel Finishes: Manufacturer's standard form in which manufacturer agrees to repair finish or replace metal wall panels that show evidence of deterioration of factory-applied finishes within specified warranty period.
  - 1. Fluoropolymer Finish: Deterioration includes, but is not limited to, the following:
    - a. Color fading more than 5 Hunter units when tested according to ASTM D 2244.
    - b. Chalking in excess of a No. 8 rating when tested according to ASTM D 4214.
    - c. Cracking, checking, peeling, or failure of paint to adhere to bare metal.
  - 2. Finish Warranty Period: As follows:
    - a. Adhesion: 35 years from date of Substantial Completion.
    - b. Chalking:
    - c. 30 years from date of Substantial Completion.
    - d. Color Fading: 30 years from date of Substantial Completion.

## PART 2 - PRODUCTS

### 2.1 MANUFACTURERS

- A. In other Part 2 articles where titles below introduce lists, the following requirements apply for product selection:
1. Products: Subject to compliance with requirements, provide one of the products specified.

### 2.2 PANEL MATERIALS

- A. Metallic-Coated Steel Sheet Prepainted with Coil Coating: Steel sheet metallic coated by the hot-dip process and prepainted by the coil-coating process to comply with ASTM A 755/A 755M.
1. Zinc-Coated (Galvanized) Steel Sheet: ASTM A 653/A 653M, G90 coating designation; structural quality.
  2. Surface: Smooth, flat finish.
  3. Exposed Finishes: Apply the following coil coating, as indicated on Drawings.
    - a. High-Performance Organic Finish: Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.
      - 1) Fluoropolymer Two-Coat System: Manufacturer's standard two-coat, thermocured system consisting of specially formulated inhibitive primer and fluoropolymer color topcoat containing not less than 70 percent polyvinylidene fluoride resin by weight; complying with physical properties and coating performance requirements of AAMA 2605, except as modified below:
        - a) Humidity Resistance: 2000 hours.
        - b) Salt-Spray Resistance: 2000 hours.
    4. Concealed Finish: Apply pretreatment and manufacturer's standard white or light-colored acrylic or polyester backer finish, consisting of prime coat and wash coat with a minimum total dry film thickness of 0.5 mil.
- B. Aluminum Sheet: Coil-coated sheet, ASTM B 209, alloy as standard with manufacturer, with temper as required to suit forming operations and structural performance required.
1. Surface: Smooth, flat finish.
  2. Exposed Finishes: Apply the following coating, as indicated on Drawings.
    - a. High-Performance Organic Finish: AA-C12C42R1x (Chemical Finish: cleaned with inhibited chemicals; Chemical Finish: acid-chromate-fluoride-phosphate conversion coating; Organic Coating: as specified below). Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.
      - 1) Fluoropolymer Two-Coat System: Manufacturer's standard two-coat, thermocured system consisting of specially formulated inhibitive primer and fluoropolymer color topcoat containing not less than 70 percent polyvinylidene fluoride resin by weight; complying with AAMA 2605.
    3. Concealed Finish: Apply pretreatment and manufacturer's standard white or light-colored acrylic or polyester backer finish, consisting of prime coat and wash coat with a minimum total dry film thickness of 0.5 mil.

- C. Panel Sealants:
  - 1. Sealant Tape: Pressure-sensitive, 100 percent solids, gray polyisobutylene compound sealant tape with release-paper backing. Provide permanently elastic, nonsag, nontoxic, nonstaining tape 1/2 inch wide and 1/8 inch thick.
  - 2. Joint Sealant: ASTM C 920; elastomeric polyurethane, polysulfide, or silicone sealant; of type, grade, class, and use classifications required to seal joints in metal wall panels and remain weathertight; and as recommended in writing by metal wall panel manufacturer.
  - 3. Butyl-Rubber-Based, Solvent-Release Sealant: ASTM C 1311.

## 2.3 MISCELLANEOUS MATERIALS

- A. Panel Fasteners: Self-tapping screws, bolts, nuts, self-locking rivets and bolts, end-welded studs, and other suitable fasteners designed to withstand design loads. Provide exposed fasteners with heads matching color of metal wall panels by means of plastic caps or factory-applied coating. Provide EPDM, PVC, or neoprene sealing washers.
  - 1. Fasteners for Wall Panels: Self-drilling or self-tapping 410 stainless steel hex washer head, with EPDM or PVC washer under heads of fasteners bearing on weather side of metal wall panels.
  - 2. Fasteners for Flashing and Trim: Blind fasteners or self-drilling screws with hex washer head.
- B. Bituminous Coating: Cold-applied asphalt mastic, SSPC-Paint 12, compounded for 15-mil dry film thickness per coat. Provide inert-type noncorrosive compound free of asbestos fibers, sulfur components, and other deleterious impurities.

## 2.4 CONCEALED-FASTENER METAL (SIDING) WALL PANELS

- A. General: Provide factory-formed metal wall panels designed to be field assembled by lapping and interconnecting side edges of adjacent panels and mechanically attaching through panel to supports using concealed fasteners in side laps. Include accessories required for weathertight installation.
- B. Prefinished Metal Siding: Factory-formed, clipless, integral-standing-seam panels with raised ribs at panel edges and intermediate stiffening ribs symmetrically spaced between ribs; designed for sequential installation by mechanically attaching panels to substrate using screw fasteners located under concealed side of panels, and lapping and interconnecting side edges of adjacent panels.
  - 1. Product: Firestone Building Products; UNA-CLAD UC-4 Panel.
    - a. No substitutions. Metal siding selected to match existing metal siding.
  - 2. Material: Metallic-coated steel sheet, ASTM A 653, G90 coating designation, structural quality.
    - a. Nominal Thickness: 0.0311inch, 22 gage.
    - b. Exterior Finish: Two-coat fluoropolymer.
    - c. Color: As indicated in Exterior Materials Legend.
  - 3. Panel Coverage: 17-3/4 inches.
  - 4. Rib Height: 1-1/2 inch.
  - 5. Panel Length: Provide full height panels with no transverse seams.

## 2.5 ACCESSORIES

- A. Wall and Soffit Panel Accessories: Provide components required for a complete metal wall panel assembly including trim, copings, fasciae, mullions, sills, corner units, clips, flashings, sealants, gaskets, fillers, closure strips, and similar items. Match material and finish of metal wall panels, unless otherwise indicated.
  - 1. Closures: Provide closures at eaves and rakes, fabricated of same metal as metal wall panels.
  - 2. Backing Plates: Provide metal backing plates at panel end splices, fabricated from material recommended by manufacturer.
  - 3. Closure Strips: Closed-cell, expanded, cellular, rubber or crosslinked, polyolefin-foam or closed-cell laminated polyethylene; minimum 1-inch- thick, flexible closure strips; cut or premolded to match metal wall panel profile. Provide closure strips where indicated or necessary to ensure weathertight construction.
- B. Flashing and Trim for Wall Panels: Formed from 0.025-inch- thick (24 gage), zinc-coated (galvanized) steel sheet prepainted with coil coating. Provide flashing and trim as required to seal against weather and to provide finished appearance. Locations include, but are not limited to, bases, drips, sills, jambs, Z-flashing, J-channels, clips, corners, framed openings, foam inserts with metal closures, and fillers. Finish flashing and trim with same finish system as adjacent metal wall panels.
  - 1. Hem edges of all metal accessories, concealing raw edges and back of sheets.
  - 2. Flashing and Trim Color: To match metal wall panels as designated.
- C. Flashing and Trim for Soffit Panels: Provide flashing and trim formed from same material as metal panels as required to seal against weather and to provide finished appearance. Finish flashing and trim with same finish system as adjacent metal soffit panels.

## 2.6 FACTORY- FABRICATION

- A. General: Fabricate and finish metal wall panels and accessories at the factory to greatest extent possible, by manufacturer's standard procedures and processes, as necessary to fulfill indicated performance requirements demonstrated by laboratory testing. Comply with indicated profiles and with dimensional and structural requirements.
- B. Provide metal wall panels in one-piece, full-length sections without transverse seams, unless otherwise indicated.
- C. Fabricate metal wall panels in a manner that eliminates condensation on interior side of panel and with joints between panels designed to form weathertight seals.
- D. Provide panel profile, including major ribs and intermediate stiffening ribs, if any, for full length of panel.
- E. Sheet Metal Accessories: Fabricate flashing and trim to comply with recommendations in SMACNA's "Architectural Sheet Metal Manual" that apply to the design, dimensions, metal, and other characteristics of item indicated.
  - 1. Form exposed sheet metal accessories that are without excessive oil canning, buckling, and tool marks and that are true to line and levels indicated, with exposed edges folded back to form hems.

2. Seams for Aluminum: Fabricate nonmoving seams with flat-lock seams. Form seams and seal with epoxy seam sealer. Rivet joints for additional strength.
3. Sealed Joints: Form nonexpansion but movable joints in metal to accommodate elastomeric sealant to comply with SMACNA standards.
4. Conceal fasteners and expansion provisions where possible. Exposed fasteners are not allowed on faces of accessories exposed to view.
5. Fabricate cleats and attachment devices from same material as accessory being anchored or from compatible, noncorrosive metal recommended by metal wall panel manufacturer.
  - a. Size: As recommended by SMACNA's "Architectural Sheet Metal Manual" or metal wall panel manufacturer for application but not less than thickness of metal being secured.

## 2.7 FINISHES, GENERAL

- A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
- B. Protect mechanical and painted finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.
- C. Appearance of Finished Work: Variations in appearance of abutting or adjacent pieces are acceptable if they are within one-half of the range of approved Samples. Noticeable variations in the same piece are not acceptable. Variations in appearance of other components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances, metal wall panel supports, and other conditions affecting performance of work.
  1. Examine solid wall sheathing to verify that sheathing joints are supported by framing or blocking and that installation is within flatness tolerances required by metal wall panel manufacturer.
  2. Verify that weather barrier has been installed over sheathing and is continuous to prevent air infiltration or water penetration.
  3. If unacceptable conditions are encountered, prepare written report, endorsed by Installer, listing conditions detrimental to performance of work.
- B. Examine roughing-in for components and systems penetrating metal wall panels to verify actual locations of penetrations relative to seam locations of metal wall panels before metal wall panel installation.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.
- D. Thermal imaging of walls shall be completed before installation of metal wall panels.

### 3.2 PREPARATION

- A. Clean substrates of substances harmful to insulation, including removing projections capable of interfering with insulation attachment.
- B. Install flashings and other sheet metal to comply with requirements specified in Division 07 Section "Sheet Metal Flashing and Trim."
  - 1. Install sheet metal flashing and trim with minimum number of joints practical, using shop fabricated full-length pieces. Provide one piece flashing and trim using full-length pieces without joints where run is less than the 8 to 10 foot fabricated lengths. Do not use pieces less than 24 inches long.
    - a. Flashing at Openings and Trim: Provide one piece flashing, full width of opening except where opening exceeds available fabricated lengths. Provide sealed metal end dams at ends of sills. Sill flashings shall turn up on back side to form pan, directing water to the exterior.

### 3.3 METAL WALL AND SOFFIT PANEL INSTALLATION, GENERAL

- A. General: Install metal wall panels in orientation, sizes, and locations indicated on Drawings. Anchor metal wall panels and other components of the Work securely in place, with provisions for thermal and structural movement.
  - 1. Field cutting of metal wall panels by torch is not permitted.
  - 2. Shim or otherwise plumb substrates receiving metal wall panels.
  - 3. Rigidly fasten metal wall panels and allow end free movement due to thermal expansion and contraction.
  - 4. Flash and seal metal wall panels with weather closures at base and at perimeter of all openings. Fasten with self-tapping screws. Do not begin installation until weather barrier and flashings that will be concealed by metal wall panels are installed.
  - 5. Install screw fasteners in predrilled holes.
  - 6. Install flashing and trim as metal wall panel work proceeds.
  - 7. Align bottom of metal wall panels and fasten with blind rivets, bolts, or self-tapping screws. Fasten flashings and trim around openings and similar elements with self-tapping screws.
  - 8. Provide weatherproof escutcheons for pipe and conduit penetrating exterior walls.
- B. Fasteners for Steel Wall Panels:
  - 1. For Concealed-Fastener Wall Panels: Use concealed fasteners to greatest extent possible; fasteners shall be stainless steel. Where concealed fasteners are not possible, use stainless-steel fasteners finished to match adjacent panel finish.
- C. Metal Protection: Where dissimilar metals will contact each other or corrosive substrates, protect against galvanic action by painting contact surfaces with bituminous coating, by applying rubberized-asphalt underlayment to each contact surface, or by other permanent separation as recommended by metal wall panel manufacturer.
- D. Joint Sealers: Install gaskets, joint fillers, and sealants where indicated and where required for weatherproof performance of metal wall panel assemblies. Provide types of gaskets, fillers, and sealants indicated or, if not indicated, types recommended by metal wall panel manufacturer.
  - 1. Seal metal wall panel end laps with double beads of tape or sealant, full width of panel. Seal side joints where recommended by metal wall panel manufacturer.

2. Prepare joints and apply sealants to comply with installation requirements in Division 07 Section "Joint Sealants."

### 3.4 FIELD-ASSEMBLED METAL WALL PANEL INSTALLATION

- A. Concealed-Fastener Wall Panels: Fasten metal wall panels to substrate with fasteners at each lapped joint at location and spacing recommended by manufacturer.
  1. Apply panels and associated items for neat and weathertight enclosure. Avoid "panel creep" or application not true to line.
  2. Install screw fasteners with power tools having controlled torque adjusted to compress washer tightly without damage to washer, screw threads, or panels. Install screws in predrilled holes.

### 3.5 ACCESSORY INSTALLATION

- A. General: Install accessories with positive anchorage to building and weathertight mounting and provide for thermal expansion. Coordinate installation with flashings and other components.
  1. Install components required for a complete metal wall panel assembly including trim, copings, corners, seam covers, flashings, sealants, gaskets, fillers, closure strips, and similar items.
- B. Flashing and Trim: Comply with performance requirements, manufacturer's written installation instructions, SMACNA's "Architectural Sheet Metal Manual," and approved Shop Drawings. Provide concealed fasteners where possible, and set units true to line and level as indicated. Install work with laps, joints, and seams that will be permanently watertight and weather resistant.
  1. Install exposed flashing and trim that is without excessive oil canning, buckling, and tool marks and that is true to line and levels indicated, with exposed edges folded back to form hems. Install sheet metal flashing and trim to fit substrates and to result in waterproof and weather-resistant performance.
  2. Expansion Provisions: Provide for thermal expansion of exposed flashing and trim. Space movement joints at a maximum of 10 feet with no joints allowed within 24 inches of corner or intersection. Where lapped or bayonet-type expansion provisions cannot be used or would not be sufficiently weather resistant and waterproof, form expansion joints of intermeshing hooked flanges, not less than 1 inch deep, filled with mastic sealant (concealed within joints).
  3. Exposed fasteners shall match color and finish of material being secured.

### 3.6 ERECTION TOLERANCES

- A. Installation Tolerances: Shim and align metal wall panel units within installed tolerance of 1/4 inch in 20 feet, nonaccumulative, on level, plumb, and location lines as indicated and within 1/8-inch offset of adjoining faces and of alignment of matching profiles.

### 3.7 CLEANING AND PROTECTION

- A. Remove temporary protective coverings and strippable films, if any, as metal wall panels are installed, unless otherwise indicated in manufacturer's written installation instructions. On

completion of metal wall panel installation, clean finished surfaces as recommended by metal wall panel manufacturer. Maintain in a clean condition during construction.

- B. After metal wall panel installation, clear weep holes and drainage channels of obstructions, dirt, and sealant.
- C. Replace metal wall panels that have been damaged or have deteriorated beyond successful repair as determined by Architect by finish touchup or similar minor repair procedures.

END OF SECTION 074213



## SECTION 076200 - SHEET METAL FLASHING AND TRIM

### 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. This Section includes the following sheet metal flashing and trim:
  - 1. Manufactured roof edge trim/fascia units.
  - 2. Formed counterflashing and base flashing.
  - 3. Miscellaneous sheet metal accessories.
- B. Related Sections include the following:
  - 1. Division 07 Section "Metal Wall Panels" for factory-formed metal wall panels, soffits and flashing and trim not part of sheet metal flashing and trim and for installing counterflashing receivers with metal wall panels.

#### 1.3 PERFORMANCE REQUIREMENTS

- A. General: Sheet metal flashing and trim assemblies shall withstand wind loads, structural movement, thermally induced movement, and exposure to weather without failure due to defective manufacture, fabrication, installation, or other defects in construction. Completed sheet metal flashing and trim shall not rattle, leak, or loosen, and shall remain watertight.
- B. SPRI Wind Design Standard for Manufactured Roof Edge Flashings: Manufacture and install roof-edge flashings tested according to SPRI ES-1 and capable of resisting the following design pressures:
  - 1. Design Wind Uplift: As follows:
    - a. Corner Uplift Pressure: 57.4 lbf/sq. ft.
    - b. Perimeter Uplift Pressure: 38.2 lbf/sq. ft.
- C. Thermal Movements: Provide sheet metal flashing and trim that allow for thermal movements resulting from the following maximum change (range) in ambient and surface temperatures by preventing buckling, opening of joints, hole elongation, overstressing of components, failure of joint sealants, failure of connections, and other detrimental effects. Provide clips that resist rotation and avoid shear stress as a result of sheet metal and trim thermal movements. Base engineering calculation on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.
  - 1. Temperature Change (Range): 120 deg F, ambient; 180 deg F, material surfaces.
- D. Water Infiltration: Provide sheet metal flashing and trim that do not allow water infiltration to building interior.

## 1.4 SUBMITTALS

- A. Product Data: For each type of product indicated. Include construction details, material descriptions, dimensions of individual components and profiles, finishes, and installation instructions.
  - 1. Include waterproof underlayment manufacturer's written installation instructions. Variations between manufacturer's printed instructions and these Specifications shall be noted in the submittal.
- B. Shop Drawings: Show layouts of sheet metal flashing and trim, including plans and elevations. Distinguish between shop- and field-assembled work. Provide layouts at 1/4-inch scale and details at 3-inch scale. Include the following:
  - 1. Identify material, thickness, weight, and finish for each item and location in Project.
  - 2. Details for forming sheet metal flashing and trim, including profiles, shapes, seams, and dimensions.
  - 3. Details for fastening, joining, supporting, and anchoring sheet metal flashing and trim, including fasteners, clips, cleats, and attachments to adjoining work.
  - 4. Include details of termination points and assemblies.
  - 5. Include details of roof-penetration flashing.
  - 6. Details of edge conditions, including roof edges, counter flashings, and miscellaneous fabrications as applicable.
  - 7. Details of connections to adjoining work.
- C. Samples for Initial Selection: For each type of sheet metal flashing and trim indicated with factory-applied color finishes.
  - 1. Include similar Samples of trim and accessories involving color selection.
- D. Samples for Verification: For each type of exposed finish required, prepared on Samples of size indicated below:
  - 1. Sheet Metal Flashing: 12 inches long. Include fasteners, cleats, clips, closures, and other attachments.
  - 2. Accessories: Full-size Sample.
- E. Qualification Data: For firms and persons specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include lists of completed projects with project names and addresses, names and addresses of architects and owners, and other information specified.
- F. Product Certificates: For each type of roof edge flashing that is SPRI ES-1 tested.
- G. Warranties: Special warranties specified in this Section.

## 1.5 QUALITY ASSURANCE

- A. Installer Qualifications: Engage an experienced Installer who has completed sheet metal flashing and trim work similar in material, design, forming method, and extent to that indicated for this Project and with a record of successful in-service performance for ten years.

## 1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver sheet metal flashing materials and fabrications undamaged. Protect sheet metal flashing and trim materials and fabrications during transportation and handling.
- B. Deliver metal coils, components, and other sheet metal roofing materials so as not to be damaged or deformed. Package shop formed sheet metal roofing materials for protection during transportation and handling.
- C. Unload, store, and install sheet metal flashing materials and fabrications in a manner to prevent bending, warping, twisting, staining, and surface damage.
- D. Stack materials on platforms or pallets, covered with suitable weathertight and ventilated covering. Do not store sheet metal flashing and trim materials in contact with other materials that might cause staining, denting, or other surface damage.
  - 1. Store tin-zinc alloy coated copper away from uncured concrete and masonry.
- E. Protect strippable protective covering on sheet metal flashing and trim from exposure to sunlight and high humidity, except to extent necessary for period of sheet metal flashing and trim installation.

## 1.7 COORDINATION

- A. Coordinate installation of sheet metal flashing and trim with interfacing and adjoining construction to provide a leakproof, secure, and noncorrosive installation.
- B. Coordinate Work of this Section with interfacing and adjoining Work for proper sequencing of each installation to ensure a weathertight installation.

## 1.8 WARRANTY

- A. General: Special warranties specified in this Article shall not deprive Owner of other rights Owner may have under other provisions of the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by Contractor under requirements of the Contract Documents.
- B. Special Warranty on Painted Finishes: Manufacturer's standard form in which manufacturer agrees to repair finish or replace roof specialties that show evidence of deterioration of factory-applied finishes within specified warranty period.
  - 1. Fluoropolymer Finish: Deterioration includes, but is not limited to, the following:
    - a. Color fading more than 5 Hunter units when tested according to ASTM D 2244.
    - b. Chalking in excess of a No. 8 rating when tested according to ASTM D 4214.
    - c. Cracking, checking, peeling, or failure of paint to adhere to bare metal.
  - 2. Finish Warranty Period: 20 years from date of Substantial Completion.
- C. Special Installer's Warranty: Installer's warranty, on warranty form at end of this Section, signed by Installer, in which Installer agrees to repair or replace components of custom-fabricated sheet metal flashing and trim that fail in materials or workmanship within specified warranty period.
  - 1. Failures include, but are not limited to, the following:

- a. Structural failures.
  - b. Loose parts.
  - c. Wrinkling or buckling.
  - d. Failure to remain weathertight, including uncontrolled water leakage.
2. Warranty Period: Two years for date of Substantial Completion.

## PART 2 - PRODUCTS

### 2.1 MANUFACTURERS

- A. In other Part 2 articles where titles below introduce lists, the following requirements apply to product selection:
- 1. Products: Subject to compliance with requirements, provide one of the products specified.

### 2.2 SHEET METALS

- A. Prepainted, Metallic-Coated Steel Sheet: Steel sheet metallic coated by the hot-dip process and prepainted by the coil-coating process to comply with ASTM A 755/A 755M.
- 1. Zinc-Coated (Galvanized) Steel Sheet: ASTM A 653/A 653M, G90 coating designation; structural quality.
  - 2. Exposed Finishes: Apply the following coil coating:
    - a. High-Performance Organic Finish: Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.
      - 1) Fluoropolymer 2-Coat System: Manufacturer's standard 2-coat, thermocured system consisting of specially formulated inhibitive primer and fluoropolymer color topcoat containing not less than 70 percent polyvinylidene fluoride resin by weight; complying with physical properties and coating performance requirements of AAMA 2605, except as modified below:
        - a) Humidity Resistance: 2000 hours.
        - b) Salt-Spray Resistance: 2000 hours.
      - 2) Colors: As indicated by manufacturer's designations in Exterior Materials Legend; if not indicated, as selected by Architect from manufacturer's full range.

### 2.3 UNDERLAYMENT MATERIALS

- A. Felts: ASTM D 226, Type II (No. 30), asphalt-saturated organic felt, nonperforated.
- B. Slip Sheet: Rosin-sized paper, minimum 5-lb/100 sq. ft..
- C. Self-Adhering Sheet Underlayment, High Temperature: Minimum of 30- to 40-mil- thick, slip-resisting, polyethylene-film-reinforced top surface laminated to layer of butyl or SBS-modified asphalt adhesive, with release paper backing; cold applied.
- 1. Thermal Stability: Stable after testing at 240 deg F; ASTM D 1970.
  - 2. Low-Temperature Flexibility: Passes after testing at minus 20 deg F; ASTM D 1970.
  - 3. Products:

- a. Dri-Start "HR"; Carlisle Coatings & Waterproofing, Div. of Carlisle Co., Inc.
- b. Vycor Ultra; Grace, W. R. & Co.

## 2.4 MISCELLANEOUS MATERIALS

- A. General: Provide materials and types of fasteners, solder, welding rods, protective coatings, separators, sealants, and other miscellaneous items as required for complete sheet metal flashing and trim installation.
- B. Fasteners: Wood screws, annular threaded nails, self-tapping screws, self-locking rivets and bolts, and other suitable fasteners designed to withstand design loads.
  - 1. Nails for Tin-Zinc Alloy Coated Copper Sheet: Copper or hardware bronze, 0.109 inch minimum and not less than 7/8 inch long, barbed with large head.
  - 2. Exposed Fasteners: Heads matching color of sheet metal by means of plastic caps or factory-applied coating.
  - 3. Fasteners for Flashing and Trim: Blind fasteners or self-drilling screws, gasketed, with hex washer head.
  - 4. Blind Fasteners: High-strength aluminum or stainless-steel rivets.
  - 5. Fasteners into Preservative Treated Lumber: Stainless steel.
- C. Flashing Tapes for Sealing Top of Metal Flashing to Air/Vapor Barrier: Composite flashing product consisting of a pliable, adhesive rubberized-asphalt compound, bonded to a high-density, cross-laminated polyethylene film to produce an overall thickness of not less than 0.040 inch.
  - 1. Coordinate flashing and mastic with manufacturer of air/vapor barrier system. If proposed flashing system is not from the air/vapor barrier manufacturer being used on the project, it is the responsibility of the mason contractor to obtain and submit a statement of compatibility from the air/vapor barrier system being used on the project.
  - 2. Products:
    - a. Henry Company; Blueskin TWF Thru-Wall Flashing.
      - 1) Termination Mastic: Polybitume 579-05. Coordinate mastic and flashing with manufacturer of air/vapor barrier system.
    - b. Carlisle Coatings & Waterproofing; CCW-705-TWF Thru-Wall Flashing.
      - 1) Termination Mastic: CCW-704 rubberized bitumen mastic. Coordinate mastic and flashing with manufacturer of air/vapor barrier system.
    - c. Grace Construction Products, a unit of W. R. Grace & Co. - Conn.; Perm-A-Barrier Wall Flashing.
      - 1) Termination Mastic: Bituthene Mastic. Coordinate mastic and flashing with manufacturer of air/vapor barrier system.
- D. Flashing Tapes for Sealing Top of Metal Flashing to Weather Barrier, New: Pressure-sensitive, self-adhering, cold-applied, proprietary seam tape. Seam tape shall be from same manufacturer as weather barrier. Butyl flashing tapes are not acceptable.
  - 1. Flashing Tape: VaproShield LLC, VaproFlashing SA flashing tape shall be used in conjunction with the WrapShield SA weather barrier system, no substitution.
  - 2. Fluid Applied Flashing Sealant: Use for sealing across top edge and ends of flashing tape. VaproShield LLC; VaproLiqui-Flash liquid-applied flashing and joint sealant.
    - a. Local VaproShield Representative: Bob McEachern, Roof Tech Sales LLC; phone: (603) 494-3757.

- E. Sealing Tape: Pressure-sensitive, 100 percent solids, polyisobutylene compound sealing tape with release-paper backing. Provide permanently elastic, nonsag, nontoxic, nonstaining tape.
- F. Elastomeric Sealant: ASTM C 920, elastomeric polymer sealant; of type, grade, class, and use classifications required to seal joints in sheet metal flashing and trim and remain watertight.
- G. Epoxy Seam Sealer: Two-part, noncorrosive, aluminum seam-cementing compound, recommended by aluminum manufacturer for exterior nonmoving joints, including riveted joints.
- H. Bituminous Coating: Cold-applied asphalt mastic, SSPC-Paint 12, compounded for 15-mil dry film thickness per coat. Provide inert-type noncorrosive compound free of asbestos fibers, sulfur components, and other deleterious impurities.
- I. Metal Accessories: Provide sheet metal clips, straps, anchoring devices, and similar accessory units as required for installation of work, matching or compatible with material being installed, noncorrosive, size and gage as required for performance.
  - 1. Closures: Provide closures at roof eaves, fabricated of same metal as sheet metal roofing.
  - 2. Clips: Minimum 0.0625-inch- thick, stainless steel panel clips designed to withstand negative-load requirements.
  - 3. Cleats: Mechanically seamed cleats formed from same metal and gage as sheet metal roofing.
- J. Elastic Flashing Filler: Closed cell polyethylene or other soft closed cell material recommended by elastic flashing manufacturer as fill under flashing loops to ensure movement with minimum stress on flashing sheet.

## 2.5 MANUFACTURED ROOF EDGE FLASHINGS

- A. Roof-Edge Fascia: Manufactured two-piece, roof-edge fascia consisting of snap-on metal fascia cover in section lengths not exceeding 12 feet; a continuous extruded aluminum bar with integral drip-edge to engage fascia cover and secure single-ply roof membrane; and necessary splice plates. Provide matching factory-mitered and welded corner units. Radiused sections shall be factory formed and welded to detail.
  - 1. Performance: Per IBC 2009 low-slope membrane roof system metal edge securement shall be designed and installed for wind loads and tested in accordance with ANSI/SPRI ES-1.
  - 2. Face Height: Match existing.
  - 3. Fascia Cover Material: Fabricate from prefinished, galvanized sheet steel, not less than 24 gage thick.
    - a. Color: Match existing.
  - 4. Basis-of-Design: Subject to compliance with requirements, provide Anchor-Tite Standard Fascia by Metal-Era, Inc. or comparable product by one of the following:
    - a. MM Systems Corporation.
    - b. W. P. Hickman Company.

## 2.6 CUSTOM FABRICATION, GENERAL

- A. General: Custom fabricate sheet metal flashing and trim to comply with recommendations in SMACNA's "Architectural Sheet Metal Manual, Seventh Edition" that apply to design,

dimensions, metal, and other characteristics of item indicated. Shop fabricate items where practicable. Obtain field measurements for accurate fit before shop fabrication.

- B. Fabricate sheet metal flashing and trim in thickness or weight needed to comply with performance requirements, but not less than that specified for each application and metal.
- C. Fabricate sheet metal flashing and trim in minimum 96-inch- lengths, but not exceeding 10-foot- long sections.
- D. Fabricate sheet metal flashing and trim without excessive oil canning, buckling, and tool marks and true to line and levels indicated, with exposed edges folded back to form hems.
  - 1. Seams: Fabricate nonmoving seams in accessories with flat-lock seams. Tin edges to be seamed, form seams, and solder.
- E. Sealed Joints: Form nonexpansion but movable joints in metal to accommodate elastomeric sealant to comply with SMACNA recommendations.
- F. Expansion Provisions: Where lapped or bayonet-type expansion provisions in the Work cannot be used or would not be sufficiently water/weatherproof, form expansion joints of intermeshing hooked flanges, not less than 1 inch deep, filled with elastomeric sealant concealed within joints.
- G. Separations: Provide for separation of metal from noncompatible metal or corrosive substrates by coating concealed surfaces at locations of contact, with bituminous coating, by applying rubberized-asphalt underlayment to each contact surface, or other permanent separation as recommended by manufacturer/fabricator.
- H. Conceal fasteners and expansion provisions where possible on exposed-to-view sheet metal flashing and trim, unless otherwise indicated.
- I. Fabricate cleats and attachment devices from same material as accessory being anchored or from compatible, noncorrosive metal.
  - 1. Thickness: As recommended by SMACNA's "Architectural Sheet Metal Manual" for application but not less than thickness of metal being secured.

## 2.7 CUSTOM FABRICATED FLASHING SCHEDULE

- A. Miscellaneous Flashing at Siding: Formed to detail; fabricate from prefinished galvanized sheet steel, not less than 24 gauge. Obtain coil stock from manufacturer of metal wall panels furnished in Division 07 Section "Metal Wall Panels" to assure color match.

## 2.8 FINISHES

- A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
- B. Protect mechanical and painted finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

- C. Appearance of Finished Work: Variations in appearance of abutting or adjacent pieces are acceptable if they are within one-half of the range of approved Samples. Noticeable variations in the same piece are not acceptable. Variations in appearance of other components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, to verify actual locations, dimensions and other conditions affecting performance of work.
  - 1. Verify that substrate is sound, dry, smooth, clean, sloped for drainage, and securely anchored.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 INSTALLATION, GENERAL

- A. General: Anchor sheet metal flashing and trim and other components of the Work securely in place, with provisions for thermal and structural movement. Use fasteners, solder, welding rods, protective coatings, separators, sealants, and other miscellaneous items as required to complete sheet metal flashing and trim system.
  - 1. Torch cutting of sheet metal flashing and trim is not permitted.
- B. Metal Protection: Where dissimilar metals will contact each other or corrosive substrates, protect against galvanic action by painting contact surfaces with bituminous coating or by other permanent separation as recommended by fabricator or manufacturers of dissimilar metals.
  - 1. Underlayment: Where installing metal flashing directly on cementitious or wood substrates, install a course of felt underlayment and cover with a slip sheet or install a course of polyethylene underlayment.
  - 2. Bed flanges in thick coat of water cutoff mastic where required for waterproof performance.
- C. Install sheet metal flashing and trim with minimum number of joints practical, using manufactured or shop fabricated full-length pieces. Provide one piece flashing and trim using full-length pieces without joints where run is less than the 8 to 10 foot fabricated lengths. Do not use pieces less than 24 inches long.
  - 1. Sill Flashing at Openings: Provide one piece flashing full width of opening, except where opening exceeds available manufactured/fabricated lengths. Provide sealed metal end dams at ends of sills. Sills flashing shall turn up on back side to form pan, directing water to the exterior.
- D. Install exposed sheet metal flashing and trim without excessive oil canning, buckling, and tool marks.
- E. Install sheet metal flashing and trim true to line and levels indicated. Provide uniform, neat seams with minimum exposure of solder, welds, and elastomeric sealant.



- F. Install sheet metal flashing and trim to fit substrates and to result in watertight performance. Verify shapes and dimensions of surfaces to be covered before fabricating sheet metal.
  - 1. Cleats shall be continuous, unless otherwise noted.
- G. Expansion Provisions: Provide for thermal expansion of exposed flashing and trim. Space movement joints at a maximum of 10 feet with no joints allowed within 24 inches of corner or intersection. Where lapped or bayonet-type expansion provisions cannot be used or would not be sufficiently watertight, form expansion joints of intermeshing hooked flanges, not less than 1 inch deep, filled with elastomeric sealant concealed within joints.
- H. Fasteners: Use fasteners of sizes that will penetrate substrate not less than 1-1/4 inches for nails and not less than 3/4 inch for wood screws.
  - 1. Prepainted, Metallic-Coated Steel: Use stainless-steel fasteners.
  - 2. Zinc-Tin Alloy-Coated Copper: Use copper or stainless steel fasteners.
- I. Seal joints with elastomeric sealant as required for watertight construction.
  - 1. Where sealant-filled joints are used, embed hooked flanges of joint members not less than 1 inch into sealant. Form joints to completely conceal sealant. When ambient temperature at time of installation is moderate, between 40 and 70 deg F, set joint members for 50 percent movement either way. Adjust setting proportionately for installation at higher ambient temperatures. Do not install sealant-type joints at temperatures below 40 deg F.
  - 2. Prepare joints and apply sealants to comply with installation requirements in Division 07 Section "Joint Sealants."
- J. Soldered Joints: Clean surfaces to be soldered, removing oils and foreign matter. Pre-tin edges of sheets to be soldered to a width of 1-1/2 inches except where pre-tinned surface would show in finished Work.
  - 1. Do not solder prepainted, metallic-coated steel.
  - 2. Pre-tinning is not required for zinc-tin alloy-coated copper.
  - 3. Do not use open-flame torches for soldering. Heat surfaces to receive solder and flow solder into joints. Fill joints completely. Completely remove flux and spatter from exposed surfaces.

### 3.3 INSTALLATION OF MANUFACTURED ROOF FLASHINGS

- A. General: Install manufactured roof specialties according to manufacturer's written instructions. Anchor with manufacturer's required devices, fasteners, and fastener spacing to meet performance requirements. Use fasteners, separators, sealants, and other miscellaneous items as required to complete manufactured roof specialty systems.
  - 1. Install manufactured roof specialties with provisions for thermal and structural movement.
  - 2. Torch cutting of manufactured roof specialties is not permitted.
- B. Install manufactured roof specialties level, plumb, true to line and elevation, and without warping, jogs in alignment, excessive oil canning, buckling, or tool marks.
- C. Install manufactured roof specialties to fit substrates and to result in watertight performance. Verify shapes and dimensions of surfaces to be covered before manufacture.

- D. Fasteners: Use fasteners of type and size recommended by manufacturer but of sizes that will penetrate substrate not less than 1-1/4 inches for nails and not less than 3/4 inch for wood screws.
- E. Seal joints with elastomeric sealant as required by manufacturer of roofing specialties.

### 3.4 CUSTOM FABRICATED FLASHING AND TRIM INSTALLATION

- A. General: Except as otherwise indicated, install sheet metal flashing and trim comply with fabricator's installation instructions, performance requirements, and SMACNA "Architectural Sheet Metal Manual, Seventh Edition." Anchor units of work securely in place by methods indicated, providing for thermal expansion of metal units; conceal fasteners where possible; and set units true to line and level as indicated. All edge strips shall be neatly folded; external and internal corners shall be mitered and soldered for copper, and sealed in full bed of water cut off mastic for pre-finished metal. Install work with laps, joints, and seams that will be permanently watertight and weatherproof.
  - 1. Fabricate in minimum 96-inch- long sections, but not exceeding 10-foot-long sections.
- B. Back-Up Plates: Where specified, set flashing ends in full bed of water cut-off mastic, allowing 1/4-inch between sections.
- C. Counterflashing: Coordinate installation of counterflashing with installation of base flashing. Insert counterflashing in reglets or receivers and fit tightly to base flashing. Extend counterflashing 4 inches over base flashing. Lap counterflashing joints a minimum of 4 inches and bed with elastomeric sealant.
  - 1. Install receivers to receive counterflashing in manner and by methods indicated.
    - a. Where receivers are shown in wall panels, provide them to installer of siding as specified in Division 07 Sections "Metal Wall Panels" and "Composite Wall Panels."
  - 2. Secure in a waterproof manner by means of snap-in installation or welding in-place. Fill reglets with mastic or elastomeric sealant, as indicated and depending on degree of sealant exposure.
  - 3. Verify correct installation of receiver flashing with back-up plates properly set and sealed at joints for two-piece counter flashing detail.
- D. Install flashing and sheet metal with concealed fasteners, unless indicated otherwise. Metal edge flashing shall be installed to resist wind blow-off and prevent flutter and vibration. Allow for expansion and contraction, making square, straight corners and tight overlaps, free of gaps and openings, properly sealed to be watertight.
- E. Electrolytic Action: Where two dissimilar metals adjoin or lap each other (example: galvanized metal ducts and copper cap flashing), an approved separating strip or other insulating material shall be installed.
- F. Bed flanges of work in water cut off mastic where required for waterproof performance.

### 3.5 CLEANING AND PROTECTION

- A. Clean exposed metal surfaces of substances that interfere with uniform oxidation and weathering.

- B. Clean and neutralize flux materials. Clean off excess solder and sealants.
- C. Remove temporary protective coverings and strippable films as sheet metal flashing and trim are installed. On completion of installation, clean finished surfaces, including removing unused fasteners, metal filings, pop rivet stems, and pieces of flashing. Maintain in a clean condition during construction.
- D. Replace sheet metal flashing and trim that have been damaged or that have deteriorated beyond successful repair by finish touchup or similar minor repair procedures.

### 3.6 INSTALLER'S WARRANTY

- A. WHEREAS <Insert name> of <Insert address>, herein called the "Installer," has performed siding, roofing, flashing and associated work ("work") on the following project:
  - 1. Owner: <Insert name of Owner.>
  - 2. Address: <Insert address.>
  - 3. Building Name/Type: <Insert information.>
  - 4. Address: <Insert address.>
  - 5. Area of Work: <Insert information.>
  - 6. Acceptance Date: <Insert date.>
  - 7. Warranty Period: <Insert time.>
  - 8. Expiration Date: <Insert date.>
- B. AND WHEREAS Installer has contracted (either directly with Owner or indirectly as a subcontractor) to warrant said work against leaks and faulty or defective materials and workmanship for designated Warranty Period,
- C. NOW THEREFORE Installer hereby warrants, subject to terms and conditions herein set forth, that during Warranty Period he will, at his own cost and expense, make or cause to be made such repairs to or replacements of said work as are necessary to correct faulty and defective work and as are necessary to maintain said work in a watertight condition.
- D. This Warranty is made subject to the following terms and conditions:
  - 1. Specifically excluded from this Warranty are damages to work and other parts of the building, and to building contents, caused by:
    - a. lightning;
    - b. peak gust wind speed exceeding 100 mph;
    - c. fire;
    - d. failure of siding and roofing system substrate, including cracking, settlement, excessive deflection, deterioration, and decomposition;
    - e. faulty construction of parapet walls, copings, chimneys, skylights, vents, equipment supports, and other edge conditions and penetrations of the work;
    - f. vapor condensation on bottom of work; and
    - g. activity on work by others, including construction contractors, maintenance personnel, other persons, and animals, whether authorized or unauthorized by Owner.
  - 2. When work has been damaged by any of foregoing causes, Warranty shall be null and void until such damage has been repaired by Installer and until cost and expense thereof have been paid by Owner or by another responsible party so designated.

3. Installer is responsible for damage to work covered by this Warranty but is not liable for consequential damages to building or building contents resulting from leaks or faults or defects of work.
4. During Warranty Period, if Owner allows alteration of work by anyone other than Installer, including cutting, patching, and maintenance in connection with penetrations, attachment of other work, and positioning of anything on roof, this Warranty shall become null and void on date of said alterations, but only to the extent said alterations affect work covered by this Warranty. If Owner engages Installer to perform said alterations, Warranty shall not become null and void unless Installer, before starting said work, shall have notified Owner in writing, showing reasonable cause for claim, that said alterations would likely damage or deteriorate work, thereby reasonably justifying a limitation or termination of this Warranty.
5. During Warranty Period, if original use of roof is changed and it becomes used for, but was not originally specified for, a promenade, work deck, spray-cooled surface, flooded basin, or other use or service more severe than originally specified, this Warranty shall become null and void on date of said change, but only to the extent said change affects work covered by this Warranty.
6. Owner shall promptly notify Installer of observed, known, or suspected leaks, defects, or deterioration and shall afford reasonable opportunity for Installer to inspect work and to examine evidence of such leaks, defects, or deterioration.
7. This Warranty is recognized to be the only warranty of Installer on said work and shall not operate to restrict or cut off Owner from other remedies and resources lawfully available to Owner in cases of siding, roofing, flashing, or trim failure. Specifically, this Warranty shall not operate to relieve Installer of responsibility for performance of original work according to requirements of the Contract Documents, regardless of whether Contract was a contract directly with Owner or a subcontract with Owner's General Contractor.

E. IN WITNESS THEREOF, this instrument has been duly executed this <Insert day> day of <Insert month>, <Insert year>.

1. Authorized Signature: <Insert signature.>
2. Name: <Insert name.>
3. Title: <Insert title.>

END OF SECTION 076200

## SECTION 079200 – JOINT SEALANTS

### 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. This Section includes joint sealants for the following applications, including those specified by reference to this Section:
  - 1. Exterior joints in the following vertical surfaces and horizontal nontraffic surfaces:
    - a. Joints between different materials listed above.
    - b. Perimeter joints between materials listed above and frames of doors, windows and louvers.
    - c. Other joints as indicated.
  - 2. Interior joints in the following vertical surfaces and horizontal nontraffic surfaces:
    - a. Perimeter joints of exterior openings where indicated.
    - b. Other joints as indicated.
- B. Related Sections include the following:
  - 1. Division 07 Section "Sheet Metal Flashing and Trim" for sealing joints related to flashing and sheet metal for roofing.

#### 1.3 PERFORMANCE REQUIREMENTS

- A. Provide joint sealants that have been produced and installed to establish and maintain watertight and airtight continuous seals without causing staining or deterioration of joint substrates.
- B. Provide joint sealants for interior applications that establish and maintain airtight and water-resistant continuous joint seals without staining or deteriorating joint substrates.

#### 1.4 SUBMITTALS

- A. Product Data: For each joint-sealant product indicated.
  - 1. Include manufacturer's installation instructions.
- B. Samples for Selection: Manufacturer's color charts consisting of strips of cured sealants showing the full range of colors available for each product exposed to view.
- C. Joint-Sealant Schedule: Include the following information:
  - 1. Joint-sealant application, joint location, and designation.
  - 2. Joint design, including width and depth of joint sealant, and backer rod or bond-breaker size and location.
  - 3. Joint-sealant manufacturer and product name.
  - 4. Joint-sealant formulation.

5. Joint-sealant color.
6. Primer for each substrate type.
7. Solvent wipe cleaner for each substrate type.
8. For sealants and sealant primers used inside the weatherproofing system, including printed statement of VOC content.

#### 1.5 QUALITY ASSURANCE

- A. Installer Qualifications: Engage an experienced Installer who has completed joint sealant applications similar in materials, design, and extent to that indicated for Project that have resulted in construction with a record of successful in-service performance.
- B. Source Limitations: Obtain each type of joint sealant through one source from a single manufacturer.

#### 1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to Project site in original unopened containers or bundles with labels indicating manufacturer, product name and designation, color, expiration period for use, shelf/pot life, curing time, and mixing instructions for multi-component materials.
- B. Store and handle materials in compliance with manufacturer's recommendations to prevent their deterioration or damage due to moisture, high or low temperatures, contaminants, or other causes.
- C. Remove and replace materials, at no cost to Owner, that cannot be applied within their stated shelf life.

#### 1.7 PROJECT CONDITIONS

- A. Environmental Conditions: Do not proceed with installation of joint sealants under the following conditions:
  1. When ambient and substrate temperature conditions are outside limits permitted by joint-sealant manufacturer or are below 40 deg F.
  2. When joint substrates are wet.
  3. Where joint widths are less than those allowed by joint-sealant manufacturer for applications indicated.
  4. Contaminants capable of interfering with adhesion have not yet been removed from joint substrates.
- B. Joint Width Conditions: Do not proceed with installation of joint sealants where joint widths are less than allowed by joint sealant manufacturer for application indicated.
- C. Joint Substrate Conditions: Do not proceed with installation of joint sealants until contaminants capable of interfering with their adhesion are removed from joint substrates.

## 1.8 SEQUENCING AND SCHEDULING

- A. Coordinate Work of this Section with interfacing and adjoining Work for proper sequencing of each installation to ensure a weathertight installation.

## PART 2 - PRODUCTS

### 2.1 MANUFACTURERS

- A. Products: Subject to compliance with requirements, provide one of the products listed in other Part 2 articles.

### 2.2 MATERIALS, GENERAL

- A. Compatibility: Provide joint sealants, backings, and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by sealant manufacturer, based on testing and field experience.
- B. Exposed Joint Sealants: Products exposed to view in interior public areas shall be paintable. Mechanical, electrical and elevator machine rooms are not considered public spaces.
- C. Colors of Exposed Joint Sealants: As selected by Architect from manufacturer's full range.

### 2.3 JOINT SEALANTS

- A. VOC Content of Sealants and Primers:
  - 1. Exterior Sealants and Primers: Provide exterior sealants and sealant primers that comply with the following limits for VOC content when calculated according to South Coast Air Quality Management District Rule No. 1168:
    - a. Architectural Sealants: 250 g/L.
    - b. Sealant Primers, Porous: 775 g/L.
  - 2. Interior Sealants and Primers: Provide interior sealants and sealant primers that comply with the following limits for VOC content when calculated according to South Coast Air Quality Management District Rule No. 1168:
    - a. Sealants:
      - 1) Architectural: 250 g/L.
    - b. Sealant Primers:
      - 1) Architectural, Nonporous: 250 g/L
      - 2) Architectural, Porous: 775 g/L.
      - 3) Other: 750 g/L.
- B. Type 1 - General Purpose Exterior Sealant: Polyurethane; ASTM C920, Type S, Grade NS, Class 25; single component.
  - 1. Products:
    - a. Sonolastic NP-1; Sonneborn, Division of ChemRex Inc.
    - b. Dymonic; Tremco.
    - c. Sikaflex-1a; Sika Corporation, Inc.
    - d. Dynatrol 1; Pecora Corporation.
    - e. Vulkem 116; Tremco.

- C. Type 2 - General Purpose Exterior Sealant: Single-component, nonsag, neutral-curing silicone joint sealant; ASTM C 920, Type S, Grade NS, Class 50, for Use NT. Shall be no staining on granite, precast concrete and brick per ASTM C 1248.
  - 1. Products:
    - a. Dow Corning Corporation; 795.
    - b. GE Advanced Materials - Silicones; SilPruf NB SCS9000.
    - c. Pecora Corporation; 864NST.
    - d. Tremco Incorporated; Spectrem 3.
  
- D. Type 3 - General Purpose Interior Sealant: Acrylic emulsion latex; ASTM C834, single component, paintable.
  - 1. Products:
    - a. Tremflex 834; Tremco.
    - b. AC-20; Pecora Corporation.
    - c. Chem-Calk 600; Bostik Findley.

## 2.4 JOINT-SEALANT BACKING

- A. General: Provide sealant backings (backer rods) of material and type that are nonstaining; are compatible with joint substrates, sealants, primers, and other joint fillers; and are approved for applications indicated by sealant manufacturer based on field experience and laboratory testing.
  
- B. Plastic Foam Joint Fillers (Backer Rod): ASTM C 1330, Type C, preformed, compressible, resilient, nonstaining, nonwaxing, nonextruding strips of flexible plastic foam of material indicated below and of size, shape, and density to control sealant depth and otherwise contribute to producing optimum sealant performance:
  - 1. Closed-cell polyethylene foam, nonabsorbent to liquid water and gas, nonoutgassing in unruptured state.
  
- C. Bond-Breaker Tape: Polyethylene tape or other plastic tape recommended by sealant manufacturer for preventing sealant from adhering to rigid, inflexible joint-filler materials or joint surfaces at back of joint where such adhesion would result in sealant failure. Provide self-adhesive tape where applicable.

## 2.5 MISCELLANEOUS MATERIALS

- A. Primer: Material recommended by joint-sealant manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from preconstruction joint-sealant-substrate tests and field tests.
  
- B. Cleaners for Nonporous Surfaces: Chemical cleaners acceptable to manufacturers of sealants and sealant backing materials, free of oily residues or other substances capable of staining or harming joint substrates and adjacent nonporous surfaces in any way, and formulated to promote optimum adhesion of sealants to joint substrates.
  
- C. Masking Tape: Nonstaining, nonabsorbent material compatible with joint sealants and surfaces adjacent to joints.



## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine joints indicated to receive joint sealants, with Installer present, for compliance with requirements for joint configuration, installation tolerances, and other conditions affecting joint-sealant performance.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 PREPARATION

- A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with joint-sealant manufacturer's written instructions and the following requirements:
  - 1. Remove all foreign material from joint substrates that could interfere with adhesion of joint sealant, including dust, paints (except for permanent, protective coatings tested and approved for sealant adhesion and compatibility by sealant manufacturer), old joint sealants, oil, grease, waterproofing, water repellents, water, surface dirt, and frost.
  - 2. Clean concrete, masonry, unglazed surfaces of ceramic tile, and similar porous joint substrate surfaces by brushing, grinding, blast cleaning, mechanical abrading, or a combination of these methods to produce a clean, sound substrate capable of developing optimum bond with joint sealants. Remove loose particles remaining after cleaning operations above by vacuuming or blowing out joints with oil-free compressed air.
  - 3. Remove laitance and form-release agents from concrete.
  - 4. Clean metal, glass, porcelain enamel, glazed surfaces of ceramic tile, and other nonporous surfaces with chemical cleaners or other means that do not stain, harm substrates, or leave residues capable of interfering with adhesion of joint sealants.
- B. Joint Priming: Prime joint substrates, where indicated or recommended in writing by joint-sealant manufacturer, based on preconstruction joint-sealant-substrate tests or prior experience. Apply primer to comply with joint-sealant manufacturer's written instructions. Confine primers to areas of joint-sealant bond; do not allow spillage or migration onto adjoining surfaces.
  - 1. Simulated stone and concrete surfaces shall be primed.
- C. Masking Tape: Use masking tape where required to prevent contact of sealant with adjoining surfaces that otherwise would be permanently stained or damaged by such contact or by cleaning methods required to remove sealant smears. Remove tape immediately after tooling without disturbing joint seal.

### 3.3 INSTALLATION OF JOINT SEALANTS

- A. General: Comply with joint-sealant manufacturer's written installation instructions for products and applications indicated, unless more stringent requirements apply.
- B. Sealant Installation Standard: Comply with recommendations in ASTM C 1193 for use of joint sealants as applicable to materials, applications, and conditions indicated.
- C. Installation of Sealant Backings (Backer Rods): Install sealant backings to comply with the following requirements:

1. Install sealant backings of type indicated to provide support of sealants during application and at position required to produce cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability.
    - a. Do not leave gaps between ends of sealant backings.
    - b. Do not stretch, twist, puncture, or tear sealant backings.
    - c. Remove absorbent sealant backings that have become wet before sealant application and replace them with dry materials.
  2. Install bond-breaker tape behind sealants where sealant backings are not used between sealants and joint fillers or backs of joints.
- D. Installation of Sealants: Install sealants using proven techniques that result in sealants directly contacting and fully wetting joint substrates, completely filling recesses provided for each joint configuration, and providing uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability. Install sealants at the same time sealant backings and primers are installed.
1. Place sealants so they directly contact and fully wet joint substrates.
  2. Completely fill recesses in each joint configuration.
  3. Produce uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability.
- E. Tooling of Nonsag Sealants: Immediately after sealant application and before skinning or curing begins, tool sealants according to requirements specified below to form smooth, uniform beads of configuration indicated; to eliminate air pockets; and to ensure contact and adhesion of sealant with sides of joint.
1. Remove excess sealant from surfaces adjacent to joints.
  2. Use tooling agents that are approved in writing by sealant manufacturer and that do not discolor sealants or adjacent surfaces.
  3. Provide concave joint configuration per Figure 5A in ASTM C 1193, unless otherwise indicated.

### 3.4 CLEANING

- A. Clean off excess sealant or sealant smears adjacent to joints as the Work progresses by methods and with cleaning materials approved in writing by manufacturers of joint sealants and of products in which joints occur.

### 3.5 PROTECTION

- A. Protect joint sealants during and after curing period from contact with contaminating substances and from damage resulting from construction operations or other causes so sealants are without deterioration or damage at time of Substantial Completion. If, despite such protection, damage or deterioration occurs, cut out and remove damaged or deteriorated joint sealants immediately so installations with repaired areas are indistinguishable from original work.

### 3.6 JOINT-SEALANT SCHEDULE

- A. Control, Expansion, and Soft Joints between Exterior Simulated Stone Veneer and Adjacent Work: Type 2; colors as selected. Prime simulated stone.

- B. Joints between Exterior Metal Frames, Windows, Trim and Adjacent Work: Type 2; colors as selected.
  - 1. Do not use in contact with PVC trim.
- C. Under Exterior Door Thresholds: Type 1.
- D. Exterior Joints for Which No Other Sealant Type is Indicated: Type 3; colors as selected.
- E. Concealed Interior Perimeter Joints of Exterior Openings: Type 1.
- F. Exposed Interior Perimeter Joints of Exterior Openings: Type 4; colors as selected.
- G. Joints between Interior Simulated Stone Veneer and Adjacent Work: Type 2; colors as selected.
- H. Interior Ceramic Tile Expansion, Control, Contraction, and Isolation Joints in Horizontal Traffic Surfaces: Type 5; color as selected.
- I. Control and Expansion Joints in Interior Concrete Slabs and Floors Left Exposed: Type 5; colors as selected.
- J. Joints between Plumbing Fixtures and Walls and Floors and Between Countertops and Walls: Type 4; colors as selected.
- K. Interior Joints for Which No Other Sealant is Indicated: Type 3; colors as selected.

END OF SECTION 079200

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## SECTION 085200 – FIBERGLASS REPLACEMENT WINDOWS

### 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. Double-hung windows.
  - 2. Related stationary windows.
  - 3. Casement windows.
  - 4. Sliding windows.
- B. Related sections include the following:
  - 1. Division 07 Section “Joint Sealants”.

#### 1.3 ACTION SUBMITTALS

- A. Product Data: Manufacturer’s product data and installation guides.
- B. Shop Drawings: Drawings indicating direction of operable parts, typical jamb, head and sill conditions, flashing, trim details, mullion details and special mullion reinforcement details.
- C. Color Samples: Selection and verification samples, including the following:
  - 1. Hardware: Samples indicating typical finish on window hardware.
  - 2. Exterior Cladding: Submit color samples of exterior cladding.

#### 1.4 INFORMATIONAL SUBMITTALS

- A. Quality Assurance/Control Submittals:
  - 1. Performance Data: Manufacturer’s published performance data for specified products.

#### 1.5 CLOSEOUT SUBMITTALS

- A. Warranty documents specified herein.
- B. Owner’s Manual: Bound manual clearly identified with project name, location, and completion date. Identify type and size of units installed. Provide recommendations for periodic inspections, care, and maintenance. Identify common causes of damage with instructions for temporary repair.

#### 1.6 QUALITY ASSURANCE

- A. Certifications:
  - 1. Window and Door Manufacturers Association (WDMA). Products shall be certified and labeled per WDMA Hallmark Certification Program to the AAMA/WDMA/CSA 101/I.S.2/A440 industry standard.

2. Insulating Glass Units: Provide insulating glass units permanently marked with certification label of Insulating Glass Certification Council (IGCC) indicating compliance.

#### 1.7 DELIVERY, STORAGE, AND HANDLING

- A. Comply with manufacturer’s ordering instructions and lead time requirements to avoid construction delays.
- B. Delivery: Deliver materials in manufacturer’s original unopened, undamaged containers with identification labels intact.
- C. Storage and Protection: Store materials protected from exposure to harmful environmental conditions and at temperature and humidity conditions recommended by the manufacturer.
- D. Store materials and accessories off ground, under cover, and protected from weather and construction activities.

#### 1.8 WARRANTY

- A. Project Warranty: Refer to Conditions of the Contract for project Warranty provisions.
- B. Manufacturer’s Warranty: Submit, for Owner’s acceptance, manufacturer’s standard limited warranty document. Manufacturer’s limited warranty is in addition to, and not a limitation of, other rights Owner may have under contract documents.
  1. Window Unit and Finish: 10 years from date of Substantial Completion.
  2. Insulating Glass: 20 years from date of Substantial Completion.

### PART 2 - PRODUCTS

#### 2.1 MANUFACTURER

- A. Provide products as follows:
  - a. Factory-assembled Ultrex® units as manufactured by Integrity Windows & Doors, West Fargo, North Dakota.

#### 2.2 PERFORMANCE REQUIREMENTS

Product	Air Tested to psf	Water Tested to psf	Certification Rating	Design Pressure (DP)	Max Overall Width	Max Overall Height
IICA	1.56	7.52	LC-PG50-C	50.13	36.000	71.125
IIAWN	1.56	7.52	LC-PG50-AP	50.13	48.000	47.125
IICAP / IICAT	1.56	7.52	LC-PG50-AP	50.13	72.000	59.125
IICAP / IICAT	1.56	7.52	LC-PG50-AP	50.13	56.000	71.125

## 2.3 MANUFACTURED UNITS

- A. Proprietary Products/Systems: Fiberglass windows, including the following:
1. Factory-assembled Ultrex®. Integrity Insert Double Hung window.
  2. Factory-assembled Ultrex®. Integrity casement window.
  3. Related picture units.
  4. Factory-assembled Ultrex®. Integrity glider window.

## 2.4 MATERIALS

- A. Frame Description
1. Ultrex®, a fiberglass pultrusion. Exterior and Interior 0.075” (2mm) thick.
  2. Frame thickness: 7/8” (22mm) head jamb and composite side jamb, 25/32” (20mm) sill with 8 degree bevel
- B. Sash Description
1. Ultrex®, a fiberglass pultrusion. Exterior and Interior 0.075” (2mm) thick for operating units and 0.080” (2mm) thick for picture units.
  2. Composite sash thickness: 1-3/8” (35mm) for operating units,
  3. Operable sash tilt to interior for cleaning and removal
- C. Weatherstripping:
1. Jamb: Foam filled bulb with flexible TPE skin, to match interior color
  2. Parting Stop: PVC with flexible hinged seal to match interior color
  3. Bottom Sash: Beige, “V” shaped profile, vinyl foam filled with flexible TPE skin
  4. Check Rail: PVC with flexible hinged wand seal. Color: Beige
  5. Stationary Units: Continuous, foam weather strip at perimeter of sash. Color: Gray
- D. Glazing
1. Select quality complying with ASTM C 1036. Insulating glass SIGMA/IGCC when tested in accordance with ASTM E 2190. STC/OITC ratings are tested to the stated performance level in accordance with ASTM E 90-09.
  2. Glazing Method: 11/16” (18mm) Insulating glass – altitude adjusted
  3. Glass Type: LoE2 – 272® with Argon Gas, Tempered as required
  4. Glazing Seal: Silicone bedding on interior, silicone bedding on exterior
  5. Obscure “Frosted” glass as noted on Plans.
- E. Hardware
1. Balance system: Coil spring block and tackle with nylon cord and fiber filled nylon clutch
  2. Lock: zinc die-cast lock and keeper
    - a. Color: Satin Nickel
    - b. Extended Sizes: two locks
  3. Lift
    - a. Color: Satin Nickel
    - b. Extended Sizes: two lifts
  4. Sash Hanger: fixed upper sash only
    - a. Color: White,
- F. Insect Screen
1. Factory-installed (removable): half screen or full screen
    - a. Standard screen mesh material: 18 x 16: Charcoal Fiberglass

2. Frame Color: Stone White

## 2.5 ACCESSORIES

- A. Installation Accessories: Package of installation hardware for operable units consisting of:
  1. Six #8 x 2" Torx® truss head installation screws
  2. Six jamb hole plugs
  3. One sash lift (two sash lifts on extended sizes)
  4. Two #7 x 3/4" Phillips flat head screws (for sash lift) (Four screws on extended sizes)
  5. Keeper pile weather strip (EverWood™ only) (two weather strip on extended sizes)
  6. EverWood™ test strip (EverWood™ only)
  7. Paint and Stain Instructions (EverWood™ only)
- B. Sill Installation Filler
  1. 108' lengths
- C. Mulling Accessories
  1. Exterior mull cover
  2. Mull post
  3. Interior mull cover
  4. Shipping bracket assembly
  5. #10 x 1 1/8" screws
  6. Foam block kit
- D. Polyurethane Foam Insulation (Minimal Expansive): Single- or two-component, UL classified sealant, to insulate, seal, fill, and stop air infiltration; shall not expand to the point to cause pressure on window jambs.
  1. R-Value: ASTM C 518, not less than 4.0 per inch of thickness.
  2. Fire-Test-Response Characteristics: ASTM E 84, as follows:
    - a. Flame Spread: Not greater than 10.
    - b. Smoke Developed: Not greater than 20.
  3. Products:
    - a. Dow Chemical Company (The); Great Stuff PRO Window & Door.
    - b. Fomo Products Inc.; Handi-Seal Window and Door Sealant.
    - c. Convenience Products; No-Warp Foam Window & Door Insulating Sealant.

## 2.6 INSECT SCREENS

- A. Insect Screens: Provide venting sash with an insect screen at double-hung windows, including attachment hardware. Provide insect screens at all operable windows.
  1. Frames: Full height 0.024 inch (0.61 mm) rolled aluminum frame with chromate conversion coating. Provide matching corner locks and latch retainers.
    - a. Insect Screen Cloth: 18 by 16 (1.0 by 1.1 mm) count per sq. inch aluminum mesh, gunmetal finish.
    - b. Frame Finish: High-bake polyester finish in the following color:
      - 1) Color: White.
    - c. Provide lift handles on screens in casement windows to permit easy removal for egress.



## 2.7 FABRICATION

- A. Preservative Treatment: Treat wood sash and frame members after machining with a water repellent preservative per WDMA I.S.4.
- B. A-Series Double-Hung Units, Gliders, Picture Units and Casement Units:
  - 1. Outer Frame: Fibrex material.
  - 2. Outer Frame: Extruded Fibrex material adhesively bonded corner keys.
  - 3. Sill: Fibrex material.
  - 4. Bond outer frame members and sill to wood base frame with adhesive.
  - 5. Jamb and Head Jamb Liners (Pine):
    - a. Side Jamb Liner: Solid pine filler attached to a rigid PVC vinyl extrusion.
    - b. Head Jamb Liner: Solid pine head parting stop and interior aesthetic filler with rigid PVC vinyl head liner.
  - 6. Sash Components:
    - a. Exterior Sash: Pultruded fiberglass material with adhesively bonded PVC corner keys.
    - b. Interior Sash: Pultruded fiberglass material with adhesively bonded PVC corner keys.
  - 7. Factory applied weatherstripping.
- C. Glazing: Factory glazed with glazing sealant.
- D. Weatherstripping: Factory-applied to unit frame. Field-applied interlocking weatherstripping at panel meeting stiles.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Site Verification of Conditions: Verify that site conditions are acceptable for installation of units, including the following:
  - 1. Rough openings are square, plumb, and dimensions are correct.
  - 2. Sill plates are level.
- B. Do not proceed with installation of units until unacceptable conditions are corrected.

### 3.2 INSTALLATION

- A. General:
  - 1. Comply with the instructions and recommendations of window manufacturer.
  - 2. Remove unit components, parts, accessories, and installation guides from carton.
  - 3. Inspect unit components and verify that components are not damaged and that parts are included before disposing of carton.
  - 4. Multiple units shall be factory assembled.
  - 5. Field-assemble multiple units that are too large for shipping before installation per manufacturer's installation guides.
- B. Interface With Other Work:
  - 1. Perform installation per Manufacturer's installation guides.

2. Install units level, plumb, square, true to line, without distortion, anchored securely in place to structural support, and in proper relation to wall flashing and other adjacent construction. Install drip cap at head of single units and joined assemblies.
3. Separate aluminum and other corrodible surfaces from sources of corrosion or electrolytic action at points of contact with other materials.
4. Install insulation in shim space around unit perimeter to maintain continuity of building insulation. Do not overfill.
5. Hold back exterior siding or other finish materials from edge of unit to allow for expansion and contraction and installation of proper joint sealant with backing materials. Seal perimeter of unit after exterior finish is applied per requirements of Division 07 "Joint Sealants" Section.
6. Finish interior units per requirements specified in related sections. Refer to, and comply with, additional requirements in manufacturer's installation guides.
7. Install optional hardware and unit accessories after cleaning.
8. Seal between perimeter of window and air/vapor barrier with continuous low-expanding foam sealant, approximately 1 inch in depth.

C. Site Tolerances:

1. Adjust operation, insect screens, hardware, and accessories for a tight fit at contact points and weatherstripping for smooth operation and weathertight closure.

3.3 CLEANING

- A. Clean units using cleaning material and methods specifically recommended by window manufacturer.
- B. Remove excess sealants, glazing materials, dirt, and other substances.
- C. Avoid damaging protective coatings and finishes.
- D. Remove debris from work site and properly dispose of debris.

3.4 PROTECTION

- A. Protect installed work from damage due to subsequent construction activity on site.

END OF SECTION 085200

## SECTION 099000 – PAINTING

### 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. This Section includes the following:
  1. Exposed exterior items and surfaces with low VOC coatings complying with ME DEP regulations (OTC regulations).
  2. Exposed interior items and surfaces with low VOC coatings complying with ME DEP regulations (OTC regulations).
  3. Surface preparation, priming, and finish coats specified in this Section are in addition to shop priming and surface treatment specified in other Sections.

#### 1.3 DEFINITIONS

- A. General: Standard coating terms defined in ASTM D 16 apply to this Section.
  1. Flat refers to a lusterless or matte finish with a gloss range below 15 when measured at an 85-degree meter.
  2. Eggshell refers to low-sheen finish with a gloss range between 20 and 35 when measured at a 60-degree meter.
  3. Satin refers to low-sheen finish with a gloss range between 15 and 35 when measured at a 60-degree meter.
  4. Semigloss refers to medium-sheen finish with a gloss range between 35 and 70 when measured at a 60-degree meter.
  5. Full gloss refers to high-sheen finish with a gloss range more than 70 when measured at a 60-degree meter.

#### 1.4 SUBMITTALS

- A. Product Data: For each paint system indicated. Include block fillers and primers.
  1. Material List: An inclusive list of required coating materials. Indicate each material and cross-reference specific coating, finish system, and application. Identify each material by manufacturer's catalog number and general classification.
  2. Manufacturer's Information: Manufacturer's technical information, including label analysis and instructions for handling, storing, and applying each coating material proposed for use.
  3. Include printed statement of VOC content for each product.
- B. Schedule: Provide schedule of all surfaces to be coated, with prime and finish coat material listed, and manufacturer's recommended wet film thickness.

- C. Samples: For each type of exposed finish required, submit color chips, 3- by 5-inches, matching colors indicated on Materials Legend.
- D. Manufacturer Certificates: Signed by manufacturers certifying that products with limit VOC amounts specified comply with requirements.
- E. Qualification Data: For Applicator.
- F. Color Mix Code: For all colors used for Project to include in Owner's Manual.

#### 1.5 QUALITY ASSURANCE

- A. Applicator Qualifications: Engage an experienced Applicator who has completed painting system applications similar in material, design, and extent to those indicated for this Project, whose work has resulted in applications with a record of successful in-service performance.
- B. Source Limitations: Obtain primers and undercoat materials for each coating system from the same manufacturer as the finish coats.
- C. Benchmark Samples (Mockups): Provide a full-coat benchmark finish sample for each type of coating and substrate required. Duplicate finish of approved sample Submittals.
  - 1. Architect will select one room or surface to represent surfaces and conditions for each type of coating and substrate to be painted.
    - a. Wall Surfaces: Provide samples of at least 100 sq. ft.
    - b. Small Areas and Items: Architect will designate items or areas required.
  - 2. After permanent lighting and other environmental services have been activated, apply benchmark samples, according to requirements for the completed Work. Provide required sheen, color, and texture on each surface.
    - a. After finishes are accepted, Architect will use the room or surface to evaluate coating systems of a similar nature.
  - 3. Final approval of colors will be from benchmark samples.
  - 4. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

#### 1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to the Project Site in manufacturer's original, unopened packages and containers bearing manufacturer's name and label, and the following information:
  - 1. Product name or title of material.
  - 2. Product description (generic classification or binder type).
  - 3. Manufacturer's stock number and date of manufacture.
  - 4. Contents by volume, for pigment and vehicle constituents.
  - 5. Thinning instructions.
  - 6. Application instructions.
  - 7. Color name and number.
  - 8. VOC content.
- B. Store materials not in use in tightly covered containers in a well-ventilated area at a minimum ambient temperature of 45 deg F. Maintain containers used in storage in a clean condition, free of foreign materials and residue.

1. Protect from freezing. Keep storage area neat and orderly.
2. Remove oily rags and waste daily.
3. Take necessary measures to ensure that workers and work areas are protected from fire and health hazards resulting from handling, mixing, and application.

#### 1.7 PROJECT CONDITIONS

- A. Apply finishes only when temperatures of surfaces to be finished and ambient air temperatures are between 50 and 95 deg F.
  1. At exterior applications, temperature shall be continuous for 48 hours prior to application, during application and for 48 hours after to application.
- B. Exterior Finishes: Do not apply paint in snow, rain, fog, or mist; or when relative humidity exceeds 85 percent; or at temperatures less than 5 deg F above the dew point; or to damp or wet surfaces.
  1. Painting may continue during inclement weather if surfaces and areas to be painted are enclosed and heated within temperature limits specified by manufacturer during application and drying periods.
  2. Allow wet surfaces to dry thoroughly and attain temperature and conditions specified before proceeding with or continuing coating operation.

#### 1.8 EXTRA MATERIALS

- A. Furnish extra paint materials from the same production run as the materials applied and in the quantities described below. Package with protective covering for storage and identify with labels describing contents. Deliver extra materials to Owner.
  1. Quantity: Furnish Owner with not less than 1 gal., of each material and color applied for Owner's use during move in.

### PART 2 - PRODUCTS

#### 2.1 MANUFACTURERS

- A. Products: Subject to compliance with requirements, provide one of the products listed in other Part 2 articles.
- B. Manufacturers' Names: Shortened versions (shown in parentheses) of the following manufacturers' names are used in other Part 2 articles:
  1. Benjamin Moore & Company (Moore).
  2. PPG Architectural Finishes, Inc. (PPG).
  3. Sherwin-Williams Co. (S-W).
  4. Flame Control Coatings, LLC (Flame Control); phone: (716) 282-1399; available through Sherwin-Williams.

## 2.2 COATINGS MATERIALS, GENERAL

- A. Material Compatibility: Provide block fillers, primers, undercoats, and finish-coat materials that are compatible with one another and with the substrates indicated under conditions of service and application, as demonstrated by manufacturer based on testing and field experience.
- B. Material Quality: Provide manufacturer's best quality coating material of the various coating types specified that are factory formulated and recommended by manufacturer for application indicated. Paint-material containers not displaying manufacturer's product identification will not be acceptable.
  - 1. Proprietary Names: Use of manufacturer's proprietary product names to designate colors or materials is not intended to imply that products named are required to be used to the exclusion of equivalent products of other manufacturers listed in the specification schedule. Furnish manufacturer's material data and certificates of performance for proposed substitutions.
  - 2. Where schedule says no substitution, use proprietary product only. Do not propose substitution, as the products from the other manufacturers have been considered, and are not acceptable.
- C. VOC Compliance for Exterior and Interior Paints and Coatings: Provide the manufacturer's formulation for the products specified below that are VOC compliant with the State of Maine Department of Environmental Protection Regulation, "Chapter 151: Architectural and Industrial Maintenance (AIM) Coatings" and the following chemical restrictions from the Ozone Transport Commission (OTC) expressed in grams per liter:
  - 1. Flat Paints and Coatings: VOC content of not more than 100 g/L.
  - 2. Non-Flat Paints and Coatings: VOC content of not more than 150 g/L.
  - 3. Anticorrosive (Rust Preventative) Coatings: VOC content of not more than 400 g/L.
  - 4. Clear Wood Coatings:
    - a. Varnishes: VOC content of not more than 350 g/L.
  - 5. Fire Retardant Coatings:
    - a. Clear: VOC content of not more than 650 g/L.
    - b. Opaque: VOC content of not more than 350 g/L.
  - 6. Primers, Sealers, and Undercoaters: VOC content of not more than 200 g/L.
  - 7. Quick-Dry Enamels: VOC content of not more than 250 g/L.
  - 8. Quick-Dry Primers, Sealers, and Undercoaters: VOC content of not more than 200 g/L.
  - 9. Specialty Primers, Sealers, and Undercoaters: VOC content of not more than 350 g/L.
  - 10. Stains: VOC content of not more than 500 g/L.
  - 11. Wood Preservatives: VOC content of not more than 350 g/L.
- D. Colors: Provide colors as indicated in Materials Legend; if color is not indicated, color shall be as selected by the Architect from the manufacturer's full range of options.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Applicator and drywall subcontractor present, under which painting will be performed for compliance with paint application requirements.

1. Inspect walls for dents and imperfections prior to painting. Inspect walls again after primer and first coat of paint applied, with Applicator and drywall subcontractor present. Drywall subcontractor shall touch-up as follows:
    - a. Touch-up visible gypsum board imperfections before priming of walls.
    - b. Touch-up imperfections found in field of boards and joints made visible from painting after first finish coat applied.
  2. If unacceptable conditions are encountered, prepare written report, endorsed by Applicator, listing conditions detrimental to performance of work.
  3. Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.
  4. Application of coating indicates Applicator's acceptance of surfaces and conditions within a particular area.
  5. Begin coating application only after unsatisfactory conditions have been corrected and surfaces are dry.
- B. Coordination of Work: Review other Sections in which primers are provided to ensure compatibility of the total system for various substrates. On request, furnish information on characteristics of specified finish materials to ensure use of compatible primers.
1. Notify Architect about anticipated problems when using the materials specified over substrates primed by others.

### 3.2 PREPARATION

- A. General: Remove hardware and hardware accessories, plates, machined surfaces, lighting fixtures, and similar items already installed that are not to be painted. If removal is impractical or impossible because of size or weight of the item, provide surface-applied protection before surface preparation and painting.
1. After completing painting operations in each space or area, reinstall items removed using workers skilled in the trades involved.
- B. Cleaning: Before applying paint or other surface treatments, clean substrates of substances that could impair bond of the various coatings. Remove oil and grease before cleaning.
1. Schedule cleaning and painting so dust and other contaminants from the cleaning process will not fall on wet, newly painted surfaces.
- C. Surface Preparation: Clean and prepare surfaces to be painted according to manufacturer's written instructions for each particular substrate condition and as specified.
1. Provide barrier coats over incompatible primers or remove and reprime.
  2. Interior Wood: Clean surfaces of dirt, oil, and other foreign substances with scrapers, mineral spirits, and sandpaper, as required. Sand surfaces exposed to view smooth and dust off.
    - a. Scrape and clean small, dry, seasoned knots, and apply a thin coat of white shellac or other recommended knot sealer before applying primer.
    - b. Prime, stain, or seal wood to be painted immediately on delivery. Prime edges, ends, faces, undersides, and back sides of wood, including counters and paneling.
    - c. After priming, fill holes and imperfections in finish surfaces with putty or plastic wood filler. Sand smooth when dried.
    - d. If transparent finish is required, backprime with spar varnish.
  3. Ferrous Metals: Clean ungalvanized ferrous-metal surfaces that have not been shop coated; remove oil, grease, dirt, loose mill scale, and other foreign substances. Use solvent or mechanical cleaning methods that comply with SSPC's standards.

- a. Treat bare and sandblasted or pickled clean metal with a metal treatment wash coat before priming.
  - b. Touch up bare areas and shop-applied prime coats that have been damaged. Clean with solvents recommended by paint manufacturer and SSPC SP2; and touch up with same primer as the shop coat.
  4. Galvanized Surfaces: Uniformly abrade galvanized surfaces with a palm sander and 60 grit aluminum oxide so surface is free of oil and surface contaminants. Remove pretreatment from galvanized sheet metal fabricated from coil stock by mechanical methods to produce clean, lightly etched surfaces that promote adhesion of subsequently applied paints.
    - a. Clean field welds with nonpetroleum-based solvents complying with SSPC's standards so surface is free of oil and surface contaminants.
    - b. Coating shall be applied within 8 hours of sanding and wipe down.
  5. Metal Doors and Frames: Wipe down to remove oils and surface contaminants from shipping and installation.
    - a. Coating shall be applied within 8 hours of sanding and wipe down.
  6. PVC Trim: Clean surfaces of dirt, oil, and other foreign substances with mixture of water and mild detergent as recommended by manufacturer. Remove blemishes on surfaces exposed to view by sanding smooth and dust off.
- D. Material Preparation: Mix and prepare paint materials according to manufacturer's written instructions.
1. Maintain containers used in mixing and applying paint in a clean condition, free of foreign materials and residue.
  2. Stir material before application to produce a mixture of uniform density. Stir as required during application. Do not stir surface film into material. If necessary, remove surface film and strain material before using.
  3. Use only thinners approved by paint manufacturer and only within recommended limits.

### 3.3 APPLICATION

- A. General: Apply paint according to manufacturer's written instructions. Use applicators and techniques best suited for substrate and type of material being applied.
1. Paint colors, surface treatments, and finishes are indicated in the paint schedules.
  2. Do not paint over dirt, rust, scale, grease, moisture, scuffed surfaces, or conditions detrimental to formation of a durable paint film.
  3. Provide finish coats that are compatible with primers used.
  4. The term "exposed surfaces" includes areas visible when permanent or built-in fixtures, grilles, convactor covers, covers for finned-tube radiation and similar components are in place. Extend coatings in these areas, as required, to maintain system integrity and provide desired protection.
  5. Paint surfaces behind movable equipment and furniture the same as similar exposed surfaces. Before final installation of equipment, paint surfaces behind permanently fixed equipment or furniture with prime coat only.
  6. Paint interior surfaces of ducts with a flat, nonspecular black paint where visible through registers or grilles.
  7. Paint back sides of access panels and removable or hinged covers to match exposed surfaces.
  8. Finish exterior doors on tops, bottoms, and side edges the same as exterior faces, unless indicated otherwise.



9. Sand lightly between each succeeding enamel or varnish coat.
- B. Scheduling Painting: Apply first coat to surfaces that have been cleaned, pretreated, or otherwise prepared for painting as soon as practicable after preparation and before subsequent surface deterioration.
1. The number of coats and film thickness required are the same regardless of application method. Do not apply succeeding coats until previous coat has cured as recommended by manufacturer. If sanding is required to produce a smooth, even surface according to manufacturer's written instructions, sand between applications.
  2. Omit primer over metal surfaces that have been shop primed and touchup painted, unless otherwise indicated.
  3. If undercoats, stains, or other conditions show through final coat of paint, apply additional coats until paint film is of uniform finish, color, and appearance. Give special attention to ensure that edges, corners, crevices, welds, and exposed fasteners receive a dry film thickness equivalent to that of flat surfaces.
  4. Allow sufficient time between successive coats to permit proper drying. Do not recoat surfaces until paint has dried to where it feels firm, and does not deform or feel sticky under moderate thumb pressure, and until application of another coat of paint does not cause undercoat to lift or lose adhesion.
- C. Paint all exposed surfaces, except where the paint schedules indicate that a surface or material is not to be painted or is to remain natural. If the paint schedules do not specifically mention an item or a surface, paint the item or surface the same as similar adjacent materials or surfaces whether or not schedules indicate colors. If the schedules do not indicate color or finish, the Architect will select from standard colors and finishes available.
1. Painting includes field painting of exposed bare and covered pipes and ducts (including color-coding), hangers, exposed steel and iron work, and primed metal surfaces of mechanical and electrical equipment at all locations, except mechanical and electrical rooms.
- D. Do not paint prefinished items, concealed surfaces, finished metal surfaces, operating parts, and labels.
1. Labels: Do not paint over Underwriters Laboratories (UL), Factory Mutual (FM), or other code-required labels or equipment name, identification, performance rating, or nomenclature plates.
- E. Application Procedures: Apply paints and coatings by brush, roller, spray, or other applicators according to manufacturer's written instructions. Walls shall have roller finish.
1. Brushes: Use brushes best suited for type of material applied. Use brush of appropriate size for surface or item being painted.
  2. Rollers: Use rollers of carpet, velvet-back, or high-pile sheep's wool as recommended by manufacturer for material and texture required.
  3. Spray Equipment: Use airless spray equipment with orifice size as recommended by manufacturer for material and texture required.
- F. Minimum Coating Thickness: Apply paint materials no thinner than manufacturer's recommended spreading rate to achieve dry film thickness indicated. Provide total dry film thickness of the entire system as recommended by manufacturer.
- G. Mechanical and Electrical Work: Painting of mechanical, plumbing, and electrical work is limited to items exposed in occupied spaces (outside mechanical and electrical rooms).

- H. Mechanical and plumbing items to be painted include, but are not limited to, the following:
  - 1. Piping, pipe hangers and supports.
  - 2. Heat exchangers.
  - 3. Ductwork, including interior of ductwork visible through air devices.
  - 4. Insulation.
  - 5. Accessory items.
- I. Electrical items to be painted include, but are not limited to, the following:
  - 1. Conduit and fittings.
  - 2. Panelboards.
- J. Prime Coats: Before applying finish coats, apply a prime coat, as recommended by manufacturer, to material that is required to be painted or finished and that has not been prime coated by others. Recoat primed and sealed surfaces where evidence of suction spots or unsealed areas in first coat appears, to ensure a finish coat with no burn-through or other defects due to insufficient sealing.
- K. Pigmented (Opaque) Finishes: Completely cover surfaces as necessary to provide a smooth, opaque surface of uniform finish, color, appearance, and coverage. Cloudiness, spotting, holidays, laps, brush marks, runs, sags, ropiness, or other surface imperfections will not be acceptable.
- L. Transparent (Clear or Stained) Finishes: Use multiple coats to produce a glass-smooth surface film of even luster. Provide a finish free of laps, runs, cloudiness, color irregularity, brush marks, orange peel, nail holes, or other surface imperfections.
  - 1. Provide satin finish for final coats, unless otherwise noted.
- M. Stipple Enamel Finish: Roll and redistribute paint to an even and fine texture. Leave no evidence of rolling, such as laps, irregularity in texture, skid marks, or other surface imperfections.
- N. Completed Work: Match approved samples for color, texture, and coverage. Remove, refinish, or repaint work not complying with requirements.
- O. Exterior Ferrous Metal Items to Be Painted Include, but Are Not Limited To, the Following:
  - 1. Steel doors and frames.
  - 2. Bollards.
  - 3. Miscellaneous metal items, including galvanized steel.
- P. Interior Ferrous Metal Items to Be Painted Include, but Are Not Limited To, the Following:
  - 1. Steel doors and frames.
  - 2. Handrails.
  - 3. Access panels (both sides).

### 3.4 CLEANING

- A. Cleanup: At the end of each workday, remove empty cans, rags, rubbish, and other discarded paint materials from the Project site.
  - 1. After completing painting, clean glass and paint-spattered surfaces. Remove spattered paint by washing and scraping. Be careful not to scratch or damage adjacent finished surfaces.

### 3.5 PROTECTION

- A. Protect work of other trades, whether being painted or not, against damage by painting. Correct damage by cleaning, repairing or replacing, and repainting, as approved by Architect.
- B. Provide "Wet Paint" signs to protect newly painted finishes. Remove temporary protective wrappings provided by others to protect their work after completing painting operations.
  - 1. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces.

### 3.6 EXTERIOR PAINT SCHEDULE

- A. VOC Compliance, General: Provide the manufacturers' formulations for the products specified below that comply with the VOC requirements for the State of Maine Department of Environmental Protection in paragraph 2.2.C of this Section.
- B. PVC Trim, soffits: Provide the following finish systems over exterior PVC substrates:
  - 1. Low-Luster Acrylic Finish: 2 finish coats over a prime coat.
    - a. Prime Coat: Exterior, latex primer/sealer applied at spreading rate recommended by the manufacturer to achieve a dry film thickness of not less than indicated for product.
      - 1) Moore: Fresh Start Multi-Purpose Latex Primer N023; 1.2 mils DFT.
      - 2) PPG: Speedhide 6-609 Exterior Latex Wood Primer; 1.6 mils DFT.
      - 3) SW: Multi-Purpose Interior/Exterior Latex Primer/Sealer B51-450 Series; 1.4 mils DFT.
    - b. First and Second Coats: Low-sheen (satin), exterior, acrylic-latex paint, tinted with vinyl safe colorants, paint applied at spreading rate recommended by the manufacturer to achieve a dry film thickness per coat of not less than indicated for product.
      - 1) Moore: Aura Waterborne Exterior Paint Satin Finish No. 631 with Gennex colorant system; 2.4 mils DFT per coat.
      - 2) PPG: Speedhide 6-2045XI Exterior 100% Acrylic Latex Satin with SidingSafe Color Technology colorants; 1.4 mils DFT per coat.
      - 3) S-W: Duration Exterior Latex Satin K33-200 Series with vinyl safe colorants; 2.5 mils DFT per coat.
- C. Ferrous and Zinc-Coated Metal: Provide the following finish systems over exterior zinc-coated (galvanized) metal surfaces. Primer is not required on shop-primed items, except zinc-coated (galvanized) steel doors and frames, which require a primer under this specification.
  - 1. Semigloss, Waterborne Alkyd Finish: 2 finish coats over a primer.
    - a. Primer: Quick-drying, corrosion resistant, single component, acrylic-modified alkyd metal primer applied to galvanized metals not previously shop-primed applied at spreading rate recommended by the manufacturer to achieve a dry film thickness of not less than indicated for product. Moore and S-W do not have exterior products meeting requirements.
      - 1) PPG: Speedhide 6-209 Interior/Exterior Galvanized Steel Primer; 1.8 mils DFT.
    - b. First and Second Coats: Semigloss, exterior, single component, waterborne alkyd applied at spreading rate recommended by the manufacturer to achieve a dry film thickness per coat of not less than indicated for product. Moore does not have

exterior products meeting requirements; S-W ProMar 200 Interior Waterbased Acrylic-Alkyd not approved for exterior use.

- 1) PPG: Speedhide Interior/Exterior WB Alkyd Semi-Gloss 6-1510 Series; 1.5 mils DFT per coat.

### 3.7 LOW VOC INTERIOR COATINGS

- A. VOC Compliance, General: Provide the manufacturers' formulations for the products specified below that comply with the VOC requirements for the State of Maine Department of Environmental Protection in as defined in paragraph 2.2.C of this Section.
- B. Gypsum Board: Provide the following finish systems over interior gypsum board and tackable wall surfaces:
  1. Flat Acrylic Finish, GPDW Soffits and Ceilings: 2 finish coats over a primer.
    - a. Primer: Low-odor, low or zero VOC, latex-based, interior primer applied at spreading rate recommended by the manufacturer to achieve a dry film thickness of not less than indicated for product.
      - 1) Moore:Ultra Spec 500 Interior Latex Primer No. N534; 1.8 mils DFT.
      - 2) PPG: Speedhide Interior MaxPrime Latex Primer/Surfacer 6-4; 1.0 mils DFT.
      - 3) S-W: ProMar 200 Zero VOC Interior Latex Primer B28W02600 Series; 1.0 mils DFT.
    - b. First and Second Coats: Low-odor, low or zero VOC, flat, acrylic-latex-based, interior paint applied at spreading rate recommended by the manufacturer to achieve a dry film thickness per coat of not less than indicated for product.
      - 1) Moore:Ultra Spec 500 Interior Flat Finish No. N536; 1.8 mils DFT per coat.
      - 2) PPG: Speedhide Interior Latex Flat 6-70 Series; 1.3 mils DFT per coat.
      - 3) S-W: ProMar 200 Zero VOC Interior Latex Flat, B30W2600 Series; 1.6 mils DFT per coat.
  2. Low-Luster (Satin or Eggshell), Acrylic-Latex Finish; Walls: 2 finish coats over a primer.
    - a. Primer: Low odor, low or zero VOC, latex-based, interior primer applied at spreading rate recommended by the manufacturer to achieve a dry film thickness of not less than indicated for product.
      - 1) Moore:Ultra Spec 500 Interior Latex Primer No. N534; 1.8 mils DFT.
      - 2) PPG: Speedhide Interior MaxPrime Latex Primer/Surfacer 6-4; 1.0 mils DFT.
      - 3) S-W: ProMar 200 Zero VOC Interior Latex Primer, B28W02600 Series; 1.0 mils DFT.
    - b. First and Second Coats: Low odor, low or zero VOC, low-luster (eggshell or satin), acrylic-latex, interior finish applied at spreading rate recommended by the manufacturer to achieve a dry film thickness per coat of not less than indicated for product.
      - 1) Moore:Ultra Spec 500 Low Sheen Finish No. N537; 1.8 mils DFT per coat.
      - 2) PPG: Speedhide Interior Satin Acrylic Latex, Series 6-3511; 1.3 mils DFT per coat.
      - 3) S-W: ProMar 200 Zero VOC Interior Latex Eg-Shel, B20W2600 Series; 1.7 mils DFT per coat.

- C. Ferrous Metal: Provide the following finish systems over ferrous metal. Primer is not required on shop-primed items, except steel doors and frames, which require a primer under this specification. Prime bare spots and cracks on other ferrous metals.
1. Semigloss, Waterborne Alkyd Finish or Waterborne Alkyd Urethane Finish: 2 finish coats over a primer.
    - a. Primer: Quick-drying, corrosion resistant, single component, acrylic-modified alkyd primer or self cross-linking acrylic primer, as recommended by the manufacturer for this substrate, applied at spreading rate recommended by the manufacturer to achieve a dry film thickness of not less than indicated for product.
      - 1) Moore: Advance Waterborne Interior Alkyd Primer No. 790; 1.6 mils DFT.
      - 2) PPG: Pitt-Tech Plus 90-912 Interior/Exterior Industrial DTM Primer; 3.0 mils DFT.
      - 3) S-W: Pro Industrial Pro-Cryl Universal Primer B66-310 Series; 3.0 mils DFT.
    - b. First and Second Coats: Low VOC, semigloss, waterborne alkyd interior or waterborne alkyd urethane finish applied at spreading rate recommended by the manufacturer to achieve a dry film thickness per coat of not less than indicated for product.
      - 1) Moore: Advance Waterborne Interior Alkyd Semi-Gloss No. 793; 1.3 mils DFT per coat.
      - 2) PPG: Speedhide Interior/Exterior WBAlkyd Semi-Gloss No. 6-1510 Series; 1.5 mils DFT per coat.
      - 3) S-W: Pro Industrial Waterbased Alkyd Urethane Enamel B53-1150 Series; 1.5 mils DFT per coat.

END OF SECTION 099000

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