

PART B

Specifications

SECTION 01000

SPECIAL CONDITIONS

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PART 1 - GENERAL

1.01 RESPONSIBILITY AND COMPLIANCE

- A. All requirements set forth under this SECTION 01000 are directed to the General Contractor except as specifically excepted.
- B. Be responsible for arranging for facilities as specified herein as required for proper and expeditious prosecution of the work. Pay costs for such general services and temporary facilities, except as otherwise specified, until final acceptance of the work, and remove same at completion of work.
- C. Comply with applicable OSHA, State, and municipal regulations and requirements for services and facilities required under this SECTION 01000, and in performance of all requirements of this Contract.
- D. Be responsible for the proper behavior of all employees while on the sites. The Owner reserves the right to require the immediate and permanent removal from the premises of any person whose behavior is deemed to be improper, or otherwise detrimental to the buildings or their occupants.

1.02 CONTRACT CONDITIONS SPECIFICALLY REQUIRED BY LAW AND REGULATIONS

- A. This Contract is subject to all applicable Federal regulations, State and local laws, and all amendments thereto, and where any requirements contained herein do not conform to such regulations and statutes governing the construction work of this Contract, the regulations, and statutes shall govern.

1.03 PROJECT SCHEDULE

- A. Prior to commencing the work required under the Contract, prepare a schedule of operations to be performed, indicating expected times for each operation. Coordinate the schedule with the Architect and the Owner, and make any changes to the schedule which may be required by either party.
- B. The Work will commence on the execution of the Owner-Contractor Agreement and issuance of the Notice to Proceed. The Project dates for Commencement, Submittals, Substantial Completion and Final Completion shall be as outlined in the Owner-Contractor Agreement.
- C. The work shall be carried out in three sections- (1) East and West facades, (2) North Façade, and (3) South Façade. Removal of sash shall be coordinated with the hazardous materials abatement contractor, who will remove the sash and abatement the glazing compound. Sequence may be altered if all parties agree.

1.04 TIME FOR COMPLETION

- A. It is hereby understood and mutually agreed, by and between the Contractor and the Owner, that the date of beginning and the time for completion as specified in the Contract of the work to be done hereunder are essential conditions of this Contract, and it is further mutually understood and agreed that the work embraces in this Contract shall be commenced by the date specified therein.
- B. The Contractor agrees that said work shall be prosecuted regularly, diligently, and uninterruptedly at such a rate of progress as will ensure full completion thereof within the time specified. It is expressly understood and agreed, by and between the Contractor and the Owner, that the time for the completion of the work described herein is a reasonable time for the completion of the same, taking into consideration the usual industrial and climatic conditions prevailing in this locality.
- C. It is further agreed that the time is of the essence of each and every portion of the Contract Documents wherein a definite and certain length of time is fixed for the performance of any act whatsoever; and where under the Contract an additional time is allowed for the completion of any work, the new limit fixed by such extension shall be of the essence of this Contract. Provided, that the Contractor shall not be charged with liquidated damages for any excess cost when the delay in the completion of the work is due:
 - 1. To any preference, priority, or allocation order duly issued by the Government;
 - 2. To unforeseeable causes beyond the control and without the fault or negligence of the Contractor, including, but not restricted to, Acts of God, or of the public enemy, acts of the Owner, acts of another Contractor in the performance of a Contract with the Owner, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and unusual weather; and
 - 3. To any delays of subcontractors or suppliers occasioned by any of the clauses specified in subparagraphs 1. and 2. of this paragraph, provided, further, that the Contractor shall, within ten (10) days from the beginning of such delay, unless the Owner shall grant a further period of time prior to the date of final

settlement of the Contract, notifying the Owner, in writing, of the causes of the delay, who shall ascertain within a reasonable time of its decision in the matter.

- D. The work which the Contractor is required to perform under the contract shall be substantially completed within five months of acceptance of bid and authorization to proceed.

1..05 COORDINATION OF THE WORK

- A. The Contractor and all of his subcontractors shall coordinate their work with all adjacent work and shall cooperate with all other trades so as to facilitate general progress of the work. Each trade shall afford all other trades every reasonable opportunity for the installation of their respective work and for the storage of their materials and equipment. The Contractor shall be responsible for coordination.
- B. Each subcontractor shall assume responsibility for the correctness and adequacy of his work. Each subcontractor shall be responsible for and pay for all damages done by his work or his workmen.
- C. The Contractor shall cooperate with, and provide access and working area to the Owner's contractors for the performance of specific work assigned to them.

1.06 CLERK OF THE WORKS

- A. A Clerk of the Works may be designated by the Owner. The Clerk shall represent the Owner and the Architect, and the Clerk will keep close watch over the progress of the work, but he shall have no authority to speak for or in any manner to bind the Owner or the Architect.

1.07 PROJECT MEETINGS

- A. The Contractor will be required to meet with the Architect at the sites of the work, at regular intervals during the course of the contract for purpose of progress review, coordination of working schedules, submittals, and any other items of work requiring such coordination. The dates of such meetings shall be established by the Architect and mutually agreed upon by the Contractor, the Architect, and the Clerk of the Works (if any). The intervals of such meetings shall be no less than once a week.

1.08 TESTS AND INSPECTIONS

- A. Make, or have made, such tests and inspections on workmanship and materials as may be required by the building Code, State or municipal laws, or as called for under the various SECTIONS of the Specifications.
- B. Bear all expense to such tests and inspections, unless otherwise specified under the various SECTIONS of the Specifications and furnish all labor, tools, instruments, water, temporary power and light, construction, and equipment necessary for these tests and inspections. Furnish records of all tests and inspections to the Architect. Remove all temporary work, materials, and equipment upon completion of tests and inspections.

- C. Where, in the various SECTIONS of the Specifications, inspections and testing of materials, processes, and the like is called for, the selection of bureaus, laboratories, and/or agencies for such inspection and testing shall be subject to the approval of the Architect.
- D. Should any material or work be found, after testing or inspections, to be defective or inferior, remove and replace such material and/or work with new sound materials and/or work as approved by the Architect, and bear all costs thereof.

1.09 EXISTING UTILITIES

- A. Protect and maintain active existing heating and electrical utilities in use.
- B. If any existing active utility, which is not visible, is unintentionally damaged, and such utility is to remain, immediately repair the damage and restore the utility to its original integrity. Consideration of any adjustment as outlined herein shall be based on the assumption that the Contractor has performed in a prudent manner at the time such damage occurred. If extra expense is incurred in protecting and maintaining any utility line not shown on the drawings, an adjustment in the contract price will be made.

1.10 USE AND OCCUPANCY BY THE OWNER

- A. The existing building will be occupied by Town employees and the public during times when work is being performed under this Contract. The Town Hall is open to the public during normal business hours, and all materials and temporary facilities that may affect staff and visitors shall be secured in a manner acceptable to the Owner.
- B. Take all necessary safety measures to protect persons and property against harm from operations being performed under the Contract.
- C. Coordinate the work to afford a minimum of interruption in the normal operation activities of the Town Hall. Provide a minimum of forty-eight (48) hours notice of interruption of service to the building.

1.11 GLASS BREAKAGE

- A. Be responsible for all breakage of existing glass, wherever such breakage is directly attributable the operations performed under this Contract. Replace all broken glass with salvaged antique glass or restoration glass by Bendheim or equal to match existing glass character and surface and deliver the work with all glazing intact, labels removed, and clean.

1.12 HAZARDOUS MATERIALS

- A. Asbestos has been detected in the glazing compound of sash. The Owner will engage an abatement contractor to abate the asbestos; this window restoration contractor shall coordinate his/her activities and schedule with those of the abatement contractor.

END OF SECTION

SECTION 01025

UNIT PRICES

PART 1 - GENERAL

1.01 GENERAL PROVISIONS

- A. The predetermined unit prices provided by the Contractor in its bid shall be used as the basis for equitable adjustment of the Contract Price in connection with changes or extra work performed under this contract, as authorized in writing by the Architect. Compensation for changes in the work which do not involve Unit Price items shall be determined by other methods of payment in accordance with the requirements of the Contract.
- B. It is mutually understood and agreed that such Unit Prices include all items of cost, equipment, taxes and insurance of very kind, overhead and profit for the Contractor, any Subcontractors performing work under the Unit Price items, and that they shall be used uniformly, without modification, for additions to, and deductions from, the Contract Price.
- C. Sufficient prior notice shall be given to the Architect so that he may take the proper measurements of materials to be removed or replaced. All quantities used in the determination of additions to or deductions from the Contract Price due to Unit Prices shall be those that have been determined and approved by the Architect.
- D. Performance of work which is not required under the Contract Documents or which is not authorized by change order, whether or not such item is set forth as a Unit Price item, shall not be considered cause for any extra payment. The Contractor shall be held fully responsible for such unauthorized work, including the performance of all corrective measures required by the Architect.
- E. All Unit Prices shall be in effect from the date of commencement of the work until final completion of all work under the Contract.
- F. All materials, methods of installation, and definitions of terms set forth for the various Unit Price items shall be as set forth in the Contract Documents.

1.02 UNIT PRICES

- A. As part of the General Bid, provide Unit Prices as follows:

UNIT PRICE #1: Additions and subtractions to base bid amount of window sash replacement for Type A sash.

UNIT PRICE #2: Additions and subtractions to the base bid amount of window

sash replacement for Type B sash.

UNIT PRICE #3: Additions and subtractions to the replacement of window sash replacement for Type C sash.

UNIT PRICE #4: Additions and subtractions to the replacement of window sash replacement for Type D sash.

END OF SECTION

SECTION 01230

ALTERNATES

PART 1 GENERAL

1.01 SUMMARY

- A. For each of the alternates Scheduled at the end of this Section, state the amount in the proposal to be added to or deducted from the Contract Sum for the work.

1.02 ALTERNATES

- A. Definition: "Alternates" are alternate products, materials, equipment, systems, methods, units of work or major elements of the construction, which may, at the Owner's option and under the terms established by the Contract or Agreement, be selected for the work in lieu of the corresponding requirements of the Contract Documents. Selection may occur prior to the Contract Date, or may, by the Agreement, be deferred for possible selection at a subsequent date.
- B. Alternate Requirements: A Schedule of Alternates is included at the end of this Section. Each alternate is defined using abbreviated language, recognizing that the Contract Documents define the requirements. Coordinate related work to ensure that work affected by each alternate is complete and properly interfaced with work of each selected alternate.
- C. Provide written proposals for each alternate on the Form of Proposal for Owner's consideration. Each proposal amount shall include the entire cost of the alternate portion of the work including overhead, profit, and other costs including cost of interfacing and coordinating the alternate with related and adjacent work.
- D. Selection of Alternates: Selection of alternates to be included in the work will be by the Owner.
- E. Notification: Immediately following award of Contract, prepare and distribute to each entity a notification of status of each alternate. Indicate which alternates have been accepted, rejected, or deferred for consideration at a later date. Include full description of negotiated modifications to alternates, if any.

1.03 DESCRIPTION OF ALTERNATES

- A. Alternates shall include the following:
1. Alternate No. 1: Installation of Owner furnished storm windows at types B, C, D, and E windows
 2. Alternate No. 2: Installation of owner furnished storm windows at type A windows.

END OF SECTION

SECTION 01300

SUBMITTALS

PART 1 - GENERAL

1.01 GENERAL PROVISIONS

- A. PART A and DIVISION 1 of PART B, as listed in the TABLE OF CONTENTS, are hereby made part of this SECTION by reference thereto.
- B. Refer to various SECTIONS for submittals required.

1.02 SUBMITTAL PROCEDURES

- A. The Contractor, within 10 calendar days after being awarded the Contract, shall prepare, and submit for the Architect's approval, a schedule of shop drawings, product data, and samples, as required in the Contract Documents. The schedule shall indicate, by trade, the date by which final approval of each item must be obtained, and shall be revised as required by the conditions of the work, subject to the Architect's approval. The Architect's review period, including those of their consultants, will not exceed 14 days from the established date of each submission indicated on the schedule of shop drawings, product data, and samples, plus the additional time, if any, for distribution by the Contractor and receipt of submissions by the Architect and Owner. The Contractor shall be required to strictly adhere to the dates established in the schedule.
- B. Notes or other information on the shop drawings, labels, transmittals or other items submitted, which are contrary to the provisions of the Contract Documents, shall be deemed to be addressed to the applicable Contractor, subcontractor, material supplier, or other parties involved, and shall have no force or effect with respect to this Contract, even though the shop drawing or sample involved is approved by the Architect and the Owner. In particular, the terms " By Others", "N.I.C.", or words of similar meaning and import, on submissions, shall not be deemed to imply that the referenced items are to be omitted from this Contract.
- C. Shop drawings:
 - 1. To receive consideration by the Architect and the Owner, shop drawings shall be accompanied by a letter of transmittal, and each drawing shall contain the following information on the title block:
 - Project identification.
 - Architect's name.
 - Date of preparation of submission, and of revision, if applicable.
 - Shop drawing number and title of item the drawing refers to.
 - Contract DRAWING numbers and SPECIFICATIONS SECTION and paragraph number used as a reference in preparing shop drawings.
 - Contractor's and subcontractor's name.
 - Name of person or firm preparing the shop drawings.

Statement or stamp of approval by the Contractor, which shall signify that he has seen and examined the drawing, and that requirements of Article 4 of the GENERAL CONDITIONS have been complied with.

2. Shop drawings relating to various units comprising a proposed assembly shall be submitted simultaneously, so that said unit may be checked individually and as an assembly.
3. Submit five (5) copies of each shop drawing for standard manufactured items in the form of manufacturer's catalog sheets, showing illustrated cuts of the items to be furnished, scale details, sizes, dimensions, performance characteristics, capacities, and other pertinent information, accompanied by an appropriate transmittal form, with specific reference to the applicable SECTION and paragraph of the SPECIFICATIONS. Such sheets will be marked either "Approved" or "Disapproved" by the Architect and the Owner, and three (3) copies will be returned to the Contractor. Five copies of each substitute item, for those marked "Disapproved", shall be resubmitted in the same manner until approval is obtained. Indicate clearly on such printed matter, containing multiple items, the specific items which are being submitted for approval. Electronic submission of pdf product information may be substituted with the consent of the Architect. Submittals will be returned in pdf form.
4. For each shop drawing, submit five (5) blackline or blueprint copies. The print copies shall be made by the Contractor after his stamp and his comments or corrections, if any, have been affixed, and in accordance with the following procedure:
 - a. Each print shall have a clear space on the right side or bottom of the transparency for stamps and Architect's comments.
 - b. The Architect will annotate the transparency and indicate one of the following marks, as applicable:

DISAPPROVED
APPROVED AS NOTED - RESUBMIT
APPROVED AS NOTED
APPROVED
 - c. For drawings marked "Disapproved" or "Approved as Noted - Resubmit", the Architect and the Owner will have prints made from the marked reproducible. Such prints will be used for record purposes and for comparison with subsequent submissions. One copy will be retained by the Architect and the Owner, one copy will be furnished to the applicable consultants, if any, and one print will be returned to the Contractor for his additional copies as required. Such procedures shall be followed until the shop drawing is marked "Approved as Noted" or "Approved".
 - d. Shop drawings, marked "Approved as Noted", shall be treated as approved drawings. The Architect's comments shall be considered part of the original drawings. Should the Contractor disagree with such comments, he shall notify the Architect in writing within fourteen (14) calendar days after receipt of such drawings and before commencing work on the items in question. Failing this, the Contractor shall be deemed to have accepted full

responsibility for implementing such comments at no additional cost to the Owner.

- e. Drawings marked "Approved as Noted" or "Approved" will be returned to the Contractor.
 - f. When the Drawing is returned by the Architect and the Owner with the mark "Approved as Noted" or "Approved", the Contractor shall deliver three (3) prints of the corrected original to the Architect and the Owner, for the Architect's and the Owner's use.
 - g. Electronic submission of pdf shop drawings may be substituted with the consent of the Architect. Submittals will be returned in pdf form.
5. If catalog cuts of standard manufactured items show different types, options, finishes, performance requirements, or other variations, such features which the Contractor proposes to furnish shall be clearly circled or otherwise emphasized, and all irrelevant diagrams, notes, or other information deleted or cancelled. If any variations from the catalog description are proposed or required, such variations must be clearly noted on the cut, by the Contractor. Catalog cuts of wiring diagrams will not be acceptable.
 6. Shop drawings shall clearly indicate all details, sectional views, arrangements, working and erection dimensions, kinds and quality of materials and their finishes, and other information necessary for proper checking, fabrication, and installation of the items, and shall include all information required for making connections to other work.
 7. If any information on previously submitted shop drawings, except for notations made by the Architect, is revised in any way, such revisions shall be circled or otherwise graphically brought to the Architect's attention. If approved shop drawings are subsequently revised, they shall be resubmitted to the Architect and the Owner, with all revisions clearly marked for the Architect's attention. Whenever drawings are revised, the latest revisions shall be circled or otherwise emphasized to distinguish them from clearly from all previous revisions (and from the information on the original drawing).
 8. Should the Architect, in checking shop drawings, make changes which the Contractor deems will increase the Contract Price, the Contractor shall so inform the Architect and the Owner in writing, within fourteen (14) calendar days following receipt of the checked shop drawings and prior to starting fabrication of the item or items. Failing this, the Contractor shall be deemed to have waived all claims for extra compensation for the work involved.
 9. The Contractor shall be responsible for obtaining and distributing copies of approved shop drawings to the applicable subcontractors, material suppliers, and others whose work is affected thereby, at no additional cost to the Owner.
 10. The Contractor shall have a complete up-to-date set of all approved shop drawings, at the site, and maintain same in good order at all times.
 11. The Contractor shall assume full liability for delay attributed to insufficient time for delivery and/or installation of material or performance of the work when approval of pertinent shop drawings is withheld due to failure of the Contractor to submit, revise, or resubmit shop drawings in adequate time to

allow the Architect reasonable time, not to exceed fourteen (14) calendar days, for normal checking and processing of each submission or resubmission.

- D. Samples: Before submitting samples, consult with the Architect to determine whether samples are to be submitted to the Architect's office, to the project, or to another location.
1. Samples shall be submitted in triplicate, unless otherwise specified or directed by the Architect.
 2. Samples may be submitted to the Architect directly from manufacturers, vendors, suppliers, subcontractors, or others, providing as separate transmittal letter is submitted through the Contractor in each such case.
 3. Each sample shall have a label indicating the material represented, its place of origin, and the names of the producer, the Architect, the Contractor, the subcontractor, and the building or work for which the material is intended. Samples shall be marked to indicate the DRAWING numbers or SPECIFICATIONS SECTION and paragraph requiring the materials represented.
 4. Approval of samples for color, texture, and other aesthetic qualities shall not be construed as approval of other characteristics of the item.
 5. Approved samples, unless specifically designated by the Contractor to be incorporated into the work, will be kept on file, accessible for inspection, by the Architect until final acceptance of the Project.
- E. Unless such written notice has been given, the Architect's approval of a resubmitted shop drawing, product data, or sample, shall not constitute approval of any changes not requested on the prior submittal.

END OF SECTION

SECTION 01500

CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS

PART 1 - GENERAL

1.01 GENERAL PROVISIONS

- A. PART A and DIVISION 1 of PART B, as listed in the TABLE OF CONTENTS, are hereby made part of this SECTION by reference thereto.

1.02 RESPONSIBILITY AND COMPLIANCE

- A. All requirements set forth under this SECTION 01500 are directed to the General Contractor except as specifically excepted.
- B. Be responsible for arranging for facilities as specified herein and as required for proper and expeditious prosecution of the work. Pay costs for such general services and temporary facilities, except as otherwise specified, until final acceptance of the work, and remove same at completion of work.
- C. Comply with applicable OSHA, State, and municipal regulations and requirements for services and facilities required under this SECTION 01500, and in performance of all requirements of this Contract.

1.03 PROTECTION OF PERSONS AND PROPERTY

- A. Provide and maintain, for the duration of the Contract, proper protective measures as may be required to adequately protect the Owner's personnel and the public from hazards resulting from the work performed hereunder.
- B. Take all proper precautions to protect the Owner's property from damages and replace, or put in good condition, any existing items which are damaged in carrying out the work, unless designated to be permanently removed or demolished.
- C. When regulated by local building code or other Authority, such requirements for protection shall be considered as minimum requirements and the Contractor shall be responsible for the protection of such minimum requirements as may be required by public safety laws.
- D. The requirements of this paragraph shall be in addition to, not in lieu of, other protection requirements contained in these contract Documents.

1.04 FIRE PROTECTION AND PREVENTION

- A. Comply with the following minimum requirements for fire prevention:
 - 1. Provide sufficient quantity of carbon dioxide fire extinguishers in all areas of work.
 - 2. Do not permit an accumulation of inflammable rubbish to stay in the building overnight.

3. Store no more than one gallon, in an approved safety can or sealed container, of any volatile inflammable liquid in any portion of the building.
4. Make arrangements for periodic inspection by local fire protection authorities and insurance underwriters' inspections. Cooperate with said authorities to facilitate proper inspection of the premises. Comply with all applicable laws and ordinances and with the Owner's fire prevention requirements.
5. Ensure that tarpaulins that may be used during construction of work are made of material which is resistant to fire, water, and weather, are U.L. approved, and comply with FS-CCC-D-746.

1.05 ACCIDENT PREVENTION

- A. Comply with all Federal, State and municipal recommendations and requirements for safety, and accident prevention, and those of the Associated General Contractors of America, and the American Standards Association Standard A10.2. Ensure that the Field Superintendent conducts regular, frequent inspections of the site for compliance with safety regulations.
- B. Neither the Owner nor the Architect shall be responsible for providing a safe working place for the Contractor, Subcontractors, or their employees, or any individual responsible to them for the work.

1.06 OVERLOADING

- A. Do not permit materials to be stacked on, or be transported over, floor or roof construction that would stress any of said construction beyond the designed live loads. Review proposed storage with the Architect and the Owner, prior to placement of any materials thereon.

1.07 RUBBISH REMOVAL

- A. Bear full responsibility for cleaning up during and immediately upon completion of the work, and remove all rubbish, waste, tools, equipment, and appurtenances caused by and used in the execution of the work; and leave all work in a clean and proper condition satisfactory to the Architect and/or Owner. Rubbish shall be removed weekly.
- B. Immediately after unpacking, collect all packing materials, case lumber, excelsior, wrapping or other rubbish, flammable or otherwise, and remove from the building.
- C. Furnish, install, maintain, and pay for, enclosed rubbish chutes, leading from the roof levels to the ground or loading truck locations, for disposal of all debris and rubbish attributed to the work of this Contract. Remove chute upon completion of the work.
- D. No burning of rubbish will be allowed.

1.08 WORK AREAS, STORAGE, ACCESS, AND PARKING

- A. The Contractor's work areas are designated on the Drawings. The Owner will designate on-site areas which may be used for storage of materials. Storage of materials beyond the designated areas will not be permitted. The Contractor shall

assume full responsibility for trespass on, and/or damage to, other property, by any of his employees.

- B. Furnish, install, maintain, and pay for temporary fencing and other protection required for the safety of stored materials and work installed under this Contract, and bear full responsibility for same. At the Contractor's option, the fencing may be either one of the following types:
 - 1. Chain link fencing, at least six (6) feet in height, complete with all required gates, posts, bracing, and post footings. Posts may be either standard fencing pipe posts or 4 by 4-inch wood posts, set securely into temporary concrete footings. Gates shall be equipped with locks.
 - 2. Plywood fencing, at least six (6) feet in height, complete with all required gates, posts, bracing, and post footings. Plywood shall be clean, exterior grade, 3/4 or one inch thick. Fencing shall be adequately braced and have 4 by 4-inch posts spaced approximately 48 inches on centers. Gates shall be equipped with locks.
- C. Vehicular access to the site, and parking locations for employees' vehicles, shall be as designated by the Architect and the Owner.

1.09 TEMPORARY PROTECTION

- A. Furnish, erect, and maintain for the duration of the work period, OSHA standard temporary barriers to protect persons and property against accidents caused by construction activities.
- B. Protect finished surfaces and areas from damage.

1.10 TEMPORARY SCAFFOLDING, HOISTING, AND RIGGING

- A. Except as otherwise specified in the various trade SECTIONS of the Specifications, furnish, install, maintain, and remove when no longer needed, temporary staging, having planking or other approved type of load-bearing working surfaces, as required for the work. Provide secure barricades to prevent unauthorized access to the staging and scaffolding.
- B. Include all costs for temporary scaffolding, hoisting, and rigging in the Contract amount.
- C. Scaffolding, staging, hoisting, and rigging devices shall conform to all state and local laws and regulations.

1.11 TEMPORARY PROTECTION, STAIRS, RAMPS AND CHUTES

- A. The Contractor shall provide necessary security and barricades, in or on the existing buildings, protect existing windows, siding, trim, and roofs from damage from staging, workmen, and abuse. Damaged areas are to be restored to their pre-existing condition.
- B. The Contractor shall furnish, install and maintain all dust protection and temporary enclosures required to control the spread of dust outside work areas.
- C. The Contractor shall furnish, install and maintain temporary ramps, stairs, ladders and temporary closures at windows with removed sash, and shall bear all costs therefrom.

- D. No materials, rubbish or debris shall be allowed to drop free, or be thrown from openings in the building or the staging or scaffolding.
- E. Protective enclosures for asbestos abatement shall be provided by the abatement contractor engaged separately by the Town

1.12 TEMPORARY SERVICES

- A. Temporary toilets: a chemical toilet shall be provided for the contractor's personnel and shall be removed at the conclusion of the work.
- B. Water: The existing building facilities may be used by the Contractor.
- C. Traffic: Establish direct traffic patterns from the exterior work locations to any temporary work locations within the buildings, inform all employees of such patterns, and ensure that the traffic patterns are followed at all times, to cause a minimum of interruption in the Owner's daily operations and activities.

1.13 WEATHER PROTECTION

- A. "Weather protection" shall mean the temporary protection of that work adversely affected by moisture, cold and wind by covering, enclosing and/or heating. This protection shall provide adequate working areas as determined by the Architect and consistent with the approved construction schedule to permit the continuous progress of all work necessary to maintain an orderly and efficient sequence of construction operations. The Contractor shall furnish and install all "weather protection" material and be responsible for all costs, including heating required to maintain a minimum temperature of 40 degrees F. at the working surfaces except where otherwise specified in a trade section. This provision does not supersede any specific requirements for methods of construction and/or curing of materials.
- B. The Contractor shall provide and pay all costs including labor incurred in furnishing, fueling, operating, maintaining and removing all facilities required to provide temporary heat for work areas to protect the construction against injury or damage resulting from cold temperature and dampness, to heat materials and to maintain the minimum temperatures specified herein and under the various Sections of the Specifications.
- C. The Window Restoration Contractor shall provide temporary weather closures at all windows where sash has been removed for restoration or replacement. Such enclosures may be reused in a phased process and must be removed from the site when the work is complete.

1.14 FINAL CLEANING

- A. Before the final inspection, thoroughly clean all work areas, and remove all temporary construction facilities, debris, and rubbish from the Owner's property and legally dispose of same beyond the site limits.

END OF SECTION

SECTION 01731

CUTTING AND PATCHING

PART 1- GENERAL

1.1 SUMMARY

A. Section Includes:

1. Requirements and limitations for cutting and patching Work.
2. Products for patching and extending Work.
3. Transitions and adjustments.
4. Repair of damaged surfaces, finishes and cleaning.

B. Related Sections:

1. Section 01500 - Temporary Facilities and Controls: Temporary barriers.
2. Section 02020 - Selective Demolition

1.2 PERFORMANCE REQUIREMENTS

A. Cutting and patching includes cutting into existing construction to provide for installation or performance of other work and subsequent fitting and patching required to restore surfaces to their original condition.

B. Structural Work:

1. Do not cut and patch structural work in manner resulting in reduction of load-carrying capacity or load and deflection ratio.
2. Submit proposal for cutting and patching of structural work and obtain the Architect's approval prior to the structural alterations.

C. Operational Limitations:

1. Do not cut and patch in manner resulting in decreased performance, shortened useful life, or increased maintenance.
2. Submit proposals for cutting and patching operational elements and safety components and obtain architect's acceptance prior to the work.

D. Quality Limitations: Do not cut and patch work exposed to view (exterior and interior) in manner resulting in noticeable reduction of Historic Fabric, aesthetic qualities and similar qualities, as determined by the Architect.

E. Limitation on Acceptance: The Architect's acceptance to proceed with cutting and patching shall not waive right to later require removal or replacement of work found to be cut and patched in unsatisfactory manner as determined by the Architect.

PART 2- PRODUCTS

1.3 MATERIALS

- A. Use materials for cutting and patching that are identical to existing materials. If identical materials are not available or cannot be used, use materials that match existing adjacent surfaces to fullest extent possible with regard to visual effect. Use materials for cutting and patching that will result in equal or better performance characteristics.

PART 3- EXECUTION

1.4 EXAMINATION

- A. Examine surfaces to be cut and patched and conditions under which work is to be performed before cutting. Take corrective action before proceeding with work if unsafe or otherwise unsatisfactory conditions are encountered.

1.5 PREPARATION

- A. Temporary Support: Provide temporary support of work to be cut to prevent failure.
- B. Protection:
 - 1. Protect other work during cutting and patching to prevent damage.
 - 2. Provide protection from adverse weather conditions for that part of project that may be exposed during cutting and patching operations.
 - 3. Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.
 - 4. Take precautions not to cut existing pipe, conduit, or duct serving building but scheduled to be relocated until provisions have been made to bypass them.

1.6 CUTTING AND PATCHING

- A. Remove, cut, and patch Work in a manner to minimize damage and to provide means of restoring products, materials and finishes to original condition.
- B. Cut work using methods that are least likely to damage work to be retained or adjoining work.
- C. Where cutting is required, use hand or small power tools designed for sawing or grinding rather than hammering or chopping. Cut through concrete and masonry using cutting machines such as a carborundum saw or core drill. Cut holes and slots neatly to size required with minimum disturbance of adjacent work. To avoid marring existing finished surfaces, cut and drill from exposed or finished side into concealed surfaces. Temporarily cover openings when not in use.
- D. Patch with seams that are durable and as invisible as possible. Comply with specified tolerances for work.

1.7 TRANSITIONS

- A. Where new Work abuts or aligns with existing Work, provide a smooth and even transition. Patched Work shall match existing adjacent Work in texture and appearance

- B. When finished surfaces are cut so that a smooth transition with expansion new Work is not possible, terminate existing surface along a straight line at a natural line of division.

1.8 REPAIR OF DAMAGED SURFACES

- A. Patch or replace portions of existing surfaces which are damaged, discolored, or showing imperfections. Repair substrate prior to patching finish.

1.9 FINISHES

- A. Finish surfaces as specified in individual product sections.
- B. Finish patched area shall produce uniform finish and texture over entire area. When finish cannot be matched, refinish entire surface to nearest intersections.

END OF SECTION

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(Not used)

CUTTING AND PATCHING
01731-4

SECTION 01770

CONTRACT CLOSEOUT

PART 1 - GENERAL

1.01 CLOSEOUT PROCEDURES

- A. Comply with procedures stated in GENERAL CONDITIONS for issuance of Certificate of Substantial Completion.
- B. Owner will occupy adjacent areas of the building for the purpose of conducting business.
- C. When the Contractor considers that the work required under this Contract has reached final completion, submit written certification that the Contract Documents have been reviewed, all work has been inspected, and that all work is complete in accordance with Contract Documents and ready for Architect's inspection.
- D. In addition to submittals required under this Contract, provide submittals required by governing authorities, and submit a final statement of accounting giving total adjusted Contract Sum, previous payments and sum remaining due.
- E. The Architect will issue a final change order reflecting approved adjustments to Contract sum not previously made by Change Order.

1.02 FINAL CLEANING

- A. Perform final cleaning prior to final inspection.
- B. Clean interior and exterior surfaces exposed to view; remove temporary labels, stains and foreign substances. Clean roofs and roof drainage systems.
- C. Remove waste and surplus materials, rubbish, and construction facilities from the project and from the site.

1.03 PROJECT RECORD DOCUMENTS

- A. Store documents separate from those used for construction.
- B. Keep documents current; do not permanently conceal any work until required information has been recorded.
- C. At Contract closeout, submit documents with transmittal letter containing date, Project title, Contractor's name and address, list of documents, and signature of Contractor.

1.04 MAINTENANCE DATA

- A. Provide data for: Building Owner's guide for maintaining windows.
- B. Submit two sets prior to final inspection, bound in 8 1/2 x 11 inch three-ring side binders with durable plastic covers.

1.05 WARRANTIES AND BONDS

TOPSFIELD TOWN HALL
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- A. Provide duplicate, notarized copies. Execute Contractor's submittals and assemble documents executed by subcontractors, supplies, and manufacturers. Provide table of contents and assemble in binder with durable plastic cover.
- B. Submit materials prior to final application for payment. For equipment put into use with Owner's permission during construction, submit within 10 days after first operation. For items of Work delayed materially beyond Date of Substantial Completion, provide updated submittal within ten days after acceptance, listing date of acceptance as start of warranty period.

END OF SECTION

SECTION 06250
CARPENTRY AND WOOD CONSERVATION

PART 1 – GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specifications Sections, apply to the work of this section.
- B. The extent of work is shown on the drawings, and as scheduled herein.

1.02 DESCRIPTION OF THE WORK

- A. Provide all materials, labor and equipment necessary and/or required for the complete execution of the work of this Section and as indicated on the Drawings, including, but not limited to:
 - 1. Window trim, frame, and sill repairs: Refer to Sheets A-1 to A-4 for locations and details.
 - a. Perform epoxy conservation repairs to molded and flat exterior trim including wood Dutchman inserts where deterioration is too severe for epoxy consolidation and filling.
 - b. Replace severely deteriorated turned colonette bases to match existing profiles.
 - c. At window “F” (Sheet A-2) disassemble colonettes, window jambs, and related blocking and trim as required to install new copper flashing behind these elements. Reassemble wood elements and blockings including matching replacements and/or Dutchman as required.

UNIT PRICE #1:

UNIT PRICE #2:

B. Definitions:

- 1. The terms “conserve”, “conservation repairs”, “restore”, and “epoxy conservation” as used in this specification and as indicated on the Drawings shall include the following work activities:
 - a. Refastening of all existing sound but loose trim, and installation of all new or conserved elements in their original positions, together with any rough carpentry that may be required for sound installation.
 - b. Millwork to provide new exact replica elements to replace badly deteriorated or missing woodwork, or portions thereof, and inaccurately matched modern replacement elements. Replacement millwork shall duplicate the original element as

to the species of wood, dimensions of the stock, exact profiles, and the methods of installation, unless otherwise indicated.

- c. Conservation by epoxy consolidation and filling of deeply fissured, punky, or otherwise deteriorated finish woodwork and structural elements determined to be salvageable, together with wood Dutchmen inserts secured with epoxy adhesives where voids exceed 2 cubic inch in volume.
 - d. Filling of gaps between individual pieces of wood, and splits within single pieces where cyclical movement is anticipated, with the specified flexible sealant material.
 - e. Filling of small, shallow fissures and nail holes less than 1/16" wide and 1/8" deep in wood surfaces with specified putty to produce a smooth, uniform surface that will not trap water. Putty filling is to be executed after application of prime coat of paint.
2. The terms "replicate" and "provide replica replacement", and "replace to match existing" as used in this specification and as indicated on the Drawings shall include the following work activities:
- a. Existing materials and finishes which can not be repaired or restored as defined above under conservation repairs, and therefore are not determined to be salvageable by the Architect, shall be replaced by matching the best available representative original item in terms of color, dimension, texture, design, material, fabrication details, and installation. The replacement item shall also incorporate improvements, except where specified otherwise, which represent the best standards of fabrication and workmanship, so that even if an existing best example of an element is gouged, pitted, worn, or is missing sections, the new element shall be without such defects and fabricated from new material. Identification and selection of all original elements to be replicated shall be provided and approved by the Architect.

1.03. RELATED WORK SPECIFIED ELSEWHERE

- A. Carefully examine all of the Contract Documents for requirements which effect the work of this Section.
- B. Related Work Specified Elsewhere:
 1. Section 08600 – Wood Window Conservation.
 2. Section 08620– Replacement Wood Window Sash
 3. Section 09900 – Painting

1.04 INTENT

- A. It is the intent of this work to conserve/replace defective window frames and trim along with the repair and installation of related flashings to make the assemblies watertight.

1.05 QUALITY ASSURANCE

- A. The work of this Section shall be accomplished by a specialist firm of established reputation for performance of work of the highest quality having not less than five years of successful experience in the conservation and installation of architectural trim and woodwork including the conservation of deteriorated elements by epoxy consolidation on buildings of similar age and type to the Topsfield Town Hall, or, if newly organized, whose personnel have previously established a similar reputation in the same field, and which is regularly engaged in and maintains a regular force of workman skilled in the work of this section.
- B. Provide sufficient workmen and supervisors who shall be present at all times during execution of this portion of the Work, and who shall be thoroughly familiar with the type of construction involved and the materials and techniques specified.
- C. The Contractor shall take all necessary field measurements prior to fabrication and installation of work and shall assume complete responsibility for accuracy of same.
- E. Quality Standard: Provide work complying with applicable requirements of AWI Architectural Woodwork Quality Standards. Where not otherwise indicated, provide work in accordance with AWI Premium Grade for materials and workmanship.
- F. Softwood Lumber Standards: Comply with PS 20, National Hardwood Lumber Association (NHLA) Rules, Western Wood Products Association (WWPA) rules and/or the applicable grading rules of the respective grading and inspecting agency for the species and product indicated.
- H. Hardwood Lumber Standard: Comply with National Hardwood Lumber Association (NHLA) rules, Western Wood Products Association (WWPA) grading rules, and all applicable rules of the respective grading and inspecting agency for the species and product indicated.
- I. The Topsfield Town Hall is listed in the STATE AND NATIONAL REGISTERS OF HISTORIC PLACES. All work performed shall meet the Secretary of the Interior's Standards for the Treatment of Historic Projects.
- J. Mock-Ups: Prior to the start of production conservation work for the respective items, provide full size mock-ups for each of the items listed in locations designated by the Architect. Mock-ups will be used to measure standards of workmanship, finish, texture, material, and detail, and qualifications of workman with regard to requirements set forth in the Contract Documents. Obtain written acceptance of mock-up from Architect before proceeding with production conservation work. Repeat mock-up procedure as required until accepted by the Architect. Protect and mark accepted mock-ups, retain in undisturbed condition during construction to be used as a standard for acceptance of completed work. Unless otherwise indicated accepted mock-ups may be incorporated into production work.
 - 1. Conservation of window frames and sills – demonstrate in successive stages the following conservation steps:

- a. Removal of paint and sealant from repair area followed by cleaning out of unsound wood from rotted or fissured areas.
- b. Application of epoxy consolidant (i.e., resin without fillers) to fully penetrate adjacent wood.
- c. Application of epoxy filler to defects followed by finish sanding to demonstrate a completed fill repair.
- d. Preparation followed by installation of a wood Dutchman repair.

1.06 SUBMITTALS

- A. Work Plan: Submit work plan detailing schedule proposed to accomplish the work including the order in which specific areas will be worked on and protection of the building from inclement weather.
- B. Shop Drawings:
 1. Drawings at full scale showing exact profiles and dimensions for any molded millwork to be replaced.
- C. Samples:
 1. Provide full length samples of wood stock proposed for frame and trim repairs.
 2. Provide samples of each type of wood, hardware, fasteners, paints, epoxies, fillers, adhesives, and other materials proposed for use. Provide unopened container of each material with manufacturer's original labeling.
 3. Product Data. Submit manufacturers' technical data and Materials Safety Data Sheets for each product specified or proposed for use including recommendations for their application and use.

1.07 DELIVERY, STORAGE AND HANDLING

- A. Deliver materials to site in manufacturer's original and unopened containers and packaging, bearing labels as to type and names of products and manufacturers. Store materials only in designated areas.
- B. Protect materials during storage and construction. Keep containers tightly closed and away from open flames. Protect liquid components from freezing. Comply with manufacturer's recommendations for minimum and maximum temperatures.

1.08 PROJECT CONDITIONS

- A. Maintain optimum environmental conditions to prevent woodwork from shrinkage, swelling and all other forms of damage.
- B. Environmental requirements. Epoxies, adhesives, paints, putty, and sealants may only be applied to surfaces when air, surface and materials temperatures and moisture content are

within the range approved by the manufacturers.

- C. Prevent epoxies, adhesives, paints, and sealants from staining surrounding building materials and objects. Clean up spills and drips immediately.

1.09 GUARANTEE

- A. Provide written warranty ensuring that all replacement and/or conserved wood elements, patching materials, adhesives, painted surfaces, and sealant joints shall remain sound and free of defects, cracks, peeling, deterioration, and discoloration for a period of two (2) years from the date of substantial completion, and that any such defects occurring within the warranty period will be repaired or replaced in a manner conforming with the requirements of these Contract Documents.

PART 2: – PRODUCTS

2.01 FINISH LUMBER

- A. For Dutchman repairs or splices to existing finish trim and blocking elements; match species and grain direction of the existing element.
- B. For replacement elements including blocking, clear Spanish Cedar or Honduras Mahogany.
- B. Moisture content: For all dressed dimensional lumber – 15% maximum at installation and at time of dressing and complying with the dry size requirements of PS20. Mark lumber “ML–15”. Air dried lumber may be used provided it meets these requirements.

2.02 ANCHORAGE AND FASTENING MATERIALS

- A. Use special nails on exposed trim as described below. Do not use dry wall or Phillips head screws where heads will be exposed to view
 - 1. Exposed trim: Hot dipped galvanized or stainless steel 5p finish nails.
- G. Wood Screws: FS FF-S-111
- H. Bolts and Studs: FS FF-B-575
- I. Nuts: FS FF-W-92
- J. Washers: FS FF-W-92
- K. Lag Screws or Lag Bolts: FS FF-B-561. Use only hot dipped galvanized lag screws.

2.06 WOOD PRESERVATIVES AND PAINT

- A. All new finish wood elements shall be back primed prior to installation with the priming paint specified in Section 09900 - Painting.

2.07. WOOD CONSERVATION MATERIALS

- A. Epoxy for consolidation and filling:
 - 1. Liquid Wood for consolidation, and WoodEpoxy for filler, both by Abatron, Inc., 141 Center Drive, Gilberts, IL 60136 (312-426-2200).
 - 2. West System Brand Epoxy; #105 Resin, #205 and #206 Hardeners, and fillers # 403, 406, and 407, all by Gougeon Brothers, Inc., P.O. Box 908, Bay City, MI 48707.
 - 3. Alternate epoxy consolidant: Seep-N-Seal, by Extreme Adhesives, Inc., 63 Epping Road • PO. Box 1445 • Raymond, NH 03077, (603)-895-4028 • 800-888-GLUE • FAX (603) 895-6236 • www.extremeadhesives.com
- B. Wood Adhesive:
 - 1. Titebond type III
 - 2. West System Brand Epoxy with #403 and/or #406 fillers.
- C. Sealant/caulking compounds: paintable one part electrometric sealant complying with FS-TT-S-00230, Class A, Type II (non-sag).
 - 1. Sealant/caulking compounds for wood: Moorlastic 55 Year Urethane Acrylic Sealant 465 by Benjamin Moore Paints, Fed. Spec. TT-S-00230C Type II Class A.
 - 2. Putty Filler: Linseed oil based putty by SarcoSeal, Inc.

2.08 PAINT

- A. Refer to Section 09900 - Painting

PART 3: EXECUTION

3.01 GENERAL

- A. Dismantle wood elements as required to carry out copper flashing repairs and window frame/trim conservation with care to not damage sound elements or components to be retained. All salvageable pieces shall be carefully numbered as to original location to facilitate reinstallation.
- B. Provide replacement elements for missing or severely deteriorated elements and for elements indicated to be replaced. New wood for finish trim shall be sanded smooth so that no machine milling marks are visible, and so that profile of new blends smoothly into profile of existing piece. Match thickness of material being replaced as required to replicate all visible surfaces.
- C. Back prime all new exterior wood components including all clapboards on all concealed surfaces including end grain cuts before re-assembly using primers specified in Section 09900 - Painting.
- D. End grain joints for Dutchman repairs to trim shall be bevel cut wherever possible.

- E. Reassemble dismantled components on building incorporating pieces that have been conserved or replaced with new wood. All exposed modern nail and screw heads shall be countersunk and filled with putty.
- F. Caulk all exposed joints between dissimilar materials and wood to wood joints as required to protect joints from water penetration while still allowing normal movement of separate pieces.
- G. Any questions concerning whether a specific item is to be replaced, treated with epoxy, or filled with putty shall be referred to the Architect for resolution.

3.02 EPOXY CONSERVATION TREATMENTS

- A. Consolidate and fill deeply weathered and fissured wood elements indicated to be conserved with specified epoxy conservation materials and wood Dutchmen according to instructions of manufacturer and “Epoxies for Wood Repair in Historic Buildings” by Morgan Phillips and Dr. Judith Selwyn. Refer to Detail on Drawing Sheet A-9.

1. Remove all paint, existing fillers, and sealant from entire area to be treated with epoxy conservation. Paint removal from pieces that have been removed from the building may be accomplished with heat and/or solvent based chemicals. Only solvent based chemicals are to be used on elements attached to the building.

The use of alkaline chemical strippers is strictly prohibited. Exercise care to avoid gouging wood surface or damaging molding profiles. Note that although the existing paint has not been tested for lead, the Contractor shall assume there are lead containing paint layers on all painted wood and should therefore take all necessary steps to comply with all applicable state and federal regulations and take appropriate measures to protect his work force, the museum staff, and the public during paint removal procedures.

2. Prepare surface by cleaning dirt and debris from all cracks and fissures, and remove all severely rotted, loose, flaking, and deeply punky wood from area to be treated.
3. Fully saturate area with consolidant, allow to soak in about five minutes, and reapply in successive timed applications until wood no longer absorbs additional consolidant. Drill holes to inject consolidant in areas requiring deep consolidation as described in the reference materials. Full saturation of treated area is critical to producing a long lasting repair. If using West system use resin and hardener mixture without fillers as consolidant, or Seep-N-Seal.
4. Use epoxy adhesive to glue in place any loose pieces and slivers, to repair splits, to install wood Dutchmen to fill any voids in excess of 2 cubic inches in volume, and to piece out severely deteriorated or missing ends of elements with new wood. Glue joints for piecing in shall generally be angled and beveled to minimize end grain to end grain joints and to shed water.

5. Fill consolidated voids, cracks, fissures, and cavities with epoxy filler, molding to conform to existing surface as much as possible. Additional applications of filler may be required to adequately fill voids and fissures. If using West system 406 filler may be used for deep fills, but finish fills using 407 filler to produce a sandable surface. Use 407 filler for shallow fills.
 6. Dress and sand dried surface of epoxy so that the existing surface of original wood and its profile is maintained. The epoxy should not form a skin over the entire wood surface.
 7. Use care to make sure epoxy does not adhere separate components to each other, such as at corner joints.
 8. On visible elements take precautions to avoid staining visible surfaces with glue/epoxy. Clean off any glue getting on visible surfaces immediately before it sets using solvents as recommended by the glue/epoxy manufacturer.
- B. Piece out damaged ends and sections in excess of 2 cubic inches with wood Dutchmen secured with epoxy adhesive and dressed or molded to match the profile of the remaining sound sections.

END OF SECTION

SECTION 08520

SECONDARY GLAZING SYSTEMS INSTALLATION

PART 1 - GENERAL

1.01 GENERAL PROVISIONS

- A. PART A and DIVISION 1 of PART B, as listed in the TABLE OF CONTENTS, are hereby made part of this SECTION by reference thereto.
- B. Refer to SECTION 01030, ALTERNATES, for alternates which may affect the work of this SECTION.

1.02 WORK TO BE PERFORMED

- A. Install the following secondary glazing units supplied by the Owner:
 - 1. Aluminum framed single glazed exterior storm window units with operable sash and screens (Type A, B, C, and H windows).
 - 2. Aluminum framed single glazed exterior storm window units with fixed glass (Type D, I, and J windows).
 - 3. Aluminum framed single glazed interior storm panels magnetically attached (Type E, F, G windows).
 - 4. Sealants, tapes, and weatherstripping for joints between of items furnished hereunder.
 - 5. All screws, washers, shims, compressible fillers, and anchorage items, as required for installation of the new secondary glazing and related items.
 - 6. Sealant and compressible back-up beads for perimeter joints between windows, furnished and installed hereunder, and adjacent dissimilar materials.
- B. Provide measurements for transmission to the secondary glazing manufacturer of window openings to be used for fabrication of the storm windows.
- C. Coordinate installation of storm windows with the wood window restoration work.
- D. Perform initial cleaning and polishing of all metal work and glass, furnished hereunder, after installation thereof.

1.03 RELATED WORK

- A. The following related work will be performed under the designated SECTIONS:
 - 1. Restoration wood window frames: SECTION 06250, CARPENTRY AND WOOD CONSERVATION.
 - 2. Restoration and repair of wood sash: SECTION 08600, WOOD WINDOW CONSERVATION.

PART 2 - PRODUCTS

2.01 MANUFACTURE AND TYPES

- A. General: Bidders should base their pricing for installation on the following storm window units to be provided by the Owner:
 - 1. Exterior Storm windows with operable glass and screens: HOL “Historic One Lite” Series storm windows as manufactured by Allied Window, Inc. or Cincinnati, OH.
 - 2. Exterior fixed storm windows, removable for cleaning and maintenance: “Allied One-Lite” as manufactured by Allied Window Inc. of Cincinnati, OH.
 - 3. Interior storm window, magnetically attached: “Magnetic One Lite”, as manufactured by Allied Window Inc. of Cincinnati, OH..

PART 3 - EXECUTION

3.01 FIELD DIMENSIONS AND SCHEDULING

- A. Provide a schedule of window openings, including opening dimensions and arched window head geometry where applicable.
- B. If the storm windows are used in lieu of temporary closures where sash are being restored, coordinate restoration work scheduling with the fabrication and delivery schedule of the storm windows.

3.02 INSTALLATION

- A. The Owner will arrange for the shipping and delivery of the storm windows. Once the material is turned over to the Contractor, he shall be responsible for protection from damage in handling or installation.
- B. Perform the installation work with fully-trained and competent workmen in strict accordance with the manufacturer's printed instructions and the approved shop drawings.
- B. Install storm windows, frames, and related items plumb, level, square, true-to-line, without warp or rack of frames, without springing or distortion, and in correct alignment with surrounding work. Provide proper clearances and anchor to the building structure in a positively safe, secure, and weathertight manner.
- D. Provide for relief of stresses caused by thermal or structural movement in the installation of all components.
- E. Thoroughly seal all joints, to assure a thoroughly weathertight installation.

3.03 INSTALLATION OF PERIMETER SEALANT

- A. Ensure that receiving surfaces are completely dry; that proper temperature will be maintained during the application operations; and that all joint conditions are as recommended by the manufacturer for proper use of the specified materials.
- B. Apply non-staining masking tape to exposed adjacent surfaces on each side of joints designated to receive sealant material, to protect such surfaces from damage, staining, and excess material, during the application operations.
- C. Thoroughly clean all joints free from dust, dirt, and other matter which would otherwise prevent proper adhesion and performance of the sealant material.

- D. Perform installation of sealant material in strict accordance with the recommendations of the manufacturer, and with additional requirements specified herein.
- E. Install specified joint bead back-up into all joints having a depth of 5/8-inch or more, and into joints which have no back-up therein, placing the joint bead in the joint in a manner which will assure a constant sealant depth tolerance specified herein. Set beads into the joints, continuously, slightly stretching the bead during placement to permit compression against the sides of joint, without surface wrinkles or buckles.
- F. Apply sealant material using a hand or power gun, equipped with proper sized nozzle, with sufficient pressure to completely fill the joints in one operation. The depth of sealant material shall be in accordance with the recommendations of the manufacturer, for the specific joint function; but in no case exceeding 1/2-inch in depth, nor less than 1/4-inch, regardless of the joint width. Wherever adjacent surfaces on each side of joint are in the same plane, keep outer edge of sealant material back 1/8-inch from such faces. Tool all exposed sealant material to a uniformly dense and smooth concave surface, using a dry or water-wet tool.
- G. Remove temporary masking tape immediately after tooling, before the sealant material takes initial set.
- H. Clean all surfaces of adjacent work which have been soiled or marked by the work of this SECTION, using only cleaning materials which will not damage the surfaces in any way.

3.04 PROTECTION, CLEANING, AND TOUCH-UP OF FINISHES

- A. Protect prefinished aluminum surfaces from damage during storage, and erection, and from then until date of Substantial Completion of the project.
- B. Thoroughly clean all metal surfaces promptly after installation, exercising care to avoid damage to the shop-applied finish. Remove excess sealant, dirt, handling marks, packing tapes, and other substances.
- C. After installation, touch up all scratches, abrasions, and other defects in the prefinished surfaces, using material of the same color, and degree of gloss, as that used for the shop-applied finish system.
- D. Provide protective treatment and other precautions through the remainder of the construction period to ensure that the entire work of this SECTION will be without damage or deterioration (other than normal weathering) until final completion of the project.

3.05 DEFECTS AND BREAKAGE OF GLASS

- A. Identify to the Architect for resolution any storm window glass that is broken prior to being handed over to this Contractor.
- B. Replace all glass which is broken, cracked or chipped during handling and installation by this Contractor. Once glazing installations have been accepted by the Architect, the Contractor shall thereupon become responsible for damage to glass until final completion of the project.

3.06 CLEANING

- A. Remove all labels and other markings from glass surfaces promptly after installation, exercising care to avoid damage to the same. Remove excess sealing compounds, dirt, and other contaminants, from the various surfaces.
- B. Leave all exposed edges of sealant and gaskets smooth, uniform in line, and with edges neatly struck.
- C. Final cleaning of glass at time of Substantial Completion will be performed by the Contractor, under SECTION 01500, CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS.

END OF SECTION

SECTION 08600

WOOD WINDOW CONSERVATION

PART I-GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specifications Sections, apply to the work of this section.
- B. The extent of work is shown on the Drawings and Window Schedule and described herein.
- C. Allowances: Refer to Section 01020 - Allowances, which apply to the work of this section.
- D. Unit Prices: Refer to Section 01025 - Unit Prices which applies to the work of this Section.

1.02 DESCRIPTION OF THE WORK

- A. Provide all plant, materials, labor and equipment necessary and/or required for the complete execution of the work of this Section including, but not limited to:
 - 1. Complete repair and restoration of all wood window frames and sash as listed on the Window Schedule and elevations:
 - a. Removal of all indicated double hung and fixed sash from their respective openings with their respective interior stops, transporting sash to off-site work area, and the provision of temporary protective closure of all sash openings. Temporarily reinstall stops after sash have been removed.
 - b. Removal of all exterior paint finishes down to bare wood substrate from designated sash in off site work area, except for specific areas of paint designated by the Architect to be retained as an in place record of past paint treatments.
 - c. Removal of all glazing compound and glass from all sash removed from building that are designated for 100% reglazing followed by reinstallation of all existing glass lites in their original position with complete new glazing.
 - d. Removal of all defective glazing compound from all sash designated for partial reglazing followed by new glazing to replace the defective glazing.
 - e. At all frames and sills scheduled for on-site work conservation work, in place preparation of all exterior painted surfaces affected by the repair work for spot repainting by conventional cleaning, scraping and hand sanding of loose or defective paint. At specific areas to be treated with epoxy removal all paint down to bare wood.
 - f. Removal of all hardware and window furnishings as required to remove the sash from their frames. Window shades, blinds and interior shutters together with their hardware are to be stored and reinstalled when the completed sash are reinstalled.
 - g. Woodwork conservation repairs including epoxy consolidation and epoxy filling, wood dutchmen, and replacement rails to restore severely weathered, deteriorated, or otherwise damaged wood components of window sash frames and sills. Refer to Section 06250 -Woodwork Conservation.
 - h. At sash designated to be replaced, fabricate new sash matching all dimensions and profiles of indicated original sash and glaze with restoration glass.

- i. Prime and finish painting on site of all exterior window frames, sash and any interior stops and trim not removed from openings, and other indicated items shall be carried out under the work of this section in accordance with the requirements of Section 09900 -Painting.
 - j. Prime and finish painting off-site of all sash removed from the openings shall be carried out under the work of this section in accordance with the requirements of Section 09900 -Painting.
 - k. Reinstallation of all window sash removed from their frames complete with all hardware, weights and ropes, and wood stops as required to be weathertight and secure sash in place. Upper sash are to be fixed in place by wood blocks in their jambs.
2. Clean up at the completion of the work to include cleaning all window glass.
 3. All woodwork repairs to sash and frames shall conform to all the requirements of Section 06250 -WOODWORK CONSERVATION.
 4. All work affecting existing painted surfaces shall conform to the requirements of Section 09900 -PAINTING.
 5. Allowances: Refer to Section 01020 -ALLOWANCES, which apply to the work of this section.
ALLOWANCE #1. (not used at this time).
 6. Unit Prices: Refer to Section 01025 -UNIT PRICES, which applies to the work of this Section.
UNIT PRICE #1. (not used at this time).

1.03 RELATED WORK SPECIFIED ELSEWHERE

- A. Carefully examine all of the Contract Documents for requirements which effect the Work of this Section.
- B. Related Work Specified Elsewhere:
 - 1 Section 06250 -Woodwork Conservation
 - 2 Section 09900 -Painting

1.04 INTENT

- A. It is the intent of this work to restore the window sash and frames to sound, stable and weather tight condition while preserving the maximum amount of historic fabric possible.

1.05 QUALITY ASSURANCE

- A. The work of this Section shall be accomplished by a “specialist” firm of established reputation for performance of work of the highest quality having not less than five years of successful experience in the repair and restoration of wood windows and woodwork conservation with epoxies on buildings of similar age; and type to the Topsfield Town Hall or, if newly organized, whose personnel have previously established a similar reputation in the same field, and which is regularly engaged in and maintains a regular force of workman skilled in the work of this section.
- B. Provide sufficient workmen and supervisors who shall be present at all times during execution of this portion of the Work, and who shall be thoroughly familiar with the type of

construction involved and the materials and techniques specified.

- C. The Contractor shall take all necessary field measurements prior to fabrication and installation of work and shall assume complete responsibility for accuracy of same.
- D. The Topsfield Town Hall is listed in the State Register of Historic Places; All work performed must comply with the Secretary of the Interior's Standards for the Treatment of Historic Properties.

1.06 SUBMITTALS

- A. Work Plan: Submit work plan detailing schedule proposed to accomplish the work including the order in which specific rooms and windows will be worked on, protection of the openings while the sash are removed for both security and inclement weather, measures to protect the sash and historic glass during the execution of the work and identification systems to be used to insure that all sash, interior stops, individual glass panes, and related elements are reinstalled in their existing locations, and coordination with the work of other sections of this Contract.
- B. Field Survey & Window Schedule: The Window Schedule included with the Drawings is provided to indicate the general intent and scope of work required under this Contract, but is not guaranteed to be definitive as to the exact locations and full extent of all work required for the complete restoration of all wood windows, materials, components, elements and finishes under this Contract. Prior to commencing with the work, the Contractor shall carry out and complete his own "Field Survey & Window Schedule" of all wood windows and related materials, components, elements and finishes scheduled for work throughout the building in accordance with the requirements of this section, and submit the Field Survey & Window Schedule to the Architect for review and approval. Refer to Submittals requirements specified in Section 01000 -General Requirements.
 - 1. The Field Survey & Window Schedule shall be updated and resubmitted to the Architect to include new conditions information discovered after removal of window sash from the openings and after preparation work is completed (paint and glazing removal).
- C. Samples
 - 1. Provide 2 samples of each type of replacement glass proposed for use.
 - 2. Provide samples of each type of wood, hardware, fasteners, putty, paints, epoxies, adhesives, and other materials proposed for use. Provide unopened container of each material with manufacturer's original labeling.
- D. Product Data: Submit manufacturers' technical data and Materials Safety Data Sheets for each product specified or proposed for use including recommendations for their application and use.

1.07. FIELD CONSTRUCTED MOCK-UPS

- A. Prior to the start of production work for the respective items, provide full size mock-ups for each of the items listed in locations designated by the Architect. Mock-ups will be used to measure standards of workmanship, finish, texture, material, and detail, and qualifications of workman with regard to requirements set forth in the Contract Documents. Obtain written acceptance of Mock-up from Architect before proceeding with production work. Repeat mock-up procedure as required until accepted by Architect. Protect and mark accepted mock-ups, retain in undisturbed condition during construction to be used as a standard for

acceptance of completed work. Unless otherwise indicated accepted mock-ups may be incorporated into production work. Note that individual mock-ups may be phased to the normal order of performing the work rather than at the beginning of the entire Contract. However, the individual mock-ups must be presented for review prior to starting production work for the particular stage of work to be demonstrated. Refer to Section 06250 -Woodwork Conservation for additional mock-up requirements that apply to the work of this section.

1. Complete off-site conservation of a single sash unit demonstrating in successive stages:
 - a. Removal of painted/ finishes, all glazing putty and glass, and preparation of rabbets to receive new putty.
 - b. Installation of glass and glazing putty.
 - c. Execution of typical woodwork conservation repairs.
 - i. Epoxy consolidation and filling of weather checked surface.
 - ii Dutchman repair of corner joint.
 - d. Execution of finish painting.
 - e. Reinstallation of restored sash and stops in window opening including typical associated hardware.

1.08. DELIVERY, STORAGE AND HANDLING

- A. Deliver materials to site in manufacturer's original and unopened containers and packaging, bearing labels as to type and names of products and manufacturers. Store materials only in designated areas.
- B. Protect materials during storage and construction. Keep containers tightly closed and away from open flames. Protect liquid components from freezing. Keep all products dry and protected from rain.
- C. Comply with manufacturer's recommendations for minimum and maximum temperatures.

1.09 PROJECT CONDITIONS

- A. Environmental requirements. Do not remove or install sash during rainy or windy weather conditions.
- B. Do not apply paint, glazing compound or epoxy materials to damp substrates, or when ambient temperature of substrate materials are below 40 degrees F or as otherwise specified or recommended by the manufactures printed instructions.
- C. Protect openings while the sash are removed for both security and weather.
- D. Protect occupants of building and building interior finishes that are N.I.C. during all work operations for the duration of the project.

1.10 GUARANTEE

- A. Provide written warranty ensuring that all sash and window frame repairs shall remain sound, and free and defects for a period of two (2) years from the date of substantial completion, and that any such defects occurring within the warranty period will be repaired or replaced in a manner conforming with the requirements of these Contract Documents.

PART 2· PRODUCTS

2.01 GENERAL

- A. All wood conservation repair materials including epoxies, wood, adhesives, and fasteners shall be as specified in Section 06250 -Woodwork Conservation.
- B. Putty filler for nail holes and small cracks and fissures less than 1/16” wide: Commercial grade linseed oil based putty.

2.02 GLAZING MATERIALS

- A. Glazing Putty: Linseed Oil Putty, F.5. IT-G-410E(1). Sarco Multi-Glaze Type M Putty by SarcoSeal
- B. Glazing Points: Standard manufacture, copper or zinc coated metal in size suitable for the installation. Points shall not protrude through the putty.
- C. Primer for Putty: Alkyd oil based primer by same manufacturer as finish paint, SUPRIME #8 by Pratt & Lambert , Trouble Shooter by California Paints, or equal; or Boiled Linseed Oil.
- D. Glass: Salvage glass of cylinder type similar in visual character to existing cylinder glass in sash; Restoration Glass, “Light” by Blenko Glass, Milton, NY, or Bendheim Glass Company, Passsaic, NJ.

2.03 HARDWARE

- A. Sash locks: Spring sash lock from Architectural Resource Center or equal, black finish.
- B. Shade, Venetian blind hardware, and other misc. hardware: Remove as required to carry out the scope of repairs, and reinstall on completion of the work. At offices temporarily reinstall immediately after removing sash.
- D. Fasteners:
 - 1 Match original fasteners in type, size and material unless indicated otherwise on drawings or schedule. In general fasteners are to be brass or bronze. Stop bead adjusters- Crown City 3341 or equal.
 - 2 The use of drywall screws, galvanized deck screws, and similar modern fasteners is prohibited.
- E. Sash Cord: Chain of size and weight to match typical existing chains at units where chains are found to need replacement. At upper sash to be fixed in place, chains and weights are to be left connected to the sash.
- F. Sash Weights: Use existing weights where schedule indicates sash is to be operable. All other weights are to be left in place in the pocket as is.
- G. Weather Stripping: Jambs – Bronze “V (cushion Bronze): type weather stripping by Accurate Weatherstrip Co , Universal Weatherstripping, or equal. Meeting rails YYY; Sills- V type weatherstripping (not yet selected).

2.04 WOOD

- A. Replacement Sash: Clear straight grained Spanish Cedar or Honduras mahogany.
- B. Wood Dutchman and replacement rails: Match species and grain of wood in sash being

repaired (probably Eastern White Pine), using only heartwood.

PART 3 -EXECUTION

3.01 INSPECTION AND ACCEPTANCE

- A. Examine all surfaces and contiguous elements to receive the work of this section and correct, as part of the Work of this Contract, any defects affecting installation. Commencement of work will be construed as complete acceptance of surfaces and contiguous elements.
- B. The Contractor is advised that all existing painted surfaces should be assumed to contain lead paint, and trace amounts of asbestos have been identified in glazing putty. Any dust generated during removal of the sash must be contained and promptly removed, and the Contractor is responsible for compliance with all applicable environmental regulations both onsite and in his workshop.

3.02 REFERENCE STANDARDS

- A. For window conservation and glazing: Preservation Briefs #9, "The Repair of Historic Wooden Windows", by John H. Myers, The National Park Service, 1981

3.03 WINDOW REPAIR SCHEDULE

- A. The Window Repair Schedule and Drawings A-1 to A-9 are to be used in conjunction with 3.05 and 3.06 below, which describe the work designated by the terms used in the Schedule.

3.04 WOOD CONSERVATION

- A. All work indicated by the terms "conserve", "conservation repairs", "epoxy consolidation", "epoxy filling", "epoxy" or "woodwork conservation", or "Dutchman" is to conform to all the requirements of Section 06250 -Wood Conservation & Repairs.

3.05 WINDOW FRAME REPAIRS

- A. Repair wood frames including sills, exterior casings and exterior trim according to the following categories. Category numbers for the exterior frames of each window are designated on the Window Repair Schedule and elevation drawings.

Category 1: Good Condition

Typical Existing Condition: Paint surfaces may be moderately worn but wood generally remains firm and sound. Sills may have minor fine weather checking but remain firm.

- a. Paint: All surfaces are to be left as is.

Category 2: Fair Condition

Typical Existing Condition: Sills where there are widespread areas of fissures and weather checks; exterior casings that have splits and weather checking in the lower few inches and/or short loose or dislodged sections of moldings.

- a. Preparation of painted surfaces for epoxy and/or Dutchman repairs where paint remains: Remove paint to bare wood within 2 inches of all sides of defects and prepare surface for epoxy repair. Paint in areas that will not be affected by the conservation work (i.e., most of the window frames and sills) will not require paint preparation and repainting. Following application of epoxy conservation, sand the repair area to level the epoxy filling and provide smooth surface, and feather edges of remaining paint adjacent to repair area to facilitate spot repainting. Utilize scrapers and sanding blocks custom fabricated as required to conform to existing molding

profiles to avoid damaging curved moldings and crisp edges.

b. Repair of moderate defects to wood sills and exterior casings: Repair moderate defects with epoxy. Woodwork having areas of fissures and splits shall be repaired in place using epoxy consolidants and epoxy fillers to restore unit to sound and smooth profile (Epoxy filler is to be used only to fill voids and cracks, and is not to be built up over surface to restore missing original profiles -refer to Section 06250 for requirements of epoxy conservation work).

c. Painting: Apply paint to repaired area to match existing adjacent colors and surface textures as per Section 09900 -Painting.

Category 3 -Poor Condition (Frames in this condition are not in this Contract and will be treated others prior to the execution of this contract)

Typical Existing Condition: Lower portions of window frames having turned bases and molded pilasters above the front entry porch have substantial areas of rot and splits along with defects in the copper sill flashings.

a. All operations under category 2.

b. Bases of colonettes at windows 23, 42, & 43: Replace turned bases with matching new bases. At window 23 remove internal blocking as required repair copper sill flashing, and install wood Dutchmen to replace rotted sections of the base of the jamb for window 23. Refer to Drawing Details XX and YY for specific repair details. Refer to Section 06250 for requirements regarding wood Dutchman and epoxy conservation work.

c. Bottoms of molded pilasters at windows 22 and 24: Provide extensive epoxy conservation and/or wood Dutchman at all elements that are, extensively fissured and weathered, rotted or otherwise deteriorated. Refer to Section 06250 for requirements regarding wood Dutchman and epoxy conservation work.

3.06 WINDOW SASH, WEATHER STRIPPING, AND INTERIOR STOP REPAIRS

A. Repair sash, including rails, stiles and muntins according to the following categories. Category numbers for the sash of each window are designated on the Window Repair Schedule and elevation drawings.

Category 1 - Good Condition

Typical Existing Condition: Double hung or fixed sash that exhibit a range of paint and glazing conditions from sound to moderate weathering of paint and limited areas of cracked, missing, or otherwise defective glazing compound, but with all wood surfaces remaining sound with only minimal fine weather checking except for typical end grain defects at the exposed bases of the lower sash stiles. Most first floor sash are included in this category.

a. Sash removal: Remove upper and lower sash from opening and transport to shop to execute work. Provide temporary weatherproof closure for opening where storm windows are not present.

b. Interior stops - Removal: Remove jamb stops as required to remove sash, install temporary closure at opening where needed, and to reinstall conserved sash. Use care in removal to not break, crack or otherwise damage the stops. Temporarily reinstall

- stops as required to secure temporary closure of opening or to store them in place and provide functional window blinds.
- c. Interior stops - Reinstallation: All stops are to be reused in the opening they were removed from. Replacement stops matching the existing in detail and finish are to be provided in any instances where the stops are damaged in removal, or where indicated on the schedule. Reuse existing fasteners and holes wherever feasible. Where not feasible review fastener options with Architect. Position stops to firmly hold sash in place. Fill any obsolete fastener holes in stops as per paragraphs d.ii and iii below.
 - d. Shades and blind along with their hardware: Remove as required to remove sash from openings; in office spaces, reinstall after sash removal. In other spaces store for reinstallation. Fill all obsolete holes from fasteners, etc. (including existing holes from hardware that is no longer present) with putty filler colored to match adjacent wood surface.
 - e. Sash locks: remove from sash; discard modern clamshell locks; remove all early locks and store for possible reuse.
 - f. Weather Stripping: remove all bronze and vinyl weather stripping from jambs and sash. Replace with Cushion bronze weather stripping in jambs, YY at meeting rails, and ZZ at bottom rails of lower sash.
 - g. Paint preparation:
 - i. Sand and hand scrape to remove all loose or otherwise deteriorated paint on all exterior portions of sash. Utilize scrapers and sanding blocks custom fabricated as required to conform to existing molding profiles to avoid damaging curved moldings and crisp edges.
 - ii. Repainting of existing interior stops is to be limited to touch up of defects at fasteners to match existing paint color and surface. New stops are to be painted to match adjacent existing woodwork.
 - iii. Preservation of historic paint: At locations to be designated by Architect leave area of existing interior paint in place undisturbed. Such areas will usually be 12" long by the width of a rail or stile.
 - h. Repair of minor defects:
 - i. General: Woodwork having only shallow surface roughness with all fissures less than 1/16 inches wide. Hand sand to smooth and remove loose or friable wood and roughness, prime, and fill shallow fissures with putty filler after priming. Coordinate window repair with paint priming operations.
 - ii. Protruding Pins: Slightly protruding pins may be sanded or cut flush to the sash surface as required to facilitate sanding. Pins protruding over 1/8" should be driven home or if very loose replaced with new pins prior to being cut flush to the sash surface.
 - i. Repair end grain defects in base of stiles at sash: Carry out conservation repairs to consolidate and fill all checking in the exposed end grain at the bottom of the lower sash stiles with epoxy, including voids where the end grain of the stiles is missing over rail tenons as indicated on drawing details. End grain conservation repairs are not indicated on the Window Schedule.
 - j. Glass and Glazing:

- i. Glazing: Spot remove all defective glazing using extreme care not to break glass.
- ii. Broken Glass: Replace all broken or cracked panes of cylinder or modem glass with either salvage or reproduction cylinder glass similar in character to the remaining cylinder glass in the specific sash.
- iv. Preparation for putty: All joints, spaces, and surfaces to receive glazing compound shall be thoroughly dry and free from dust, oil and other foreign materials before priming and glazing. Apply priming paint or linseed oil sealer to all bare wood surfaces prior to application of glazing materials. Allow 24 hours drying time prior to installing new glazing compound. Do not use a shellac based primer sealer. Do no glazing when ambient temperatures are less than 40 F. All glazing work shall be performed in accordance with the standards of the “FGMA Glazing Manual,” and the specific printed specifications, instructions and recommendations of each of the various manufacturers.
- v. Installation where glass has been removed: Bed glass panes in thin layer of glazing compound, matching specific position and orientation of each pane prior to removal. Secure with glazier’s points, making sure that points will not protrude through finished glazing compound. Install face glazing compound and tool to form smooth, neat and consistent surface.
- vi. Installation where glass remains in place: Install face glazing compound wherever existing is missing or has been removed, and tool to form smooth, neat and consistent surface with comers neatly struck.
- k. Weights and Chains at all sash designated to be operable: Repair all weights and chains as required to restore smooth, functional operation of lower sash at windows indicated to be operational on the Window Schedule. Adjust or change weights as required to properly balance weight of sash. Provide new chains only where existing is broken or missing.
- l. Parting Beads: Parting beads at “Category 1 windows are to be left as is.
- m. Painting: Prepare wood and glazing surfaces for painting. Lightly sand all wood, removing weathered surface material. Clean off all dust and dirt. Allow glazing putty to fully cure prior to applying paint. Apply paint as per Section 09900. At all exterior glazing lap paint approximately 1/16” onto surface of glass to provide tight, continuous seal between glass and glazing compound.
- n. Cleaning: Clean glass surfaces promptly after installation, exercising care to avoid damage to glass. Remove excess glazing compound, paint, dirt, and other contaminants.
- o. Storm windows: all storm windows are to remain as is.

Category 2 -Fair Condition

Typical Existing Condition: Sash that exhibit substantial weathering and/or checking of some exterior wood surfaces, and/or corner joints and/or muntin/rail joints out of alignment less than 1/8”.

- a. Perform all work included under Category 1 above. as applicable.
- b. Glass and Glazing putty: Remove all glazing and bedding putty to bare wood substrate using extreme care not to break glass. Remove glass from sash, label as to positions and orientation in sash, and store for reinstallation.

- c. Exterior Paint: Remove all exterior paint down to wood substrate from all exterior surfaces of sash that have been removed from the building. Hand sand exposed wood to remove any roughness resulting from paint removal process, and to provide smooth surface on severely weathered exterior surfaces. Utilize scrapers and sanding blocks custom fabricated as required to conform to existing molding profiles to avoid damaging curved moldings and crisp edges.
- d. Interior paint: Sand and hand scrape to remove all loose or otherwise deteriorated paint on all interior portions of sash. Fully sound paint is to be left as is other than cleaning light sanding to remove surface dirt. Utilize scrapers and sanding blocks custom fabricated as required to conform to existing molding profiles to avoid damaging curved moldings and crisp edges. Apply interior paint approximately 1/16" onto surface of glass to provide tight, continuous seal between glass and glazing compound. New paint is to match the existing color of each sash.
- e. Repair of moderate defects: Exterior wood having areas of small fissures and weather checking and/or small areas of rot shall be conserved using epoxy consolidants and epoxy fillers to restore unit to sound and smooth surface.
- f. Joints having gaps: Re-align joint to be as tight as possible and repin as required.

Category 3 -Poor Condition

Typical Existing Condition: Sash with extensive deep weather checking, substantial separation and/or rot at corner joints, and/or broken muntins.

- a. Perform all work included under Categories 1 & 2.
- b. Provide additional repairs to replace areas of separated corner joints, and/or rot with new wood dutchmen repairs and/or new replacement rails and/or muntins.
 - i. Separated Corner joints: Corner joint(s) and/or muntin/rail joints more than 1/8 inch out of alignment, or having limited broken, voids or moderately rotted elements, shall be repaired by disassembly of joint and regluing and pinning and epoxy/small dutchman repairs including rebuilding deteriorated tenons with wood Dutchman as required. Where damage is extensive the defective element may be replaced with a matching element (i.e., usually a rail or muntin).

Category 4 – Extremely poor condition

Typical Existing Condition: Sash with extensive widespread defects or modern replacement sash that do not match original sash.

- a. Perform all work included under Categories 1 & 2 as required to remove existing sash and install new replacement.
- b. Provide replacement sash sized to fit specific openings indicated on the Schedule. Joinery details and profiles of sash shall exactly match all details of historic sash designated by the Architect rather than the units they are scheduled to replace.
- c. Carpentry and painting requirements for new sash shall conform to all the requirements of Section 06200 -Finish Carpentry, and Section 09900 -Painting, respectively.

3.07 ACCEPTANCE AND PATCHING

- A. On completion of work, all equipment and debris resulting from the work of this section shall be removed from the premises.
- B. Leave work clean, whole, and sound ready for additional finish or sealing as specified and/or

as indicated.

- C. Clean all glass, window sash, casings, trim and accessories free of dirt and other foreign materials after completion of installation.

END OF SECTION

SECTION 08520

SECONDARY GLAZING SYSTEMS INSTALLATION

PART 1 - GENERAL

1.01 GENERAL PROVISIONS

- A. PART A and DIVISION 1 of PART B, as listed in the TABLE OF CONTENTS, are hereby made part of this SECTION by reference thereto.
- B. Refer to SECTION 01030, ALTERNATES, for alternates which may affect the work of this SECTION.

1.02 WORK TO BE PERFORMED

- A. Install the following secondary glazing units supplied by the Owner:
 - 1. Aluminum framed single glazed exterior storm window units with operable sash and screens (Type A, B, C, and H windows).
 - 2. Aluminum framed single glazed exterior storm window units with fixed glass (Type D, I, and J windows).
 - 3. Aluminum framed single glazed interior storm panels magnetically attached (Type E, F, G windows).
 - 4. Sealants, tapes, and weatherstripping for joints between of items furnished hereunder.
 - 5. All screws, washers, shims, compressible fillers, and anchorage items, as required for installation of the new secondary glazing and related items.
 - 6. Sealant and compressible back-up beads for perimeter joints between windows, furnished and installed hereunder, and adjacent dissimilar materials.
- B. Provide measurements for transmission to the secondary glazing manufacturer of window openings to be used for fabrication of the storm windows.
- C. Coordinate installation of storm windows with the wood window restoration work.
- D. Perform initial cleaning and polishing of all metal work and glass, furnished hereunder, after installation thereof.

1.03 RELATED WORK

- A. The following related work will be performed under the designated SECTIONS:
 - 1. Restoration wood window frames: SECTION 06250, CARPENTRY AND WOOD CONSERVATION.
 - 2. Restoration and repair of wood sash: SECTION 08600, WOOD WINDOW CONSERVATION.

PART 2 - PRODUCTS

2.01 MANUFACTURE AND TYPES

- A. General: Bidders should base their pricing for installation on the following storm window units to be provided by the Owner:
 - 1. Exterior Storm windows with operable glass and screens: HOL “Historic One Lite” Series storm windows as manufactured by Allied Window, Inc. or Cincinnati, OH.
 - 2. Exterior fixed storm windows, removable for cleaning and maintenance: “Allied One-Lite” as manufactured by Allied Window Inc. of Cincinnati, OH.
 - 3. Interior storm window, magnetically attached: “Magnetic One Lite”, as manufactured by Allied Window Inc. of Cincinnati, OH..

PART 3 - EXECUTION

3.01 FIELD DIMENSIONS AND SCHEDULING

- A. Provide a schedule of window openings, including opening dimensions and arched window head geometry where applicable.
- B. If the storm windows are used in lieu of temporary closures where sash are being restored, coordinate restoration work scheduling with the fabrication and delivery schedule of the storm windows.

3.02 INSTALLATION

- A. The Owner will arrange for the shipping and delivery of the storm windows. Once the material is turned over to the Contractor, he shall be responsible for protection from damage in handling or installation.
- B. Perform the installation work with fully-trained and competent workmen in strict accordance with the manufacturer's printed instructions and the approved shop drawings.
- B. Install storm windows, frames, and related items plumb, level, square, true-to-line, without warp or rack of frames, without springing or distortion, and in correct alignment with surrounding work. Provide proper clearances and anchor to the building structure in a positively safe, secure, and weathertight manner.
- D. Provide for relief of stresses caused by thermal or structural movement in the installation of all components.
- E. Thoroughly seal all joints, to assure a thoroughly weathertight installation.

3.03 INSTALLATION OF PERIMETER SEALANT

- A. Ensure that receiving surfaces are completely dry; that proper temperature will be maintained during the application operations; and that all joint conditions are as recommended by the manufacturer for proper use of the specified materials.
- B. Apply non-staining masking tape to exposed adjacent surfaces on each side of joints designated to receive sealant material, to protect such surfaces from damage, staining, and excess material, during the application operations.
- C. Thoroughly clean all joints free from dust, dirt, and other matter which would otherwise prevent proper adhesion and performance of the sealant material.

- D. Perform installation of sealant material in strict accordance with the recommendations of the manufacturer, and with additional requirements specified herein.
- E. Install specified joint bead back-up into all joints having a depth of 5/8-inch or more, and into joints which have no back-up therein, placing the joint bead in the joint in a manner which will assure a constant sealant depth tolerance specified herein. Set beads into the joints, continuously, slightly stretching the bead during placement to permit compression against the sides of joint, without surface wrinkles or buckles.
- F. Apply sealant material using a hand or power gun, equipped with proper sized nozzle, with sufficient pressure to completely fill the joints in one operation. The depth of sealant material shall be in accordance with the recommendations of the manufacturer, for the specific joint function; but in no case exceeding 1/2-inch in depth, nor less than 1/4-inch, regardless of the joint width. Wherever adjacent surfaces on each side of joint are in the same plane, keep outer edge of sealant material back 1/8-inch from such faces. Tool all exposed sealant material to a uniformly dense and smooth concave surface, using a dry or water-wet tool.
- G. Remove temporary masking tape immediately after tooling, before the sealant material takes initial set.
- H. Clean all surfaces of adjacent work which have been soiled or marked by the work of this SECTION, using only cleaning materials which will not damage the surfaces in any way.

3.04 PROTECTION, CLEANING, AND TOUCH-UP OF FINISHES

- A. Protect prefinished aluminum surfaces from damage during storage, and erection, and from then until date of Substantial Completion of the project.
- B. Thoroughly clean all metal surfaces promptly after installation, exercising care to avoid damage to the shop-applied finish. Remove excess sealant, dirt, handling marks, packing tapes, and other substances.
- C. After installation, touch up all scratches, abrasions, and other defects in the prefinished surfaces, using material of the same color, and degree of gloss, as that used for the shop-applied finish system.
- D. Provide protective treatment and other precautions through the remainder of the construction period to ensure that the entire work of this SECTION will be without damage or deterioration (other than normal weathering) until final completion of the project.

3.05 DEFECTS AND BREAKAGE OF GLASS

- A. Identify to the Architect for resolution any storm window glass that is broken prior to being handed over to this Contractor.
- B. Replace all glass which is broken, cracked or chipped during handling and installation by this Contractor. Once glazing installations have been accepted by the Architect, the Contractor shall thereupon become responsible for damage to glass until final completion of the project.

3.06 CLEANING

- A. Remove all labels and other markings from glass surfaces promptly after installation, exercising care to avoid damage to the same. Remove excess sealing compounds, dirt, and other contaminants, from the various surfaces.
- B. Leave all exposed edges of sealant and gaskets smooth, uniform in line, and with edges neatly struck.
- C. Final cleaning of glass at time of Substantial Completion will be performed by the Contractor, under SECTION 01500, CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS.

END OF SECTION

SECTION 09900

PAINTING

PART 1 – GENERAL

1.01 RELATED DOCUMENTS

- A. All of the Contract Documents, including Drawings, General and Supplementary Conditions and Division 1 General Requirements apply to the work of this section.
- B. The extent of work is shown on the drawings, photographs, and keynote schedules.
- C. Carefully examine all of the Contract Documents for requirements which effect the work of this section. The exact scope of work of this section cannot be determined without a thorough review of all specification sections and other Contract Documents.

1.02 DESCRIPTIONS OF THE WORK

- A. Provide all plant, materials, labor and equipment necessary and/or required for the complete execution of the work of this Section including, but not limited to:
 - 1. Painting indicated exposed surfaces of exterior woodwork and misc. painted metals including clapboards, trim, window frames and sash to include:
 - a. Surface preparation to remove all loose, flaking, or otherwise defective old paint, and mildew, and to sand weathered or friable surfaces from woodwork that have been exposed to the weather.
 - b. Application of priming paint to all surfaces including existing sound paint that remains after surface preparation.
 - c. Caulking of minor cracks, fissures, and surface defects with putty or sealant.
 - d. Finish painting with two (2) coats; having three distinct colors, red to match existing for the sash, and blue and gray to match existing for window frames and trim:

Specific shades to be provided by Architect prior to the start of finish painting.
 - 2. Painting interior window sash and trim per the interior finishes schedule to include:
 - a. Surface preparation to remove all loose, flaking, or otherwise defective old paint, and mildew, and to sand weathered or friable surfaces from woodwork that have been affected by condensation.
 - b. Application of priming paint to all bare wood surfaces.
 - c. Caulking of minor cracks, fissures, and surface defects with putty or sealant.
 - d. Finish painting with two (2) coat; colors to match existing paint color in each room.
- B. Definitions
 - 1. The term "paint", as used herein, means all coating systems materials including primers, emulsions, epoxy, enamels, sealers, fillers, and other applied materials whether used as prime, intermediate, or finish coats.

1.03. RELATED WORK SPECIFIED ELSEWHERE

- A. Wood conservation and repair: Section 06250 – Carpentry and Woodwork Conservation

B. Wood window repair and restoration: Section 08600--Wood Window Conservation

1.04 INTENT

- A. It is the intent of this work to protect all exposed exterior wood surfaces from the elements and interior wood surfaces from condensation with a sound, lasting, visually attractive coating of paint.

1.05 QUALITY ASSURANCE

- A. The work of this Section shall be accomplished by a specialist firm of established reputation for performance of work of the highest quality having not less than five years of successful experience in the preparation and painting of clapboards, architectural trim, window sash, on buildings of similar age and type to the Topsfield Town Hall, or, if newly organized, whose personnel have previously established a similar reputation in the same field, and which is regularly engaged in and maintains a regular force of workman skilled in the work of this section.
- B. Provide sufficient workmen and supervisors who shall be present at all times during execution of this portion of the Work, and who shall be thoroughly familiar with the type of construction involved and the materials and techniques specified.
- C. The Contractor shall take all necessary field measurements prior to fabrication and installation of work and shall assume complete responsibility for accuracy of same.
- A. Single Source Responsibility: Provide primers and other undercoat paint produced by same manufacturer as finish coats. Use only thinners approved by paint manufacturer, and use only within recommended limits.
- D. The Topsfield Town Hall is listed in the STATE AND NATIONAL REGISTERS OF HISTORIC PLACES. All work performed shall meet the Secretary of the Interior's Standards for the Treatment of Historic Projects.

1.06 TESTS

- A. Testing Agency: The Owner may employ an independent testing agency to perform tests, evaluations and certifications. Cooperate and permit samples of materials to be taken as they are used. The Contractor shall pay all costs of tests which show failure to comply with Contract Documents.

1.07 SUBMITTALS

- A. Work Plan
1. Submit work plan detailing schedule proposed to accomplish the work including the order in which specific elevations, interior rooms, and work items will be worked on, coordination with Carpentry and Woodwork Conservation; protection of entry ways and paths used by the Owner, and the general public using the facility; and protection of property within the building from inclement weather, dust and construction debris, and theft and vandalism. Designate key personnel to coordinate work and schedule with the Owner.
- B. Submit list of all materials proposed for use, indicating:
1. Manufacturer.
 2. Product name.
 3. Surface for which proposed.
- C. Samples.

1. Submit samples of paint for review of color and texture only. Compliance with all other requirements is the exclusive responsibility of the Contractor. Provide a listing of the material and application for each coat of each finish sample.
 - a. Provide two (2) samples of each color proposed for use on 12" x 12" hardboard cards prior to installation; resubmit until finish is accepted by Architect.
2. Provide samples of each type of paints, glazing putty, fillers, sealants, and other materials proposed for use. Provide unopened container of each material with manufacturer's original labeling.
3. Product Data. Submit manufacturers' technical data and Materials safety Data Sheets for each product specified or proposed for use including recommendations for their application and use.

1.08 DELIVERY, STORAGE AND HANDLING

- A. Deliver materials to site in manufacturer's original and unopened containers and packaging, bearing labels as to type and names of products and manufacturers. Store materials only in designated areas and in strict compliance with manufacturers' instructions and recommendations. Protect from freezing and damage.
- B. Avoid the possibility of fire by removing flammable materials, solvents and spirits from the project site or by storing materials in UL approved fire-resistive cabinets. Keep work area free from flammable waste and soiled rags.

1.09 PROJECT CONDITIONS

- A. Weather, Temperature, and Humidity: Perform work only when existing and forecasted conditions are within the limits established by manufacturers of the materials and products used.
 1. Water-Base Paints: Apply only when temperature of surfaces to be painted and surrounding air temperatures are between 50°F and 90°F, unless otherwise permitted by manufacturer's printed instructions.
 2. Solvent-Thinned Paints: Apply only when temperature of surfaces to be painted and surrounding air temperatures are between 45°F and 95°F, unless otherwise permitted by paint manufacturer's printed instructions.
 3. Conditions: Do not apply paint in snow, rain, fog or mist, or when relative humidity exceeds 85%, to damp or wet surfaces, or when the moisture content of the substrate is in excess of 15% as measured by an electronic moisture meter unless otherwise permitted by paint manufacturer's printed instructions.
- B. Prevent paints, and sealants from staining surrounding building materials and objects. Clean up spills and drips immediately.
- C. Do not apply finish in area where dust is being generated.
- D. Comply with manufacturer's requirements and recommendations for ventilation.
- E. Protect property, employees, and users of the site and building from possible injury or damage by construction activities.
- F. Provide tarpaulins or scrim covers on the outside of staging and on the ground at all active work areas during preparation as required to contain dust and debris.
- G. Provide protection to the floor and woodwork from the activities and materials used in removal of paint and preparation of surfaces.

1.10 COORDINATION

- A. Convene a pre-installation conference to establish procedures to maintain optimum working conditions and to coordinate this work with related and adjacent work.
- B. Coordinate this work with work specified in other sections. Special attention is called to coordinate with the work in the Section 06250 - Carpentry for the conservation and repair of window frames.

1.12 EXTRA STOCK

- A. Amount: Upon completion of the work of this Section, deliver to the owner an extra stock equaling 10% of each color, type, and gloss of paint used on the Work.
- B. Packaging: Tightly seal each container and clearly label with the contents and location used.

1.13 GUARANTEE

- A. Provide written warranty ensuring that all paint films and glazing shall remain sound and free of defects, cracks, peeling, deterioration, and discoloration for a period of two (2) years from the date of substantial completion, and that any such defects occurring within the warranty period will be repaired or replaced in a manner conforming with the requirements of these Contract Documents.

PART 2: – PRODUCTS

2.01 PAINT AND FILLERS

- A. Painting materials
 - 1. All materials used in the work shall be pure, of best quality, and "Top of the Line" of the manufacturer. Materials not displaying the manufacture's identification as a standard best-grade product will not be acceptable.
 - 2. Undercoats and thinners: Provide undercoat paint produced by the same manufacturer as the finish coat. Use only the thinners recommended by the paint manufacturer, and use only to the recommended limits. Insofar as practicable, use undercoat, finish coat, and thinner material as parts of a unified system of paint finish.
 - 3. Follow manufacturer's recommendations for suitability of specific products for each specific substrate, and for application procedures.
 - 4. Secondary products: Products not specified by name and required for the job, such as shellac, thinners, putty, shall be "best grade" or "first Line" products of a reputable manufacturer and acceptable to the manufacturer of the paint coatings.
 - 5. Exterior paint shall be by top grade by California Paints, Pittsburgh Paints (PPG), Pratt & Lambert, Sherwin Williams, Benjamin Moore, or equal as follows:
 - a. Prime for all exterior wood and misc. metal surfaces:
 - i. California Paints Storm Stain Trouble Shooter Primer-Linseed Oil/Alkyd Primer
 - b. Finish for exterior wood:
 - First coat: California Paints 2010 Exterior Finish, 100% acrylic latex in Satin Gloss.

Second coat: same as first.

- c. Prime for all interior wood:

Benjamin Moore Fresh Start All-Purpose Alkyd Primer (024)

- d. Finish for interior woodwork:

First coat; Benjamin Moore “Satin Impervo Alkyd Low Lustre Paint”

Second coat: Same as first.

6. Color and gloss to be as directed by the Architect at the start of the work, and will include two colors for the exterior. Selection of paints for interior plaster will be made in consultation with the Architect during the mock-up process. Interior colors are to match existing paint color in each room being painted. Colors will be custom mixed using manufacture's standard custom color system as required to match sample chips to be provided by Architect.

B. Preparation Materials

1. Mildew Removal: Solution consisting of 2/3 cup trisodium phosphate 1/3 cup household detergent 1 quart household bleach 3 quarts warm water; Wash bleach solution off thoroughly with water and allow building element or sash to thoroughly dry for at least 72 hours.
2. Paint scrapers and removers:
 - a. Various shaped hand scraping and sanding tools.
 - b. Non-flammable and non-alkaline based chemical paint strippers:
 1. Non-alkaline strippers by Dumont Chemical including Peel Away 2, Peel-Away 6, Peel-Away 7, and Peel-Away 21.
 2. Readi-Strip and Readi-strip Pro by Back to Nature Products (1-800-211-5175).
 - c. **The use of heat including heat guns and heat plates to remove paint on the building is strictly prohibited.** Preparation and removal methods using heat may only be used on elements that have been removed from the building.
 - d. **Alkaline based paint chemical removers will not be allowed.**
 - e. Power sanding using only orbital sanders may only be used where the individual mechanics can adequately demonstrate that their usage will not result in swirl marks, gouging, digging or other damage to the substrate, subject to applicable environmental regulations.
 - f. **The use of power grinders will not be allowed.**

C. Fillers for wood

1. Putty filler for small defects and nail heads: Sarco Multi-Glaze Type M Putty by SarcoSeal, or equal
2. Epoxy filler for small defects and nail heads:

Araldite 2 Part Epoxy Paste (AV1253 and LV1253) by CIBA-GEIGY Corp., 4917 Dawn Ave, East Lansing, Michigan (517-351-5900), or equal.

West System

3. Sealant/caulking compounds for wood: Moorlastic 55 Year Urethane Acrylic Sealant 465 by Benjamin Moore Paints, Fed. Spec. TT-S-00230C Type II Class A.

PART 3: EXECUTION

3.01 ACCEPTANCE OF SURFACE CONDITIONS

- A. Inspection: Prior to installation of the work of this Section, the applicator shall carefully inspect the installed work of all other trades and verify that all such work is complete to the point where this installation may properly commence. Coordinate work with Woodwork Conservation Contractor.
- B. Discrepancies: Do not proceed in areas of discrepancy until all such discrepancies have been fully resolved.
- C. Responsibility: The Applicator shall be solely responsible for the finishing work and shall prepare substrates as needed to obtain the highest quality finished surfaces.

3.02 SURFACE PREPARATION

- A. Perform preparation and cleaning procedures in strict accordance with the paint manufacturer's instructions and as herein specified, for each particular substrate condition.
- B. Wash all surfaces to remove dirt, salt contamination, and loose paint. The use of power washing equipment other than a conventional hose will be allowed only if the Contractor demonstrates through the mock-up procedure that the equipment will be operated in a manner that does not drive water into the wall construction or otherwise damage the clapboards.
 1. Power washing equipment shall produce a maximum of 1500 PSI at 3 gpm and shall employ a minimum spray tip size of 25 degrees. Do not hold tip closer than 8" to the work surface, and maintain a broad, wide spray pattern directed downwards. **Use extreme caution to not damage the wood substrate or force water through joints and laps into the wall construction. Generally angle the spray downwards.**
 2. Do not apply paint to power washed surfaces for at least 3 days after completion of washing, and only when moisture content of the substrate is the same as it was prior to washing and not less than 15 % as measured with an electronic moisture meter. Moisture meter readings shall be taken before power washing and after completion of drying prior to application of paint on each facade or major work area.
- C. Scrape with hand tools all surfaces exhibiting areas of loose paint, poor adhesion, and other defects to remove all such defective paint except layers that are tightly bonded to the substrate. Feather all rough edges with sandpaper to provide smooth transition between paint layers and exposed substrate.
- D. Where weathered wood is exposed by paint preparation, sand to remove all punky and friable surface down to sound wood, except as noted in paragraph "F." below.
- E. In all scraping, sanding, and paint removal processes use care to not damage wood substrate surfaces by gouging, rounding over edges, or otherwise leaving visible marks from the sanding process.
- F. Interior Preparation – Window Sash and Trim:

1. Clean surfaces to be painted before applying paint or surface treatments. Remove oil and grease prior to mechanical cleaning. Sandpaper smooth those finished surfaces exposed to view, and dust off, using care to not round over the crisp edges of the window muntins. Program the cleaning and painting so that contaminants from the cleaning process will not fall onto wet, newly-painted surfaces.
 2. Where mildew or mold exists on any building element, scrub affected area with solution specified in Materials Section.
 3. Apply primer to bare wood surfaces and any areas where preparation has exposed previous undercoats that do not match the existing finish color.
- G. Containment of debris from paint preparation and paint removal:** Take steps to fully contain all debris from paint preparation including paint chips, paint dust, and paint remover within the immediate work area, and legally dispose of same off-site. Do not allow any paint scraping debris to accumulate on the ground or adjacent plantings. Paint preparation and containment is to be carried out in strict accordance with all applicable local, state, and federal laws and regulations.

3.03 MATERIALS PREPARATION

- A. Mix and prepare painting materials in strict accordance with the manufacturer's recommendations. Store materials not in actual use in tightly covered containers. Maintain containers used in storage, mixing, and application of paint in a clean condition, free from foreign materials and residue.
- B. Stir all materials before application to produce a mixture of uniform density, and as required during the application of materials. Do not stir into the material any film which may form on the surface. Remove the film and, if necessary, strain the material before using.
- C. Do not thin materials or introduce additives without approval of Architect.
- D. Slightly vary the color of succeeding coats; Tint priming coats to be a slightly lighter shade of the color scheduled for the finish coats. Do not apply additional coats until the complete coat has been inspected and accepted.

3.04 APPLICATION

- A. Apply paint in accordance with the manufacturer's directions. Use applicators and techniques best suited for the type of material being applied. No spraying or system of application other than by hand brushing will be allowed.
- B. Brush out and work all brush coats onto the surfaces in an even film. Cloudiness, spotting, holidays, laps, brush marks, runs, sags, ropiness, and other surface imperfections will not be acceptable. Make edges of paint adjoining other materials or colors sharp and clean without overlapping.
- C. Apply additional coats when undercoats, stains or other conditions show through the final coat of paint, until the paint film is of uniform finish, color and appearance.
- D. Apply each material at not less than the manufacturer's lowest recommended spreading rate and at the highest dry film thicknesses recommended by their manufacturers.
- E. Allow sufficient drying time between coats as recommended by the manufacturer. Modify the period as recommended by the material manufacturer to suit adverse weather conditions.

- F. Oil-base and oleo-resinous solvent-type paints shall be considered dry for recoating when the paint feels firm, does not deform or feel sticky under moderate pressure of the thumb, and the application of another coat of paint does not cause lifting or loss of adhesion of the undercoat.

3.05 CLEAN UP

- A. Clean-up: During the progress of the work, remove from the Project daily all discarded paint materials, rubbish, cans and rags.
- B. Upon completion of painting work, clean all windows glass and other paint-spattered surfaces. Remove spattered paint by proper methods of washing and scraping, using care not to scratch or otherwise damage finished surfaces. Use only paint thinner and rags to remove spattered paint from window glass, and apply minimum pressure when doing so.

3.06 SPECIAL PRECAUTIONS FOR LEAD-BASED PAINT

- A. The contractor is advised that certain painted surfaces may contain lead-based paint. The following work practices will be required when working on those surfaces:
 - 1. Work Practices
 - a. Persons under the age of 18 are prohibited from working on these surfaces.
 - b. Persons sanding these surfaces shall wear a full-face, powered, air-purifying respirator equipped with HEPA-filters and wear disposable coveralls.
 - c. Eating, drinking or smoking are prohibited in the work area.
 - 2. Execution
 - a. The work areas shall be sealed off from the rest of the building, by placing two layers of six-mil thick polyethylene sheeting over and on all.
 - b. All objects remaining within the work area shall be wrapped or covered with 6-mil thick polyethylene sheeting, taped and sealed in place.
 - c. Only power tools equipped with HEPA-filters will be acceptable for sanding these surfaces. Manufacturers of these tools include NILFISK and HAKO. The contractor shall submit manufacturer's data for the sanding equipment according to Section 01300 Submittals.
 - d. All tools and equipment leaving the work area shall be cleaned with tri-sodium phosphate or a HEPA-filtered vacuum.
 - e. Upon completion of the sanding operations, the work area and all surfaces within the work area shall be wiped down using a tri-sodium phosphate solution or vacuumed with a HEPA-filtered vacuum.
 - f. All waste material shall be placed in a double six-mil thick waste bag. All waste shall be properly disposed of in a DEP approved landfill.
- B. It is the sole responsibility of the contractor to comply with all OSHA regulations concerning occupational exposure to lead, including personal exposure monitoring and personnel medical monitoring.

END OF SECTION