

**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.

### 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 **three** 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. Immediately repair any active existing utility lines, (cables, conduits, ducts and piping), except where such lines are to be abandoned. Protect and maintain such active existing utilities in use, until relocation of same has been completed or cut, or capped, or prepared for service connections, as applicable. Perform such repair and protection work at no additional cost to the contract.
- B. If any existing active utility, which is not indicated on the drawings, is unintentionally damaged, and such utility is to remain, immediately repair the damage and restore the utility to its original integrity. Reimbursement of cost for performing such repair will be made by an adjustment to the contract price, at rates determined and approved by the Architect. 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.

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. Furnish, install, maintain, and remove when no longer needed, temporary hoisting and rigging devices, as required for the work of the Contract. Employ skilled operators, necessary guards, signals, and safety devices, as required to ensure safe operation and usage of the devices, including suitable runways from hoist to each floor level and roof.
- C. Include all costs for temporary scaffolding, hoisting, and rigging in the Contract amount.
- D. 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 chutes as required for the use of all trades for the proper execution of their work, 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.

#### 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 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.

#### 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

TOPSFIELD TOWN HALL  
TOPSFIELD, MA

(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  
TOPSFIELD, MA

- 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-3 for locations and details.
    - a. Perform epoxy conservation repairs to molded and flat exterior trim and turned colonette bases 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.
    - d. Provide new weather stripping at window “F”
    - e. At type “H” windows perform epoxy conservation repairs to fill weather checking in sills and trim in conjunction with replacement of the sash.
    - f. Conserve and/or replace exterior arched trim above Type G windows.
- 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 Windows.
  2. Section 09900 – Painting
  3. Section 07600 – Flashings and Sheet Metal

#### 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. Provide 6" samples weatherstripping proposed for use at Window "F".
  4. 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.
- B. Wood Screws: FS FF-S-111
- C. Bolts and Studs: FS FF-B-575
- D. Nuts: FS FF-W-92
- E. Washers: FS FF-W-92
- F. 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 “Epoxy for Wood Repair in Historic Buildings” by Morgan Phillips and Dr. Judith Selwyn. Refer to Detail 10 on Drawing Sheet A-2.

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.
- 3.03 FLASHING REPAIRS
- A. Coordinate wood restoration work at types E & F window casings and frames with the installation of sheet metal flashings.

END OF SECTION

## **SECTION 07600**

### **FLASHING AND SHEET METAL**

#### **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.

##### **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. Provide all copper flashings required for the repair to flashings at Types E and F windows and surrounding woodwork, including, but not limited to:
    - a. Provide 20 oz. Cu. counter flashings soldered to existing sill flashings behind pilaster bases between E and F windows.

##### **1.03. RELATED WORK SPECIFIED ELSEWHERE**

Section 06250 - Carpentry and Wood Conservation

##### **1.04 INTENT**

- A. It is the intent of this work to make the flashings at the Type E and F windows and related trim sound and 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 installation of copper roofing, flashings 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.

## **1.06 SUBMITTALS**

- A. Samples.
  - 1. Provide 1' x 1' sample of each weight of copper, aluminum, and lead proposed for use stamped with manufacturer's identification as to gauge.
  - 2. 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. Keep all products dry and protected from rain. Comply with manufacturer's recommendations for minimum and maximum temperatures.

## **1.08 PROJECT CONDITIONS**

- A. Environmental requirements.
  - 1. Do not apply copper or other roofing materials over damp substrates.
- B. Protect work areas as they are exposed by removal of finishes and repairs to the substrate from weather and physical damage to the surfaces below. Fully protect by waterproof tarpaulins, plastic sheeting, or roofing felts all areas where finish materials have been removed to effect work.
- C. Protect owners, tenants, and the general public using the building from possible injury by construction debris.

## **1.09 GUARANTEE**

- A. Provide written warranty ensuring that all roofing materials shall remain sound, fully watertight, and free of cracks 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 FLASHING MATERIALS**

- A. Copper:

1. Copper for flashings and roofing (Cu.): ASTM B-370, temper H100 (cold rolled) except where soft temper is required for forming; 20 oz. except as otherwise indicated.
- B. Nails for fastening sheet metal to wood: brass or copper, of "stronghold" type, with large flat heads, annular rings, and needle points; not smaller than No. 12 stub gauge and of sufficient length to penetrate the wood sheathing, blocking, and nailers, etc., not less than 7/8" long.
- C. Screws, bolts, and other accessories for fastening sheet metal to wood or other non-ferrous metals shall be round headed brass, silicone bronze, or copper, and shall be equipped with soft neoprene self-sealing washers.
- D. Solder: ASTM Specification B-32, composition 60% tin and 40% lead.
- E. Flux: Rosin core or acid killed with zinc. All acid is to be completely washed off after completion of soldering.
- F. Sealant: low modulus, one part, silicone sealant, No. 795 by Dow Corning Company. Color to match adjacent mortar joints in chimney.
- G. Slip Sheets: 6 lb. rosin sized building paper.

## **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.

### **3.02 REFERENCE STANDARDS**

- A. Follow guidelines and written specifications of "Sheet Copper Applications" by the Copper Development Association, "Copper and Common Sense" by Revere Copper and Brass Co., Inc., manufacturer's instructions, and the Cedar Shake and Shingle Bureau.

### **3.03 INSTALLATION , GENERAL**

- A. Fabrication: Follow Reference Standards for fabrication and soldering of new flashings to existing.
- B. Soldering: Clean existing copper to bright metal with emery paper and steel wool. Perform slowly with well-heated coppers, so as to heat thoroughly the seam and sweat the solder through the full seam width as in joint "B" in drawing 2/A6. All acid is to be completely washed off metal after completion of soldering.

**3.04 FLASHING SPECIFICS**

- A. Flashing at colonette bases between E and F windows: Use 20 oz. base copper for flashings. Each piece to extend out on existing flashings 2" and up on wall 8" under finish woodwork. Extend each piece 2" above the top edge of the backing wood behind the colonette bases. Solder counterflashing to existing sill flashing. Do not puncture flashings trim nails.

**END OF SECTION**

**SECTION 08620**

**REPLACEMENT WOOD WINDOW SASH**

**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. Furnish and install custom made wood sash matching existing sash. Stile and rail construction with mortise and tenon and rabbeted joints matching the existing joints for sash and muntins.
- B. Provide three sets of single hung type “H” sash to replace existing type “H” sash at the attic level of the front tower, including new exterior support stops matching the existing stops for the upper sash, and new interior stops at jambs and stool. The existing frames and casings are to remain.
- C. Provide one new type “F” four lite sash to replace existing type “F” sash at the second floor level of the front tower. Reuse existing hardware to secure the sash in place.

**1.03 SUBMITTALS**

- A. Product Data: For each type of product.
- B. Shop Drawings: Include plans, elevations, sections, hardware, accessories, operational clearances, and details of installation, including anchor, flashing, and sealant installation.
- C. Product Schedule: For wood windows. Use same designations indicated on Drawings.
- D. Name of sash Fabricator if other than the GC.

**1.04 QUALITY ASSURANCE**

- A. Standards: Comply with the specified fabrication provisions of the Architectural Woodwork Institute (AWI), Quality Standards. Comply with the material standards contained in the U.S. Department of Commerce, Softwood Lumber Standards, P.W. 20, and the applicable grading rules of the official grading or inspecting agency for the specified material selected.
- B. Manufacturer: Provide wood window sash produced by a single fabricator, capable of demonstrating prior successful production of units similar to those required in these Specifications. Use only skilled journeyman carpenters who have had at least five (5) years experience in the fabrication of custom historic reproduction window elements with the materials and methods specified.

- C. Mockups: Build mockups to verify selections made under Sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.
  - 1. D. Prepare one sash as full-scale mock up to be installed showing all aspects of workmanship. Approved mock-up may be incorporated into the final work.

## **PART 2 -PRODUCTS**

### 2.01 CUSTOM WINDOW REPLACEMENT SASH TO MATCH EXISTING.

- A. Remove one existing window of each type to be replaced from work area as template.
- B. Provide new window sash fitted into existing frames to match existing sash overall dimensions, and profiles of muntins and sash stiles and rails.

### 2.02 WOOD WINDOWS

- A. Operating Types: Type “H” single hung 1/1 sash without balance system. Type “F” sash set in existing frame to be completely removable from the interior for access to the entry porch roof.
  - B. Sashes: Fine-grained wood lumber complying with AAMA/WDMA/CSA 101/1.S.2/A440; kiln dried to a moisture content of not more than 7 percent at time of fabrication; no finger joints, blue stain, knots, pitch pockets, and surface checks larger than 1/32 inch deep by 2 inches wide.
  - C. Wood Species: Honduran Mahogany, Species “Swientia macrophylla.”
  - D. Glass: Clear annealed glass, ASTM C 1036, Type 1, Class 1, q3, except as indicated below.
    - 2. Glass
      - a. Tint: Clear.
      - b. Type “H” sash: Existing historic glass is to be reused in new sash to the extent feasible. Where glass cannot be reused, provide salvage glass of cylinder type similar in visual character to existing cylinder glass in sash or new Restoration Glass, “Light” by Blenko Glass, Milton, NY, or Bendheim Glass Company, Passaic, N
      - c. Type “F” sash: Provide, fully tempered, labeled safety glass for all four lites.
    - 3. Lites: Match existing layout and size.
    - 4. Glazing Putty: Linseed Oil Putty, F.5. IT-G-410E(1). Sarco Multi-Glaze Type M Putty by SarcoSeal
    - 5. Glazing Points: Standard manufacture, copper or zinc coated metal in size suitable for the installation. Points shall not protrude through the putty.
  - E. Primer for Putty: Alkyd oil based primer by same manufacturer as finish paint, Trouble Shooter by California Paints, or equal; or Boiled Linseed Oil.
- Hardware, General: Manufacturer's standard corrosion-resistant hardware sized to accommodate sash weight and dimensions.

6. Exposed Hardware (Pullies, locks and bin pulls on operating sash) Color and Finish: Oil Rubbed Bronze.
  7. Hung Window Hardware (Type “H” sash):
    - a. Counterbalancing Mechanism: None.
    - b. Locks, Latches, and sash lifts:
    - c. For Type “H” sash: Spring sash lock from Architectural Resource Center or equal, black finish, and brass sash lifts (two per lower sash)
  8. For type “F” Sash; reuse existing slide bolts and lifting handles, or provide similar brass new ones.
- G. Weather Stripping: Provide full-perimeter weather stripping for each operable sash unless otherwise indicated.
- H. Fasteners
9. Fasteners: Noncorrosive and compatible with window members, trim, hardware, anchors, and other components.
  10. Exposed Fasteners: Do not use exposed fasteners to the greatest extent possible. For application of hardware, use fasteners that match finish hardware being fastened.

### **PART 3 -EXECUTION**

#### 3.01 FABRICATION - General

- A. Fabricate wood sash in sizes indicated to match existing sash and fit in existing window frames.
- B. Joinery: match joinery details of existing historic sash.
- C. Glaze wood windows in the factory.
- D. Weather strip each operable sash to provide weathertight installation.
  1. Type F window: Reuse existing bulb weatherstripping or provide new to match
  2. Type H windows: cushion bronze at jambs; finned silicone bulb at sill
- E. Complete fabrication, assembly, finishing, hardware application, and other work in the factory to greatest extent possible. Disassemble components only as necessary for shipment and installation. Allow for scribing, trimming, and fitting at Project site.

#### 3.02 FABRICATION DETAILS

- A. 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.
- B. Glass installation: Bed glass panes in thin layer of glazing compound. 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.

- C. Sash Paint: Provide prime and two coats of finish paint on interior and exterior of sash prior to installation (see Painting Section 09900). Match existing colors. Interior color of type "H" sash to match interior color of Type "F" sash.

### 3.03 INSTALLATION

- A. Install sash level, plumb, square, true to line, without distortion, set in existing frames, and in proper relation to wall flashing and other adjacent construction to produce weathertight construction.
- B. Adjust operating sashes and hardware for a tight fit at contact points and weather stripping for smooth operation and weathertight closure.
- C. At type "H" sash provide new full height removeable interior stops at jambs, new stops at sills, and new exterior support blocks for upper sash matching existing.
- D. At type "F" sash coordinate installation of sash with repairs to copper flashing, exterior wood trim, and blocking. Take special care with weatherstripping to insure that water cannot penetrate between the sash stiles and the window jamb lining. Review proposed weatherstripping products and installation with architect prior to execution.
- E. Clean exposed surfaces immediately after installing windows. Remove excess sealants, glazing materials, dirt, and other substances.
- F. Remove and replace glass if glass has been broken, chipped, cracked, abraded, or damaged during construction period.

**END OF SECTION 08620**

**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, doors, 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, interior woodwork, and repair of historic lime plaster 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.
- D. 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 repair of the sash must be contained and promptly removed, and the Contractor is responsible for compliance with all applicable environmental regulations.

#### **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. Glass and Glazing:
  - i. Glazing: Spot remove all defective glazing using extreme care not to break glass.
  - ii. 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.
  - iii. 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.
  - iv. Broken Glass: Replace any 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.
  - 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. 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**

