Project Manual & Specifications

Repair and Refurbishment of

Nathan Hale Homestead

Coventry, CT

DATE: September 22, 2025

Owner:	Connecticut Landmarks By:_____
Architect:	Crosskey Architects, LLC By:_____
Contractor:	By:_____
Bonding Company:	By:_____

Crosskey Architects LLC
Architecture | Preservation | Planning

750 Main Street, Suite 150, Hartford, CT 06103 **Phone: 860-724-3000**

www.crosskey.com

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SECTION 00 01 02

PROJECT DIRECTORY

PROJECT:	Repair Refurbishment of Nathan Hale Homestead 2299 South Street Coventry, CT 06238
OWNER:	Connecticut Landmarks Amos Bull House 59 South Prospect Street Hartford, CT 06103 Phone: 860-247-8996
ARCHITECT:	Crosskey Architects LLC 750 Main Street Suite 150 Hartford, CT 06103 Phone: 860-724-3000

END OF SECTION

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END OF SECTION

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DOCUMENT 00 11 16

INVITATION TO BID

OWNER: Connecticut Landmarks
Amos Bull House
59 Prospect Street
Hartford, CT 06106

ARCHITECT: Crosskey Architects, LLC.
750 Main Street
Suite 150
Hartford, CT 06103

TO ALL BIDDERS

1. The Architect will receive bids in triplicate on or before 2:00p.m., October 27, 2025 at the Crosskey Architects, LLC office, 750 Main Street, Suite 150, Hartford, CT 06103.

2. A mandatory site examination will be held at 10:00a.m., September 29, 2025 at the project site: 2299 South Street, Coventry, CT 06238. All General Contractors submitting a bid are required to attend.

3. Bids will be received for furnishing all labor, materials, tools and equipment necessary for the project scope of work consisting of repairs and refurbishment of the Nathan Hale Homestead and associated site work.

4. The Contract will include selective demolition, interior and exterior repair, repainting, and all other work necessary for or incidental to the completion of the project.

5. The successful bidder will be required to furnish 100% Performance and Payment Bond or Bonds, in the forms included in the Specifications, as well as a certified statement of financial condition, as of a date not exceeding ninety (90) days prior to the date thereof.

6. Proposed form of Contract Documents, including Plans and Specifications, are on file at the office of the above-mentioned Architect and can be transmitted electronically.

7. The Owner reserves the right to reject any or all bids and to waive any informalities in bidding. All Bid Documents must be completely filled in when submitted.

8. No bid shall be withdrawn for a period of ninety (90) days subsequent to the opening of bids or until the next work day immediately following said period, if such period ends on a weekend or a State holiday, without the consent of the above-mentioned Owner.

9. General Information:

   Readiness to Proceed
   The bidder selected to perform the work described herein shall apply for building permits immediately after entering into a construction contract with the owner. The duration of construction should be indicated on each bidders bid form**.**

Permits and Certificates of Occupancy
The General Contractor selected to perform the construction activities will be responsible for obtaining and paying for all building permits. Also, it is the express responsibility of the Contractor to obtain Certificates of Occupancy and present them to the owner at the conclusion of construction.

Utilities
All utilities required by the Contractor during construction will be provided by the Owner.

Payment
The Contractor will present a request for payment together with the appropriate original lien waivers. Payment will be made within 15 calendar days after the Owner receives all appropriate documentation.

Insurance Requirements
As part of the response to this request for proposals and upon request by the owner at any time, evidence of the following must be provided to the owner. The bidder shall submit a statement indicating awareness and acceptance of insurance requirements.

General Liability: General Liability insurance on a policy form no less broad than ISO form CG 00 01, written on an "occurrence" form shall be maintained. Minimum required limits are either the limit carried by the Mortgagor or the limits shown below, whichever is greater. If the policy covers more than one location, the policy aggregate must apply per location. The State of Connecticut shall be listed as additionally insured under the following coverages:

General Aggregate:	$2,000,000
Products and Completed Operations Aggregate:	$1,000,000
Personal and Advertising Injury:	$1,000,000
Each Occurrence:	$1,000,000
Fire Damage (any one fire):	$100,000
Medical Expense (any one person):	$5,000

Automobile Liability: The minimum required limit of insurance is $1,000,000 per accident, covering all owned, non-owned, leased or rented motor vehicles. If no owned vehicles, only non-owned or hired motor vehicle coverage is required.

Workers' Compensation and Employers' Liability: Required Limits: Workers' Compensation: Statutory

Employers' Liability:	Bodily Injury by Accident:	$1,000,000
	Bodily Injury by Disease:	$1,000,000
	Bodily Injury by Each Employee:	$1,000,000

Umbrella or Excess Liability: The minimum required limit of Umbrella/Excess liability coverage shall be $5,000,000.

Builder's Risk Insurance, when applicable, should be obtained either through the general contractor or construction manager. A copy of the Builder's Risk Certificate should be provided to DECD with the State of Connecticut listed as A.T.I.M.A.

The "Hold Harmless" Indemnification endorsement of the insurance shall include the interest of the municipality and the State of Connecticut. The Contractor and Subcontractors and other interests shall be so named.

An Affirmative Action/Equal Opportunity Employer. Minority/Women's Business Enterprises are encouraged to apply.

END OF DOCUMENT

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DOCUMENT 00 21 13

INSTRUCTIONS TO BIDDERS

PART 1. SUMMARY

1.01 DOCUMENT INCLUDES

A. Invitation
   1. Bid Submission
   2. Intent
   3. Work Identified in the Contract Documents
   4. Contract Time

B. Bid Documents and Contract Documents
   1. Definitions
   2. Contract Documents Identification
   3. Availability
   4. Examination
   5. Queries/Addenda
   6. Product/System Substitutions

C. Site Assessment
   1. Site Examination
   2. Preview of the site

D. Qualifications
   1. Qualifications
   2. Subcontractors/Suppliers/Others

E. Bid Submission
   1. Submission Procedure
   2. Bid Ineligibility

F. Bid Enclosures/Requirements
   1. Security Deposit
   2. Performance Assurance
   3. Bid Form Requirements
   4. Fees for Changes in the Work
   5. Bid Form Signature
   6. Additional Bid Information

G. Offer Acceptance/Rejection
   1. Duration of Offer
   2. Acceptance of Offer

1.02 RELATED DOCUMENTS

A. Document 00 11 16 - Invitation To Bid.

C. Document 00 41 13 - Bid Form.

D. Document 00 43 20 - Supplements to Bid Form.

E. Document 00 60 51.1 - Supplementary General Conditions: Contract Time identification rebate procedures, Bond types and values.

PART 2. INVITATION

2.01 BID SUBMISSION

A. Bids signed and under seal, executed, and dated will be received by the Owner at the Crosskey Architects, LLC office, 750 Main Street, Suite 150, Hartford, CT 06103 before

2:00p.m. local time on the 27th day of October, 2025.

B. Offers submitted after the above time may be returned to the Bidder unopened.

C. Offers will be opened publicly immediately after the time for receipt of Bids.

D. Amendments to the submitted offer will be permitted if received in writing prior to Bid closing and if endorsed by the same party or parties who signed and sealed the offer.

E. Owner reserves the right to reject any or all bids and waive any bid procedures or formalities.

2.02 INTENT

A. Contract in accordance with the Contract Documents.

2.03 WORK IDENTIFIED IN THE CONTRACT DOCUMENTS

A. Work of this proposed Contract comprises general restoration and repairs to the Nathan Hale Homestead buildings.

B. Location: 2299 South Street, Coventry, CT 06238.

2.04 CONTRACT TIME

A. Perform the Work in [**90]** calendar days.

B. The Bidder may suggest a revision to the Contract Time with a specific adjustment to the Bid Price.

PART 3. BID DOCUMENTS AND CONTRACT DOCUMENTS

3.01 DEFINITIONS

A. Bid Documents: Contract Documents supplemented with Invitation to Bid, Instructions to Bidders, and Bid Form identified herein.

B. Contract Documents: Defined in AIA A201 Article 1 including issued Addenda.

C. Bid, Offer, or Bidding: Act of submitting an offer under seal.

D. Bid Price: Monetary sum identified by the Bidder in the Bid Form.

3.02 CONTRACT DOCUMENTS IDENTIFICATION

A. The Contract Documents are identified as Repair & Refurbishment of the **Nathan Hale Homestead**; prepared by the Architect, Crosskey Architects LLC, located at 750 Main Street, Suite 150, Hartford, CT and identified in the Project Manual.

3.03 AVAILABILITY

A. Bid Documents may be obtained at Crosskey Architects, LLC, 750 Main Street, STE 150, Hartford, CT 06103 p: 860.724.3000.

B. Bid Documents are made available only for the purpose of obtaining offers for this project. Their use does not grant a license for other purposes.

3.04 EXAMINATION

A. Bid Documents may be viewed at the office of the Architect.

B. Upon receipt of Bid Documents verify that documents are complete. Notify Architect should the documents be incomplete.

C. Immediately notify the Architect upon finding discrepancies or omissions in the Bid Documents.

3.05 QUERIES/ADDENDA

A. Direct questions in writing to Laura Crosskey, AIA, President – Crosskey Architects, email lcrosskey@crosskey.com

B. Addenda may be issued during the Bidding period. All Addenda become part of the Contract Documents. Include resultant costs in the Bid Price.

C. Verbal answers are not binding on any party.

D. Clarifications requested by Bidders must be in writing not less than 7 days before date set for receipt of Bids. The reply will be in the form of an Addendum, a copy of which will be forwarded to known recipients.

3.06 PRODUCT/SYSTEM SUBSTITUTIONS

A. Substitute products will be considered if submitted as an attachment to the Bid Form.

B. The submission shall provide sufficient information to determine acceptability of such products.

C. Provide complete information on required revisions to other Work to accommodate each substitution, the value of additions to or reductions from the Bid Price, including revisions to other Work.

D. Provide Products as specified unless substitutions are submitted in this manner and subsequently accepted.

E. Approval to submit substitutions prior to submission of Bids is not required.

F. **Contractor shall reimburse Owner for Architect's time spent reviewing substitutions.**

PART 4. SITE ASSESSMENT

4.01 PREBID CONFERENCE

A. A mandatory pre-bid walk-thru of the site will be conducted on September 29, 2025 at 10:00a.m. at the project site.

B. All general contract and major subcontract Bidders are invited.

C. Representatives of the Owner and Architect will be in attendance.

D. Information relevant to the Bid Documents will be recorded in an Addendum, issued to

Bid Document recipients.

PART 5. QUALIFICATIONS

5.01 SUBCONTRACTORS/SUPPLIERS/OTHERS

A. The Owner reserves the right to reject a proposed Subcontractor for reasonable cause.

B. Refer to AIA Article 5 of General Conditions.

PART 6. BID SUBMISSION

6.01 SUBMISSION PROCEDURE

A. Bidders shall be solely responsible for the delivery of their Bids in the manner and time prescribed.

B. Submit three copies of the executed offer on the Bid Forms provided, signed and sealed with the required security in a closed opaque envelope, clearly identified with Bidder's name, project name and Owner's name on the outside.

C. Improperly completed information, irregularities in security deposit or bid bond, may be cause not to open the Bid Form envelope and declare the Bid invalid or informal.

D. An abstract summary of submitted Bids will be made available to all Bidders following Bid opening.

6.02 BID INELIGIBILITY

A. Bids that are unsigned, improperly signed or sealed, conditional, illegible, obscure, contain arithmetical errors, erasures, alterations, or irregularities of any kind, may at the discretion of the Owner, be declared unacceptable.

B. Bid Forms, Appendices, and enclosures which are improperly prepared may at the discretion of the Owner, be declared unacceptable.

C. Failure to provide security deposit, bonding or insurance requirements may at the discretion of the Owner, invalidate the Bid.

PART 7. BID ENCLOSURES/REQUIREMENTS

7.01 SECURITY DEPOSIT

A. Bids shall be accompanied by a security deposit as follows:

1. Bid Bond of a sum no less than 5 percent of the Bid Price/Sum on AIA A310 Bid Bond Form.

OR

2. Certified check in the amount of 5% of the Bid Price.

B. Endorse the Bid Bond in the name of the Owner as obligee, signed and sealed by the Contractor as principal and the Surety.

OR

C. Endorse the certified check in the name of the Owner.

D. The security deposit will be returned after delivery to the Owner of the required

Performance and Labor and Materials Payment Bond(s) by the accepted Bidder.

E. Do not include the cost of Bid Security in the Bid Price.

F. After a Bid has been accepted, all securities will be returned to the respective Bidders.

G. If no contract is awarded, all security deposits will be returned.

H. Bonding Company be listed on the most recent IRS Circular 570.

7.02 PERFORMANCE ASSURANCE

A. Accepted Bidder: Provide a Performance and Payment bond as described in Document 00 60 50.1 - Supplementary General Conditions.

B. Include the cost of performance assurance bonds in the Bid Price and identify the cost when requested by the Owner.

7.03 BID FORM REQUIREMENTS

A. Complete all requested information in the Bid Form and Appendices.

7.04 FEES FOR CHANGES IN THE WORK

A. Include in the Bid Form, the overhead and profit fees on own Work and Work by Subcontractors, applicable for Changes in the Work, whether additions to or deductions from the Work on which the Bid Price is based.

B. Include in the Bid Form, the fees proposed for subcontract work for changes (both additions and deductions) in the Work. The Contractor shall apply fees as noted, to the Subcontractor's gross (net plus fee) costs on additional work.

7.05 BID FORM SIGNATURE

A. The Bid Form shall be signed by the Bidder, as follows:

1. Sole Proprietorship: Signature of sole proprietor in the presence of a witness who will also sign. Insert the words "Sole Proprietor" under the signature. Affix seal.
2. Partnership: Signature of all partners in the presence of a witness who will also sign. Insert the word "Partner" under each signature. Affix seal to each signature.
3. Corporation: Signature of a duly authorized signing officer(s) in their normal signatures. Insert the officer's capacity in which the signing officer acts, under each signature. Affix the corporate seal. If the Bid is signed by officials other than the President and Secretary of the company, or the President/Secretary/Treasurer of the company, a copy of the by-law resolution of the Board of Directors authorizing them to do so, must also be submitted with the Bid Form in the Bid envelope.
4. Joint Venture: Each party of the joint venture shall execute the Bid Form under their respective seals in a manner appropriate to such party as described above, similar to the requirements of a Partnership.

PART 8. OFFER ACCEPTANCE/REJECTION

8.01 DURATION OF OFFER

A. Bids shall remain open to acceptance and shall be irrevocable for a period of ninety (90) days after the Bid closing date.

8.02 ACCEPTANCE OF OFFER

A. The Owner reserves the right to accept or reject any or all offers.

B. The Owner will select the lowest responsible bid from a qualified bidder. Lowest bid means the lowest price offered in section 00 41 13, 1. Offer.

END OF DOCUMENT

DOCUMENT 00 41 13

BID FORM

TO: Connecticut Landmarks
Amos Bull House
59 South Prospect Street
Hartford, CT 06103

PROJECT: Nathan Hale Homestead
2299 South Street
Coventry, CT 06238

Date: _____

Submitted by:
(full name)

_____

(full address)

_____

_____

1. OFFER

Having examined the Place of the Work and all matters referred to in the Instructions to Bidders and the Contract Documents prepared by Crosskey Architects LLC, Architect for the above mentioned project, we, the undersigned, hereby offer to enter into a Contract to perform the Work for the Price of:

$ _____ ($ _____) dollars.

We have included herewith, the required security deposit/Bid Bond as required by the Instruction to Bidders.

Sales tax is not included in the Bid Price, as the Owner is tax exempt.

All Cash Allowances described in Section 01 26 00 - Contract Considerations are included in the Bid Price.

2. ACCEPTANCE

This offer shall be open to acceptance and is irrevocable for 90 days from the Bid closing date.

If this Bid is accepted by the Owner within the time period stated above, we will:

Execute the Agreement within 15 days of receipt of acceptance of this Bid.

Furnish the required Performance and Labor & Material Bonds within 7 days of receipt of acceptance of this Bid.

Commence work within 15 days after executing the agreement.

If this Bid is accepted within the time stated, and we fail to commence the Work or we fail to provide the required Bond(s), the security deposit shall be forfeited as damages to the Owner by reason of our failure, limited in amount to the lesser of the face value of the security deposit or the difference between this Bid and the Bid upon which the Contract is signed.

In the event our Bid is not accepted within the time stated above, the required security deposit shall be returned to the undersigned, in accordance with the provisions of the Instructions to Bidders; unless a mutually satisfactory arrangement is made for its retention and validity for an extended period of time.

3. CONTRACT TIME

If this Bid is accepted, we will:

Complete the Work in **Ninety (90)** calendar days from acceptance of this Bid.

4. CHANGES TO THE WORK

When the Architect establishes that the method of valuation for Changes in the Work will be net cost plus a percentage fee in accordance with General Conditions, our percentage fee will be:

_____percent overhead and profit on the net cost of our own Work;

_____percent on the cost of work done by any Subcontractor.

On work deleted from the Contract, our credit to the Owner shall be the Architect approved net cost plus

_____of the overhead and profit percentage noted above.

5. ADDENDA

The following Addenda have been received. The modifications to the Bid Documents noted therein have been considered and all costs thereto are included in the Bid Price.

Addendum #_____Dated_____

Addendum #_____Dated_____

Addendum #_____Dated_____

6. APPENDICES

Submit Appendices in Document 00 43 20 - Supplements to Bid Forms as directed in Document 00 11 16 – Instructions to Bidders.

7. BID FORM SIGNATURE(S)

The Corporate Seal of

_____

(Bidder - please print the full name of your Proprietorship, Partnership, or Corporation)

was hereunto affixed in the presence of:

_____

(Authorized signing officer (Title)

(Seal)

_____

(Authorized signing officer (Title)

If the Bid is a joint venture or partnership, add additional forms of execution for each member of the joint venture in the appropriate form or forms as above.

END OF DOCUMENT

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DOCUMENT 00 43 75

APPENDIX A – CHRO FORM

Attached are the completed Equal Employment Opportunity forms referenced in the bid submitted by:

(Bidder)_____

TO: Connecticut Landmarks
Amos Bull House
59 Prospect Street
Hartford, CT 06106

PROJECT: Repair and Refurbishment of Nathan Hale Homestead
2299 South Street
Coventry, CT 06238

Dated _____ and which is an integral part of the Bid Form.

All bidders must complete, sign, and return the "CHRO Contract Compliance Regulations Notification to Bidders" form to the grantee at the time of bid opening. Bids not including this form will be considered incomplete and rejected.

END OF SECTION

COMMISSION ON HUMAN RIGHTS AND OPPORTUNITIES
CONTRACT COMPLIANCE REGULATIONS
NOTIFICATION TO BIDDERS

(Revised 09/17/07)

The contract to be awarded is subject to contract compliance requirements mandated by Sections 4a-60 and 4a-60a of the Connecticut General Statutes; and, when the awarding agency is the State, Sections 46a-71(d) and 46a-81i(d) of the Connecticut General Statutes. There are Contract Compliance Regulations codified at Section 46a-68j-21 through 43 of the Regulations of Connecticut State Agencies, which establish a procedure for awarding all contracts covered by Sections 4a-60 and 46a-71(d) of the Connecticut General Statutes.

According to Section 46a-68j-30(9) of the Contract Compliance Regulations, every agency awarding a contract subject to the contract compliance requirements has an obligation to "aggressively solicit the participation of legitimate minority business enterprises as bidders, contractors, subcontractors and suppliers of materials." "Minority business enterprise" is defined in Section 4a-60 of the Connecticut General Statutes as a business wherein fifty-one percent or more of the capital stock, or assets belong to a person or persons: "(1) Who are active in daily affairs of the enterprise; (2) who have the power to direct the management and policies of the enterprise; and (3) who are members of a minority, as such term is defined in subsection (a) of Section 32-9n." "Minority" groups are defined in Section 32-9n of the Connecticut General Statutes as "(1) Black Americans . . . (2) Hispanic Americans . . . (3) persons who have origins in the Iberian Peninsula . . . (4)Women . . . (5) Asian Pacific Americans and Pacific Islanders; (6) American Indians . . ." An individual with a disability is also a minority business enterprise as provided by Section 4a-60g of the Connecticut General Statutes. The above definitions apply to the contract compliance requirements by virtue of Section 46a-68j-21(11) of the Contract Compliance Regulations.

The awarding agency will consider the following factors when reviewing the bidder's qualifications under the contract compliance requirements:

(a) the bidder's success in implementing an affirmative action plan;
(b) the bidder's success in developing an apprenticeship program complying with Sections 46a-68-1 to 46a-68-17 of the Administrative Regulations of Connecticut State Agencies, inclusive;
(c) the bidder's promise to develop and implement a successful affirmative action plan;
(d) the bidder's submission of employment statistics contained in the "Employment Information Form", indicating that the composition of its workforce is at or near parity when compared to the racial and sexual composition of the workforce in the relevant labor market area; and
(e) the bidder's promise to set aside a portion of the contract for legitimate minority business enterprises. See Section 46a-68j-30(10)(E) of the Contract Compliance Regulations.

INSTRUCTIONS AND OTHER INFORMATION

The following BIDDER CONTRACT COMPLIANCE MONITORING REPORT must be completed in full, signed, and submitted with the bid for this contract. The contract awarding agency and the Commission on Human Rights and Opportunities will use the information contained thereon to determine the bidders compliance to Sections 4a-60 and 4a-60a CONN. GEN. STAT., and Sections 46a-68j-23 of the Regulations of Connecticut State Agencies regarding equal employment opportunity, and the bidder's good faith efforts to include minority business enterprises as subcontractors and suppliers for the work of the contract.

1) Definition of Small Contractor

Section 4a-60g CONN. GEN. STAT. defines a small contractor as a company that has been doing business under the same management and control and has maintained its principal place of business in Connecticut for a one year period immediately prior to its application for certification under this section, had gross revenues not exceeding ten million dollars in the most recently completed fiscal year, and at least fifty-one percent of the ownership of which is held by a person or persons who are active in the daily affairs of the company, and have the power to direct the management and policies of the company, except that a nonprofit corporation shall be construed to be a small contractor if such nonprofit corporation meets the requirements of subparagraphs (A) and (B) of subdivision 4a-60g CONN. GEN. STAT.

2) Description of Job Categories (as used in Part IV Bidder Employment Information) (Page 2)

MANAGEMENT: Managers plan, organize, direct, and control the major functions of an organization through subordinates who are at the managerial or supervisory level. They make policy decisions and set objectives for the company or departments. They are not usually directly involved in production or providing services. Examples include top executives, public relations managers, managers of operations specialties (such as financial, human resources, or purchasing managers), and construction and engineering managers.

BUSINESS AND FINANCIAL OPERATIONS: These occupations include managers and professionals who work with the financial aspects of the business. These occupations include accountants and auditors, purchasing agents, management analysts, labor relations specialists, and budget, credit, and financial analysts.

MARKETING AND SALES: Occupations related to the act or process of buying and selling products and/or services such as sales engineer, retail sales workers and sales representatives including wholesale.

LEGAL OCCUPATIONS: In-House Counsel who is charged with providing legal advice and services in regards to legal issues that may arise during the course of standard business practices. This category also includes assistive legal occupations such as paralegals, legal assistants.

COMPUTER SPECIALISTS: Professionals responsible for the computer operations within a company are grouped in this category. Examples of job titles in this category include computer programmers, software engineers, database administrators, computer scientists, systems analysts, and computer support specialists

ARCHITECTURE AND ENGINEERING: Occupations related to architecture, surveying, engineering, and drafting are included in this category. Some of the job titles in this category include electrical and electronic engineers, surveyors, architects, drafters, mechanical engineers, materials engineers, mapping technicians, and civil engineers.

OFFICE AND ADMINISTRATIVE SUPPORT: All clerical-type work is included in this category. These jobs involve the preparing, transcribing, and preserving of written communications and records; collecting accounts; gathering and distributing information; operating office machines and electronic data processing equipment; and distributing mail. Job titles listed in this category include telephone operators, bill and account collectors, customer service representatives, dispatchers, secretaries and administrative assistants, computer operators and clerks (such as payroll, shipping, stock, mail and file).

BUILDING AND GROUNDS CLEANING AND MAINTENANCE: This category includes occupations involving landscaping, housekeeping, and janitorial services. Job titles found in this category include supervisors of landscaping or housekeeping, janitors, maids, grounds maintenance workers, and pest control workers.

CONSTRUCTION AND EXTRACTION: This category includes construction trades and related occupations. Job titles found in this category include boilermakers, masons (all types), carpenters, construction laborers, electricians, plumbers (and related trades), roofers, sheet metal workers, elevator installers, hazardous materials removal workers, paperhangers, and painters. Paving, surfacing, and tamping equipment operators; drywall and ceiling tile installers; and carpet, floor and tile installers and finishers are also included in this category. First line supervisors, foremen, and helpers in these trades are also grouped in this category..

INSTALLATION, MAINTENANCE AND REPAIR: Occupations involving the installation, maintenance, and repair of equipment are included in this group. Examples of job titles found here are heating, ac, and refrigeration mechanics and installers; telecommunication line installers and repairers; heavy vehicle and mobile equipment service technicians and mechanics; small engine mechanics; security and fire alarm systems installers; electric/electronic repair, industrial, utility and transportation equipment; millwrights; riggers; and manufactured building and mobile home installers. First line supervisors, foremen, and helpers for these jobs are also included in the category.

MATERIAL MOVING WORKERS: The job titles included in this group are Crane and tower operators; dredge, excavating, and lading machine operators; hoist and winch operators; industrial truck and tractor operators; cleaners of vehicles and equipment; laborers and freight, stock, and material movers, hand; machine feeders and offbearers; packers and packagers, hand; pumping station operators; refuse and recyclable material collectors; and miscellaneous material moving workers.

PRODUCTION WORKERS: The job titles included in this category are chemical production machine setters, operators and tenders; crushing/grinding workers; cutting workers; inspectors, testers sorters, samplers, weighers; precious stone/metal workers; painting workers; cementing/gluing machine operators and tenders; etchers/engravers; molders, shapers and casters except for metal and plastic; and production workers.

3) Definition of Racial and Ethnic Terms (as used in Part IV Bidder Employment Information) (Page 3)

White (not of Hispanic Origin)- All persons having origins in any of the original peoples of Europe, North Africa, or the Middle East. Black(not of Hispanic Origin)- All persons having origins in any of the Black racial groups of Africa. Hispanic- All persons of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race.	Asian or Pacific Islander- All persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands. This area includes China, India, Japan, Korea, the Philippine Islands, and Samoa. American Indian or Alaskan Native- All persons having origins in any of the original peoples of North America, and who maintain cultural identification through tribal affiliation or community recognition.

BIDDER CONTRACT COMPLIANCE MONITORING REPORT

PART I - Bidder Information

Company Name Street Address City & State Chief Executive	Bidder Federal Employer Identification Number_____ Or Social Security Number_____
Major Business Activity (brief description)	Bidder Identification (response optional/definitions on page 1) -Bidder is a small contractor. Yes__ No__ -Bidder is a minority business enterprise Yes__ No__ (If yes, check ownership category) Black___ Hispanic___ Asian American___ American Indian/Alaskan Native___ Iberian Peninsula___ Individual(s) with a Physical Disability___ Female___
Bidder Parent Company (If any)	- Bidder is certified as above by State of CT Yes__ No__
Other Locations in Ct. (If any)	

PART II - Bidder Nondiscrimination Policies and Procedures

1. Does your company have a written Affirmative Action/Equal Employment Opportunity statement posted on company bulletin boards? Yes__ No__	7. Do all of your company contracts and purchase orders contain non-discrimination statements as required by Sections 4a-60 & 4a-60a Conn. Gen. Stat.? Yes__ No__
2. Does your company have the state-mandated sexual harassment prevention in the workplace policy posted on company bulletin boards? Yes__ No__	8. Do you, upon request, provide reasonable accommodation to employees, or applicants for employment, who have physical or mental disability? Yes__ No__
3. Do you notify all recruitment sources in writing of your company's Affirmative Action/Equal Employment Opportunity employment policy? Yes__ No__	9. Does your company have a mandatory retirement age for all employees? Yes__ No__
4. Do your company advertisements contain a written statement that you are an Affirmative Action/Equal Opportunity Employer? Yes__ No__	10. If your company has 50 or more employees, have you provided at least two (2) hours of sexual harassment training to all of your supervisors? Yes__ No__ NA__
5. Do you notify the Ct. State Employment Service of all employment openings with your company? Yes__ No__	11. If your company has apprenticeship programs, do they meet the Affirmative Action/Equal Employment Opportunity requirements of the apprenticeship standards of the Ct. Dept. of Labor? Yes__ No__ NA__
6. Does your company have a collective bargaining agreement with workers? Yes__ No__ 6a. If yes, do the collective bargaining agreements contain non-discrim ination clauses covering all workers? Yes__ No__ 6b. Have you notified each union in writing of your commitments under the nondiscrimination requirements of contracts with the state of Ct? Yes__ No__	12. Does your company have a written affirmative action Plan? Yes__ No__ If no, please explain. 13. Is there a person in your company who is responsible for equal employment opportunity? Yes__ No__ If yes, give name and phone number. _____

Part III - Bidder Subcontracting Practices (Page 4)

1. Will the work of this contract include subcontractors or suppliers? Yes__ No__

1a. If yes, please list all subcontractors and suppliers and report if they are a small contractor and/or a minority business enterprise. (defined on page 1 / use additional sheet if necessary)

1b. Will the work of this contract require additional subcontractors or suppliers other than those identified in 1a. above? Yes__ No__

PART IV - Bidder Employment Information Date:

JOB CATEGORY *	OVERALL TOTALS	WHITE (not of Hispanic origin)		BLACK (not of Hispanic origin)		HISPANIC		ASIAN or PACIFIC ISLANDER		AMERICAN INDIAN or ALASKAN NATIVE	
		Male	Female	Male	Female	Male	Female	Male	Female	male	female
Management											
Business & Financial Ops											
Marketing & Sales											
Legal Occupations											
Computer Specialists											
Architecture/Engineering											
Office & Admin Support											
Bldg/ Grounds Cleaning/Maintenance											
Construction & Extraction											
Installation , Maintenance & Repair											
Material Moving Workers											
Production Occupations											
TOTALS ABOVE											
Total One Year Ago											
FORMAL ON THE JOB TRAINEES (ENTER FIGURES FOR THE SAME CATEGORIES AS ARE SHOWN ABOVE)											
Apprentices											
Trainees											

*NOTE: JOB CATEGORIES CAN BE CHANGED OR ADDED TO (EX. SALES CAN BE ADDED OR REPLACE A CATEGORY NOT USED IN YOUR COMPANY)

PART V - Bidder Hiring and Recruitment Practices (Page 5)

1. Which of the following recruitment sources are used by you? (Check yes or no, and report percent used)				2. Check (X) any of the below listed requirements that you use as a hiring qualification (X)		3. Describe below any other practices or actions that you take which show that you hire, train, and promote employees without discrimination
SOURCE	YES	NO	% of applicants provided by source			
State Employment Service					Work Experience	
Private Employment Agencies					Ability to Speak or Write English	
Schools and Colleges					Written Tests	
Newspaper Advertisement					High School Diploma	
Walk Ins					College Degree	
Present Employees					Union Membership	
Labor Organizations					Personal Recommendation	
Minority/Community Organizations					Height or Weight	
Others (please identify)					Car Ownership	
					Arrest Record	
					Wage Garnishments	

Certification (Read this form and check your statements on it CAREFULLY before signing). I certify that the statements made by me on this BIDDER CONTRACT COMPLIANCE MONITORING REPORT are complete and true to the best of my knowledge and belief, and are made in good faith. I understand that if I knowingly make any misstatements of facts, I am subject to be declared in non-compliance with Section 4a-60, 4a-60a, and related sections of the CONN. GEN. STAT.

(Signature)	(Title)	(Date Signed)	(Telephone)

DOCUMENT 00 60 01.1

AGREEMENT - AIA

1 AGREEMENT

AIA Document A101 Standard Form of Agreement Between Owner and Contractor where the basis of payment is a Stipulated Sum (1997 Edition), forms the basis of Contract between the Owner and Contractor. Note that the Agreement includes liquidated damages for failure to achieve Substantial Completion of the project by the agreed upon date.

END OF SECTION

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DRAFT

AIA® Document A101™ – 2007

Standard Form of Agreement Between Owner and Contractor
where the basis of payment is a Stipulated Sum

AGREEMENT made as of the « » day of « » in the year « »
(In words, indicate day, month and year.)

BETWEEN the Owner:
(Name, legal status, address and other information)

«~~Mutual Housing Association of Greater Hartford~~»« »
«~~95 Niles Street~~
~~Hartford, CT 06105~~»
« »
« »

and the Contractor:
(Name, legal status, address and other information)

« »« »
« »
« »
« »

for the following Project:
(Name, location and detailed description)

~~«New Construction at 929-981 Park Street»~~
~~«929-981 Park Street~~
~~Hartford, CT 06106»~~
« »

The Architect:
(Name, legal status, address and other information)

«Crosskey Architects LLC»« »
«750 Main Street; Suite 150
Hartford, CT 06103»
«Telephone Number: 86-724-3000»
« »

The Owner and Contractor agree as follows.

ADDITIONS AND DELETIONS: The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

AIA Document A201™–2007, General Conditions of the Contract for Construction, is adopted in this document by reference. Do not use with other general conditions unless this document is modified.

ELECTRONIC COPYING of any portion of this AIA® Document to another electronic file is prohibited and constitutes a violation of copyright laws as set forth in the footer of this document.

TABLE OF ARTICLES

1 THE CONTRACT DOCUMENTS

2 THE WORK OF THIS CONTRACT

3 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION

4 CONTRACT SUM

5 PAYMENTS

6 DISPUTE RESOLUTION

7 TERMINATION OR SUSPENSION

8 MISCELLANEOUS PROVISIONS

9 ENUMERATION OF CONTRACT DOCUMENTS

10 INSURANCE AND BONDS

ARTICLE 1 THE CONTRACT DOCUMENTS

The Contract Documents consist of this Agreement, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications, Addenda issued prior to execution of this Agreement, other documents listed in this Agreement and Modifications issued after execution of this Agreement, all of which form the Contract, and are as fully a part of the Contract as if attached to this Agreement or repeated herein. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations or agreements, either written or oral. An enumeration of the Contract Documents, other than a Modification, appears in Article 9.

ARTICLE 2 THE WORK OF THIS CONTRACT

The Contractor shall fully execute the Work described in the Contract Documents, except as specifically indicated in the Contract Documents to be the responsibility of others.

ARTICLE 3 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION

§ 3.1 The date of commencement of the Work shall be the date of this Agreement unless a different date is stated below or provision is made for the date to be fixed in a notice to proceed issued by the Owner.
(Insert the date of commencement if it differs from the date of this Agreement or, if applicable, state that the date will be fixed in a notice to proceed.)

« »

If, prior to the commencement of the Work, the Owner requires time to file mortgages and other security interests, the Owner's time requirement shall be as follows:

« »

§ 3.2 The Contract Time shall be measured from the date of commencement.

§ 3.3 The Contractor shall achieve Substantial Completion of the entire Work not later than « » (« ») days from the date of commencement, or as follows:
(Insert number of calendar days. Alternatively, a calendar date may be used when coordinated with the date of commencement. If appropriate, insert requirements for earlier Substantial Completion of certain portions of the Work.)

« »

Portion of Work	Substantial Completion Date

, subject to adjustments of this Contract Time as provided in the Contract Documents.
(Insert provisions, if any, for liquidated damages relating to failure to achieve Substantial Completion on time or for bonus payments for early completion of the Work.)

« »

ARTICLE 4 CONTRACT SUM

§ 4.1 The Owner shall pay the Contractor the Contract Sum in current funds for the Contractor's performance of the Contract. The Contract Sum shall be « » ($ « »), subject to additions and deductions as provided in the Contract Documents.

§ 4.2 The Contract Sum is based upon the following alternates, if any, which are described in the Contract Documents and are hereby accepted by the Owner:
(State the numbers or other identification of accepted alternates. If the bidding or proposal documents permit the Owner to accept other alternates subsequent to the execution of this Agreement, attach a schedule of such other alternates showing the amount for each and the date when that amount expires.)

« »

§ 4.3 Unit prices, if any:
(Identify and state the unit price; state quantity limitations, if any, to which the unit price will be applicable.)

Item	Units and Limitations	Price Per Unit ($0.00)

§ 4.4 Allowances included in the Contract Sum, if any:
(Identify allowance and state exclusions, if any, from the allowance price.)

Item	Price

§ **4.5** Liquidated damages, if any:

Notwithstanding Article 15.1.2 of the General Conditions, if the Contractor fails to achieve Substantial Completion of the Work on or before the Substantial Completion Date, as may be adjusted pursuant to the terms of this Agreement, then Owner shall be entitled to recover from Contractor an amount equal to Two Hundred Fifty dollars and zero cents ($250.00) per day for each day that Substantial Completion is delayed up to and including the date that Contractor achieves Substantial Completion.

ARTICLE 5 PAYMENTS

§ 5.1 PROGRESS PAYMENTS

§ 5.1.1 Based upon Applications for Payment submitted to the Architect by the Contractor and Certificates for Payment issued by the Architect, the Owner shall make progress payments on account of the Contract Sum to the Contractor as provided below and elsewhere in the Contract Documents.

§ 5.1.2 The period covered by each Application for Payment shall be one calendar month ending on the last day of the month, or as follows:

« »

§ 5.1.3 Provided that an Application for Payment is received by the Architect not later than the « » day of a month, the Owner shall make payment of the certified amount to the Contractor not later than the « » day of the « » month. If an Application for Payment is received by the Architect after the application date fixed above, payment shall be made by the Owner not later than « » (« ») days after the Architect receives the Application for Payment.
(Federal, state or local laws may require payment within a certain period of time.)

§ 5.1.4 Each Application for Payment shall be based on the most recent schedule of values submitted by the Contractor in accordance with the Contract Documents. The schedule of values shall allocate the entire Contract Sum among the various portions of the Work. The schedule of values shall be prepared in such form and supported by such data to substantiate its accuracy as the Architect may require. This schedule, unless objected to by the Architect, shall be used as a basis for reviewing the Contractor's Applications for Payment.

§ 5.1.5 Applications for Payment shall show the percentage of completion of each portion of the Work as of the end of the period covered by the Application for Payment.

§ 5.1.6 Subject to other provisions of the Contract Documents, the amount of each progress payment shall be computed as follows:

.1 Take that portion of the Contract Sum properly allocable to completed Work as determined by multiplying the percentage completion of each portion of the Work by the share of the Contract Sum allocated to that portion of the Work in the schedule of values, less retainage of « five » percent (« 5 » %). Pending final determination of cost to the Owner of changes in the Work, amounts not in dispute shall be included as provided in Section 7.3.9 of AIA Document A201™–2007, General Conditions of the Contract for Construction;

.2 Add that portion of the Contract Sum properly allocable to materials and equipment delivered and suitably stored at the site for subsequent incorporation in the completed construction (or, if approved in advance by the Owner, suitably stored off the site at a location agreed upon in writing), less retainage of « five » percent (« 5 » %);

.3 Subtract the aggregate of previous payments made by the Owner; and

.4 Subtract amounts, if any, for which the Architect has withheld or nullified a Certificate for Payment as provided in Section 9.5 of AIA Document A201–2007.

§ 5.1.7 The progress payment amount determined in accordance with Section 5.1.6 shall be further modified under the following circumstances:

.1 Add, upon Substantial Completion of the Work, a sum sufficient to increase the total payments to the full amount of the Contract Sum, less such amounts as the Architect shall determine for incomplete Work, retainage applicable to such work and unsettled claims; and
(Section 9.8.5 of AIA Document A201–2007 requires release of applicable retainage upon Substantial Completion of Work with consent of surety, if any.)

.2 Add, if final completion of the Work is thereafter materially delayed through no fault of the Contractor, any additional amounts payable in accordance with Section 9.10.3 of AIA Document A201–2007.

§ 5.1.8 Reduction or limitation of retainage, if any, shall be as follows:
(If it is intended, prior to Substantial Completion of the entire Work, to reduce or limit the retainage resulting from the percentages inserted in Sections 5.1.6.1 and 5.1.6.2 above, and this is not explained elsewhere in the Contract Documents, insert here provisions for such reduction or limitation.)

« »

§ 5.1.9 Except with the Owner's prior approval, the Contractor shall not make advance payments to suppliers for materials or equipment which have not been delivered and stored at the site.

§ 5.2 FINAL PAYMENT

§ 5.2.1 Final payment, constituting the entire unpaid balance of the Contract Sum, shall be made by the Owner to the Contractor when

.1 the Contractor has fully performed the Contract except for the Contractor's responsibility to correct Work as provided in Section 12.2.2 of AIA Document A201–2007, and to satisfy other requirements, if any, which extend beyond final payment; and

.2 a final Certificate for Payment has been issued by the Architect.

§ 5.2.2 The Owner's final payment to the Contractor shall be made no later than 30 days after the issuance of the Architect's final Certificate for Payment, or as follows:

« »

ARTICLE 6 DISPUTE RESOLUTION

§ 6.1 INITIAL DECISION MAKER

The Architect will serve as Initial Decision Maker pursuant to Section 15.2 of AIA Document A201–2007, unless the parties appoint below another individual, not a party to this Agreement, to serve as Initial Decision Maker.
(If the parties mutually agree, insert the name, address and other contact information of the Initial Decision Maker, if other than the Architect.)

« »
« »
« »
« »

§ 6.2 BINDING DISPUTE RESOLUTION

For any Claim subject to, but not resolved by, mediation pursuant to Section 15.3 of AIA Document A201–2007, the method of binding dispute resolution shall be as follows:
(Check the appropriate box. If the Owner and Contractor do not select a method of binding dispute resolution below, or do not subsequently agree in writing to a binding dispute resolution method other than litigation, Claims will be resolved by litigation in a court of competent jurisdiction.)

[« »] Arbitration pursuant to Section 15.4 of AIA Document A201–2007

[« »] Litigation in a court of competent jurisdiction

[« »] Other *(Specify)*

« »

ARTICLE 7 TERMINATION OR SUSPENSION

§ 7.1 The Contract may be terminated by the Owner or the Contractor as provided in Article 14 of AIA Document A201–2007.

§ 7.2 The Work may be suspended by the Owner as provided in Article 14 of AIA Document A201–2007.

ARTICLE 8 MISCELLANEOUS PROVISIONS

§ 8.1 Where reference is made in this Agreement to a provision of AIA Document A201–2007 or another Contract Document, the reference refers to that provision as amended or supplemented by other provisions of the Contract Documents.

§ 8.2 Payments due and unpaid under the Contract shall bear interest from the date payment is due at the rate stated below, or in the absence thereof, at the legal rate prevailing from time to time at the place where the Project is located.
(Insert rate of interest agreed upon, if any.)

« » % « »

§ 8.3 The Owner's representative:
(Name, address and other information)

«_~~Catherine MacKinnon~~»
«_~~95 Niles Street~~
~~Hartford, CT 06105~~»
« »
« »
« »
« »

§ 8.4 The Contractor's representative:
(Name, address and other information)

« »
« »
« »
« »
« »
« »

§ 8.5 Neither the Owner's nor the Contractor's representative shall be changed without ten days written notice to the other party.

§ 8.6 Other provisions:

« »

ARTICLE 9 ENUMERATION OF CONTRACT DOCUMENTS

§ 9.1 The Contract Documents, except for Modifications issued after execution of this Agreement, are enumerated in the sections below.

§ 9.1.1 The Agreement is this executed AIA Document A101–2007, Standard Form of Agreement Between Owner and Contractor.

§ 9.1.2 The General Conditions are AIA Document A201–2007, General Conditions of the Contract for Construction.

§ 9.1.3 The Supplementary and other Conditions of the Contract:

Document	Title	Date	Pages

§ 9.1.4 The Specifications:
(Either list the Specifications here or refer to an exhibit attached to this Agreement.)
« »

Section	Title	Date	Pages

§ 9.1.5 The Drawings:
(Either list the Drawings here or refer to an exhibit attached to this Agreement.)
« »

Number	Title	Date

§ 9.1.6 The Addenda, if any:

Number	Date	Pages

Portions of Addenda relating to bidding requirements are not part of the Contract Documents unless the bidding requirements are also enumerated in this Article 9.

§ 9.1.7 Additional documents, if any, forming part of the Contract Documents:

.1 AIA Document E201™–2007, Digital Data Protocol Exhibit, if completed by the parties, or the following:

« »

.2 Other documents, if any, listed below:
(List here any additional documents that are intended to form part of the Contract Documents. AIA Document A201–2007 provides that bidding requirements such as advertisement or invitation to bid, Instructions to Bidders, sample forms and the Contractor's bid are not part of the Contract Documents unless enumerated in this Agreement. They should be listed here only if intended to be part of the Contract Documents.)

« »

ARTICLE 10 INSURANCE AND BONDS

The Contractor shall purchase and maintain insurance and provide bonds as set forth in Article 11 of AIA Document A201–2007.
(State bonding requirements, if any, and limits of liability for insurance required in Article 11 of AIA Document A201–2007.)

Type of insurance or bond	Limit of liability or bond amount ($0.00)

This Agreement entered into as of the day and year first written above.

OWNER *(Signature)*	**CONTRACTOR** *(Signature)*
«~~Catherine MacKinnon~~»« »	« »« »
(Printed name and title)	*(Printed name and title)*

DRAFT

AIA® Document A312® – 2010

Performance Bond

CONTRACTOR:
(Name, legal status and address)

« »« »
« »

SURETY:
(Name, legal status and principal place of business)

« »« »
« »

OWNER:
(Name, legal status and address)

«Connnecticut Landmarks »« »
«Amos Bull House
59 South Prospect Street, New London, CT 06320 »

CONSTRUCTION CONTRACT
Date: « »
Amount: $ « »
Description:
(Name and location)
« Repairs & Refurbishment of Nathan Hale Hometead »
« 2299 South Street, Coventry, CT »

BOND
Date:
(Not earlier than Construction Contract Date)
« »
Amount: $ « »
Modifications to this Bond: « » None « » See Section 16

CONTRACTOR AS PRINCIPAL		**SURETY**	
Company:	*(Corporate Seal)*	Company:	*(Corporate Seal)*
Signature:		Signature:	
Name and Title:	« »« »	Name and Title:	« »« »

(Any additional signatures appear on the last page of this Performance Bond.)

(FOR INFORMATION ONLY — Name, address and telephone)

AGENT or **BROKER:**

« »
« »
« »

OWNER'S REPRESENTATIVE:
(Architect, Engineer or other party:)

« »
« »
« »
« »
« »
« »

ADDITIONS AND DELETIONS:
The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

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§ 1 The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to the Owner for the performance of the Construction Contract, which is incorporated herein by reference.

§ 2 If the Contractor performs the Construction Contract, the Surety and the Contractor shall have no obligation under this Bond, except when applicable to participate in a conference as provided in Section 3.

§ 3 If there is no Owner Default under the Construction Contract, the Surety's obligation under this Bond shall arise after

.1 the Owner first provides notice to the Contractor and the Surety that the Owner is considering declaring a Contractor Default. Such notice shall indicate whether the Owner is requesting a conference among the Owner, Contractor and Surety to discuss the Contractor's performance. If the Owner does not request a conference, the Surety may, within five (5) business days after receipt of the Owner's notice, request such a conference. If the Surety timely requests a conference, the Owner shall attend. Unless the Owner agrees otherwise, any conference requested under this Section 3.1 shall be held within ten (10) business days of the Surety's receipt of the Owner's notice. If the Owner, the Contractor and the Surety agree, the Contractor shall be allowed a reasonable time to perform the Construction Contract, but such an agreement shall not waive the Owner's right, if any, subsequently to declare a Contractor Default;

.2 the Owner declares a Contractor Default, terminates the Construction Contract and notifies the Surety; and

.3 the Owner has agreed to pay the Balance of the Contract Price in accordance with the terms of the Construction Contract to the Surety or to a contractor selected to perform the Construction Contract.

§ 4 Failure on the part of the Owner to comply with the notice requirement in Section 3.1 shall not constitute a failure to comply with a condition precedent to the Surety's obligations, or release the Surety from its obligations, except to the extent the Surety demonstrates actual prejudice.

§ 5 When the Owner has satisfied the conditions of Section 3, the Surety shall promptly and at the Surety's expense take one of the following actions:

§ 5.1 Arrange for the Contractor, with the consent of the Owner, to perform and complete the Construction Contract;

§ 5.2 Undertake to perform and complete the Construction Contract itself, through its agents or independent contractors;

§ 5.3 Obtain bids or negotiated proposals from qualified contractors acceptable to the Owner for a contract for performance and completion of the Construction Contract, arrange for a contract to be prepared for execution by the Owner and a contractor selected with the Owner's concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract, and pay to the Owner the amount of damages as described in Section 7 in excess of the Balance of the Contract Price incurred by the Owner as a result of the Contractor Default; or

§ 5.4 Waive its right to perform and complete, arrange for completion, or obtain a new contractor and with reasonable promptness under the circumstances:

.1 After investigation, determine the amount for which it may be liable to the Owner and, as soon as practicable after the amount is determined, make payment to the Owner; or

.2 Deny liability in whole or in part and notify the Owner, citing the reasons for denial.

§ 6 If the Surety does not proceed as provided in Section 5 with reasonable promptness, the Surety shall be deemed to be in default on this Bond seven days after receipt of an additional written notice from the Owner to the Surety demanding that the Surety perform its obligations under this Bond, and the Owner shall be entitled to enforce any remedy available to the Owner. If the Surety proceeds as provided in Section 5.4, and the Owner refuses the payment or the Surety has denied liability, in whole or in part, without further notice the Owner shall be entitled to enforce any remedy available to the Owner.

§ 7 If the Surety elects to act under Section 5.1, 5.2 or 5.3, then the responsibilities of the Surety to the Owner shall not be greater than those of the Contractor under the Construction Contract, and the responsibilities of the Owner to

the Surety shall not be greater than those of the Owner under the Construction Contract. Subject to the commitment by the Owner to pay the Balance of the Contract Price, the Surety is obligated, without duplication, for

.1 the responsibilities of the Contractor for correction of defective work and completion of the Construction Contract;

.2 additional legal, design professional and delay costs resulting from the Contractor's Default, and resulting from the actions or failure to act of the Surety under Section 5; and

.3 liquidated damages, or if no liquidated damages are specified in the Construction Contract, actual damages caused by delayed performance or non-performance of the Contractor.

§ 8 If the Surety elects to act under Section 5.1, 5.3 or 5.4, the Surety's liability is limited to the amount of this Bond.

§ 9 The Surety shall not be liable to the Owner or others for obligations of the Contractor that are unrelated to the Construction Contract, and the Balance of the Contract Price shall not be reduced or set off on account of any such unrelated obligations. No right of action shall accrue on this Bond to any person or entity other than the Owner or its heirs, executors, administrators, successors and assigns.

§ 10 The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders and other obligations.

§ 11 Any proceeding, legal or equitable, under this Bond may be instituted in any court of competent jurisdiction in the location in which the work or part of the work is located and shall be instituted within two years after a declaration of Contractor Default or within two years after the Contractor ceased working or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this Paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

§ 12 Notice to the Surety, the Owner or the Contractor shall be mailed or delivered to the address shown on the page on which their signature appears.

§ 13 When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

§ 14 Definitions

§ 14.1 Balance of the Contract Price. The total amount payable by the Owner to the Contractor under the Construction Contract after all proper adjustments have been made, including allowance to the Contractor of any amounts received or to be received by the Owner in settlement of insurance or other claims for damages to which the Contractor is entitled, reduced by all valid and proper payments made to or on behalf of the Contractor under the Construction Contract.

§ 14.2 Construction Contract. The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and changes made to the agreement and the Contract Documents.

§ 14.3 Contractor Default. Failure of the Contractor, which has not been remedied or waived, to perform or otherwise to comply with a material term of the Construction Contract.

§ 14.4 Owner Default. Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.

§ 14.5 Contract Documents. All the documents that comprise the agreement between the Owner and Contractor.

§ 15 If this Bond is issued for an agreement between a Contractor and subcontractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

§ 16 Modifications to this bond are as follows:

« »

(Space is provided below for additional signatures of added parties, other than those appearing on the cover page.)

CONTRACTOR AS PRINCIPAL		**SURETY**	
Company:	*(Corporate Seal)*	Company:	*(Corporate Seal)*
Signature:		Signature:	
Name and Title:	« »« »	Name and Title:	« »« »
Address:	« »	Address:	« »

DRAFT

AIA® Document A312® – 2010

Payment Bond

CONTRACTOR:
(Name, legal status and address)

« »« »
« »

SURETY:
(Name, legal status and principal place of business)

« »« »
« »

OWNER:
(Name, legal status and address)

«Connecticut Landmarks »« »
«Amos Bull House
59 South Prospect Street
Hartford, CT 06106 »

CONSTRUCTION CONTRACT
Date: « »
Amount: $ « »
Description:
(Name and location)

«Repairs & Refurbishment of Nathan Hale Homestead »
«2299 South Street, Coventry, CT »

BOND
Date:
(Not earlier than Construction Contract Date)
« »
Amount: $ « »
Modifications to this Bond: « » None « » See Section 18

CONTRACTOR AS PRINCIPAL		**SURETY**	
Company:	*(Corporate Seal)*	Company:	*(Corporate Seal)*
Signature:		Signature:	
Name and Title:	« »« »	Name and Title:	« »« »

(Any additional signatures appear on the last page of this Payment Bond.)

(FOR INFORMATION ONLY — Name, address and telephone)

AGENT or **BROKER:**

« »
« »
« »

OWNER'S REPRESENTATIVE:
(Architect, Engineer or other party:)

« »
« »
« »
« »
« »
« »

ADDITIONS AND DELETIONS:
The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

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§ 1 The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to the Owner to pay for labor, materials and equipment furnished for use in the performance of the Construction Contract, which is incorporated herein by reference, subject to the following terms.

§ 2 If the Contractor promptly makes payment of all sums due to Claimants, and defends, indemnifies and holds harmless the Owner from claims, demands, liens or suits by any person or entity seeking payment for labor, materials or equipment furnished for use in the performance of the Construction Contract, then the Surety and the Contractor shall have no obligation under this Bond.

§ 3 If there is no Owner Default under the Construction Contract, the Surety's obligation to the Owner under this Bond shall arise after the Owner has promptly notified the Contractor and the Surety (at the address described in Section 13) of claims, demands, liens or suits against the Owner or the Owner's property by any person or entity seeking payment for labor, materials or equipment furnished for use in the performance of the Construction Contract and tendered defense of such claims, demands, liens or suits to the Contractor and the Surety.

§ 4 When the Owner has satisfied the conditions in Section 3, the Surety shall promptly and at the Surety's expense defend, indemnify and hold harmless the Owner against a duly tendered claim, demand, lien or suit.

§ 5 The Surety's obligations to a Claimant under this Bond shall arise after the following:

§ 5.1 Claimants, who do not have a direct contract with the Contractor,

- **.1** have furnished a written notice of non-payment to the Contractor, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were, or equipment was, furnished or supplied or for whom the labor was done or performed, within ninety (90) days after having last performed labor or last furnished materials or equipment included in the Claim; and
- **.2** have sent a Claim to the Surety (at the address described in Section 13).

§ 5.2 Claimants, who are employed by or have a direct contract with the Contractor, have sent a Claim to the Surety (at the address described in Section 13).

§ 6 If a notice of non-payment required by Section 5.1.1 is given by the Owner to the Contractor, that is sufficient to satisfy a Claimant's obligation to furnish a written notice of non-payment under Section 5.1.1.

§ 7 When a Claimant has satisfied the conditions of Sections 5.1 or 5.2, whichever is applicable, the Surety shall promptly and at the Surety's expense take the following actions:

§ 7.1 Send an answer to the Claimant, with a copy to the Owner, within sixty (60) days after receipt of the Claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed; and

§ 7.2 Pay or arrange for payment of any undisputed amounts.

§ 7.3 The Surety's failure to discharge its obligations under Section 7.1 or Section 7.2 shall not be deemed to constitute a waiver of defenses the Surety or Contractor may have or acquire as to a Claim, except as to undisputed amounts for which the Surety and Claimant have reached agreement. If, however, the Surety fails to discharge its obligations under Section 7.1 or Section 7.2, the Surety shall indemnify the Claimant for the reasonable attorney's fees the Claimant incurs thereafter to recover any sums found to be due and owing to the Claimant.

§ 8 The Surety's total obligation shall not exceed the amount of this Bond, plus the amount of reasonable attorney's fees provided under Section 7.3, and the amount of this Bond shall be credited for any payments made in good faith by the Surety.

§ 9 Amounts owed by the Owner to the Contractor under the Construction Contract shall be used for the performance of the Construction Contract and to satisfy claims, if any, under any construction performance bond. By the Contractor furnishing and the Owner accepting this Bond, they agree that all funds earned by the Contractor in the performance of the Construction Contract are dedicated to satisfy obligations of the Contractor and Surety under this Bond, subject to the Owner's priority to use the funds for the completion of the work.

§ 10 The Surety shall not be liable to the Owner, Claimants or others for obligations of the Contractor that are unrelated to the Construction Contract. The Owner shall not be liable for the payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligation to make payments to, or give notice on behalf of, Claimants or otherwise have any obligations to Claimants under this Bond.

§ 11 The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders and other obligations.

§ 12 No suit or action shall be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the state in which the project that is the subject of the Construction Contract is located or after the expiration of one year from the date (1) on which the Claimant sent a Claim to the Surety pursuant to Section 5.1.2 or 5.2, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this Paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

§ 13 Notice and Claims to the Surety, the Owner or the Contractor shall be mailed or delivered to the address shown on the page on which their signature appears. Actual receipt of notice or Claims, however accomplished, shall be sufficient compliance as of the date received.

§ 14 When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

§ 15 Upon request by any person or entity appearing to be a potential beneficiary of this Bond, the Contractor and Owner shall promptly furnish a copy of this Bond or shall permit a copy to be made.

§ 16 Definitions

§ 16.1 Claim. A written statement by the Claimant including at a minimum:

- **.1** the name of the Claimant;
- **.2** the name of the person for whom the labor was done, or materials or equipment furnished;
- **.3** a copy of the agreement or purchase order pursuant to which labor, materials or equipment was furnished for use in the performance of the Construction Contract;
- **.4** a brief description of the labor, materials or equipment furnished;
- **.5** the date on which the Claimant last performed labor or last furnished materials or equipment for use in the performance of the Construction Contract;
- **.6** the total amount earned by the Claimant for labor, materials or equipment furnished as of the date of the Claim;
- **.7** the total amount of previous payments received by the Claimant; and
- **.8** the total amount due and unpaid to the Claimant for labor, materials or equipment furnished as of the date of the Claim.

§ 16.2 Claimant. An individual or entity having a direct contract with the Contractor or with a subcontractor of the Contractor to furnish labor, materials or equipment for use in the performance of the Construction Contract. The term Claimant also includes any individual or entity that has rightfully asserted a claim under an applicable mechanic's lien or similar statute against the real property upon which the Project is located. The intent of this Bond shall be to include without limitation in the terms "labor, materials or equipment" that part of water, gas, power, light, heat, oil, gasoline, telephone service or rental equipment used in the Construction Contract, architectural and engineering services required for performance of the work of the Contractor and the Contractor's subcontractors, and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials or equipment were furnished.

§ 16.3 Construction Contract. The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and all changes made to the agreement and the Contract Documents.

§ 16.4 Owner Default. Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.

§ 16.5 Contract Documents. All the documents that comprise the agreement between the Owner and Contractor.

§ 17 If this Bond is issued for an agreement between a Contractor and subcontractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

§ 18 Modifications to this bond are as follows:

« »

(Space is provided below for additional signatures of added parties, other than those appearing on the cover page.)

CONTRACTOR AS PRINCIPAL		**SURETY**	
Company:	*(Corporate Seal)*	Company:	*(Corporate Seal)*
Signature:		Signature:	
Name and Title:	« »« »	Name and Title:	« »« »
Address:	« »	Address:	« »

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GENERAL CONDITIONS – AIA A201

1. GENERAL CONDITIONS

AIA Document A201 General Conditions of the Contract for Construction (2007 Edition) are the General Conditions between the Owner and Contractor.

END OF SECTION

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DRAFT

AIA® Document A101® – 2017

Standard Form of Agreement Between Owner and Contractor
where the basis of payment is a Stipulated Sum

AGREEMENT made as of the « » day of « » in the year « »
(In words, indicate day, month and year.)

BETWEEN the Owner:
(Name, legal status, address and other information)

«Connecticut Landmarks »« »
«Amos Bull House »
«59 South Prospect Street »
«Hartford, CT 06106 »

and the Contractor:
(Name, legal status, address and other information)

« »« »
« »
« »
« »

for the following Project:
(Name, location and detailed description)

«-Repair and Refurbishment of the Nathan Hale Homestead »
«2299 South Street »
«Coventry, CT 06238 »

The Architect:
(Name, legal status, address and other information)

«Crosskey Architects »«LLC »
«750 Main Street, Suite 150 »
«Hartford, CT 06103 »
«860-724-3000 »

The Owner and Contractor agree as follows.

ADDITIONS AND DELETIONS:
The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

The parties should complete A101®–2017, Exhibit A, Insurance and Bonds, contemporaneously with this Agreement. AIA Document A201®–2017, General Conditions of the Contract for Construction, is adopted in this document by reference. Do not use with other general conditions unless this document is modified.

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TABLE OF ARTICLES

1 THE CONTRACT DOCUMENTS

2 THE WORK OF THIS CONTRACT

3 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION

4 CONTRACT SUM

5 PAYMENTS

6 DISPUTE RESOLUTION

7 TERMINATION OR SUSPENSION

8 MISCELLANEOUS PROVISIONS

9 ENUMERATION OF CONTRACT DOCUMENTS

EXHIBIT A INSURANCE AND BONDS

ARTICLE 1 THE CONTRACT DOCUMENTS

The Contract Documents consist of this Agreement, Conditions of the Contract (General, Supplementary, and other Conditions), Drawings, Specifications, Addenda issued prior to execution of this Agreement, other documents listed in this Agreement, and Modifications issued after execution of this Agreement, all of which form the Contract, and are as fully a part of the Contract as if attached to this Agreement or repeated herein. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations, or agreements, either written or oral. An enumeration of the Contract Documents, other than a Modification, appears in Article 9.

ARTICLE 2 THE WORK OF THIS CONTRACT

The Contractor shall fully execute the Work described in the Contract Documents, except as specifically indicated in the Contract Documents to be the responsibility of others.

ARTICLE 3 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION

§ 3.1 The date of commencement of the Work shall be:
(Check one of the following boxes.)

[« X »] The date of this Agreement.

[« »] A date set forth in a notice to proceed issued by the Owner.

[« »] Established as follows:
(Insert a date or a means to determine the date of commencement of the Work.)

« »

If a date of commencement of the Work is not selected, then the date of commencement shall be the date of this Agreement.

§ 3.2 The Contract Time shall be measured from the date of commencement of the Work.

§ 3.3 Substantial Completion

§ 3.3.1 Subject to adjustments of the Contract Time as provided in the Contract Documents, the Contractor shall achieve Substantial Completion of the entire Work:
(Check one of the following boxes and complete the necessary information.)

[«X »] Not later than «One Hundred Eighty » («180 ») calendar days from the date of commencement of the Work.

[« »] By the following date: « »

§ 3.3.2 Subject to adjustments of the Contract Time as provided in the Contract Documents, if portions of the Work are to be completed prior to Substantial Completion of the entire Work, the Contractor shall achieve Substantial Completion of such portions by the following dates:

Portion of Work	Substantial Completion Date

§ 3.3.3 If the Contractor fails to achieve Substantial Completion as provided in this Section 3.3, liquidated damages, if any, shall be assessed as set forth in Section 4.5.

ARTICLE 4 CONTRACT SUM

§ 4.1 The Owner shall pay the Contractor the Contract Sum in current funds for the Contractor's performance of the Contract. The Contract Sum shall be « » ($ « »), subject to additions and deductions as provided in the Contract Documents.

§ 4.2 Alternates

§ 4.2.1 Alternates, if any, included in the Contract Sum:

Item	Price

§ 4.2.2 Subject to the conditions noted below, the following alternates may be accepted by the Owner following execution of this Agreement. Upon acceptance, the Owner shall issue a Modification to this Agreement.
(Insert below each alternate and the conditions that must be met for the Owner to accept the alternate.)

Item	Price	Conditions for Acceptance

§ 4.3 Allowances, if any, included in the Contract Sum:
(Identify each allowance.)

Item	Price

§ 4.4 Unit prices, if any:
(Identify the item and state the unit price and quantity limitations, if any, to which the unit price will be applicable.)

Item	Units and Limitations	Price per Unit ($0.00)

§ 4.5 Liquidated damages, if any:
(Insert terms and conditions for liquidated damages, if any.)

« Notwithstanding Article 15.1.2 of the General Conditions, if the Contractor fails to achieve Substantial Completion of the Work on or before the Substantial Completion Date, as may be adjusted pursuant to the terms of this Agreement, then Owner shall be entitled to recover from Contractor an amount equal to Two Hundred Fifty dollars and zero cents ($250.00) per day for each day that Substantial Completion is delayed up to and including the date that Contractor achieves Substantial Completion. »

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§ 4.6 Other:
(Insert provisions for bonus or other incentives, if any, that might result in a change to the Contract Sum.)

« »

ARTICLE 5 PAYMENTS

§ 5.1 Progress Payments

§ 5.1.1 Based upon Applications for Payment submitted to the Architect by the Contractor and Certificates for Payment issued by the Architect, the Owner shall make progress payments on account of the Contract Sum to the Contractor as provided below and elsewhere in the Contract Documents.

§ 5.1.2 The period covered by each Application for Payment shall be one calendar month ending on the last day of the month, or as follows:

« »

§ 5.1.3 Provided that an Application for Payment is received by the Architect not later than the « » day of a month, the Owner shall make payment of the amount certified to the Contractor not later than the « » day of the « » month. If an Application for Payment is received by the Architect after the application date fixed above, payment of the amount certified shall be made by the Owner not later than « » (« ») days after the Architect receives the Application for Payment.
(Federal, state or local laws may require payment within a certain period of time.)

§ 5.1.4 Each Application for Payment shall be based on the most recent schedule of values submitted by the Contractor in accordance with the Contract Documents. The schedule of values shall allocate the entire Contract Sum among the various portions of the Work. The schedule of values shall be prepared in such form, and supported by such data to substantiate its accuracy, as the Architect may require. This schedule of values shall be used as a basis for reviewing the Contractor's Applications for Payment.

§ 5.1.5 Applications for Payment shall show the percentage of completion of each portion of the Work as of the end of the period covered by the Application for Payment.

§ 5.1.6 In accordance with AIA Document A201™–2017, General Conditions of the Contract for Construction, and subject to other provisions of the Contract Documents, the amount of each progress payment shall be computed as follows:

§ 5.1.6.1 The amount of each progress payment shall first include:

- **.1** That portion of the Contract Sum properly allocable to completed Work;
- **.2** That portion of the Contract Sum properly allocable to materials and equipment delivered and suitably stored at the site for subsequent incorporation in the completed construction, or, if approved in advance by the Owner, suitably stored off the site at a location agreed upon in writing; and
- **.3** That portion of Construction Change Directives that the Architect determines, in the Architect's professional judgment, to be reasonably justified.

§ 5.1.6.2 The amount of each progress payment shall then be reduced by:

- **.1** The aggregate of any amounts previously paid by the Owner;
- **.2** The amount, if any, for Work that remains uncorrected and for which the Architect has previously withheld a Certificate for Payment as provided in Article 9 of AIA Document A201–2017;
- **.3** Any amount for which the Contractor does not intend to pay a Subcontractor or material supplier, unless the Work has been performed by others the Contractor intends to pay;
- **.4** For Work performed or defects discovered since the last payment application, any amount for which the Architect may withhold payment, or nullify a Certificate of Payment in whole or in part, as provided in Article 9 of AIA Document A201–2017; and
- **.5** Retainage withheld pursuant to Section 5.1.7.

§ 5.1.7 Retainage

§ 5.1.7.1 For each progress payment made prior to Substantial Completion of the Work, the Owner may withhold the following amount, as retainage, from the payment otherwise due:
(Insert a percentage or amount to be withheld as retainage from each Application for Payment. The amount of retainage may be limited by governing law.)

« Five percent (5%) »

§ 5.1.7.1.1 The following items are not subject to retainage:
(Insert any items not subject to the withholding of retainage, such as general conditions, insurance, etc.)

« »

§ 5.1.7.2 Reduction or limitation of retainage, if any, shall be as follows:
(If the retainage established in Section 5.1.7.1 is to be modified prior to Substantial Completion of the entire Work, including modifications for Substantial Completion of portions of the Work as provided in Section 3.3.2, insert provisions for such modifications.)

« »

§ 5.1.7.3 Except as set forth in this Section 5.1.7.3, upon Substantial Completion of the Work, the Contractor may submit an Application for Payment that includes the retainage withheld from prior Applications for Payment pursuant to this Section 5.1.7. The Application for Payment submitted at Substantial Completion shall not include retainage as follows:
(Insert any other conditions for release of retainage upon Substantial Completion.)

« »

§ 5.1.8 If final completion of the Work is materially delayed through no fault of the Contractor, the Owner shall pay the Contractor any additional amounts in accordance with Article 9 of AIA Document A201–2017.

§ 5.1.9 Except with the Owner's prior approval, the Contractor shall not make advance payments to suppliers for materials or equipment which have not been delivered and stored at the site.

§ 5.2 Final Payment

§ 5.2.1 Final payment, constituting the entire unpaid balance of the Contract Sum, shall be made by the Owner to the Contractor when

.1 the Contractor has fully performed the Contract except for the Contractor's responsibility to correct Work as provided in Article 12 of AIA Document A201–2017, and to satisfy other requirements, if any, which extend beyond final payment; and

.2 a final Certificate for Payment has been issued by the Architect.

§ 5.2.2 The Owner's final payment to the Contractor shall be made no later than 30 days after the issuance of the Architect's final Certificate for Payment, or as follows:

« »

§ 5.3 Interest

Payments due and unpaid under the Contract shall bear interest from the date payment is due at the rate stated below, or in the absence thereof, at the legal rate prevailing from time to time at the place where the Project is located.
(Insert rate of interest agreed upon, if any.)

« » % « »

ARTICLE 6 DISPUTE RESOLUTION

§ 6.1 Initial Decision Maker

The Architect will serve as the Initial Decision Maker pursuant to Article 15 of AIA Document A201–2017, unless the parties appoint below another individual, not a party to this Agreement, to serve as the Initial Decision Maker.
(If the parties mutually agree, insert the name, address and other contact information of the Initial Decision Maker, if other than the Architect.)

« »
« »

« »
« »

§ 6.2 Binding Dispute Resolution
For any Claim subject to, but not resolved by, mediation pursuant to Article 15 of AIA Document A201–2017, the method of binding dispute resolution shall be as follows:
(Check the appropriate box.)

[« »] Arbitration pursuant to Section 15.4 of AIA Document A201–2017

[«X »] Litigation in a court of competent jurisdiction

[« »] Other *(Specify)*

« »

If the Owner and Contractor do not select a method of binding dispute resolution, or do not subsequently agree in writing to a binding dispute resolution method other than litigation, Claims will be resolved by litigation in a court of competent jurisdiction.

ARTICLE 7 TERMINATION OR SUSPENSION
§ 7.1 The Contract may be terminated by the Owner or the Contractor as provided in Article 14 of AIA Document A201–2017.

§ 7.1.1 If the Contract is terminated for the Owner's convenience in accordance with Article 14 of AIA Document A201–2017, then the Owner shall pay the Contractor a termination fee as follows:
(Insert the amount of, or method for determining, the fee, if any, payable to the Contractor following a termination for the Owner's convenience.)

« »

§ 7.2 The Work may be suspended by the Owner as provided in Article 14 of AIA Document A201–2017.

ARTICLE 8 MISCELLANEOUS PROVISIONS
§ 8.1 Where reference is made in this Agreement to a provision of AIA Document A201–2017 or another Contract Document, the reference refers to that provision as amended or supplemented by other provisions of the Contract Documents.

§ 8.2 The Owner's representative:
(Name, address, email address, and other information)

« »
« »
« »
« »
« »
« »

§ 8.3 The Contractor's representative:
(Name, address, email address, and other information)

« »
« »
« »
« »
« »
« »

§ 8.4 Neither the Owner's nor the Contractor's representative shall be changed without ten days' prior notice to the other party.

§ 8.5 Insurance and Bonds

§ 8.5.1 The Owner and the Contractor shall purchase and maintain insurance as set forth in AIA Document A101™–2017, Standard Form of Agreement Between Owner and Contractor where the basis of payment is a Stipulated Sum, Exhibit A, Insurance and Bonds, and elsewhere in the Contract Documents.

§ 8.5.2 The Contractor shall provide bonds as set forth in AIA Document A101™–2017 Exhibit A, and elsewhere in the Contract Documents.

§ 8.6 Notice in electronic format, pursuant to Article 1 of AIA Document A201–2017, may be given in accordance with a building information modeling exhibit, if completed, or as otherwise set forth below:
(If other than in accordance with a building information modeling exhibit, insert requirements for delivering notice in electronic format such as name, title, and email address of the recipient and whether and how the system will be required to generate a read receipt for the transmission.)

« »

§ 8.7 Other provisions:

« »

ARTICLE 9 ENUMERATION OF CONTRACT DOCUMENTS

§ 9.1 This Agreement is comprised of the following documents:

.1 AIA Document A101™–2017, Standard Form of Agreement Between Owner and Contractor

.2 AIA Document A101™–2017, Exhibit A, Insurance and Bonds

.3 AIA Document A201™–2017, General Conditions of the Contract for Construction

.4 Building information modeling exhibit, dated as indicated below:
(Insert the date of the building information modeling exhibit incorporated into this Agreement.)

« »

.5 Drawings

Number	Title	Date
G-000	Cover	4/30/2025
G-001	Drawing Index & General Information	4/30/2025
AM-101	Main Bldg./ First Floor Plan	4/30/2025
AM-102	Main Bldg./Second & Attic Floor Plans	4/30/2025
AM-103	Main Bldg./ Roof Plan	4/30/2025
AM-201	Main Bldg./ Exterior Elevations	4/30/2025
AM-202	Main Bldg./ Exterior Elevations	4/30/2025
AM-203	Main Bldg./ Door Details	4/30/2025
AC-101	Classroom Bldg./ Floor Plans & Elevations	4/30/2025
AE-101	East Barn/ Floor & Roof Plans	4/30/2025
AE-201	East Barn/ Exterior Elevations	4/30/2025
AW-101	West Barn/ Floor & Roof Plans	4/30/2025
AW-201		4/30/2025

A-621	West Barn/ Exterior Elevations	4/30/2025
A-622	Window & Exterior Door Schedules & Details Classroom Building Window Details	4/30/2025

.6 Specifications

Section	Title	Date	Pages
All	Project Manual & Specifications	4/30/2025	154

.7 Addenda, if any:

Number	Date	Pages

Portions of Addenda relating to bidding or proposal requirements are not part of the Contract Documents unless the bidding or proposal requirements are also enumerated in this Article 9.

.8 Other Exhibits:
(Check all boxes that apply and include appropriate information identifying the exhibit where required.)

[« »] AIA Document E204™–2017, Sustainable Projects Exhibit, dated as indicated below:
(Insert the date of the E204-2017 incorporated into this Agreement.)

« »

[« »] The Sustainability Plan:

Title	Date	Pages

[« »] Supplementary and other Conditions of the Contract:

Document	Title	Date	Pages

.9 Other documents, if any, listed below:
(List here any additional documents that are intended to form part of the Contract Documents. AIA Document A201™–2017 provides that the advertisement or invitation to bid, Instructions to Bidders, sample forms, the Contractor's bid or proposal, portions of Addenda relating to bidding or proposal requirements, and other information furnished by the Owner in anticipation of receiving bids or proposals, are not part of the Contract Documents unless enumerated in this Agreement. Any such documents should be listed here only if intended to be part of the Contract Documents.)

« »

This Agreement entered into as of the day and year first written above.

OWNER *(Signature)*

CONTRACTOR *(Signature)*

« »« »
(Printed name and title)

« »« »
(Printed name and title)

DOCUMENT 00 60 50.1

SUPPLEMENTARY GENERAL CONDITIONS

SUPPLEMENTARY CONDITIONS

These Supplementary Conditions amend or supplement the General Conditions of the Contract for Construction (AIA A201 - 2007 Edition) and other provisions of the Contract Documents as indicated below. All provisions which are not so amended or supplemented remain in full force and effect.

The terms used in these Supplementary Conditions which are defined in the General Conditions of the Contract for Construction (AIA A201 2007 Edition) have the meanings assigned to them in the General Conditions.

CONTRACTOR INSURANCE COVERAGE

Name of Contractor:_____

A. Commercial General Liability — Company:_____

Form: 1986 Occurrence:_____

Minimum Limit:

$ 2,000,000	Aggregate Limit
$ 1,000,000	Products/completed operations aggregate
$ 1,000,000	Personal & Advertising Injury
$ 1,000,000	Each Occurrence
$ 50,000	Fire Damage
$ 5,000	Medical Expense

No Deductible or Retention
OCP-Owners & Contractors Protective
XCU (explosion/collapse/underground)
Additional insureds as required; include The Partnership

B. Workers' Compensation — Company:_____

Limits:

(A) Workers' Compensation	Statutory
(B) Employer's Liability	$ 100,000 Each Acc.
	$ 500,000 Disease-Policy
	$ 100,000 Disease-per Employee

C. Automobile/Hired & Non-Owned Liability — Company:_____

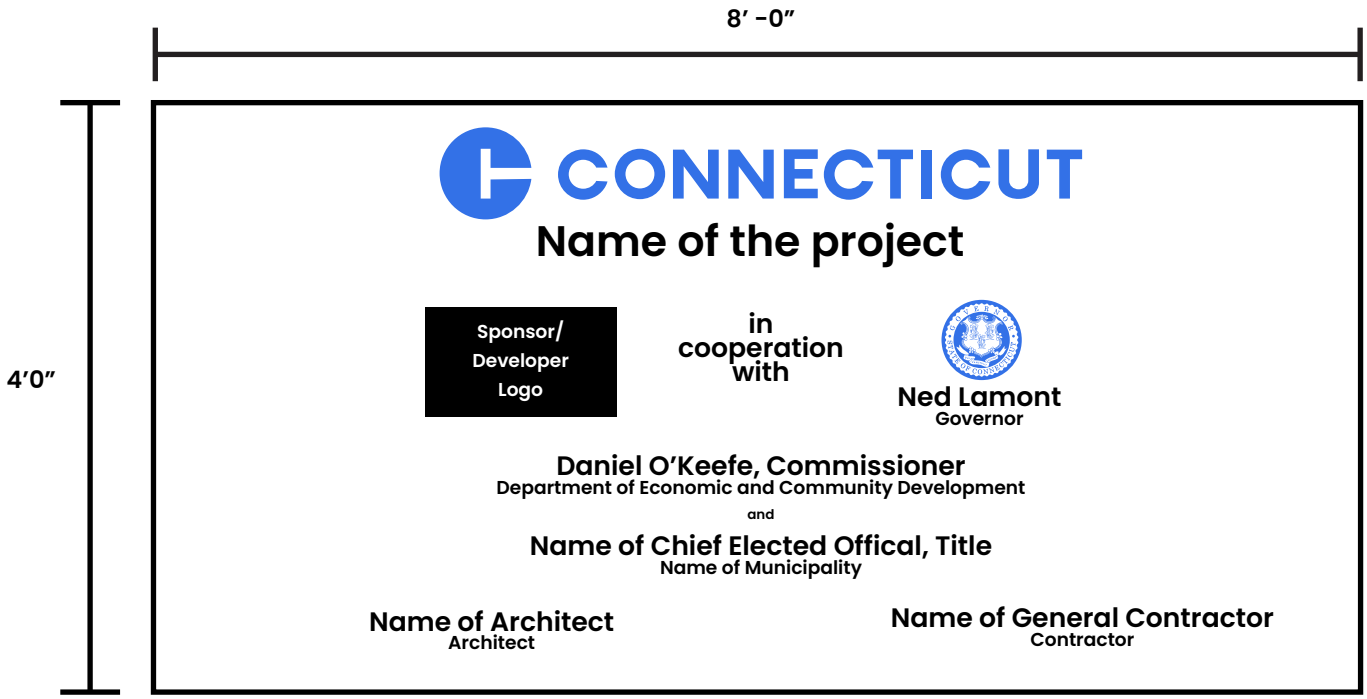
Limit: $ 1,000,000 per accident Combined Single Limit ("CSL")

D. Umbrella Liability

Minimum Limit: As required by contract
Additional Insureds as required

CONNECTICUT

Department of Economic and Community Development
Project Sign



Sign Panel	¾” MDO-EXT-APA PLYWOOD SUPPORTED WITH (2) 4X4 TREATED WOOD COLUMNS AND SECURED 4’ INTO GRADE. TOP OF SIGN AT 8’-0” ABOVE GRADE
Colors	ALL LETTERS AND SYMBOLS ARE TO BE BLACK. THE BACKGROUND WILL BE WHITE ENAMEL. BACK OF PLYWOOD AND SUPPORT STRUCTURE SHALL BE PAINTED MATTE BLACK
Typeface	POPPINS SEMI-BOLD. NAME OF PROJECT IS TO BE BIGGER THAN ANY NAMES. TITLES OF LEADERS IS TO BE SMALLER THAN THEIR NAMES. FONT IS ATTACHED.
Colors	ALL LETTERS AND SYMBOLS ARE TO BE BLACK. THE BACKGROUND WILL BE WHITE ENAMEL. BACK OF PLYWOOD AND SUPPORT STRUCTURE SHALL BE PAINTED MATTE BLACK
Location	SIGN MUST BE LOCATED WHERE IT IS CLEARLY VISIBLE TO THE PUBLIC
Timing	INSTALL AT THE START OF CONSTRUCTION AND REMOVE AT CONSTRUCTION COMPLETION
State & Governor Logo	ATTACHED

SECTION 01 10 07

GENERAL PRESERVATION PROJECT GUIDELINES

PART 1 – GENERAL

1.1 SAFETY PRECAUTIONS

PREFACE: This standard includes general project guidelines provided to supplement specific repair and preventive maintenance procedures. Not all of these requirements will be applicable given the level of difficulty of the procedure. However, where applicable, these guidelines should be used in addition to recommendations provided by the regional historic preservation officer (RHPO). The information is listed in the order it might appear in the usual CSI section format.

A. The supervisor should ensure that all workers wear adequate, approved protective clothing and are provided with protective equipment during work operations and as required at other times.

B. Check manufacturer's literature for precautions and effects of products and procedures on adjacent building materials, components, and especially vegetation. Take appropriate protective measures.

C. All workers must be protected from the effects of chemicals during repair or cleaning operations.
   1. DO NOT save unused portions of stain-removal materials.
   2. DO NOT store any chemicals in unmarked containers.
   3. EXCELLENT VENTILATION MUST BE PROVIDED WHEREVER ANY SOLVENT IS USED. USE RESPIRATORS WITH SOLVENT FILTERS. NOTE: SOME OF THE SOLVENTS LISTED COULD BE KNOWN CARCINOGENS AND MAY BE BANNED IN SOME STATES.
   4. No use of organic solvents indoors should be allowed without substantial air movement. Use only spark-proof fans near operations involving flammable liquids.
   5. Provide adequate clothing and protective gear where the chemicals are indicated to be dangerous.
   6. Have available antidote and accident treatment chemicals where noted.
   7. Avoid skin contact and inhalation of any chemical. Rubber or plastic gloves should be worn when handling hazardous (flammable or toxic) chemicals.
      a. Follow storage and handling procedures printed on the container labels of the cleaning solutions, provide good ventilation while working, and thoroughly wash hands after completion of the work.
      b. Provide protective clothing which must be worn and protective creams for exposed skin areas.
      c. Accidental contact with unprotected skin to these materials must be treated immediately by washing with soap and water, never with solvents.
      d. Exercise care to avoid skin contact to tool cleaning solvents and to provide adequate ventilation for clean-up operations.

D. When removing bird droppings: Bird droppings may expose workers to the effects of cryptococcosis and histoplasmosis which endanger the human respiratory system. Public health authorities should be consulted for appropriate precautions.
   1. All contractor personnel must wear a National Institute for Occupational Safety and

Health (NIOSH) approved full face respirator with a high efficiency particulate air (HEPA) filter for screening particles of 0.3 micron size. Dust and particle masks are not appropriate.

2. Respirators must be used in accordance with OSHA regulation, 29 CFR 1910.134 and GSA policy, PBS P 5900.2C, Chapter 3, section 8. This includes fit-testing of respirators, maintenance, training, and storage requirements.
3. All contractor personnel must wear protective coveralls, gloves, boots, and hats.
4. Prior to removal, all excrement must be saturated with water under low pressure to prevent debris from becoming airborne.
5. On historic structures, only non-metallic tools (such as plastic spatulas and brushes with natural fiber or nylon bristles, or their equivalent) must be used to remove the excrement.
6. Removed excrement must be collected in plastic bags, sealed, and disposed of by the contractor at a sanitary landfill.
7. All work must be performed from the outside of the building. Building occupants and the general public must be kept clear of the work site during all operations. It is the contractor's responsibility to provide all barricades, signage, etc. necessary for public protection.

E. When removing paint:
1. Paint being removed most likely will contain lead. All workers must wear protective clothing (including hair), goggles and respirators with proper filters.
2. No food or drink shall be allowed near any work station so as to prevent contamination from paint, paint chips, dust or chemical removers which contain lead and other toxic substances.
3. Protective clothing shall be removed at the end of each day and kept at the site to prevent workers from tracking dust and paint chips to other parts of the site or to their homes.
4. Wash hands and face often, especially before eating and at the end of the day.
5. All waste material shall be collected at the end of each work day and disposed of in a manner consistent with local environmental regulations. It is considered Hazardous Waste.

1.2 HISTORIC STRUCTURES PRECAUTIONS

A. The principal aim of any work must be to halt the process of deterioration and stabilize the item's condition. Repair is a second option which becomes necessary only where preservation is not sufficient to ensure mid- to long-term survival. Repair should always be based on the fundamental principle of 'minimal disturbance'. The following are good practices which arise from this principle:
1. Retention of as much existing material as possible; repairing and consolidating rather than renewing.
2. The use of additional material or structure to reinforce, strengthen, prop, tie, and/or support existing material or structure.
3. The use of reversible processes wherever possible.
4. The use of traditional materials and techniques. New work should be distinguishable to the trained eye, on close inspection, from the old.
5. The item should be recorded before, during and after the work.
    a. No smoking will be allowed by personnel performing work on or about Historic Structures.

b. RHPO's approval is required for any change, addition or removal of historic structural fabric or historic property.
c. RHPO should be notified of any visible change in the integrity of the material or component whether environmental, such as biological attack, ultraviolet degradation, freeze, thaw, etc., or structural defects, such as cracks, movement, or distortion.
d. Architectural features will be repaired rather than replaced wherever possible. Repair or replacement of missing features will be based on accurate duplications rather than on conjectural designs.
e. Work which requires existing features to be removed, cleaned and reused shall be accomplished without damage to the material itself, to adjacent materials, or the substrate.
f. Existing features removed from the building which are to be reinstalled shall be carefully labeled and stored within the building in a place where they will not be damaged or obstruct other work.
g. New or replacement materials/features will be permanently marked in an unobtrusive manner to distinguish them from original fabric. The manner of identification and location of these marks shall be recorded in permanent building records.
h. Identify the historic importance of the material or feature. The item's merit, in terms of age, uniqueness of design, materials, size, technological development, association with persons or events, exceptional workmanship or design qualities, must be understood before decisions regarding repair, maintenance and preservation can be made.
i. Statement of Non-Compliance: Wherever it is necessary to proceed with the use of products, under conditions which do not comply with the requirements (because of time schedule difficulties or other reasons which the supervisor determines that are crucial to the project), prepare a written statement for the RHPO's Record indicating the nature of the non-compliance, the reasons for proceeding, the extra or precautionary measures taken to ensure the best possible work, and the names of the individuals concurring with the decisions to proceed with the work.
j. When cleaning, avoid overcleaning. Aim for achieving 85% clean. Most damage occurs when attempting to clean the last 15%.
    a. Do not use acids or flame tools to strip paint from stone, as it will damage the surface.
    b. Do not use steel or metal spatulas or tools to scrape stone because of the likelihood of scratching, chipping, gouging, or otherwise marring the surface.

1.3 SUBMITTALS

A. Product Data (when applicable):

1. Submit to RHPO manufacturer's technical data for each product indicated including chemical analysis, recommendations for their application and use, and any other available technical data. Include test reports and certifications substantiating that products comply with requirements.
2. MANUFACTURERS OFFERING OTHER THAN BRAND NAME ITEMS IDENTIFIED IN THE PROCEDURE SHOULD FURNISH ADEQUATE INFORMATION TO ENSURE THAT A DETERMINATION CAN BE MADE AS TO EQUALITY OF THE PRODUCT(S) OFFERED (SEE THE CLAUSE ENTITLED BRAND NAME OR EQUAL SET FORTH IN SECTION 552.210-74 OF THE GSA

ACQUISITION REGULATION).

B. Samples:
1. Clearly labelled samples of all materials to be used on the job should be submitted to the RHPO for approval before work starts.
2. The approved samples will become the standard materials used on the job. Substitutions will not be permitted without written approval from the RHPO.
3. Quality Control Submittals:
   a. Submit written program for each phase of process including protection of surrounding materials during operations. Describe in detail materials, methods and equipment to be used for each phase of work.
   b. If alternative methods and materials to those indicated are proposed for any phase of work, provide written description to RHPO, including evidence of successful use on other, comparable projects, and program of testing to demonstrate effectiveness for use on this project.
   c. The contractor should supply proof of work on this type of project by submitting a list of pertinent projects the subcontractor has worked on which includes the scope of work, the budget for the scope of work, and a way to
   d. contact the owner and architect of each project.
4. Design Data/Test Reports/Certificates:
   a. Routine testing of proposed materials, and of final work for compliance with the procedure will be carried out by the RHPO or his\her appointed representative.
   b. Cleaning methods should be tested prior to selecting the one for use. The simplest and least aggressive method(s) should be selected.
   c. The level of cleanliness desired also should be determined. A like-new appearance is both inappropriate and requires an overly harsh cleaning method.
   d. If test results show that performance criteria are not met, removal and repair of rejected work should be performed.

1.4 QUALITY ASSURANCE

A. Qualifications:
1. Restoration Specialist: Work must be performed by a firm having not less than five years successful experience in comparable projects and employing personnel skilled in the processes and operations indicated. Project supervisor must have five years experience in work similar to this procedure. Additional personnel must also have experience.
2. A supervisory craftsperson will be present when a craftsperson begins to perform the work in order to explain any procedures. Any modification of the written procedures will be made at that time.
3. The supervisory craftsperson shall also be present during the work to instruct personnel as required.
   a. Source of Materials: Obtain materials from a single source for each type material required.

B. Regulatory Requirements:
1. Engage an approved independent testing laboratory to examine materials prior to use and continuously inspect the work for compliance with this procedure and any related documents.
2. The required research report and manufacturer's data shall be at the site and used for reference.
3. Conform with all applicable safety guidelines.

4. For Cleaning: Comply with municipal and Federal regulations governing cleaning, chemical waste disposal, scaffolding and protection of adjacent surfaces.

C. Mock-ups: After acceptance of the list of materials and proposed method of cleaning, repair or refinishing, a representative sample area shall be cleaned, repaired or refinished as specified.
   1. Employ the method proposed and accepted for use. Obtain acceptance of the sample area from the RHPO before proceeding with remainder of the procedure.
   2. Maintain the sample area in its accepted condition until final acceptance of the completed work. Manufacturer's Representative should be present during mock-up and its inspection for approval. Sample work should be preformed in an area approved by the RHPO.
   3. A SMALLER TEST FOR EACH PRODUCT SHOULD BE DONE ON EACH MATERIAL IN AN INCONSPICUOUS AREA TO CHECK FOR ADVERSE EFFECTS AND DAMAGE TO THE MATERIAL.
      a. For Cleaning
         1. Before cleaning, all drains to be used should be tested to ensure they are functioning properly. Any clogged drains should be reported immediately.
         2. During cleaning, prevent cleaning residue from entering the drains or drain lines. Drains or drain lines that become blocked with cleaner residue must be cleaned out immediately.

1.1 DELIVERY, STORAGE AND HANDLING

A. Packing and Shipping: Deliver materials to site in manufacturer's original and unopened containers and packaging, bearing labels as to type and names of products and manufacturers.

B. Acceptance at Site: Handle materials in accordance with project safety guidelines and manufacturer's recommendations.

C. Storage and Protection:
   1. Every effort must be made to use and reuse materials that are original to the structure. When removed from their rightful place, these materials must be stored under cover inside the building where they cannot be damaged.
   2. When pieces are to be removed, mark pieces inconspicuously in a consistent manner as to their original location. Document original position and label accordingly.
   3. If salvage material is to be used, treat it as new or original material with regard to its storage.
   4. Protect all materials during storage and construction from wetting by rain, snow or ground water, and from intermixture with earth or other types of materials.
   5. Protect materials from deterioration by moisture and temperature.
      a. Store cementitious materials off ground, under cover and in a dry location. Protect liquid components from freezing.
      b. Comply with manufacturer's recommendations for minimum and maximum temperature requirements for storage.
      c. Store all chemicals in metal cabinets. No cans shall be left open or out of the cabinet overnight.

1.2 PROJECT/SITE CONDITIONS

A. Environmental Requirements:
   1. Proceed with the work only when forecasted weather conditions are favorable.

2. Wet weather: Do not attempt repairing of feature in raining or foggy weather. Do not apply primer, paint, putty, or epoxy when the relative humidity is above 80%. Do not remove exterior elements of structures when rain is in the forecast or in progress.
3. Work in the shade when the temperature is above 75 degrees F. Work around the structure in the shade away from the sun.
4. Do not perform exterior wet work when the air temperature is below 40 degrees F.
5. NEVER begin cleaning, patching, etc. when there is any likelihood of frost or freezing.
6. If cleaning is done in very hot, sunny weather, the feature/area should be shielded from excessive heat by hanging protective netting or tarpaulins around it.
7. No cleaning shall be executed when either the air or the masonry surface temperature is below 45 degrees F, unless adequate, approved means are provided for maintaining a 45 degrees F temperature of the air and materials during, and for 48 hours subsequent to, cleaning.
8. Perform cleaning and rinsing of the exterior masonry only during daylight hours.
9. Hot weather maximum application temperatures:
    a. paint - 85 degrees F
    b. putty - 80 degrees F
    c. epoxy - 80 degrees F
10. Cold weather minimum application temperatures:
    a. paint - 50 degrees F
    b. putty - 50 degrees F
    c. epoxy - 55 degrees F

B. Existing Conditions: Check manufacturer's literature for precautions and effects of products and procedures on adjacent building materials, components, and especially vegetation.

1.3 SEQUENCING AND SCHEDULING

A. Preventive Maintenance and Repair activities should be scheduled during appropriate environmental conditions to avoid weather related failures.

B. Submit a work schedule indicating the proposed timing and extent of the work.

C. Co-ordinate the work schedule with that of other trades on site.

D. When cyclical maintenance work requires the use of high ladders and other access equipment, perform as many work items as possible.

1.4 PROTECTION

A. Do not change sources or brands of materials during the course of the work.

B. All necessary precautions shall be taken to protect all parts of the building not being cleaned or repaired from effects of the work, including excessive amounts of water that should not be allowed to pond in any area. Also provide protection as required to prevent damage to adjacent property.

C. Provide protection against the spread of dust, debris and water at or beyond the work area by suitable enclosures of sheeting and tarpaulins.

D. Provide masking or covering on adjacent surfaces and permanent equipment. Secure coverings without the use of adhesive type tape or nails. Impervious sheeting which

produces condensation should not be used.

E. Prevent the entry of dust, debris and water into the building by sealing all openings.

F. Provide protection from water damage to building, structure, or building contents as required.

G. Protect all landscape work adjacent to or within maintenance work areas:
   1. Provide plank barriers to protect tree trunks. Bind spreading shrubs.
   2. Covering should allow plants to breathe and should be removed at the end of each work day. Do not cover plant material with a waterproof membrane for more than 8 hours at one time.
   3. Set scaffolding and ladder legs away from plants. Pruning requests should be directed to the RHPO.

H. Test all drains and other water removal systems to assure that drains and systems are functioning properly prior to performing any cleaning operations. Notify Contracting Officer or designated representative immediately of any and all drains or systems that are found to be stopped or blocked. Contractor shall repair drains if so directed by the Contracting Officer or designated representative. Do not begin work of this Section until the drains are in working order.

I. Provide a method to prevent solids such as stone or mortar residue from entering the drains or drain lines. Contractor shall be responsible for cleaning out drains and drain lines that become blocked or filled by sand or any other solids because of work performed under this Contract.

J. Scaffolding, ladders and working platforms, required for the execution of this work should be provided. These items should not be attached to the building.

PART 2 – PRODUCTS

Not Used.

PART 3 – EXECUTION

Not Used.

END OF SECTION

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SECTION 01 10 10

SUMMARY

PART 1 – GENERAL

1.1 SECTION INCLUDES

A. Contract Description.
B. Work Covered by Contract Documents
C. Phase Construction
D. Work under separate Contracts
E. Owner-furnished Products
F. Work Restrictions
G. Specifications and Drawing Conventions

1.2 PROJECT INFORMATION

A. Project Identification:
    1. Project Location: 2299 South Street, Coventry, CT

B. Owner:
    1. Owner's Point of Contact: Aileen Bastos, Preservation Manager, Connecticut Landmarks, 860-247-8996 x23; aileen.bastos@ctlandmarks.org

C. Architect: Crosskey Architects, llc, 750 Main Street, Suite 150, Hartford, CT 06103
    1. Architect's Point of Contact: Laura Crosskey, Principal in Charge, Crosskey Architects, 860-724-3000; lcrosskey@crosskey.com

1.3 WORK COVERED BY CONTRACT DOCUMENTS

A. The Work of Project is defined by the Contract Documents and consists of the following:
    1. Refurbishment and Repairs to the existing buildings

B. Type of Contract: Stipulated Sum

1.4 WORK UNDER SEPARATE CONTRACTS

A. General: Cooperate fully with separate contractors so work on those contracts may be carried out smoothly, without interfering with or delaying work under this Contract or other contracts. Coordinate the work of this Contract with work performed under separate contracts.

B. Subsequent Work: Owner will award separate contract(s) for the following additional work to be performed at site following Substantial Completion. Completion of that work will depend on the successful completion of preparatory work under this Contract.

1.5 WORK RESTRICTIONS

A. Work Restrictions, General: Comply with restrictions on construction operations.
    1. Comply with limitations on the use of public streets and with other requirements of authorities having jurisdiction.

B. On-site Work Hours: Limit work in the existing building to normal business working hours of 8:00am to 5:00pm, Monday through Friday, unless otherwise indicated.
    1. Weekend Hours: 9:00am to 5:00pm

2. Hours for Core Drilling or similar noisy activities shall be limited to the hours of 10:00am to 5:00pm.

C. Noise Vibration and Odors: Coordinate operations that may result in high levels of noise and vibration, odors, or other disruption to Owner occupancy with Owner.
   1. Notify Construction Manager not less than two days in advance of proposed disruptive operations.

D. Non Smoking Building: Smoking is not permitted within the building or within 25 feet of entrances, operable windows or outdoor-air intakes.

E. Controlled Substances: Use of Tobacco Products and other controlled substances within the existing building is not permitted.

F. Employee Screening: Comply with Owner's requirements for drug and background screening of Contractor Personnel working on Project Site.

1.6 SPECIFICATION AND DRAWING CONVENTIONS

PART 2 – PRODUCTS

Not Used.

PART 3 – EXECUTION

Not Used.

END OF SECTION

SECTION 01 26 00

CONTRACT MODIFICATION PROCEDURES

PART 1 – GENERAL

1.1 SECTION INCLUDES

A. Inspection and testing allowances.
B. Schedule of Values.
C. Application for Payment.
D. Change procedures.
E. Defect Assessment.
F. Measurement and Payment - Unit Prices.
G. Alternates.
H. Requests for Information
I. Inspections for substantial completion and final completion

1.2 RELATED SECTIONS

A. Owner - Contractor Agreement: Contract sum/price including allowances.
B. Section 01 33 00 - Submittals: Schedule of Values.
C. Section 01 60 00 – Product Requirements: Product substitutions and alternates.

1.3 INSPECTION AND TESTING ALLOWANCES

A. Costs Included in Allowances: Cost of engaging an inspection or testing firm, execution of inspection or tests, reporting results.

B. Costs Not Included in the Allowance:
   1. Incidental labor and facilities required to assist inspection or testing firm.
   2. Costs of testing laboratory services required by Contractor separate from Contract Document requirements.
   3. Costs of retesting upon failure of previous tests as determined by Architect/Engineer.

C. Payment Procedures:
   1. Submit one copy of the inspection or testing firm's invoice with next application for payment.
   2. Pay invoice on approval by Architect/Engineer.

D. Include the sum of $5,000.00 for payment of inspection and testing laboratory services specified in Section 01 40 00. Differences in cost will be adjusted by change order.

1.4 SCHEDULE OF VALUES

A. Submit typed schedule on AIA Form G703 - Application and Certificate for Payment Continuation Sheet. Contractor's standard form or electronic media printout will be considered.

B. Submit Schedule of Values in duplicate within 15 days after date of Owner-Contractor Agreement.

C. Format: Utilize the Table of Contents of this Project Manual. Identify each line item with number and title of the major specification Section. Split line items into subcatagories for materials and labor. Identify bonds, insurance and site mobilization costs.

D. Include in each line item, the amount of each Allowance specified in this Section.

E. Revise schedule with each Application For Payment, to list approved change orders.

1.5 APPLICATIONS FOR PAYMENT

A. Submit five copies of each application on AIA Form G702 - Application and Certificate for Payment.

B. Content and Format: Utilize Schedule of Values for listing items in Application for Payment.

1.6 CHANGE PROCEDURES

A. The Architect/Engineer will advise of minor changes in the Work not involving an adjustment to Contract Sum/Price or Contract Time as authorized and will issue supplemental instructions.

B. The Architect/Engineer may issue a Proposal Request, which includes a detailed description of a proposed change with supplementary or revised Drawings and specifications, a change in Contract Time for executing the change, the period of time during which the requested price will be considered valid. Contractor will prepare and submit an estimate within seven days.

C. The Contractor may propose a change by submitting request for change to the Architect/Engineer, describing the proposed change and its full effect on the Work. Include a statement describing the reason for the change, and the effect on the Contract Sum/Price and Contract Time with full documentation in the form of unit costs and quantities for Material and Labor. Document any requested substitutions in accordance with Section 01 60 00.

1. Stipulated Sum/Price Change Order: Based on Proposal Request and Contractor's fixed price quotation.
2. Unit Price Change Order: For pre-determined unit prices and quantities, the Change Order will be executed on a fixed unit price basis. For unit costs or quantities of units of work, which are not pre-determined, execute Work under a Construction Change Authorization. Changes in Contract Sum/Price or Contract Time will be computed as specified for Time and Material Change Order.

D. Construction Change Authorization: Architect/Engineer may issue a directive, on AIA Form G713 Construction Change Authorization signed by the Owner, instructing the Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order. Document will describe changes in the Work, and designate method of determining any change in Contract Sum/Price or Contract Time. Contractor will promptly execute the change.

E. Change Order Forms: AIA G701 Change Order.

F. Execution of Change Orders: Architect will issue change orders for signature of parties as provided in the Conditions of the Contract.

G. **Contractor shall reimburse Owner for Architect's time spent reviewing proposed change orders more than twice (original and 1 revision) for the same item or scope of work.**

H. Contractor shall reimburse Owner for Architect's time spent evaluating an extensive number of claims submitted by the Contractor in connection with the Work.

1.7 DEFECT ASSESSMENT

A. Replace the Work, or portions of the Work, not conforming to specified requirements.

B. If, in the opinion of the Architect, it is not practical to remove and replace the Work, the Architect will direct an appropriate remedy or adjust payment.

1.8 MEASUREMENT AND PAYMENT - UNIT PRICES

A. Authority: Measurement methods are delineated in the individual specification sections.

B. Take measurements and compute quantities. The Architect will verify measurements and quantities.

C. Unit Quantities: Quantities and measurements indicated in the Bid Form are for contract purposes only. Actual quantities provided shall determine payment.

D. Payment Includes: Full compensation for required labor, products, tools, equipment, plant and facilities, transportation, services and incidentals; erection, application or installation of an item of the Work; overhead and profit.

1.9 ALTERNATES

A. Alternates quoted on Bid Forms will be reviewed and accepted or rejected at the Owner's option. Accepted Alternates will be identified in Owner-Contractor Agreement.

B. Coordinate related work and modify surrounding work as required.

C. Schedule of Alternates:
   1. Refer to Section 00 41 23 and Bid Form.

1.10 REQUESTS FOR INFORMATION

A. Contractor shall reimburse Owner for Architect’s time spent responding to the Contractor’s requests for information where such information is available to the Contractor from a careful study and comparison of the Contract Documents, field conditions, other Owner-provided information, Contractor prepared coordination drawings, or prior Project correspondence or documentation.

B. Refer to Section 01 31 00.

1.11 INSPECTIONS FOR SUBSTANTIAL COMPLETION AND FINAL COMPLETION

A. Contractor shall reimburse Owner for Architect’s time spent inspecting any portion of the Work more than twice to determine final completion or to determine whether such portion of the Work is substantially complete in accordance with the requirements of the Contract Documents.”

PART 2 – PRODUCTS

(Not Used)

PART 3 – EXECUTION

(Not Used)

END OF SECTION

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SECTION 01 31 00

PROJECT MANAGEMENT AND COORDINATION

PART 1 – GENERAL

1.1 SECTION INCLUDES

A. Coordination.
B. Requests for Information
C. Field engineering
D. Pre-construction conference.
E. Site mobilization conference.
F. Progress meetings.
G. Pre-installation conferences.

1.2 COORDINATION

A. Coordinate scheduling, submittals, and Work of the various Sections of Specifications to assure efficient and orderly sequence of installation of interdependent construction elements, with provisions for accommodating items installed later.

B. Verify that utility requirement characteristics of operating equipment are compatible with building utilities. Coordinate work of various Sections having interdependent responsibilities for installing, connecting to, and placing in service, such equipment.

C. Coordinate space requirements and installation of mechanical and electrical work, which are indicated diagrammatically on Drawings. Follow routing shown for pipes, ducts, and conduit, as closely as practicable; place runs parallel with line of building. Utilize spaces efficiently to maximize accessibility for other installations, for maintenance, and for repairs.

D. In finished areas except as otherwise indicated, conceal pipes, ducts, and wiring within the construction. Coordinate locations of fixtures and outlets with finish elements.

E. Coordinate completion and clean up of Work of separate sections in preparation for Substantial Completion.

F. After Owner occupancy of premises, coordinate access to site for correction of defective Work and Work not in accordance with Contract Documents, to minimize disruption of Owner's activities.

1.3 REQUESTS FOR INFORMATION (RFIs)

A. Immediately on discovery of the need for additional information or interpretation of the Contract Documents, Contractor shall prepare and submit an RFI in the form specified.

B. RFI to include a detailed, legible description of item needing information or interpretation and the following:
   1. Project Date
   2. Date
   3. Name of Contractor
   4. Name of Architect
   5. RFI number, numbered sequentially
   6. RFI subject

7. Specification Section number, title and related paragraphs as appropriate.
8. Drawing number and detail references, as appropriate.
9. Field dimensions and conditions, as appropriate.
10. Contractor's suggested resolution. If Contractor's suggested resolution impacts the Contract Time or Contract Sum, Contractor shall state impact in the RFI.
11. Attachments: Include sketches, descriptions, measurements, photos, Product Data, Shop drawings, coordination drawings, and other information necessary to fully describe items needing interpretation.

C. Architect will review each RFI, determine action required and respond. Allow ten working days for Architect's response for each RFI. RFIs received by Architect after 1:00pm EST will be considered as received the following day. If it is necessary for a Consultant to review an RFI allow for fifteen working days for both Architect and Consultant response for each RFI.

D. Architect's action may include a request for additional information, in which Architect's time for response will date from the time of receipt of additional information.

E. Architect's action that may result in a change to the Contract Time or Contract Sum may be eligible for Contractor to submit a Change Proposal in accordance with 01 26 00 Contract Modification Procedures.
   1. If Contractor believe the RFI response warrants change in Contract Time of Contract Sum, notify the Architect in writing within ten business days or receipt of the RFI response.

1.4 FIELD ENGINEERING

A. Employ a Land Surveyor registered in the State of Connecticut and acceptable to the Architect/Engineer.

B. Contractor to locate and protect survey control and reference points.

C. Control datum for survey is that established by Owner provided survey as shown on Drawings.

D. Provide field engineering services. Establish elevations, lines, and levels, utilizing recognized engineering survey practices.

E. Submit a copy of registered site drawing and certificate signed by the Land Surveyor that the elevations and locations of the Work are in conformance with the Contract Documents.

1.5 PRECONSTRUCTION CONFERENCE

A. Owner will schedule a conference after Notice of Award.

B. Attendance Required: Owner, Architect/Engineer & Contractor.

C. Agenda:
   1. Execution of Owner-Contractor Agreement.
   2. Submission of executed bonds and insurance certificates.
   3. Distribution of Contract Documents.
   4. Submission of list of Subcontractors, list of Products, schedule of values, and progress schedule.
   5. Designation of personnel representing the parties in Contract, and the

Architect/Engineer.

6. Procedures and processing of field decisions, submittals, substitutions, applications for payments, proposal request, Change Orders and Contract closeout procedures.
7. Scheduling.

1.6 SITE MOBILIZATION CONFERENCE

A. Owner will schedule a conference at the Project site prior to Contractor occupancy.

B. Attendance Required: Owner, Architect/Engineer, and Contractor, Contractor's Superintendent & major Subcontractors.

C. Agenda:
   1. Use of premises by Owner and Contractor.
   2. Owner's requirements.
   3. Construction facilities and controls provided by Owner.
   4. Temporary utilities provided by Owner.
   5. Survey and building layout.
   6. Security and housekeeping procedures.
   7. Schedules.
   8. Procedures for testing.
   9. Procedures for maintaining record documents.
   10. Requirements for start-up of equipment.
   11. Inspection and acceptance of equipment put into service during construction period.

1.7 PROGRESS MEETINGS

A. Schedule and administer meetings throughout progress of the Work at maximum weekly intervals.

B. Make arrangements for meetings, prepare agenda with copies for participants, preside at meetings. Architect will record meetings and distribute copies within seven days to Contractor, Owner, participants, and those affected by decisions made.

C. Attendance Required: Job superintendent, major Subcontractors and suppliers, Owner, Architect/Engineer as appropriate to agenda topics for each meeting.

D. Agenda:
   1. Review minutes of previous meetings.
   2. Review of Work progress.
   3. Field observations, problems, and decisions.
   4. Identification of problems, which impede planned progress.
   5. Review of submittals schedule and status of submittals.
   6. Review of off-site fabrication and delivery schedules.
   7. Maintenance of progress schedule.
   8. Corrective measures to regain projected schedules.
   9. Planned progress during succeeding work period.
   10. Coordination of projected progress.
   11. Maintenance of quality and work standards.
   12. Effect of proposed changes on progress schedule and coordination.
   13. Other business relating to Work.

1.8 PREINSTALLATION CONFERENCES

A. When required in individual specification Section, convene a pre-installation conference at work site prior to commencing work of the Section.

B. Require attendance of parties directly affecting, or affected by, work of the specific Section.

C. Notify Architect/Engineer four days in advance of meeting date.

D. Prepare agenda, preside at conference, record minutes, and distribute copies within two days after conference to participants, with two copies to Architect/Engineer.

E. Review conditions of installation, preparation and installation procedures, and coordination with related work.

PART 2 – PRODUCTS

(Not Used)

PART 3 – EXECUTION

(Not Used)

END OF SECTION

SECTION 01 32 33

PHOTOGRAPHIC DOCUMENTATION

PART 1 – GENERAL

1.1 SUMMARY

A. Section includes administrative and procedural requirements for the following
   1. Periodic Construction Photographs
   2. Photographic documentation for submittal with Pay Requisitions.
   3. Final Completion Construction Photographs.

1.2 INFORMATIONAL SUBMITTALS

A. Key Plan and Digital Photographs are to be submitted monthly with Pay requisitions, as documentation of the work completed.

B. Key Plan: Submit key plan of project site and building with notation of vantage points marked for location and direction of each photograph. Indicate elevation or story of construction. Include same information as corresponding photographic documentation.

C. Digital Photographs: Submit image files within three days of taking photographs.
   1. Digital Camera: Minimum sensor resolution of 8 megapixels
   2. Format: Minimum 3200 x 2400 pixels, in unaltered original files, with same aspect ratio as the sensor, uncropped, date and time stamped, in folder named by date of photograph, accompanied by key plan file.
   3. Identification: Provide the following information with each image description in file metadata tag:
      a) Name of project
      b) Name and contract information for photographer
      c) Name of Architect and Construction Manager/ General Contractor
      d) Name of Contractor
      e) Date Photograph was taken
      f) Description of vantage point, indicating location, direction (by compass point_, and elevation or story of construction

1.3 USAGE RIGHTS

A. Obtain and transfer copyright usage rights from photographer to Owner for unlimited reproduction of photographic documentation.

PART 2 – PRODUCTS

2.1 PHOTOGRAPHIC MEDIA

A. Digital Images: Provide images in JPG format, produced by a digital camera with minimum sensor size of 8 megapixels, and at an image resolution of not less than 3200 by 2400 pixels.

PART 3 – EXECUTION

3.1 CONSTRUCTION PHOTOGRAPHS

A. Photographer: Engage a qualified photographer to take construction photographs

B. General: Take photographs using the maximum range of depth of field, and that are in focus,

to clearly, show the work. Photographs with blurry or out-of-focus areas will not be accepted.

C. Digital Images: Submit digital images exactly as originally recorded in the digital camera, without alteration, manipulation, editing, or modifications using image-editing software.
    1. Aerial Photography: Where applicable provide a monthly photograph of the project site & building each month of the Construction process for submission with pay requisitions/ for Owner records.

D. Architect-Directed Construction Photographs: From time to time, Architect will instruct photographer about number and frequency of photographs and general directions on vantage points. Select actual vantage points and take photographs to show the status of construction and progress since the last photographs were taken.

E. Final Completion Construction Photographs: Take 20 color photographs after the date of Substantial Completion for submission as project record documents. Architect will inform photographer of desired vantage points.
    1. Do not include Date Stamp.

F. Additional photographs: Architect or Construction Manager may request photographs in addition to periodic photographs specified. Additional photographs include, but are not limited to, the following:
    1. Three days notice will be given, where feasible
    2. In emergency situations, take additional photographs within 24 hours of request
    3. Circumstances that could require additional photographs include, but are not limited to, the following:
        a) Immediate follow-up when on-site events result in construction damage or losses
        b) Owner's request for special publicity photographs

END OF SECTION

SECTION 01 33 00
SUBMITTAL PROCEDURES

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. This Section includes administrative and procedural requirements for submittals required for performance of the Work, including but not limited to the following:
   1. Submittal schedule.
   2. Shop Drawings.
   3. Product Data.
   4. Samples.
   5. Quality assurance submittals.
   6. Proposed "Substitutions/Equals".
   7. Warrantee samples.
   8. Coordination Drawings.
   9. O & M Manuals

B. Administrative Submittals: Refer to other Division 01 Sections and other Contract Documents for requirements for administrative submittals. Such submittals include, but are not limited to, the following:
   1. Permits.
   2. Applications for Payment.
   3. Performance and payment bonds.
   4. Contractor's construction schedule.
   5. Daily construction reports.
   6. Construction Photographs.
   7. Insurance certificates.
   8. List of subcontractors.

C. Related Sections: The following Sections contain requirements that relate to this Section:
   1. Section 01 26 00 "Contract Modification Procedures" specifies requirements for submittal of requests for equals and substitutions.
   2. Section 01 26 00 "Contract Modification Procedures " specifies requirements for submittal of the Schedule of Values.
   3. Section 01 31 00 "Project Management and Coordination " specifies requirements governing preparation and submittal of required Coordination Drawings.
   4. Division 01 Section 01 31 00 " Project Management and Coordination " specifies requirements for submittal and distribution of meeting and conference minutes.
   5. Division 01 Section 01 40 00 "Quality Control" specifies requirements for submittal of inspection and test reports and mockups.
   6. Division 01 Section 01 45 23.13 "Testing for Indoor Air Quality (IAQ), Baseline IAQ, and Materials" specifies requirements for submittal of documentation required to support LEED or Green Globes certification.

7. Division 01 Section 01 77 00 "Contract Closeout" specifies requirements for submittal of Project Record Documents and warranties at project closeout.
8. Division 01 Section 01 81 13 "Sustainable Design Requirements" specifies requirements for submittal of documentation required to support LEED or Green Globes certification.
9. Division 01 Section 01 91 00 "Commissioning" specifies requirements for submittal of quality assurance documentation related to commissioning.

1.3 DEFINITIONS

A. Coordination Drawings show the relationship and integration of different construction elements that require careful coordination during fabrication or installation to fit in the space provided or to function as intended and as identified in the Specification Divisions 02 - 48.
   1. Preparation of Coordination Drawings is specified in Section 01 31 00 "Project Management and Coordination" and may include components previously shown in detail on Shop Drawings or Product Data.

B. Field samples are full-size physical examples erected on-site to illustrate finishes, coatings, or finish materials. Field samples are used to establish the standard by which the Work will be judged.

C. Mockups are full-size assemblies for review of construction, coordination, testing, or operation; they are not Samples.

1.4 SUBMITTAL PROCEDURES

A. Coordination: Coordinate preparation and processing of submittals with performance of construction activities. Transmit each submittal sufficiently in advance of performance of related construction activities to avoid delay.
   1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
   2. Coordinate transmittal of different types of submittals for related elements of the Work so processing will not be delayed by the need to review submittals concurrently for coordination.
      a. The Architect reserves the right to withhold action on a submittal requiring coordination with other submittals until all related submittals are received.
      b. The Architect reserves the right to reject incomplete submitted packages.
   3. Processing: To avoid the need to delay installation as a result of the time required to process submittals, allow sufficient time for submittal review, including time for re-submittals.
      a. Allow 14 days for initial review. Allow additional time if the Architect must delay processing to permit coordination with subsequent submittals.
      b. If an intermediate submittal is necessary, process the same as the initial submittal.
      c. Allow 14 days for reprocessing each submittal.
      d. No extension of Contract Time will be authorized because of failure to transmit submittals to the Architect sufficiently in advance of the Work to permit processing.

B. Submittal Preparation: Place a permanent label, title block or 8-1/2 inches x 11 inches cover page approved by the Architect, on each submittal for identification. Indicate the name of the entity that prepared each submittal on the label or title block.

1. Unless otherwise noted or required by the Architect or Owner, each submittal shall be transmitted in electronic format to the Architect for review.
2. Provide a space approximately 4 inches by 5 inches on the label, beside the title block or on the cover page on Shop Drawings to record the Contractor's review and approval markings and the action taken.
3. Include the following information on the label for processing and recording action taken.

    a. Project Name.
    b. Date.
    c. Name and address of the Architect, Construction Administrator, and Owner Representative.
    d. Name and address of the Contractor.
    e. Name and address of the subcontractor.
    f. Name and address of the supplier.
    g. Name of the manufacturer.
    h. Number and title of appropriate Specification Section.
    i. Drawing number and detail references, as appropriate.
    j. Indicate either initial or resubmittal.
    k. Indicate deviations from Contract Documents.
    l. Indicate if "equal" or "substitution".

C. Submittal Transmittal: Package each submittal appropriately for transmittal and handling. Transmit each submittal from the Contractor to the Architect using a transmittal form. Copy the Construction Administrator on the transmittal. The Architect will return all submittals to the Contractor after action is taken with a complete copy of the submittal package. The Architect will not accept submittals received from sources other than the Contractor.

1. On the transmittal, record relevant information and requests for data. On the form, or separate sheet, record deviations from Contract Document requirements, including variations and limitations. Include Contractor's certification that information complies with Contract Document requirements.

1.5 SUBMITTAL SCHEDULE

A. After development and review by the Owner and Architect acceptance of the Contractor's Construction or CPM schedule prepare a complete schedule of submittals. Submit the schedule to the Construction Administrator within thirty (30) days of Contract Award.

1. Coordinate Submittal Schedule with the list of subcontracts, Schedule of Values, and the list of products as well as the Contractor’s Construction or CPM Schedule.
2. Prepare the schedule in chronological order. Provide the following information:

    a. Schedule date for the initial submittal.
    b. Related section number.
    c. Submittal category (Shop Drawings, Product Data, or Samples).
    d. Name of Subcontractor.
    e. Description of the part of Work covered.
    f. Scheduled date for resubmittal.
    g. Scheduled date for the Architect’s final release of approval.

B. Submittal Schedule: Submit a schedule of submittals, arranged in chronological order by dates required by construction schedule. Include time required for review, ordering, manufacturing, fabrication, and delivery when establishing dates. Include additional time

required for making corrections or modifications to submittals noted by the Architect and additional time for handling and reviewing submittals required by those corrections.

1. Coordinate submittal schedule with list of subcontracts, the schedule of values, and Contractor's Contractor's Construction or CPM Schedule.
2. Initial Submittal: Submit concurrently with start-up construction schedule. Include submittals required during the first **[insert Number of Days]** days of construction. List those submittals required to maintain orderly progress of the Work and those required early because of long lead time for manufacture or fabrication.
3. Final Submittal: Submit concurrently with the first complete submittal of Contractor's construction schedule.
    a. Submit revised submittal schedule to reflect changes in current status and timing for submittals.

C. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.
    1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
    2. Submit all submittal items required for each specification section concurrently unless partial submittals for portions of the Work are indicated on approved submittal schedule.
    3. Submit action submittals and informational submittals required by the same specification section as separate packages under separate transmittals.
    4. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.
        a. Architect reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.

D. Processing Time: Allow time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Architect's receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.
    1. Initial Review: Allow **[Fourteen Days]** days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Architect will advise Contractor when a submittal being processed must be delayed for coordination with related submittals not yet received. Additional time will be required if processing must be delayed to permit review of related subsequent submittals.
    2. Intermediate Review: If intermediate submittal is necessary, process it in same manner as initial submittal.
    3. Resubmittal Review: Allow **[Ten Days]** days for review of each resubmittal.
    4. Mass Submittals: Six (6) or more submittals in one (1) day or twenty (20) or more submittals in one (1) week. If "Mass Submittals" are received, Architect's review time stated above may be extended as necessary to perform proper review. Architect will review "Mass Submittals based upon priority determined by Architect after consultation with Owner and Contractor.

E. Distribution: Following response to the initial submittal, distribute copies to the Construction Administrator, Architect, Owner, subcontractors, and other parties required to comply with submittal dates indicated. Post copies in the Project meeting room and field office.

1. When revisions are made, distribute to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in construction activities.

F. Schedule Updating: Revise the schedule after each meeting or activity where revisions have been recognized or made. Issue the updated schedule concurrently with the report of each meeting.

1.6 DAILY CONSTRUCTION REPORTS

A. Prepare a daily construction report recording the following information concerning events at the site, and submit duplicate copies to the Construction Administrator at weekly intervals:
   1. List of subcontractors at the site.
   2. Approximate count of personnel at the site.
   3. High and low temperatures, general weather conditions.
   4. Accidents and unusual events.
   5. Meetings and significant decisions.
   6. Stoppages, delays, shortages, and losses.
   7. Meter readings and similar recordings.
   8. List of equipment on site and identify if idle or in use.
   9. Orders and requests of governing authorities.
   10. Change Orders received, start and end dates.
   11. Services connected, disconnected.
   12. Equipment or system tests and startups.
   13. Partial Completion's, occupancies.
   14. Substantial Completion's authorized.
   15. Equals or Substitutions approved or rejected.

1.7 SHOP DRAWINGS

A. Submit newly prepared information drawn accurately to scale. Highlight, encircle, or otherwise indicate deviations from the Contract Documents. Do not reproduce Contract Documents or copy standard information as the basis of Shop Drawings. Standard information prepared without specific reference to the Project is not a Shop Drawing.

B. Shop Drawings include fabrication and installation Drawings, setting diagrams, schedules, patterns, templates and similar Drawings. Include the following information:
   1. Dimensions.
   2. Identification of products and materials included by sheet and detail number.
   3. Compliance with specified standards.
   4. Notation of coordination requirements.
   5. Notation of dimensions established by field measurement.
   6. Sheet Size: Except for templates, patterns and similar full-size Drawings, submit Shop Drawings on sheets at least 8-1/2 by 11 inches but no larger than 36 by 48 inches.
   7. Submit electronic copy of shop drawings for review. The electronic submission may be done via email to the Architect or via the Contractor's online cloud system (I.e., 'Procore'). The Architect will return the reviewed shop drawing in the same manner it was transmitted by the Contractor. The reviewed shop drawing may included mark-ups and/or action items and/or corrections and/or modifications required.
   8. Details shall be large scale and/or full size.

C. The Contractor shall review the Shop Drawings, stamp with this approval, and submit them with reasonable promptness and in orderly sequence so as to cause no delay in his Work or in the Work of any subcontractor. Shop Drawings shall be properly identified as specified for item, material, workmanship, and project number. At the submission, the Contractor shall inform the Architect, in writing of any deviation in the shop drawings from the requirements of the Contract Documents.

D. The Architect will review and comment on shop drawings with reasonable promptness so as to cause no delay, but only for conformance with the design concept of the project and with the information given in the Contract Documents. Refer to Article 5 of the General Conditions. Shop Drawings received by the Architect that indicate insufficient study of drawings and specifications, illegible portions or gross errors, will be rejected outright. Such rejections shall not constitute an acceptable reason for granting the Contractor additional time to perform the work.

E. The Contractor shall make any corrections required by the Architect and shall resubmit the required number of corrected copies of Shop Drawings until fully reviewed.

F. Upon final review submit revisions in same format as submitted, for use by the Construction Administrator.

G. The Architect's review and comments on Shop Drawings shall not relieve the Contractor of responsibility for any deviation from the requirements of the Contract Documents.

H. Only final reviewed Shop Drawings are to be used on the Project site.

I. The Work installed shall be reviewed in accordance with the Shop Drawings and the drawings and specifications. Final Review of the Shop Drawings by the Architect shall constitute acceptance by the Owner and the Architect of a variation or departure that is clearly identified. If the contractor believes notations made by the A/E increases the value or scope of the CD's, the contractor must provide written notice to the CA within seven (7) days of this issue. Final reviewed Shop Drawings shall not replace or be used as a vehicle to issue or incorporate change orders or substitutions. Substitutions shall be submitted in accordance with Division 01 Section 01 25 00 "Substitution Procedures".

1.8 SHOP DRAWING FOR FIRE PROTECTION SYSTEMS

A. Shop drawings for fire protection systems shall comply with all of the requirements in the section above "Shop Drawings". In addition Sprinkler system shop drawings and hydraulic calculations must be stamped by a professional engineer licensed in the state of Connecticut. Contractor shall coordinate the number of sets required by the local jurisdiction and submit for their review.

1.9 PRODUCT DATA

A. Collect Product Data into a single submittal for each element of construction or system. Product Data includes printed information, schedules, such as manufacturer's installation instructions, catalog cuts, standard color charts, roughing-in diagrams and templates, standard wiring diagrams, and performance curves.
    1. Mark each copy to show applicable choices and options. Where printed Product Data includes information on several products that are not required, mark copies to indicate the applicable information. Include the following information:
        a. Manufacturer's printed recommendations.

b. Compliance with trade association standards.
c. Compliance with recognized testing agency standards.
d. Application of testing agency labels and seals.
e. Notation of dimensions verified by field measurement.
f. Notation of coordination requirements.

2. Do not submit Product Data until compliance with requirements of the Contract Documents has been confirmed.
3. Preliminary Submittal: Submit a preliminary single copy of Product Data where selection of options is required.
4. Submittals: Submit electronic copy of submittal for review. Each submittal shall be submitted as a single 'PDF' document. The electronic submission may be done via email to the Architect or via the Contractor's online cloud system (I.e., 'Procore'). The Architect will return the reviewed submittal in the same manner it was transmitted by the Contractor. The reviewed submittal may included mark-ups and/or action items and/or corrections and/or modifications required.
    a. Unless noncompliance with Contract Document provisions is observed, the submittal may serve as the final submittal.
5. Distribution: Furnish copies of final submittal to installers, subcontractors, suppliers, manufacturers, fabricators, and others required for performance of construction activities. Show distribution on transmittal forms.
    a. Do not proceed with installation until a copy of Product Data is in the Installer's possession.
    b. Do not permit use of unmarked copies of Product Data in connection with construction.

1.10 SAMPLES

A. Submit full-size, fully fabricated Samples cured and finished as specified and physically identical with the material or product proposed. Samples include partial sections of manufactured or fabricated components, cuts or containers of materials, color range sets, and swatches showing color, texture, and pattern.
    1. Store, mount or display Samples on site in the manner to facilitate review of qualities indicated. Prepare Samples to match the Architect's sample. Include the following:
    a. Specification Section number and reference.
        b. Generic description of the Sample.
        c. Sample source.
        d. Product name or name of the manufacturer.
        e. Compliance with recognized standards.
        f. Availability and delivery time.
    2. Submit Samples for review of size, kind, color, pattern, and texture. Submit Samples for a final check of these characteristics with other elements and a comparison of these characteristics between the final submittal and the actual component as delivered and installed.
        a. Where variation in color, pattern, texture, or other characteristic is inherent in the material or product represented, submit at least three (3) multiple units that show approximate limits of the variations.
        b. Refer to other Specification Sections for requirements for Samples that illustrate workmanship, fabrication techniques, details of assembly, connections, operation, and similar construction characteristics.
        c. Refer to other Sections for Samples to be returned to the Contractor for incorporation in the Work. Such Samples must be undamaged at time of use.

On the transmittal, indicate special requests regarding disposition of Sample submittals.

d. Samples not incorporated into the Work, or otherwise designated as the Owner's property, are the property of the Contractor and shall be removed from the site prior to Substantial Completion.

3. Preliminary Submittals: Submit a full set of choices where Samples are submitted for selection of color, pattern, texture, or similar characteristics from a range of standard choices, unless otherwise noted in specification section.
    a. The Architect will review and return preliminary submittals with the Architects notation, indicating selection and other action.
4. Submittals: Except for Samples illustrating assembly details, workmanship, fabrication techniques, connections, operation, and similar characteristics, submit three (3) sets. The Architect will return one (1) set marked with the action taken.
5. Maintain sets of Samples, as returned, at the Project Site, for quality comparisons throughout the course of construction.
    a. Unless noncompliance with Contract Document provisions is observed, the submittal may serve as the final submittal.
    b. Sample sets may be used to obtain final acceptance of the construction associated with each set.

B. Distribution of Samples: Prepare and distribute additional sets to subcontractors, manufacturers, fabricators, suppliers, installers, and others as required for performance of the Work. Show distribution on transmittal forms.
1. Field samples are full-size examples erected on-site to illustrate finishes, coatings, or finish materials and to establish the Project standard.
    a. Comply with submittal requirements to the fullest extent possible. Process transmittal forms to provide a record of activity.

1.11 QUALITY ASSURANCE SUBMITTALS

A. Submit quality-control submittals, including design data, certifications, manufacturer's instructions, manufacturer's field reports, and other quality-control submittals as required under other Sections of the Specifications.

B. Certifications: Where other Sections of the Specifications require certification that a product, material, or installation complies with specified requirements, submit a notarized certification from the manufacturer certifying compliance with specified requirements.
1. Signature: Certification shall be signed by an officer of the manufacturer or other individual authorized to sign documents on behalf of the company.

C. Inspection and Test Reports: Requirements for submittal of inspection and test reports from independent testing agencies are specified in Division 01 Section 01 40 00 "Quality Control."

1.12 ARCHITECT'S ACTION

A. Except for submittals for the record or information, where action and return is required, the Architect will review each submittal, mark to indicate action taken, and return promptly.
1. Compliance with specified characteristics is the Contractor's responsibility.

B. Action Stamp: The Architect will stamp each submittal with a uniform, action stamp. The Architect will mark the stamp appropriately to indicate the action taken, as follows:
1. **Furnish as Corrected**: When the Architect marks a submittal "**Furnish as Corrected**," the Work covered by the submittal may proceed provided it complies

with notations or corrections on the submittal and requirements of the Contract Documents. Submit corrected copies for record. Final payment depends on that compliance.

2. Returned for Resubmittal: When the Architect marks a submittal "Rejected, or Revise and Resubmit," do not proceed with Work covered by the submittal, including purchasing, fabrication, delivery, or other activity. Revise or prepare a new submittal according to the notations; resubmit without delay. Repeat if necessary to obtain different action mark.
    a. Do not use, or allow others to use, submittals marked "**Rejected**, or **Revise and Resubmit**" at the Project Site or elsewhere where Work is in progress.
3. Other Action: Where a submittal is for information or record purposes or special processing or other activity, the Architect will return the submittal marked "**Reviewed**."

C. Unsolicited Submittals: The Architect will discard unsolicited submittals without action.

PART 2 – PRODUCTS

(Not Applicable)

PART 3 – EXECUTION

(Not Applicable)

END OF SECTION

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SECTION 01 35 16

ALTERATION PROJECT PROCEDURES

PART 1 – GENERAL

1.1 SECTION INCLUDES

A. Products and installation for patching and extending Work.
B. Transition and adjustments.
C. Repair of damaged surfaces, finishes, and cleaning.

1.2 RELATED SECTIONS

A. Section 01 31 00 – Project Management and Coordination: Work sequence, Owner occupancy, Maintenance of utility services.
B. Section 01 31 00 – Project Management and Coordination, Cutting and patching.
C. Section 01 50 00 – Construction Facilities and Temporary Controls: Temporary enclosures, Protection of installed work, Cleaning during construction.
D. Section 02 41 19.16 – Minor Demolition for Remodeling: Removal and storage of products to be reinstalled in this Section.

PART 2 – PRODUCTS

2.1 PRODUCTS FOR PATCHING AND EXTENDING WORK

A. New Materials: As specified in product Sections; match existing Products and work for patching and extending work.

B. Type and Quality of Existing Products: Determine by inspection and testing Products where necessary, referring to existing Work as a standard.

PART 3 – EXECUTION

3.1 EXAMINATION

A. Verify that demolition is complete, and areas are ready for installation of new Work.

B. Beginning of restoration work means acceptance of existing conditions.

3.2 PREPARATION

A. Cut, move, or remove items as necessary for access to alterations and renovation Work. Replace and restore at completion.

B. Remove unsuitable material not marked for salvage, such as rotted wood, corroded metals, and deteriorated masonry and concrete. Replace materials as specified for finished Work.

C. Remove debris and abandoned items from area and from concealed spaces.

D. Prepare surface and remove surface finishes to provide for proper installation of new work and finishes.

E. Close openings in exterior surfaces to protect existing work and salvage items from weather and extremes of temperature and humidity. Insulate ductwork and piping to prevent condensation in exposed areas.

3.3 INSTALLATION

A. Coordinate work of alterations and renovations to expedite completion sequentially and to accommodate Owner occupancy.

B. Project & Finishes: Complete in all respects including operational mech./elec. work.

C. Remove, cut, and patch Work in a manner to minimize damage and to provide a means of restoring Products and finishes to original or specified condition.

D. Refinish visible existing surfaces to remain in renovated rooms and spaces, to specified condition for each material, with a neat transition to adjacent finishes.

E. Install Products as specified in individual Sections.

3.4 TRANSITIONS

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

B. When finished surfaces are cut so that a smooth transition with new work is not possible, terminate existing surface along a straight line at a natural line of division and make recommendation to Architect/Engineer.

3.5 ADJUSTMENTS

A. Where removal of partitions or walls results in adjacent spaces becoming one, rework floors, walls, and ceilings to a smooth plane without breaks, steps, or bulkheads.

B. Where a change of plane of 1/4 inch or more occurs, submit recommendation for providing a smooth transition for Architect/Engineer review or request instructions from Architect/Engineer.

C. Trim existing doors as necessary to clear new floor finish. Refinish trim as required.

D. Fit work at penetrations of surfaces.

3.6 REPAIR OF DAMAGED SURFACES

A. Patch or replace portions of existing surfaces, which are damaged, lifted, discolored, or showing other imperfections.

B. Repair substrate prior to patching finish.

3.7 FINISHES

A. Finish surfaces as specified in individual Product Sections.

B. Finish patches to product uniform finish and texture over entire area. When finish cannot be matched, refinish entire surface to nearest intersections.

3.8 CLEANING

A. In addition to cleaning specified in Section 01 77 00, clean Owner occupied areas of work.

END OF SECTION

SECTION 01 40 00

QUALITY CONTROL

PART 1 – GENERAL

1.1 SECTION INCLUDES

A. Quality assurance and control of installation.
B. References.
C. Field samples.
D. Mock-up.
E. Inspection and testing laboratory services.
F. Manufacturers' field services and reports.

1.2 RELATED SECTIONS

A. Section 01 30 00 – Submittals Procedures: Submission of Manufacturers' Instructions and Certificates.
B. Section 01 60 00 – Product Requirements: Requirements for material and product quality.

1.3 QUALITY ASSURANCE/CONTROL OF INSTALLATION

A. Monitor quality control over suppliers, manufacturers, Products, services, site conditions, and workmanship, to produce Work of specified quality.

B. Comply fully with manufacturers' instructions, including each step in sequence.

C. Should manufacturers' instructions conflict with Contract Documents, request clarification from Architect/Engineer before proceeding.

D. Comply with specified standards as a minimum quality for the Work except when more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.

E. Perform work by persons qualified to produce workmanship of specified quality.

F. Secure Products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion or disfigurement.

G. Verify that field measurements are as indicated on shop drawings or as instructed by the manufacturer.

1.4 REFERENCES

A. Conform to reference standard by date of issue current on date for receiving bids.

B. Obtain copies of standards when required by Contract Documents.

C. Should specified reference standards conflict with Contract Documents, request clarification for Architect/Engineer before proceeding.

D. The contractual relationship of the parties to the Contract shall not be altered from the Contract Documents by mention or inference otherwise in any reference document.

1.5 FIELD SAMPLES

A. Install field samples at the site as required by individual specifications Sections for review.

B. Acceptable samples represent a quality level for the Work.

C. Where field sample is specified in individual Sections to be removed, clear area after field sample has been accepted by Architect/Engineer.

1.6 MOCK-UP

A. Tests will be performed under provisions identified in this section and identified in the respective product specification sections.

B. Assemble and erect specified items, with specified attachment and anchorage devices, flashings, seals, and finishes.

C. Where mock-up is specified in individual Sections to be removed, clear area after mock-up has been accepted by Architect/Engineer.

1.7 INSPECTION AND TESTING LABORATORY SERVICES

A. Owner will appoint and employ services of an independent firm to perform inspection and testing. Contractor shall pay for services from an allowance specified in Section 01 31 00.

B. The independent firm will perform inspections, tests, and other services specified in individual specification Sections and as required by the Architect/Engineer.

C. Reports will be submitted by the independent firm to the Architect/Engineer, indicating observations and results of tests and indicating compliance or non-compliance with Contract Documents.

D. Cooperate with independent firm; furnish samples of materials, design mix, equipment, tools, storage and assistance as requested.
   1. Notify Architect/Engineer and independent firm 24 hours prior to expected time for operations requiring services.
   2. Make arrangements with independent firm and pay for additional samples and tests required for Contractor's use.

E. Retesting required because of non-conformance to specified requirements shall be performed by the same independent firm on instructions by the Architect/Engineer. Contractor shall pay for required retesting.

F. Testing and source quality control may occur on or off the project site. Perform off-site testing as required by the Architect or the Owner.

G. Testing does not relieve Contractor to perform Work to contract requirements.

1.8 MANUFACTURERS' FIELD SERVICES AND REPORTS

A. Submit qualifications of observer to Architect/Engineer 30 days in advance of required observations. Observer subject to approval of Architect/Engineer.

B. When specified in individual specification Sections, require material or Product suppliers or manufacturers to provide qualified staff personnel to observe site conditions, conditions of

surfaces and installation, quality of workmanship, start-up of equipment, test, adjust, and balance of equipment as applicable, and to initiate instructions when necessary.

C. Individuals to report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturers' written instructions.

D. Submit report within 30 days of observation to Architect/Engineer for review.

1.9 TOLERANCES

A. Monitor fabrication and installation tolerance control of Products to produce acceptable Work. Do not permit tolerances to accumulate.

B. Comply with manufacturers' tolerances. Should manufacturers' tolerances conflict with Contract Documents, request clarification from Architect before proceeding.

C. Adjust Products to appropriate dimensions; position before securing Products in place.

PART 2 – PRODUCTS

(Not used)

PART 3 – EXECUTION

(Not used)

END OF SECTION

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SECTION 01 50 00

CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS

PART 1 – GENERAL

1.1 SECTION INCLUDES

A. Temporary Utilities: Electricity, lighting, heat, telephone service, water, and sanitary facilities.

B. Temporary Controls: Barriers, enclosures and fencing, protection of the Work, and water control.

C. Construction Facilities: Access roads, truck access routes, parking, progress cleaning, and project signage.

1.2 TEMPORARY ELECTRICITY

A. Cost: By Contractor; Provide and pay for power service required from Utility source.

B. Provide temporary electric feeder from electrical service at location as directed.

C. Contractor will pay cost of energy used.

D. Provide power outlets for construction operations, with branch wiring and distribution boxes located at each floor. Provide flexible power cords as required.

E. Provide main service disconnect and overcurrent protection at convenient location, feeder switch at source distribution equipment.

F. Permanent convenience receptacles may be utilized during construction.

G. Provide adequate distribution equipment, wiring, and outlets to provide single-phase branch circuits for power and lighting.

1.3 TEMPORARY LIGHTING

A. Provide and maintain incandescent lighting for construction operations to achieve a minimum lighting level of 2 watt/sq ft.

B. Provide and maintain 1 watt/sq ft lighting to exterior staging and storage areas after dark for security purposes.

C. Provide and maintain 0.25 watt/sq ft H.I.D. lighting to interior work areas after dark for security purposes.

D. Provide branch wiring from power source to distribution boxes with lighting conductors, pigtails, and lamps as required.

E. Maintain lighting and provide routine repairs.

F. Permanent building lighting may be utilized during construction.

1.4 TEMPORARY HEAT

A. Provide and pay for heat devices and heat as required to maintain specified conditions for construction operations.

B. Prior to operation of permanent equipment for temporary heating purposes, verify that installation is approved for operation, equipment is lubricated and filters are in place. Provide and pay for operation, maintenance, and regular replacement of filters and worn or consumed parts.

C. Maintain minimum ambient temperature of 50 degrees F (10 degrees C) in areas where construction is in progress, unless indicated otherwise in specifications.

1.5 TEMPORARY VENTILATION

A. Ventilate enclosed areas to assist cure of materials, to dissipate humidity, and to prevent accumulation of dust, fumes, vapors, or gases.

1.6 TELEPHONE & FACSIMILE SERVICE

A. Provide, maintain and pay for telephone and facsimile service to field office at time of project mobilization.

1.7 TEMPORARY WATER SERVICE

A. Provide, maintain and pay for suitable quality water service required.

B. Extend branch piping with outlets located so water is available by hoses with threaded connections. Provide temporary pipe insulation to prevent freezing.

1.8 TEMPORARY SANITARY FACILITIES

A. Provide and maintain required facilities and enclosures.

1.9 BARRIERS

A. Provide barriers to prevent unauthorized entry to construction areas and to protect existing facilities and adjacent properties from damage from construction operations.

B. Provide protection for plant life designated to remain. Replace damaged plant life.

C. Protect non-owned vehicular traffic, stored materials, site and structures from damage.

D. Provide temporary roofing as required.

1.10 TEMPORARY FENCING

A. Construction: Commercial grade chain link fence.

B. Provide 6-foot high fence around construction sites; equip with vehicular and pedestrian gates with locks.

1.11 WATER CONTROL

A. Grade site to drain. Maintain excavations free of water. Provide, operate, and maintain pumping equipment.

B. Protect site from puddling or running water. Provide water barriers as required to protect site from soil erosion.

1.12 EXTERIOR ENCLOSURES

A. Provide temporary insulated weather-tight closure of exterior openings to accommodate acceptable working conditions and protection for Products, to allow for temporary heating and maintenance of required ambient temperatures identified in individual specification Sections, and to prevent entry of unauthorized persons. Provide access doors with self-closing hardware and locks.

B. Provide temporary roofing as required.

1.13 PROTECTION OF INSTALLED WORK

A. Protect installed Work and provide special protection where specified in individual specification Sections.

B. Provide temporary and removable protection for installed Products. Control activity in immediate work area to minimize damage.

C. Provide protective coverings at walls, projections, jambs, sills, and soffits of openings.

D. Protect finished floors, stairs, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects, by protecting with durable sheet materials.

E. Prohibit traffic or storage upon waterproofed or roofed surfaces. If traffic or activity is necessary, obtain recommendations for protection from waterproofing or roofing material manufacturer.

F. Prohibit traffic from landscaped areas.

1.14 SECURITY

A. Provide security and facilities to protect Work, and operations from unauthorized entry, vandalism, or theft.

1.15 ACCESS ROADS/TRUCK ACCESS ROUTES

A. Construct and maintain temporary roads accessing public thoroughfares to serve construction area.

B. Extend and relocate as Work progress requires. Provide detours necessary for unimpeded traffic flow.

C. Provide and maintain access to fire hydrants, free of obstructions.

D. Provide means of removing mud from vehicle wheels before entering streets.

E. Existing on-site roads may be used for construction traffic.

F. Follow truck access routes as shown on drawings attached to this specification section, pages 01 50 00-5 & 01 50 00-6.

1.16 PARKING

A. Arrange for temporary parking to accommodate construction personnel.

B. When site space is not adequate, provide additional off- site parking.

1.17 PROGRESS CLEANING

A. Maintain areas free of waste materials, debris, and rubbish. Maintain site in a clean and orderly condition.

B. Remove debris and rubbish from pipe chases, plenums, attics, crawl spaces, and other closed or remote spaces, prior to enclosing the space.

C. Broom and vacuum clean interior areas prior to start of surface finishing, and continue cleaning to eliminate dust.

D. Remove waste materials, debris, and rubbish from site periodically and dispose off-site.

1.18 PROJECT IDENTIFICATION

A. Temporary Signs - Provide three (3) project signs of exterior grade plywood and wood frame construction, painted, with die cut vinyl, self-adhesive letters and self-adhesive logo, to Owner's design and colors.

B. Erect on site at location established by Architect/Engineer.

C. No other signs are allowed without Owner permission except those required by law.

1.19 FIELD OFFICES

A. Office: Weather-tight, with lighting, electrical outlets, heating, cooling and ventilating equipment, and equipped with sturdy furniture, drawing rack and drawing display table.

B. Provide space for Project meetings, with table and chairs to accommodate 6 persons.

C. Locate office on site in existing building or job trailer.

1.20 REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS

A. Remove temporary above grade or buried utilities, equipment, facilities, materials, prior to Substantial Completion inspection.

B. Remove underground installations to a minimum depth of 2 feet (600 mm). Grade site as indicated.

C. Clean and repair damage caused by installation or use of temporary work.

D. Restore existing facilities used during construction to original condition. Restore permanent facilities used during construction to specified condition.

PART 2 – PRODUCTS

(Not Used)

PART 3 – EXECUTION

(Not Used)

END OF SECTION

SECTION 01 60 00

PRODUCT REQUIREMENTS

PART 1 – GENERAL

1.1 SECTION INCLUDES

A. Products.
B. Transportation and handling.
C. Storage and protection.
D. Product options.
E. Substitutions.

1.2 RELATED SECTIONS

A. Section 00 21 13 - Instructions to Bidders: Product options and substitution procedures.
B. Section 01 40 00 - Quality Control: Product quality monitoring.

1.3 PRODUCTS

A. Products: Means new material, machinery, components, equipment, fixtures, and systems forming the Work. Does not include machinery and equipment used for preparation, fabrication, conveying and erection of the Work. Products may also include existing materials or components required for reuse.

B. Provide interchangeable components of the same manufacturer, for similar components.

1.4 TRANSPORTATION AND HANDLING

A. Transport and handle Products in accordance with manufacturer's instructions.

B. Promptly inspect shipments to assure that Products comply with requirements, quantities are correct, and Products are undamaged.

C. Provide equipment and personnel to handle Products by methods to prevent soiling, disfigurement, or damage.

1.5 STORAGE AND PROTECTION

A. Store and protect Products in accordance with manufacturer's instructions, with seals and labels intact and legible. Store sensitive Products in weather-tight, climate controlled enclosures.

B. For exterior storage of fabricated Products, place on sloped supports, above ground.

C. Provide off-site storage and protection when site does not permit on-site storage or protection.

D. Cover Products subject to deterioration with impervious sheet covering. Provide ventilation to avoid condensation.

E. Store loose granular materials on solid flat surfaces in a well-drained area. Provide mixing with foreign matter.

F. Provide equipment and personnel to store Products by methods to prevent soiling,

disfigurement, or damage.

G. Arrange storage of Products to permit access for inspection. Periodically inspect to assure Products are undamaged and are maintained under specified conditions.

1.6 PRODUCT OPTIONS

A. Products Specified by Reference Standards or by Description Only: Any Product meeting those standards or description.

B. Products Specified by Naming One or More Manufacturers: Products of manufacturers named and meeting specifications, no options or substitutions allowed.

C. Products Specified by Naming One or More Manufacturers with a Provision for Substitutions: Submit a request for substitution for any manufacturer not named.

1.7 SUBSTITUTIONS

A. Architect/Engineer will consider requests for Substitutions only within 15 days after date of Owner-Contractor Agreement.

B. Substitutions may be considered when a Product becomes unavailable through no fault of the Contractor.

C. Document each request with complete data substantiating compliance of proposed Substitution with Contract Documents.

D. A request constitutes a representation that the Contractor:
   1. Has investigated proposed Product and determined that it meets or exceeds the quality level of the specified Product.
   2. Will provide the same warranty for the Substitution as for the specified Product.
   3. Will coordinate installation and make changes to other Work, which may be required for the Work to be complete with no additional cost to Owner.
   4. Waives claims for additional costs or time extension, which may subsequently become apparent.
   5. Will reimburse Owner for review and/or redesign services associated with approval by architect, engineer and other authorities.

E. Substitutions will not be considered when they are indicated or implied on shop drawing or product data submittals, without separate written request, or when acceptance will require revision to the Contract Documents.

F. Substitution Submittal Procedure:
   1. Submit three copies of request for Substitution for consideration. Limit each request to one proposed Substitution.
   2. Submit shop drawings, Product data, and certified test results attesting to the proposed Product equivalence.
   3. The Architect will notify Contractor, in writing, of decision to accept or reject request.

PART 2 – PRODUCTS

(Not Used)

PART 3 – EXECUTION

(Not used)

END OF SECTION

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SECTION 01 74 19

CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

PART 1 GENERAL

1.1 SUMMARY

A. Section includes administrative and procedural requirements for the following:

1. Salvaging nonhazardous demolition and] construction waste.
2. Recycling nonhazardous demolition and construction waste.
3. Disposing of nonhazardous demolition and construction waste.

B. Related Requirements:

1. Section 024116 "Structure Demolition" for disposition of waste resulting from demolition of buildings, structures, and site improvements.Section 024119 "Selective Demolition" for disposition of waste resulting from partial demolition of buildings, structures, and site improvements.

1.2 DEFINITIONS

A. Construction Waste: Building and site improvement materials and other solid waste resulting from construction, remodeling, renovation, or repair operations. Construction waste includes packaging.

B. Demolition Waste: Building and site improvement materials resulting from demolition or selective demolition operations.

C. Disposal: Removal off-site of demolition and construction waste and subsequent sale, recycling, reuse, or deposit in landfill or incinerator acceptable to authorities having jurisdiction.

D. Recycle: Recovery of demolition or construction waste for subsequent processing in preparation for reuse.

E. Salvage: Recovery of demolition or construction waste and subsequent sale or reuse in another facility.

F. Salvage and Reuse: Recovery of demolition or construction waste and subsequent incorporation into the Work.

1.3 PERFORMANCE REQUIREMENTS

A. General: Achieve end-of-Project rates for salvage/recycling of 50 percent by weight of total non-hazardous solid waste generated by the Work. Facilitate recycling and salvage of materials

1.4 ACTION SUBMITTALS

A. Waste Management Plan: Submit plan within 7 days of date established for commencement of the work

1.5 INFORMATIONAL SUBMITTALS

A. Waste Reduction Progress Reports: Concurrent with each Application for Payment, submit report. Include the following information:

1. Material category.
2. Generation point of waste.
3. Total quantity of waste in tons
4. Quantity of waste salvaged, both estimated and actual in tons.
5. Quantity of waste recycled, both estimated and actual in tons.
6. Total quantity of waste recovered (salvaged plus recycled) in tons.
7. Total quantity of waste recovered (salvaged plus recycled) as a percentage of total waste.

B. Waste Reduction Calculations: Before request for Substantial Completion, submit calculated end-of-Project rates for salvage, recycling, and disposal as a percentage of total waste generated by the Work.

C. Records of Donations: Indicate receipt and acceptance of salvageable waste donated to individuals and organizations. Indicate whether organization is tax exempt.

D. Records of Sales: Indicate receipt and acceptance of salvageable waste sold to individuals and organizations. Indicate whether organization is tax exempt.

E. Recycling and Processing Facility Records: Indicate receipt and acceptance of recyclable waste by recycling and processing facilities licensed to accept them. Include manifests, weight tickets, receipts, and invoices.

F. Landfill and Incinerator Disposal Records: Indicate receipt and acceptance of waste by landfills and incinerator facilities licensed to accept them. Include manifests, weight tickets, receipts, and invoices.

G. Qualification Data: For waste management coordinator.

1.6 QUALITY ASSURANCE

A. Waste Management Coordinator Qualifications: Experienced firm, with a record of successful waste management coordination of projects with similar requirements.

B. Waste Management Conference: Conduct conference at Project site to comply with requirements in Section 013100 "Project Management and Coordination."

1.7 WASTE MANAGEMENT PLAN

A. General: Develop a waste management plan according to ASTM E 1609 and requirements in this Section. Plan shall consist of waste identification, waste reduction work plan, and cost/revenue analysis. Distinguish between demolition and construction waste**.** Indicate quantities by weight or volume, but use same units of measure throughout waste management plan.

B. Waste Identification: Indicate anticipated types and quantities of demolition, site-clearing and construction waste generated by the Work. Include estimated quantities and assumptions for estimates.

C. Waste Reduction Work Plan: List each type of waste and whether it will be salvaged, recycled, or disposed of in landfill or incinerator. Include points of waste generation, total quantity of each type of waste, quantity for each means of recovery, and handling and transportation procedures.

1. Salvaged Materials for Reuse: For materials that will be salvaged and reused in this Project, describe methods for preparing salvaged materials before incorporation into the Work.
2. Salvaged Materials for Sale: For materials that will be sold to individuals and organizations, include list of their names, addresses, and telephone numbers.
3. Salvaged Materials for Donation: For materials that will be donated to individuals and organizations, include list of their names, addresses, and telephone numbers.
4. Recycled Materials: Include list of local receivers and processors and type of recycled materials each will accept. Include names, addresses, and telephone numbers.
5. Disposed Materials: Indicate how and where materials will be disposed of. Include name, address, and telephone number of each landfill and incinerator facility.
6. Handling and Transportation Procedures: Include method that will be used for separating recyclable waste including sizes of containers, container labeling, and designated location where materials separation will be performed.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 PLAN IMPLEMENTATION

A. General: Implement approved waste management plan. Provide handling, containers, storage, signage, transportation, and other items as required to implement waste management plan during the entire duration of the Contract.

B. Waste Management Coordinator: Engage a waste management coordinator to be responsible for implementing, monitoring, and reporting status of waste management work plan. Coordinator shall be present at Project site full time for duration of Project.

C. Training: Train workers, subcontractors, and suppliers on proper waste management procedures, as appropriate for the Work occurring at Project site.

1. Distribute waste management plan to everyone concerned within three days of submittal return.

2. Distribute waste management plan to entities when they first begin work on-site. Review plan procedures and locations established for salvage, recycling, and disposal.

D. Site Access and Temporary Controls: Conduct waste management operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.

1. Designate and label specific areas on Project site necessary for separating materials that are to be salvaged, recycled, reused, donated, and sold.
2. Comply with Section 015000 "Temporary Facilities and Controls" for controlling dust and dirt, environmental protection, and noise control.

3.2 SALVAGING DEMOLITION WASTE

A. Salvaged Items for Reuse in the Work:

1. Clean salvaged items.
2. Pack or crate items after cleaning. Identify contents of containers.
3. Store items in a secure area until installation.
4. Protect items from damage during transport and storage.
5. Install salvaged items to comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make items functional for use indicated.

B. Salvaged Items for Sale and Donation: Not permitted on Project site.

C. Salvaged Items for Owner's Use:

1. Clean salvaged items.
2. Pack or crate items after cleaning. Identify contents of containers.
3. Store items in a secure area until delivery to Owner.
4. Transport items to Owner's storage area on-site.
5. Protect items from damage during transport and storage.

3.3 RECYCLING DEMOLITION AND CONSTRUCTION WASTE, GENERAL

A. General: Recycle paper and beverage containers used by on-site workers.

B. Recycling Incentives: Revenues, savings, rebates, tax credits, and other incentives received for recycling waste materials shall accrue to Contractor.

C. Procedures: Separate recyclable waste from other waste materials, trash, and debris. Separate recyclable waste by type at Project site to the maximum extent practical according to approved construction waste management plan.

1. Provide appropriately marked containers or bins for controlling recyclable waste until they are removed from Project site. Include list of acceptable and unacceptable materials at each container and bin.

a. Inspect containers and bins for contamination and remove contaminated materials if found.

2. Stockpile processed materials on-site without intermixing with other materials. Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust.
3. Stockpile materials away from construction area. Do not store within drip line of remaining trees.
4. Store components off the ground and protect from the weather.
5. Remove recyclable waste from Owner's property and transport to recycling receiver or processor.

3.4 RECYCLING DEMOLITION WASTE

A. Asphalt Paving: Grind asphalt to maximum 1-1/2-inch size.

B. Asphalt Paving: Break up and transport paving to asphalt-recycling facility.

C. Concrete: Remove reinforcement and other metals from concrete and sort with other metals.

1. Pulverize concrete to maximum 4-inch size.

D. Masonry: Remove metal reinforcement, anchors, and ties from masonry and sort with other metals.

1. Pulverize masonry to maximum 4-inch size.
2. Clean and stack undamaged, whole masonry units on wood pallets.

E. Wood Materials: Sort and stack members according to size, type, and length. Separate lumber, engineered wood products, panel products, and treated wood materials.

F. Metals: Separate metals by type.

1. Structural Steel: Stack members according to size, type of member, and length.
2. Remove and dispose of bolts, nuts, washers, and other rough hardware.

G. Asphalt Shingle Roofing: Separate organic and glass-fiber asphalt shingles and felts. Remove and dispose of nails, staples, and accessories.

H. Gypsum Board: Stack large clean pieces on wood pallets or in container and store in a dry location. Remove edge trim and sort with other metals. Remove and dispose of fasteners.

I. Acoustical Ceiling Panels and Tile: Stack large clean pieces on wood pallets and store in a dry location.

J. Metal Suspension System: Separate metal members including trim, and other metals from acoustical panels and tile and sort with other metals.

K. Carpet and Pad: Roll large pieces tightly after removing debris, trash, adhesive, and tack strips.

1. Store clean, dry carpet and pad in a closed container or trailer provided by Carpet Reclamation Agency or carpet recycler.

L. Carpet Tile: Remove debris, trash, and adhesive.

1. Stack tile on pallet and store clean, dry carpet in a closed container or trailer provided by Carpet Reclamation Agency or carpet recycler.

M. Piping: Reduce piping to straight lengths and store by type and size. Separate supports, hangers, valves, sprinklers, and other components by type and size.

N. Conduit: Reduce conduit to straight lengths and store by type and size.

3.5 RECYCLING CONSTRUCTION WASTE

A. Packaging:

1. Cardboard and Boxes: Break down packaging into flat sheets. Bundle and store in a dry location.
2. Polystyrene Packaging: Separate and bag materials.
3. Pallets: As much as possible, require deliveries using pallets to remove pallets from Project site. For pallets that remain on-site, break down pallets into component wood pieces and comply with requirements for recycling wood.
4. Crates: Break down crates into component wood pieces and comply with requirements for recycling wood.

B. Wood Materials:

1. Clean Cut-Offs of Lumber: Grind or chip into small pieces.
2. Clean Sawdust: Bag sawdust that does not contain painted or treated wood.

C. Gypsum Board: Stack large clean pieces on wood pallets or in container and store in a dry location.

1. Clean Gypsum Board: Grind scraps of clean gypsum board using small mobile chipper or hammer mill. Screen out paper after grinding.

3.6 DISPOSAL OF WASTE

A. General: Except for items or materials to be salvaged, recycled, or otherwise reused, remove waste materials from Project site and legally dispose of them in a landfill or incinerator acceptable to authorities having jurisdiction.

1. Except as otherwise specified, do not allow waste materials that are to be disposed of accumulate on-site.
2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.

B. Burning: Do not burn waste materials.

C. Burning: Burning of waste materials is permitted only at designated areas on Owner's property, provided required permits are obtained. Provide full-time monitoring for burning materials until fires are extinguished.

D. Disposal: Remove waste materials and dispose of at designated spoil areas on Owner's property.

E. Disposal: Remove waste materials from Owner's property and legally dispose of them.

END OF SECTION

SECTION 01 77 00

CONTRACT CLOSEOUT

PART 1 – GENERAL

1.1 SECTION INCLUDES

A. Closeout Procedures.
B. Final Cleaning.
C. Adjusting.
D. Project Record Documents.
E. Operation and Maintenance Data.
F. Warranties.
G. Spare Parts and Maintenance Materials.

1.2 RELATED SECTIONS

A. Section 01 50 00 - Construction Facilities and Temporary Controls: Progress cleaning.

1.3 CLOSEOUT PROCEDURES

A. Submit written certification that Contract Documents have been reviewed, Work has been inspected, and that Work is complete in accordance with Contract Documents and ready for Architect/Engineer's inspection.

B. Provide submittals to Architect/Engineer and Owner that are required by governing or other authorities.

C. Submit final Application for Payment identifying total adjusted Contract Sum, previous payments, and sum remaining due.

1.4 FINAL CLEANING

A. Execute final cleaning prior to final inspection.

B. Clean site; sweep paved areas, rake clean landscaped surfaces.

C. Remove waste and surplus materials, rubbish, and construction facilities from the site.

1.5 ADJUSTING

A. Adjust operating Products and equipment to ensure smooth and unhindered operation.

1.6 PROJECT RECORD DOCUMENTS

A. Maintain on site, one set of the following record documents; record actual revisions to the Work:
    1. Contract Drawings.
    2. Specifications.
    3. Addenda.
    4. Change Orders and other Modifications to the Contract.
    5. Reviewed shop drawings, product data, and samples.
    6. Store Record Documents separate from documents used for construction.
    7. Record information concurrent with construction progress.

B. Specifications: Legibly mark and record at each Product section description of actual

Products installed, including the following:

1. Manufacturer's name and product model and number.
2. Product substitutions or alternates utilized.
3. Changes made by Addenda and Modifications.

C. Record Documents and Shop Drawings: Legibly mark each item to record actual construction including:

1. Field changes of dimension and detail.
2. Details not on original Contract Drawings.

D. Delete Architect/Engineer title block and seal from all documents.

E. Submit documents to Architect/Engineer with claim for final Application for Payment.

F. Project record documents may be submitted electronically if acceptable to the Owner. Confirm with Owner for requirements.

1.7 OPERATION AND MAINTENANCE DATA

A. Submit one set prior to final inspection, bound in 8-1/2 x 11 inch (216 x 279 mm) text pages, three D side ring capacity expansion binders with durable plastic covers. If acceptable to Owner, submission may be electronic. Confirm with Owner for requirements.

B. Prepare binder covers with printed title "OPERATION AND MAINTENANCE INSTRUCTIONS", title of project, and subject matter of binder when multiple binders are required.

C. Internally subdivide the binder contents with permanent page dividers, logically organized as described below; with tab titling clearly printed under reinforced laminated plastic tabs.

D. Contents: Prepare a Table of Contents for each volume, with each Product or system description identified, type on 30 pound white paper if printed.

Part 1: Directory, listing names, addresses, and telephone numbers of Architect/Engineer, Contractor, Subcontractors, and major equipment suppliers.

Part 2: Project documents and certificates, including the following:

a. Shop drawings and product data.
b. Certificates.
c. Photocopies of warranties and bonds.

E. Submit one copy of completed volumes in final form 15 days prior to final inspection. This copy will be returned after final inspection, with Architect/Engineer comments. Revise content of documents as required prior to final submittal.

F. Submit final volumes revised, within ten days after final inspection.

1.8 WARRANTIES

A. Provide notarized copies.

B. Execute and assemble documents from Subcontractors, suppliers, and manufacturers.

C. Provide Table of Contents and assemble in three D side ring binder with durable plastic cover. If acceptable to Owner, submission may be electronic. Confirm with Owner for

requirements.

D. Submit prior to final Application for Payment.

E. For items of Work delayed beyond date of Substantial Completion, provide updated submittal within ten days after acceptance, listing date of acceptance as start of warranty period.

1.9 SPARE PARTS AND MAINTENANCE MATERIALS

A. Provide products, spare parts, maintenance and extra materials in quantities specified in individual specification Sections.

B. Deliver to Project site and place in location as directed by Owner; obtain receipt prior to final payment.

PART 2 – PRODUCTS

(Not used)

PART 3 – EXECUTION

(Not used)

END OF SECTION

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SECTION 06 01 40

MAINTENANCE OF ARCHITECTURAL WOODWORK

BEFORE UNDERTAKING ANY PROJECT INVOLVING PAINT REMOVAL,APPLICABLE STATE AND FEDERAL LAWS ON LEAD PAINTABATEMENT AND DISPOSAL MUST BE CONSIDERED AND CAREFULLY FOLLOWED. STATE AND FEDERAL REQUIREMENTS MAY AFFECT OPTIONS AVAILABLE TO OWNERS ON BOTH PAINT REMOVAL AND REPAINTING. THESE LAWS, and ANY REQUIREMENTS PROHIBITING VOLATILE ORGANIC COMPOUNDS (VOCs), SHOULD BE REQUESTED FROM THE STATE HISTORIC PRESERVATION OFFICER IN EACH STATE. (From Preservation Brief 28, "Painting Historic Interiors"). REGULATORY INFORMATION MAY ALSO BE REQUESTED FROM THE ENVIRONMENTAL PROTECTION AGENCY (EPA) REGIONAL OFFICE AND/OR THE STATE OFFICE OF ENVIRONMENTAL QUALITY.

PART 1 -GENERAL

1.1 SUMMARY

A. This procedure includes guidance on removing an existing wood finish and refinishing with a stain, varnish or wax.

B. Safety Precautions:

1. Dispose of all used solutions, paint stripper residue and soiled rags in sealed non-combustible containers daily to prevent fire hazard.
2. The Contractor shall maintain a healthy level of air circulation within the space being treated. Exhaust fans or other air moving devices shall be regularly employed and maintained to the satisfaction of the Contracting Officer or designated representative.
3. Areas being treated shall be curtained off from other trades or occupants to prevent fumes from reaching other parts of the building.
4. All workers in the area being treated shall wear appropriate safety devices, including but not limited to, respirators fitted with the correct cartridge, gloves, other clothing.

C. Related Sections:

1. Section 01 00 00 – Summary
2. Historic Structures Precautions
3. Section 01 33 00 – Submittal Procedures
4. Section 01 40 00 – Quality Control
5. Section 01 50 00 – Construction Facilities & Temporary Controls
6. Section 01 60 00 – Product Requirements
7. Section 11306.6 – General Cleaning of Painted or Waxed Wood Surfaces

These guidelines should be reviewed prior to performing this procedure and should be followed, when applicable, along with recommendations from the Regional Historic Preservation Officer (RHPO).

1.2 SUBMITTALS

A. Samples:

1. The Contractor shall refinish two (2) sample areas for approval by the Contracting Officer or designated representative. Locations of sample areas shall be as selected by the Contracting Officer or designated representative.

2. The Contractor shall obtain written approval from the Contracting Officer or designated representative of wood refinishing methods, materials, and sample panels before proceeding with the work of this section. Approved sample panels shall be marked and protected for the duration of the project. They shall be used as the standard for similar work throughout the project.
3. In the case of rejection of the sample areas, these locations shall be re-stripped and refinished until approved by the Contracting Officer or designated representative.

1.3 QUALITY ASSURANCE

A. General Objective: The objectives of wood refinishing and cleaning are to give wood surfaces a smooth, uniform appearance consistent with the original design intent, and to preserve the inherent patina. Splotches, streaks, runs, or any other kind of spotty appearance shall not be accepted. Too aggressive cleaning or sanding shall not be accepted.

B. Work Standards: Basic reference and standard for wood refinishing shall be "Wood Finishing and Refinishing Revised Edition," by S.W. Gibbia, New York: Van Nostrand Reinhold Co., 1971.

C. Contractor: A firm with not less than five (5) years in wood refinishing and restoration. The Contractor shall be required to submit reference for six (6) other projects of similar nature. The Contracting Officer or designated representative reserves the right to approve or disapprove the use of the Contractor contingent upon their experience.

D. Refinish Standard: Sample areas shall be prepared which shall form a standard for wood refinishing.

E. Refinishing is defined as all the process(es) necessary to restore woodwork. Stripping is defined as the process damage to the wood. Finishing is defined as the process of applying stain and protective coating and all related preparatory and follow-up tasks. Cleaning is defined as the removal of dirt embedded in the upper finish layers and does not include the removal of any finish layer.

F. Single Source Responsibility: Provide compatible finish coating, thinner, sanding sealer, and wood filler that are produced by the same manufacturer.

G. Regulatory Requirements: Comply with municipal and Federal regulations governing the refinishing operations, chemical waste disposal, and scaffolding.

PART 2-PRODUCTS

2.1 MANUFACTURERS

A. Bonakemi USA, Inc. https://us.bona.com/

B. Butcher Polish Company http://www.bwccompany.com/index.html

C. 3M Consumer Products Group http://www.3m.com/3M/en_US/consumer-us

D. The Sherwin Williams Co. http://www.sherwin-williams.com/

E. W.M. Barr & Company http://www.citristrip.com/about/wm-barr

2.2 MATERIALS

NOTE: Chemical products are sometimes sold under a common name. This usually

means that the substance is not as pure as the same chemical sold under its chemical name. The grade of purity of common name substances, however, is usually adequate for stain removal work, and these products should be purchased when available, as they may be less expensive. Common names are shown below by an asterisk (*).

A. Commercial Paint and Varnish Remover such as "Citristrip" (W.M. Barr & Company), "Safest Stripper" (3M), or approved equal.

B. Mineral Spirits:
   1. A petroleum distillate that is used especially as paint or varnish thinner.
   2. Other chemical or common names include Benzine* {not Benzene); Naphtha*; Petroleum spirits*; Solvent naphtha*.
   3. Potential Hazards: TOXIC AND FLAMMABLE.
   4. Safety Precautions:
      a. AVOID REPEATED OR PROLONGED SKIN CONTACT.
      b. ALWAYS wear rubber gloves when handling mineral spirits.
      c. If any chemical is splashed onto the skin, wash immediately with soap and water.
   5. Available from construction specialties' distributor, hardware store, paint store, or printer's supply distributor.

   -OR-

   Turpentine:
   1. Typically used as a solvent and thinner.
   2. Potential Hazards: TOXIC AND FLAMMABLE.
   3. Safety Precautions:
      a. Work in a well ventilated area.
      b. Observe safety rules as turpentine is flammable, and the fumes can trip an ionization smoke detection system.
      c. Store soiled cloths in a metal safety container to guard against spontaneous combustion.
   4. Available from hardware store or paint store.

   -OR-

   Solvent Wax Remover such as "Woodline Renovator" (Bonakemi USA, Inc.), or approved equal.

C. Wood filler in color to match original stain. *CAUTION: WOOD FILLERS CONTAINING A LINSEED OIL VEHICLE MAY CAUSE WHITE SPOTS TO DEVELOP IN THE LACQUER FINISH COAT.*

D. Oil stain or universal stain (Sherwin Williams), or approved equal.

E. Alkyd or urethane-base satin varnish (Sherwin Williams), or approved equal.

F. Paste wax (non-yellowing) such as "Butcher's Paste Wax" (Butcher Polish Company), or approved equal.

2.3 EQUIPMENT

A. Steel wool

B. Steel or brass wire brushes

C. Stiff fiber bristle brushes

D. Putty knife or broad knife

E. Clean, dry cloths (cheese cloth or gauze)

F. Orbital Sander

G. Electric floor polisher

H. Nylon web scrubbing pads

I. Lamb's wool buffing pads

PART 3 - EXECUTION

3.1 ERECTION, INSTALLATION, APPLICATION

A. Remove Existing Coating:

1. Work in areas approximately 4' by 4' at one time.
2. Apply chemical stripper using a brush or roller. Follow manufacturer's instructions.
3. Allow stripper to stand for length of time as recommended by manufacturer, depending upon the number of surface layers to be stripped; if necessary, cover with plastic sheeting to keep the stripper moist.
4. Using a broad knife or scrapper, remove paint and stripper from the surface.
5. Safely dispose of paint and stripper residue. Follow EPA regulations for disposal of lead-base paint.
6. Specifically for varnish buildup:
   a. Wet steel wool with solvent and rub over the wood surface to remove varnish buildup and to smooth out any checks in the surface.
   b. Replace steel wool frequently with clean, and continue the wiping process until a smooth surface is achieved.

   NOTE: DO NOT USE WATER ON THE WOOD SURFACE.
7. Wipe wood with a clean cloth soaked in mineral spirits to remove chemical residue.
8. Allow to dry and dry-brush loose material from the surface using a short fiber bristle brush.
9. Repeat as necessary to sufficiently remove the previous coating.
10. Special Procedures for Varnished Wood Floors:
    a. Sand the floor with an orbital sander to remove stains, old finish and indentations in the wood. Sand in direction of wood grain.
       NOTE: DO NOT REMOVE MORE THAN 1/16" OF THE WOOD SURFACE.
    b. Remove dust from floor with vacuum and tack cloth.
11. Special Procedures for Waxed Wood Floors: *NOTE: Some sophisticated modern waxes, formulated for long wear and for high production commercial use, require special strippers that most often are not appropriate for historic materials because the ingredients cannot be readily detected. Some silicon waxes can only be removed by abrasion.*
    NOTE: WORK IN A WELL-VENTILATED ROOM. OBSERVE SAFETY RULES AS BOTH THE TURPENTINE AND THE WAX ARE FLAMMABLE, AND THE FUMES CAN TRIP AN IONIZATION SMOKE DETECTION SYSTEM. STORE SOILED CLOTHS IN A METAL SAFETY CONTAINER TO GUARD AGAINST SPONTANEOUS

COMBUSTION.

a. Dampen small area of floor with turpentine or mineral spirits, or apply wax remover evenly over the floor following manufacturer's instructions.
b. Using a 16" electric floor machine, scrub lightly with a piece of 000 steel wool or nylon web scrubbing pad. Change steel wool or pads as they become clogged with old wax.
c. Wipe up solvent and wax with clean cloths.
d. Continue cleaning in this manner until all of the old wax has been removed. Allow floor to dry, approximately 15-20 minutes after the last area has been cleaned.
e. Apply wax and buff as described 06200-01-P. Apply two or more thin coats rather than one thick coat. Buff after each coat.

B. Fill scratches, gouges and dents with wood filler.

C. Apply a high quality paste wood filler with a brush to all open grain wood species (i.e. Oak) before staining.
1. Dampen a clean cloth with mineral spirits and wipe the paste off across the grain of the wood to enable the filler to remain in the grain depressions.
2. Allow the filler to fully dry before applying the stain or varnish.

D. Stain and Varnish the Wood:
1. On a SAMPLE area 12 inches square, brush apply oil stain or universal stain.
2. Allow the stain to penetrate the wood for at least 5-10 minutes.
3. Remove excess stain with a clean, lint-free cloth. Rub the wood parallel to the grain.
4. Allow the stain to dry at least 12 hours before applying varnish.
5. Brush apply one coat of alkyd or urethane-base satin varnish. Varnish should be thin, but not watery.
6. Allow to dry for at least 24 hours.
7. When dry, buff the surface with 000 steel wool and dry-brush with a fiber bristle brush to remove any metal particles left behind from the steel wool. A tack rag may also be used to remove dust from the surface.
8. Apply second coat of satin varnish (full-strength).
9. Allow to fully dry.
10. Buff the surface with 000 steel wool and dry-brush with a fiber bristle brush to remove any metal particles left behind from the steel wool.
11. If sample is approved by RHPO, follow the same procedures for all remaining wood.
12. For areas subject to wear (i.e. handrails, wainscot, etc.):
    a. After buffing the final coat of varnish, apply one coat of non-yellowing paste wax.

END OF SECTION

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SECTION 06 10 53

MISCELLANEOUS ROUGH CARPENTRY

PART 1 – GENERAL

1.1 WORK INCLUDED

A. Blocking in walls.
B. Wood furring and grounds.
C. Wood treatment.

1.2 RELATED WORK

A. Section 06 20 00 - Finish Carpentry.

1.3 REFERENCES

A. ALSC - American Lumber Standards Committee: Softwood Lumber Standard.
B. APA - American Plywood Association: Grades and Standards.
C. FS TT-W-571 - Wood Preservation: Treating Practices.
D. NFPA - National Forest Products Association.
E. SFPA - Southern Forest Products Association.
F. WCLIB - West Coast Lumber Inspection Bureau: Standard Grading Rules for West Coast Lumber.
G. WWPA - Western Wood Products Association.

1.4 QUALITY ASSURANCE

A. Lumber Grading Agency: Certified by ALSC.
B. Plywood Grading Agency: Certified by APA.

PART 2 – PRODUCTS

2.1 MATERIALS

A. Lumber Grading Rules: WWPA.

B. Softwood Lumber: Southern Pine species, No. 2 grade, kiln dried or surfaced dry with 19 percent maximum moisture content.

C. Plywood: APA Grade C-D, with waterproof glue, unsanded.

D. Fasteners: Hot-dipped galvanized steel for exterior, high humidity, and treated wood locations; plain finish elsewhere; size and type to suit condition.

E. Anchors: Adhesive expanding bolt type for anchorage to hollow masonry. Bolts or ballistic fasteners for anchorages to steel.

2.2 WOOD TREATMENT

A. Wood Preservative (Pressure Treatment): FS TT-W-571 AWPA Treatment UC4A using water borne preservative with 0.30 percent retainage; preservative shall not contain chromium or arsenic.

PART 3 – EXECUTION

3.1 INSTALLATION

A. Erect wood framing members level and plumb.

B. Space framing and furring 16 inches.

C. Curb all roof openings except where prefabricated curbs are provided. Form corners by lapping side members alternatively.

D. Coordinate work with installation of decking and support of decking at openings.

END OF SECTION

SECTION 06 20 00

FINISH CARPENTRY

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Finish carpentry items, other than shop prefabricated casework.
B. Hand attachment accessories.
C. Refer to schedule at end of this Section.

1.03 RELATED SECTIONS

A. Section 06 10 53 –Miscellaneous Rough Carpentry: Wood Blocking and Curbing.
B. Section 08 52 00 – Wood Windows
C. Section 09 91 00 - Painting: Painting and finishing of finish carpentry items.

1.04 REFERENCES

A. AWI - Quality Standards.
B. PS 20 - American Softwood Lumber Standard.

1.05 REGULATORY REQUIREMENTS

A. Conform to applicable code for fire retardant requirements.

B. Conform to Certification of Compliance with HUD Severe Use Standards.

1.06 SUBMITTALS

A. Submit shop drawings under provisions of Section 01 33 00.

B. Submit shop drawings indicating materials, component profiles, fastening methods, jointing details, finishes, accessories, to a minimum scale of 1-1/2 inch to one foot.

C. Submit product data under provisions of Section 01 33 00.

D. Submit samples under provisions of Section 01 33 00.

1.07 DELIVERY, STORAGE, AND HANDLING

A. Deliver products to site under provisions of Section 01 60 00.

B. Store and protect products under provisions of Section 01 60 00.

C. Store materials in ventilated, interior locations under constant minimum temperatures of 60 degrees F (16 degrees C) and maximum relative humidity of 55 percent.

PART 2 PRODUCTS

2.01 FABRICATORS

A. Brockway-Smith Company.

B. Custom Millwork Shop.

C. Substitutions: Under provisions of Section 01 60 00.

2.02 LUMBER MATERIALS

A. Softwood Lumber: PS 20; Premium grade in accordance with AWI; maximum moisture content of 6 percent. Pine species, with plain sawn grain, of quality capable of transparent finish.

B. Hardwood Lumber: FS MM-L-736; Premium grade in accordance with AWI; maximum moisture content of 6 percent. Birch or oak species, with plain sawn grain, of quality capable of transparent finish.

C. MDO Plywood: Grade C-D: Graded in accordance with AWI Custom: veneer core; paper face; exterior glue.

2.03 ACCESSORIES

A. Nails: Size and type to suit application, plain and coated finish.

B. Bolts, Nuts, Washers, Blind Fasteners, Lags, and Screws: Size and type to suit application; plain and galvanized finish.

D. Lumber for Shimming, Blocking, Softwood lumber of Southern yellow pine species.

D. Primer: Alkyd primer sealer type.

E. Wood Filler: Oil base, tinted to match surface finish color.

2.04 FABRICATION

A. Fabricate to AWI Premium standards.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that surfaces and openings are ready to receive work and field measurements are as shown on the drawings.

B. Verify mechanical, electrical, and building items affecting work of this Section are placed and ready to receive this work.

C. Beginning of installation means acceptance of existing conditions.

3.02 PREPARATION

A. Before installation, prime paint surfaces of items or assemblies to be in contact with cementitious materials.

B. Before installation, back prime paint all unexposed surfaces.

3.03 INSTALLATION

A. Install work in accordance with AWI Premium quality standard.

B. Set and secure materials and components in place, plumb and level.

C. Install components and trim with nails and screws at 8 inch on center.

D. Install hardware in accordance with manufacturer's instructions.

3.04 TOLERANCES

A. Maximum Variation from True Position: 1/16 inch (1.5 mm).

B. Maximum Offset from True Alignment with Abutting Materials: 1/32 inch (0.7 mm).

3.05 SITE TREATMENT OF WOOD MATERIALS

A. Brush apply one coat of primer on hidden surfaces of exterior located finish carpentry items.

B. Apply preservative treatment in accordance with manufacturer's instructions.

C. Treat site-sawn ends. Allow preservative to cure prior to erecting materials.

D. Verify that materials requiring paint finish do not exceed 6 percent moisture content before applying treatment.

3.06 PREPARATION FOR SITE FINISHING

A. Set exposed fasteners. Apply wood filler in exposed fastener indentations. Sand work smooth.

B. Site Finishing: Refer to Section 09 91 00.

3.07 PROTECTION

A. Protect finished installation under provisions of Section 01500.

3.08 SCHEDULE

A. Trim and Moldings: New to match existing profiles & dimensions.

END OF SECTION

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SECTION 07 46 23

WOOD SIDING

PART 1. GENERAL

1.01 SECTION INCLUDES

A. Western Red Cedar products including the following:
   1. Wood siding.
   2. Wood boards.

1.02 RELATED SECTIONS

A. Section 06 10 53 Miscellaneous Rough Carpentry

1.03 REFERENCES

A. FSC-certified Stewardship Council Certification.

1.04 SUBMITTALS

A. Submit shop drawings under provisions of Section 01 33 00.

B. Product Data: Manufacturer's data sheets on each product to be used, including:
   1. Preparation instructions and recommendations.
   2. Storage and handling requirements and recommendations.
   3. Installation methods.

C. LEED Submittals: Provide documentation of how the requirements shall be met for the following credits:
   1. Product Data for Credit MR 5.1 and Credit MR 5.2: Submit data, including location and distance from Project of material manufacturer and point of extraction, harvest or recovery for main raw material.
      a. Include statement indicating cost for each regional material and the fraction by weight that is considered regional.
   2. Product Data for Credit MR 7: For products having Certified Wood content
      a. Include statement indicating costs for each product having Certified Wood content.

D. PEFC Submittals: Provide documentation indicating manufacturer is PEFC Chain-of-Custody certified.

E. Selection Samples: For each finish product specified, two complete sets of color chips representing manufacturer's full range of available colors and patterns.

1.05 QUALITY ASSURANCE

A. Manufacturer Qualifications: Minimum 5 year experience harvesting and milling forest products.

B. Installer Qualifications: Minimum 2 year experience installing similar products.

C. Certified Wood: Operations shall be FSC and PEFC Chain of Custody certified.
   1. TFP #: FSC C005906.

2. TFP #: PEFC/26-31-27.

D. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
   1. Finish areas designated by Architect.
   2. Do not proceed with remaining work until workmanship is approved by Architect.
   3. Refinish mock-up area as required to produce acceptable work.

E. Grading shall be established by published grading rules.

B. PRE-INSTALLATION MEETINGS

A. Convene minimum two weeks prior to starting work of this section.

C. DELIVERY, STORAGE, AND HANDLING

A. Deliver and store products in manufacturer's unopened packaging bearing the brand name and manufacturer's identification until ready for installation.

B. Handling: Handle materials to avoid damage.

D. PROJECT CONDITIONS

A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.

E. SEQUENCING

A. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.

PART 2. PRODUCTS

2.01 MANUFACTURERS

A. Acceptable Manufacturer: Terminal Forest Products, which is located at: 12180 Mitchell Rd.; Richmond, BC, Canada V6V 1M8; Tel: 604-717-1200; Fax: 604-321-4223; Email:request info (media@terminalforest.com); Web:www.terminalforest.com

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

2.02 WOOD SIDING

A. Material: Western Red Cedar.

B. Bevel Siding: Solid KD Clear.
   1. Grade: A and Better.
   2. 1/2 inch x existing width.

2.03 WOOD BOARDS

A. Material: Western Red Cedar.

B. Paneling: Select Knotty.
1. 1" x existing width.

PART 3. EXECUTION

3.01 EXAMINATION

A. Do not begin installation until substratrs have been properly prepared.

B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding..

3.02 PREPARATION

A. Clean surfaces thoroughly prior to installation.

B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions

3.03 INSTALLATION

A. Install in accordance with manufacturer's instructions.

B. Products shall have all butt and scarf joints caulked with a quality, exterior rated, flexible caulk prior to paint application. All non-trim/fascia abutments shall be caulked and sealed with the same exterior grade caulk.

C. Ends exposed due to post-manufacturing field cuts shall be sealed with a premium, 100% acrylic primer, to ensure that no fiber is left exposed to the elements.

D. Use only corrosion resistant fasteners. Acceptable are stainless steel or hot-dipped galvanized nails; minimum size - 7 penny.

E. Joints shall fall over framing lumber and shall be double nailed. Trim boards of 10 inches (254 mm) or greater in width require 3 nails evenly spaced across the face of the board. Do not nail any less than 1/2 inch (13 mm) from any edge and fasten at a minimum of every 24 inches (610 mm) on center.

F. Drive nails perpendicular to the framing lumber and the wood trim product; drive nails flush with the product's surface. Nails shall penetrate at least 1-1/4 inches (32 mm) into the structural framing.

3.04 PROTECTION

A. Protect installed products until completion of project.

B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION

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SECTION 08 01 52.91
WOOD WINDOW RESTORATION

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Wood Windows:
1. Awning windows.
2. Double-hung windows.
3. Single-Hung windows.
4. Fixed windows.

1.2 DESCRIPTION OF WORK

A. General: Provide all labor, materials, equipment, and services required to complete wood window restoration as specified herein and required by existing conditions and authorities having jurisdiction.

B. Wood Window Restoration may include, but is not limited to, the following:
1. Restore damaged and inoperable wood window sash while maintaining current profiles.
2. Restore existing and provide new window balance hardware at all operable sash to accommodate use.
3. Replace all broken and unsound sash cord.
4. Restore existing window hardware and provide new in-kind window hardware where existing hardware is missing or is too damaged or deteriorated to be restorable.
5. Restore all window trim disturbed for work of this Section to sound condition and existing appearance.
6. Paint and finish all wood elements as necessary to match original finishes
7. Glue or replace cracked, broken or missing glass.
8. Remove all deteriorated putty and replace with new.
9. Consolidate and repair deteriorated wood sills, framing members and sash rails and stiles.
10. Replace all broken or deteriorated parting strips
11. Reinstall repaired window sash.
12. Clean all glass.

C. Intent: It is the specific intent of this Section that repairs will maximize the retention of historic fabric while making the windows weather resistant for long-term use and serviceable for cyclical maintenance.

1.3 SUBMITTALS

A. Submit under provisions of Section 01 33 00.

B. General: Submit the following in compliance with the requirements of the Conditions of the Contract. Revise and resubmit each item as required to obtain Architect & SHPO approval.

C. Product Data: Manufacturer's data sheets on each product to be used, including:
   1. Preparation instructions and recommendations.
   2. Storage and handling requirements and recommendations.
   3. Installation methods.
   4. Documentation in the form of high-resolution (1MB min.) JPEG images on CD-ROM/ Flash drive showing the existing condition of all elements of windows to be removed for work of this Section, all elements adjacent to elements that are to be removed, and all other window elements that will be in any way affected by work of this Section. Show overall trim and details of all damage or deterioration that might be attributed to damage resulting to work of this Section.
   5. Wood Treatment Product Data: Chemical treatment manufacturer's instructions for handling, storage, installation and finishing treated materials if applicable.

D. Shop Drawings: Submit shop drawings indicating details of construction, flashings and relationship with adjacent construction.

E. Selection Samples: For each product specified, two complete sets of color chips representing manufacturer's full range of available finishes.

F. Verification Samples: For each product specified, two samples, minimum size 6 inches (150 mm) square, representing actual finishes.

G. Quality Assurance Submittals:
   1. Design Data, Test Reports: Provide manufacturer test reports indicating product compliance with indicated requirements.

H. Closeout Submittals: Refer to Section 01 77 00 Closeout Submittals.

1.4 QUALITY ASSURANCE

A. Installer Qualifications: Wood Window restoration shall be carried out be a steady crew of skilled craftspeople who are thoroughly experience with materials and methods specified.

B. Installer Qualifications: Where required by hazardous materials drawings, specifications & reports Wood Window restoration shall be carried out by a steady crew of skilled craftspeople who are certified to work with asbestos and lead containing materials, who are thoroughly experienced with the materials and methods specified.

C. Laws, Codes, and Regulations: All work of this section shall comply with all applicable federal, state and local laws, codes and regulations.

D. Knowledge of Site: Bidders shall visit site prior to bid and carefully examine Project scope and conditions that may affect proper execution of work of this Section and

determine or verify dimensions and quantities. Contractor's submission of bid shall be acknowledgement that s/he is thoroughly familiar with Project Scope and site conditions.

E. Access for Inspection, Documentation and Approvals: Provide preservation Manager access on a regular basis to all location on which mockups are being carried out, on which work is ongoing., and where work has been completed to allow for inspections, documentation and approvals, provide means of access and safety precautions required to facilitate inspections and approvals.

F. Mock-Up: Provide a mock-up for evaluation of installation techniques and workmanship.
   1. Mock-ups shall incorporate surrounding construction, including wall assembly fasteners, flashing, and other related accessories installed in accordance with manufacturer's approved installation methods.
   2. Do not proceed with remaining work until workmanship is approved by Architect.
   3. Rework mock-up as required to produce acceptable work.
   4. At Substantial Completion, approved mockups may become part of completed work or demolish mockups and remove from site as decided by owner.

G. Pre-installation Meeting: Conduct pre-installation meeting on-site two weeks prior to commencement of installation.

1.5 CONTRACTOR RESPONSIBILITY

A. Bidders shall visit the site beforehand to make themselves familiar with specific conditions relating to this Section.
B. All Subcontractors are bound by the same requirements as the Contractor. Subcontractors shall not begin work unless approved by the Architect/ SHPO.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver, store and handle materials and products in strict compliance with manufacturer's instructions and recommendations and industry standards to prevent damage, deterioration, or degradation and intrusion of foreign material.

B. Discard and remove from site deteriorated or contaminated materials and products that have exceeded their expiration dates. Replace with fresh materials.

1.7 PROJECT CONDITIONS

A. Protection of Persons: Take all necessary precautions to protect all persons, whether engaged in work of this Section or note, from all hazards of any kind associated with the work of this Section.

B. Protection of Window Opening: After removal of the sash, all window openings shall be closed with plywood or acrylic panels fitted to each individual window and

secured by non-destructive anchoring system. The panel shall be adequately weather tight and not permit any moisture to enter the building.

C. Protection of Building: Protect building elements and finishes from damage or deterioration caused by work of this section. Repair any damage to materials or finishes to Architect/ SHPO's satisfaction at no additional cost.
   1. Take all necessary precautions to prevent fire and spread of fire
   2. Take all necessary precautions to protect building elements and finishes from damage by precipitation during work of this Section. Protect openings at all times. Repair or replace to Architect/ SHPO's satisfaction all building elements and materials damaged by weather resulting from window openings that did not sufficiently exclude weather at no additional cost.

D. Coordination: Coordinate work of this Section with work specified in other sections to ensure proper completion of the Work.

1.8 ENVIRONMENTAL CONDITIONS

A. General: Perform work only when temperature of products being used, temperatures of existing and new materials, and air temperature and humidity comply with product manufacturer's requirements and requirements of this Section. In case of conflict, the most stringent requirements shall govern.

B. Use of Epoxy Resins: mix and apply epoxy resins only when temperatures are between 50 deg F and 80 deg F.

1.9 LEAD-CONTAINING PAINT(LCP)

A. General: Perform all work that disturbs lead-containing paint (LCP), handle all material that involves lead-containing paint, and transport and dispose of all lead-containing paint and residue in compliance with all applicable federal, state, and local laws and regulations for identification, removal, labeling, handling, containerization, transportation, and disposal of lead-containing material including, but not limited to, those reference herein.

B. U.S. Department of Labor OSHA Regulations: Including but not limited to: Title 29, Code of Federal Regulations (CFR) Section 1926.62" "Lead Exposure in Construction" and Title 29, CFR Section 1910.1200: Hazard Communication Standard."

C.

D. U.S. Environmental Protection Agency (USEPA) Regulations: including but not limited to: Title 40 CFR Part 262: "Standards Applicable to Generators of Hazardous Waste" and Part 263: "Standards Applicable to Transporters of Hazardous Waste".

E. U.S. Department of Transportation (USDOT) Regulations: including but not limited to: 49 CFR Parts 172, 173, 174, 175, 177, 178, 179, and 180.

PART 2 PRODUCTS

2.1 MATERIALS, GENERAL

A. Grade and Quality: Materials shall conform to requirements of this Section and shall be new, free from defects, and of recent manufacture.

B. Manufacturer's Instructions: Comply with material manufacturer's instructions for use of products (including surface preparation, mixing, applying, drying, etc.). In case of conflict with requirements of this Section, the more stringent requirements shall govern.

2.2 WOOD

A. Lumber shall be of sound stock, solid wood without finger joints or other joints within members, thoroughly seasoned, and kiln-dried to a moisture content not exceeding 8 percent.

B. Wood shall be free from defects or blemishes on surfaces exposed to view that will show after paints and finishes have been applied. Materials that do not comply with specifications for quality and grade, are in in any ways defective, or are otherwise not in proper condition will be rejected.

C. Wood for new sash as necessary. Other new elements, and repairs of existing elements shall match profile and grade of existing windows in species, quality, cut and grain pattern in king.

D. Preservation treatment shall be used for new wood after machining.

2.3 ADHESIVES

A. Adhesive for Dutchman Repairs, Member Replacement, and Fabrication of New Sash: Epoxy resin glue designed for use with wood. Provide West System as manufactured by Gougeon Brothers, Inc. 706 Martin Street, Bay City, Michigan 48706 or approved Equivalent. Provide the following materials: 105 Resin and 206 Slow Hardener or approved Equivalent.

B. Adhesives for glass repair: Provide HXTAL NYL-1 Epoxy adhesive

2.4 FASTENERS FOR CONSTRUCTION OF WOOD SASH

A. Adhesive for Dutchman Repairs, Member Replacement, and Fabrication of New Sash: Epoxy resin glue designed for use with wood. Provide West System as manufactured by Gougeon Brothers, Inc. 706 Martin Street, Bay City, Michigan 48706 or approved Equivalent. Provide the following materials: 105 Resin and 206 Slow Hardener or approved Equivalent.

2.5 HARDWARE AND ACCESSORIES

A. General: Provide each restored window with full complement of hardware and fasteners matching that on original windows. Use salvaged, restored existing hardware insofar as possible and new hardware to match existing hardware where

hardware is missing or existing hardware is damaged or deteriorated so as to be unrestorable.

1. Restored Existing hardware: Restore all existing hardware to be reused following requirements of subsection 3.11 “Restoration of Existing Hardware”.
2. New Hardware: Provide new hardware and fasteners to match existing hardware and fasteners in all respects.

B. Sash Lifts: Restore any existing sash lifts in so far as possible and new sash lifts to match existing sash lifts in material, configuration, size and finish where existing sash lifts are missing or damaged as to be non-restorable.

C. Sash Locks: Restore any existing sash locks in so far as possible and new sash locks to match existing sash locks in material, configuration, size and finish where existing sash locks are missing or damaged as to be non-restorable.

D. Sash Pulleys: Clean, lubricate and reuse sash pulleys. Replace sash pulleys if necessary to operate the windows with sash chains.

E. Sash cord: replace all sash cords with minimum breaking stain capacity of 350 kg.

F. Sash Weights: Ensure that sash weights allow full operation of each sash and allow sash to be balanced at any position in which it is placed. Add weights to existing sash weights or replace existing sash weights with new heavier weights to balance heavier sash if necessary.

G. Screws for attaching restored existing hardware: Clean, salvage existing screws in so far as possible. Where screws are missing or damaged so as to be unsalvageable, provide new screws to match existing screws in material, size and configuration.

H. Screws for attaching replacement hardware: New screws matching screws in existing hardware

2.6 PAINTING AND FINISHING MATERIALS

A. General: Paint shall be of premium quality and match existing color exactly unless otherwise specified and shall comply with requirements of contract document. Primer shall be either oil-based or 100% acrylic and finish paint shall be 100% acrylic.

B. Glazing Putty: Putty is to be best quality pure linseed or soybean oil from manufacturer approved by Architect/ SHPO.

2.7 HARDWARE RESTORATION MATERIALS

A. Non-metallic Cleaning Pads: Scotch-Brite pads, extra fine, as manufactured by 3M Co., or approved equal.

B. Wadding Cloth: "Never Dull Magic Wadding Polish", manufactured by The George Basch Co., Inc. 19 Hanse Avenue, P.O. Box 188, Freeport, N.Y. 11520, or approved Equal.

C. Paste Wax for Cold Application: White or clear paste wax, mixture of microcrystalline wax, carnuba wax, and mild solvent, in paste form, such as Trewax Clear, or Butcher's Bowling Alley Paste Wax available from White Diamond Co., Marlboro, MA. Do not use emulsion-type waxes or amber tinted waxes.

D. Thinner: Mineral spirits or turpentine

E. Lacquer: Clear, non-yellowing, acrylic emulsion, water-based coating, formulated with corrosion inhibitor benzotriazole, such as #11650 Eco-borne clear lacquer as manufactured by G.J. Nikolas & Co., Inc., 2800 Washington Blvd., Bellwood IL 60104; p: 708.544.0320, or an approved equal.

2.8 FABRICATION OF NEW SASH

A. Coordinate dimensions with actual measurements of window openings and adjacent construction to match in kind.

B. Fabricate components to match originals in kind.

C. Join moldings to match construction of original sash exactly.

D. Machine sash elements to receive glazing panels. Machine sash elements of movable sash to receive weather stripping, if appropriate, and hardware.

PART 3 EXECUTION

3.1 SAFETY

A. Protection: Protect people, adjoining building surfaces, collections and landscape elements, et al from injury resulting from window restoration work. Use drop cloths or other coverings as necessary to protect interior finishes, floor and collections and exterior landscape material from dust and debris, etc.

1. Erect temporary protection over pedestrian walkways and at hose points of entry and exist that must remain operational during restoration.

3.2 INSPECTION AND DOCUMENTATION

A. Install assemblies in accordance with manufacturer's installation guidelines and recommendations including the following.

B. General: Document all elements of windows to be restored for work of this Section, all elements adjacent to elements that are to be removed, and all other window elements that will be in anyway affected by work of this Section. Show overall window elements and detail of all damage or deterioration that might be considered as resulting from work of this section. Key all notes to photographs to, clearly identifying portions of existing elements included in each photograph.

C. Form of Documentation: Document existing construction with high resolution (1MB min.) JPEG images on CD-ROM/ Flash Drive.

3.3 REMOVALS

A. General: Remove all window components that require removal for restoration or for proper installation.
   1. To minimize breakage, paint lines at the edges of window stops and parting strips must be cut/ scribed first with a sharp knife before moldings are removed.
   2. All nails will be removed by pulling them through the back of the moldings only. Representative nails will be tagged for SHPO records.
   3. Identify and label each component that is to be removed and repaired for reinstallation with window opening designator and location on jamb. Record numbers and locations of components.
   4. Remove adjacent elements as required to modify or replace elements of window jambs, heads, and sills that must be altered to accommodate new window sash. Use all care necessary to prevent damage or deterioration of elements removed and elements remaining in place. Restore or replace all elements damaged during work of this Section to SHPO's satisfaction at no Additional cost.
   5. Store removed elements in a secure location safe from theft, damage, and deterioration.
   6. Protect window openings to prevent water entry or human intrusion.

B. Glass Removal: All glass will be removed to accommodate sash restoration.
   1. Label each pane of glass with location and orientation within the sash so that the historic glass can be returned to its original location and orientation. Use painters tape to label glass and consistently label on either interior or exterior to avoid confusion at reinstallation.
   2. Remove all face glazing compound from each window sash using steam, infrared heat or other approved method.
   3. Cracked glass is only to be replaced with prior approval of Owner. Fractured panes should be glued if at all possible, rather than replaced. Any replacement of glass in to be done in kind and all replaced glass is to be dated in corner under glazing for future identification.

C. Paint Removal: All paint will be removed from sash as needed in order to insure successful adhesion of new paint, excepting a 2" section to be retained for future paint analysis.
   1. All paint removal shall be executed in compliance with all applicable federal, state, and local regulations.
   2. Steam or heat will be used to carefully remove the paint while limiting the damage to the wood substrate.
   3. As possible, depending on the technique used for paint removal, a two-inch band of undisturbed paint will be left on the interior and exterior of each pair

of sash. Lightly feather the edges of each paint band. These bands will be used in future chromo-chronology is ever executed. If preserving areas of pain on the sash is not possible, craftsperson is to select samples from cervices where paint layers are most accumulated and best preserved and to provide labeled samples to Architect/ SHPO.

D. Hardware Removal: All hardware will be removed as needed in order to restore sash and hardware.
   1. Scribe paint around hardware so that removal of hardware does not splinter adjacent wood.
   2. Remove paint from hardware so that any crews may be loosened.
   3. Tag and retain all hardware and screws.
   4. Allow Architect/ SHPO to review all hardware so that a determination may be made as to whether hardware will be reinstalled.

3.4 DUTCHMAN REPAIRS

A. General: Provide Dutchman repairs where wood is structurally compromised. Wood repairs will not be made for aesthetic purposes. Dutchman repairs shall provide continuous smooth surfaces matching plans and profiles of wood members being repaired. Dutchman shall match wood being repaired in specie and cut. In wood for clear finish, grain pattern of Dutchman shall match grain patter of wood into which it is inserted.

B. Preparation: Neatly cut out existing opening as required to provide a prismatic void. Wherever possible create voids that will provide mechanical attachments as in dovetails. The amount of wood removed should be minimized but the amount should include all damaged wood and extend just past damaged wood to prevent spread of any fungus contained therein. Cut away area will provide ample glue surface.

C. Dutchman: Cut Dutchman to exactly fit void, with exposed portion matching original profile of woodwork and just slightly proud of original surface. Orient grain of Dutchman parallel to grain of element being patched. Where deterioration or less at end of component required Dutchman repair, use a diagonal scarf joint for end-to-end joint between Dutchman and remaining portion of component.

D. Installation: Clean glue surfaces with acetone or denatured alcohol. Insert Dutchman using specified adhesive and clamp in place until glue is set. Where clamping is not feasible, use small brads; remove brads and fill holes after adhesive has set.

E. Surfacing: Plane or scrape Dutchman to provide smooth continuous surface coplanar with adjacent wood. Do not damage or alter profile or finish of adjacent wood.

3.5 COMPONENT REPLACEMENT

A. General: Fabricate new components for any components which are deteriorated in entirety and cannot be repaired with Dutchmen and epoxy.

B. In kind replacement: Except as specifically indicated otherwise, provide replacement elements of same specie with configurations, profiles, dimensions and joinery et al exactly matching those of existing elements.
   1. Profiles: Remove coatings from profiles of existing elements before recording profiles to produce molding cutters to match existing profiles.
   2. Molding Cutters: Cut custom blades as required to match original profiles and label knifes with project code.

C. Machining and surfacing: Machine and surface all new and replacement wood elements to provide smooth even surfaces without saw marks of plane marks. Wood with surface irregularities, including but not limited to scratches, saw marks, and plane knife marks, visible after finish has been applied will be rejected and shall be replaced with properly finished wood elements at no additional cost.

3.6 SASH INSTALLATION

A. General: Install new and restored sash as per contract. At completion of installation, windows shall be complete with all components and with unblemished paint and finish coats. All operating sash shall operate smoothly over entire height, and weather stripping, if specified, shall provide weatherproof seal.

B. Sash Balances: If specified install sash with sash chains/ cords and weights properly adjusted to allow sash to close securely, open completely to top of track and remain stationary at any position in track.

C. Sash Hardware: Install any hardware, including sash lifts and sash locks, on restored sash in the same locations as originally. Adjust sash locks for smooth easy operation and firm, secure locking.

D. Wax: Treat unpainted sides of stiles and frame with wax for ease of window operation and wood protection.

E. Weather-stripping: If specified, install weather stripping following manufacturer's requirements to ensure smooth operation and weathertight closure.

3.7 ADJUSTING

A. General: Adjust operating sash and hardware to provide a tight fit at contact points and weather-stripping, if specified, and to provide smooth operating and a weather sight closure. Lubricate hardware and moving parts.

3.8 GLAZING

A. General: Re-glaze all window lites using approved pure linseed oil or soybean oil glazing putty. Glazing points shall be used to set glass.

B. Clean glass prior to glazing with non-ammoniated formula before reinstallation.

C. Panes with multiple fractures will be replaced in kind and the date will be etched in corner beneath where new glazing will cover. Fractured glass will be repaired as possible by gluing with HXTAL NY-1.

3.9 CLEANING

A. Clean interior and exterior surfaces promptly after installation. Take care to avoid damage to historic and protective coatings and finishes.

B. Use only cleaners which do not contain ammonia. Windex, 409 and like products are not acceptable as the accelerate paint film deterioration.

3.10 PAINTING

A. General: Paint and finish new and restored elements of frames and trim to match original finishes and/ or as specified by Architect. Prime and paint sash in controlled environment according to manufacturer's instructions.

B. Prepare substrate for repairs by hand sanding with 100grit paper. The sides of the stiles (unpainted edges) of double hung di not need to be sanded unless special conditions require it.

C. After substrate is sanded, vacuum all surfaces and remove remaining dust with barely damp dust-free cloth. Allow surfaces to dry completely before priming.

D. Apply water repellant wood preservative to all surfaces of sash.

E. Apply on coat of alkyd or 100% acrylic primer to all surfaces of the sash including putty bed (shellac-based paint cannot be applied over glazing). On all window sash, extend primer and paint 1/16 inch onto glass to seal glazing. If sash is operable, it is important to paint bottom edge to prevent water intrusion.

F. Lightly sand surfaces after the primer has dried and clean of all dust.

G. Apply tow topcoats of premium quality 100% acrylic paint to all surfaces. Color to match existing unless otherwise specified.

H. Immediately after installation touch-up and disturbed areas of paint.

3.11 RESTORATION OF EXISTING HARDWARE

A. General: Remove historic sash hardware from existing sash to be replaced and remove sash pulleys from jambs. Store hardware in plastic bags or containers identified with sash number to ensure that each unit of hardware is reinstalled in its original location.

B. Remove lacquer coatings with acetone or lacquer thinner.

C. Strip Paint coatings by dipping in chemical paint stripper.

D. After removal of paint and other coatings, thoroughly rinse in appropriate solvent and wipe dry with soft cloth.

E. Replacement Parts: provide replacement parts, including operating parts and fasteners, matching original parts in metal and alloy, configuration, size, and finish for all missing and damaged parts.

F. Remove scratches and buff surfaces using like metal cleaning and polishing pads and polishing compounds as necessary. Do not scratch finish with abrasive pads or wire brushes.

G. Provide lacquer finish on all copper alloy elements
   1. Preparation
      a. Clean and degrease metal using solvent and burnishing with handheld bronze wool to provide surface free of dust, dust, grease, oil, and other contaminants. Do not damage metal finish. If surface is handled of contaminated, repeat cleaning and degreasing process.
      b. Drying: Ensure that metal surface is completely dry
      c. Environment: Ensure that environment is dust-free before applying lacquer
   2. Lacquer Application: Build up coatings to product 2-mil dry film thickness. Spray lacquer using “hot spray”, “airless spray”, or “electrostatic spray” methods.
   3. Curing: Cure lacquer coatings by “baking” in shop at elevated temperatures following manufacturer’s recommendations.
   4. Waxing: Protect baked lacquer coatings by hand application of two coats of hard paste wax

H. Lubricate operating parts.

I. Store units in protective packaging.

J. Provide all missing fasteners for hardware. Fasteners must match all visual aspects of existing fasteners.

3.12 PROTECTION

A. Protect windows from damage or deterioration until time of substantial completion.

END OF SECTION

SECTION 08 52 00
WOOD WINDOWS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Wood Windows:
   1. Double-hung windows

1.2 REFERENCES

A. American Architectural Manufacturer Association (AAMA):
   1. AAMA 1304: Voluntary Specification for Forced-Entry Resistance of Side-Hinged Door Systems.
   2. ANSI/AAMA/NWWDA 101/I.S.2 /NAFS - Voluntary Specifications for Aluminum, Vinyl (PVC) and Wood Windows and Glass Doors.

B. ASTM International (ASTM):
   1. ASTM E 283 - Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen.
   2. ASTM E 330 - Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference.

C. National Fenestration Rating Council (NFRC):
   1. NFRC 100 - Procedure for Determining Fenestration Thermal Properties.
   2. NFRC 200 - Solar Heat Gain Coefficient and Visible Transmittance.

D. Window and Door Manufacturers Association (WDMA): WDMA I.S.4; Water Repellent Preservative Non-Pressure treatment for Millwork.

1.3 SUBMITTALS

A. Submit under provisions of Section 01300.

B. Product Data: Manufacturer's data sheets on each product to be used, including:
   1. Preparation instructions and recommendations.
   2. Storage and handling requirements and recommendations.
   3. Installation methods.

C. Shop Drawings: Submit shop drawings indicating details of construction, flashings and relationship with adjacent construction.

D. Selection Samples: For each factory-finished product specified, two complete sets of color chips representing manufacturer's full range of available finishes.

E. Verification Samples: For each factory-finished product specified, two samples, minimum size 6 inches (150 mm) square, representing actual finishes.

F. Quality Assurance Submittals:
   1. Design Data, Test Reports: Provide manufacturer test reports indicating product compliance with indicated requirements.

G. Closeout Submittals: Refer to Section 01700 Closeout Submittals.

1.4 QUALITY ASSURANCE

A. Installer Qualifications: Minimum 2 years installing similar assemblies.

B. Mock-Up: Provide a mock-up for evaluation of installation techniques and workmanship.
   1. Mock-ups shall incorporate surrounding construction, including wall assembly fasteners, flashing, and other related accessories installed in accordance with manufacturer’s approved installation methods.
   2. Do not proceed with remaining work until workmanship is approved by Architect.

3. Rework mock-up as required to produce acceptable work.
4. At Substantial Completion, approved mockups may become part of completed work or demolish mockups and remove from site as decided by owner.

C. Pre-installation Meeting: Conduct pre-installation meeting on-site two weeks prior to commencement of installation.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Deliver, store and handle materials and products in strict compliance with manufacturer's instructions and recommendations and industry standards.

B. Deliver and store assembly materials and components in manufacturer's original, unopened, undamaged containers with identification labels intact. Protect from damage.

1.6 PROJECT CONDITIONS

A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.

1.7 WARRANTY

A. Manufacturer's Standard Warranty: Assemblies will be free from defects in materials and workmanship from the date of Substantial Completion for the time periods indicated below:
1. Window Units: 20 years.
2. Pine Wood Products: 20 years against wood decay and termites.
3. Glazing:
a. Insulated Glass: 20 years against seal breakage.
b. Specialty Glazing: 5 years against delamination.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Basis of Design: Subject to compliance with requirements, provide Andersen Corporation; Anderse 400 Series Woodwright windows.

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

2.2 **WOOD WINDOWS - GENERAL**

A. General: Provide windows complying with the performance requirements indicated and tested according to NAFS.

B. Materials:
1. Exterior Wood: 40% Wood fiber with 60% Thermoplastic polymer binder.
2. Interior Wood:
a. Material: Standard, Western Pine.

C. Installation Accessories:
1. Sealants: Provide manufacturer recommended sealants to maintain watertight conditions.

D. Interior Finishes:
1. Finish: Provide optional pre-finished, Moderate White.

E. Exterior Finishes: Factory applied latex primer.

2.3 WOOD WINDOW ASSEMBLIES

A. Basis of Design: 400 Series Woodwright windows as by Andersen Corporation.
1. Window Type: Double-hung windows.

B. Window Fabrication:
   1. Window Type: Double-hung windows.
      a. Frame: Corner joints mechanically fastened and secured with adhesive.
      b. Sash: Stiles and rails are slotted and tenoned and mechanically fastened.
      c. Glass: Mounted using silicone glazing compound and secured with interior applied profiled wood stops.

C. Frames:
   1. Material: Fibrex.
   2. Jamb Width: 4-9/16 inches (116 mm).

D. Sashes: Select kiln-dried pine.
   1. Sash Thickness: 1-7/16 inches (36.5 mm)

E. Exterior Trim:
   1. To match existing.

F. Interior Trim:
   1. To match existing.

G. Factory Applied Extension Jambs: Provide on four sides of frame interior, 21/32 inch (16.7 mm) up to 12 inches (304.8 mm).

H. Weatherstripping:
   1. For Double-hung Windows: Dual bulb at head and sill, thermoplastic rubber bulb at check rail, rigid vinyl water stops at sill.
      a. Jamb Liner Color: Provide optional color, White.

I. Window Hardware:
   1. Double-Hung Windows:
      a. Balance: Dual block and tackle.
      b. Sash Retainer: Recessed top and bottom.
      c. Lock: Recessed cam action.
      d. Finish: White.

J. Glazing for Windows:
   1. Strength: Standard, annealed glass.
   2. Glazing Type: Insulated glass.
      a. Description: Two panes of glass utilizing continuous roll formed stainless steel spacer and dual seal sealants.
      b. Overall Nominal Thickness:
      c. Overall Nominal Thickness: 3/4 inch (19 mm).
      d. Glass Type: Standard, Type 1 - Clear.
      e. Coating on No. 2 Surface: Standard, Low-E.
      f. Air Space: Standard, Argon-filled airspace.

K. Exterior Insect Screens:
   1. Material: Standard, charcoal fiberglass screen cloth (18 by 16 mesh) set in painted roll formed aluminum frame.
   2. Frame Color: White.

L. Grilles:
   1. Type: Simulated Divided Lites (SDL).
      a. Exterior Muntins:
         1) Material: Primed Fibrex permanently applied to exterior of insulating glass unit.
         2) Profiles: Bead stop profiles.
            (a) Bead Stop Profile Width: 7/8 inch (22 mm).
         3) Pattern: As scheduled and indicated on Drawings.
         4) Finish: Match exterior finish.
      b. Internal Shadow Bar: Standard finish.

c. Interior Muntins
   1) Material: Clear pine permanently bonded to interior of insulating glass unit.
   2) Width: Match exterior muntin.

PART 1 EXECUTION

1.1 EXAMINATION AND PREPARATION

A. Inspect and prepare openings and substrates using the methods recommended by the manufacturer for achieving best result for the substrates under project conditions.
   1. Inspect assembly components prior to installation.
   2. Verify rough opening conditions are within recommended tolerances.
   3. Form sheet metal sill pan in accordance with manufacturer's recommendations.
   4. Prepare assembly components for installation in accordance with manufacturer's recommendations.

B. Do not proceed with installation until openings and substrates have been prepared using the methods recommended by the manufacturer and deviations from manufacturer's recommended tolerances are corrected. Commencement of installation constitutes acceptance of conditions.

C. If preparation is the responsibility of another installer, notify Architect in writing of deviations from manufacturer's recommended installation tolerances and conditions.

1.2 INSTALLATION

A. Install assemblies in accordance with manufacturer's installation guidelines and recommendations including the following.

B. Installation of Windows With Exterior Trim: Insert windows into rough opening.
   1. Shim side jambs straight.
   2. Inspect window for square, level and plumb.
   3. Fasten window through exterior trim around entire window.
   4. Test and adjust for smooth operation of window.
   5. Set all nails below wood surface.

1.3 FIELD QUALITY CONTROL

A. Manufacturers' Field Services: Field inspections.

1.4 CLEANING AND PROTECTION

A. Clean the exterior surface and glass with mild soap and water.

B. Protect installed windows from damage.

C. Remove and dispose of protective film from glass; touch-up, repair or replace damaged components and assemblies before Substantial Completion.

END OF SECTION

SECTION 08 80 00

GLAZING

PART 1 - GENERAL

1.01 WORK INCLUDED
A. Glass for Windows.

1.02 RELATED WORK
A. Section 06 20 00 – Finish Carpentry

1.03 REFERENCES
A. ANSI Z97.1 - Safety Performance Specifications and Methods of Test for Safety Glazing Material Used in Buildings.
B. ASTM C669 - Glazing Compounds for Back Bedding and Face Glazing of Metal Sash.
C. ASTM C804 Use of Solvent Release Type Sealants.
D. ASTM C864 - Dense Elastomeric Compression Seal Gaskets, Setting Blocks, and Spacers.
E. ASTM C920 -Elastomeric Joint Sealants.
F. ASTM C1036 - Flat Glass.
G. ASTM C1048 - Heat-Treated Flat Glass - Kind HS, Kind FT Coated and Uncoated Glass.
H. ASTM C1172 - Laminated Architectural Safety Glass.
I. ASTM E84- Surface Burning Characteristics of Building Materials.
J. ASTM E283 - Test Method For Rate of Air Leakage Through Exterior Windows, Curtain Walls and Doors.
K. ASTM E330 Structural Performance of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference.
L. ASTM E546 - Test Method For Frost Point of Sealed Insulating Glass Units.
M. ASTM E576 - Test Method For Dew/Frost Point of Sealed Insulating Glass Units in Vertical Position.
N. ASTM E773 - Test Method for Seal Durability of Sealed Insulating Glass Units.
O. ASTM E774 - Sealed Insulating Glass Units.
P. FGMA Glazing Manual.
Q. FGMA Sealant Manual.
R. Laminators Safety Glass Association - Standards Manual.
S. SIGMA - Sealed Insulated Glass Manufacturers Association.
T. CPSC 16 CFR Part 1201 for Category II materials.

1.04 PERFORMANCE REQUIREMENTS
A. Provide glass and glazing materials for continuity of building enclosure, vapor retarder, and air barrier:
   1. In conjunction with materials described in Section 07 92 00.
   2. To utilize the inner pane of multiple pane sealed units for the continuity of the air barrier and vapor retarder seal.
   3. To maintain a continuous air barrier and vapor retarder throughout the glazed assembly from glass pane to heel bead of glazing sealant.
B. Size glass to withstand dead loads and positive and negative live loads acting normal to plane of glass as measured in accordance with ASTM E330 & ASTM E283.

C. Limit glass deflection to 1/200 or flexure limit of glass with full recovery of glazing

materials, whichever is less.

1.05 QUALITY ASSURANCE

A. Conform to Flat Glass Marketing Association (FGMA) Glazing Manual for glazing installation methods.

1.06 SUBMITTALS

A. Submit product data under provisions of Section 01 33 00.

B. Submit samples under provisions of Section 01 33 00.

C. Submit 12 x 12 inch samples of insulated glass units.

1.07 DELIVERY, STORAGE, AND PROTECTION

A. Deliver products to site under provisions of Section 01 60 00.

B. Store and protect products under provisions of Section 01 60 00.

PART 2 PRODUCTS

2.01 ACCEPTABLE GLASS MANUFACTURERS

A. Pittsburg Plate Glass.

B. Saint-Gobain

C. Pilkington/ Libbey-Owens-Ford

D. Substitutions: Under provisions of Section 01 60 00.

2.02 GLASS MATERIALS

A. Float or Plate Glass: Clear, premium quality windows, 1/4 inch thick minimum at store fronts.

B. Fire Rated Glass: Clear, ¼ inch thick minimum, compliant with ANZI Z97.1 and CPSC 16CFR1201 (Cat. I and II), Rated as per Drawings.

C. Insulated Glass Units at Exterior Window Openings: Double pane units with aluminum double edge seal; both panes of clear glass with Low 'E'; argon gas-filled inter pane space purged with dry hermetic air; total thickness of 5/8 inch.

D. Insulated Glass Units at Aluminum Storefronts: Double pane units with aluminum edge seal; outer pane tinted glass with low E coating on no. 2 face, inner pane of clear glass; interpane space purged with dry hermetic air; total thickness of one inch.

E. Mirror Glass (Type MR-A): Clear float type with copper & silver coating, organic overcoating, beveled edges, ¼" thick, sizes as shown on the plans.

F. Laminated Safety Glass: Two-ply laminated glass for safety/ burglary resistance; Insulating glass units with laminated glass lite(s). Two sheets of monolithic glass bonded together with a polyvinyl butyral interlayer by heat and pressure.

2.03 ACCEPTABLE GLAZING COMPOUND MANUFACTURERS

A. Dow Chemical.

B. Substitutions: Under provisions of Section 01 60 00.

2.04 GLAZING COMPOUNDS

A. Silicone Sealant: Single component, capable of water immersion without loss of properties; non-bleeding; non-staining; cured Shore A hardness of 15-25; dark brown color.

B. Verify glazing sealant is compatible with glazing accessories as supplied by door and window manufacturer. Notify Architect if non-silicone compatible accessories are supplied and require a field applied glazing sealant.

2.05 GLAZING ACCESSORIES

A. Supply glazing accessories in accordance with window and door manufacturer's standard shop glazing procedures and as shown on the drawings.

B. Supply field installed glazing accessories in accordance with window and door manufacturer's recommendations.

PART 3 EXECUTION

3.01 INSPECTION

A. Verify wall surfaces are clean, free of obstructions, and ready for work of this Section.

B. Verify sashes are clean, free of obstructions, and ready for work of this Section.

C. Beginning of installation means acceptance of substrate.

3.02 PREPARATION

A. Clean contact surfaces with solvent and wipe dry.

B. Seal porous glazing channels or recesses.

3.03 EXTERIOR DRY METHOD (PREFORMED GLAZING)

A. Cut glazing tape or spline to length; install on glass pane. Seal corners by butting tape and dabbing with butyl sealant.

B. Place setting blocks at 1/4 points.

C. Rest glass on setting blocks and push against fixed stop with sufficient pressure to attain full contact at perimeter of pane.

D. Install removable stops without displacement of glazing spline. Exert pressure for full continuous contact.

E. Trim protruding tape edge.

3.04 EXTERIOR COMBINATION METHOD (TAPE AND SEALANT)

A. Cut glazing tape to length and set against permanent stops, 3/16 inch (5 mm) below sightline. Seal corners by butting tape and dabbing with butyl sealant.

B. Apply heel bed of butyl sealant along exterior void ensuring full contact with pane.

C. Place setting blocks at 1/4 points.

D. Rest glass on setting blocks and push against tape and heel bead of sealant with sufficient pressure to attain full contact at perimeter of pane.

E. Install removable stops, spacer strips inserted between glass, and applied stops at 24 inch (600 mm) intervals, 1/4 inch (6 mm) below sightline. Place glazing tape on glass with tape 1/4 inch (6 mm) below sightline.

F. Fill gap between pane and applied stop with sealant to depth equal to bite of frame on pane, but not more than 3/8 inch (9 mm) below sightline.

G. Apply cap bead of sealant along exterior void, to uniform line, flush with sightline. Tool or wipe sealant surface with solvent for smooth appearance.

3.05 EXTERIOR WET METHOD (SEALANT AND SEALANT)

A. Place setting blocks at 1/4 points and install glass pane.

B. Install removable stops with pane centered in space by inserting spacer shims both sides at 24 inch (600 mm) intervals, 1/4 inch (6 mm) below sightline.

C. Fill gap between pane and stops with type sealant to depth equal to bite of frame on pane, but not more than 3/8 inch (9 mm) below sightline.

D. Apply sealant to uniform line, flush with sightline. Tool or wipe sealant surface with solvent for smooth appearance.

3.06 INTERIOR DRY METHOD (TAPE AND TAPE)

A. Cut glazing tape to length and set against permanent stops, projecting 1/16 inch (1.6 mm) above sightline.

B. Place setting blocks at 1/4 points.

C. Rest glass on setting blocks and push against tape for full contact at perimeter of pane.

D. Place glazing tape on free perimeter of pane in same manner described above.

E. Install removable stop without displacement of tape. Exert pressure on tape for full continuous contact.

F. Knife trim protruding tape.

3.07 INTERIOR COMBINATION METHOD (TAPE AND SEALANT)

A. Cut glazing tape to length and install against permanent stops, projecting 1/16 inch (1.6 mm) above sightline.

B. Place setting blocks at 1/4 points.

C. Rest glass on setting blocks and push against tape to ensure full contact at perimeter of pane.

D. Install removable stops, spacer shims inserted between glass, and applied stops at 24-inch (600 mm) intervals, 1/4 inch (6 mm) below sightline.

E. Fill gap between pane and applied stop with sealant to depth equal to bite of frame on pane to uniform and level line.

F. Trim protruding tape edge.

3.08 INTERIOR WET METHOD (COMPOUND AND COMPOUND)

A. Install glass resting on setting blocks. Install applied stop and center pane by use of spacer shims at 24 inch (600 mm) centers, kept 1/4 inch (6 mm) below sightline.

B. Locate and secure glass pane using glaziers' clips.

C. Fill gaps between pane and stops with glazing compound until flush with sightline. Tool surface to straight line.

3.09 SCHEDULE

A. Window Glazing: Low E, Clear, Insulated, Tempered Glass

3.10 CLEANING

A. After installation, mark pane with an "X" by using plastic tape or removable paste.

B. Remove glazing materials from finish surfaces.

C. Remove labels after work is completed.

END OF SECTION

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SECTION 09 01 90.51

GENERAL CLEANING OF PAINTED OR WAXED WOOD SURFACES

PART 1 – GENERAL

1.1 SUMMARY

A. Section includes:

1. Guidance for periodically cleaning painted or waxed wood surfaces.

B. Related Sections:

1. Section 01 10 00 – Summary
2. Historic Structures Precautions
3. Section 01 33 00 - Submittals
4. Section 01 40 00- Quality Control
5. Section 01 60 00 – Product Requirement
6. Section 01 50 00 – Construction Facilities & Temporary Controls
7. Section 06 01 20 – Maintenance of Finish Carpentry

PART 2 – PRODUCTS

2.1 MATERIALS

NOTE: Chemical products are sometimes sold under a common name. This usually means that the substance is not as pure as the same chemical sold under its chemical name. The grade of purity of common name substances, however, is usually adequate for stain removal work, and these products should be purchased when available, as they tend to be less expensive. Common names are indicated below by an asterisk (*).

A. Non-Ionic detergent such as "Joy" or "Ivory Liquid", or trisodium phosphate (TSP)

1. Trisodium Phosphate:

NOTE: THIS CHEMICAL IS BANNED IN SOME STATES SUCH AS CALIFORNIA. REGULATORY INFORMATION AS WELL AS ALTERNATIVE OR EQUIVALENT CHEMICALS MAY BE REQUESTED FROM THE ENVIRONMENTAL PROTECTION AGENCY (EPA) REGIONAL OFFICE AND/OR THE STATE OFFICE OF ENVIRONMENTAL QUALITY.

a. Strong base-type powdered cleaning material sold under brand names.
b. Other chemical or common names include Sodium Orthophosphate; Tribasic sodium phosphate; Trisodium orthophosphate; TSP*; Phosphate of soda*; (also sold under brand names such as).
c. Potential Hazards: CORROSIVE TO FLESH.
d. Available from chemical supply house, grocery store or supermarket or hardware store.

B. Mineral Spirits:

1. A petroleum distillate that is used especially as a paint or varnish thinner.
2. Other chemical or common names include Benzine* (not Benzene); Naphtha*; Petroleum spirits*; Solvent naphtha*.
3. Potential Hazards: TOXIC AND FLAMMABLE.
4. Safety Precautions:
   a. AVOID REPEATED OR PROLONGED SKIN CONTACT.
   b. ALWAYS wear rubber gloves when handling mineral spirits.
   c. If any chemical is splashed onto the skin, wash immediately with soap and water.
5. Available from construction specialties distributor, hardware store, paint store, or printer's

supply distributor.
-OR-
Turpentine: Available from hardware store or paint store.
-OR-
Denatured Alcohol:
a. Other chemical or common names include Methylated spirit*.
b. Potential hazards: TOXIC AND FLAMMABLE.
c. Available from hardware store, paint store or printer's supply distributor.
d. Denatured alcohol should be a satisfactory substitute for ethyl alcohol for stain removing purposes.

C. Paste wax
D. Liquid bleach
E. Clean, potable water

2.2 EQUIPMENT

A. Steel wool
B. Two buckets (solution and rinse)
C. Two sponges (solution and rinse)
D. Supply of soft dry wiping cloths
E. Ladder
F. Drop cloth
G. 16" electric floor machine
H. Lamb's wool buffing pads

PART 3 – EXECUTION

3.1 PREPARATION

A. Protection:
1. Cover all surfaces and equipment not to be cleaned. Coverings must be adhered without adhesive tape or nails. Impervious sheeting that produces condensation shall not be used.
2. Make sure work area is well ventilated and wear protective clothing and rubber gloves.
3. When cleaning, always rub along the grain of the wood.
4. Change cloths as often as necessary to be effective in cleaning.

B. Surface Preparation: Thoroughly dust and/or vacuum surfaces before washing.

3.2 ERECTION, INSTALLATION, APPLICATION

A. Cleaning Painted Wood Surfaces:
1. To clean spots, rub area gently with a clean, damp sponge and dry with a clean wiping cloth.
2. If water alone will not remove spot, use a non- ionic detergent or TSP solution as described below, rinse thoroughly, and wipe dry. If this cleaning procedure leaves a noticeable difference between treated and untreated areas, cleaning is not being performed properly or frequently enough.
a. Wash dirt and grease using a solution of 3 quarts warm water mixed with 2/3 cup trisodium phosphate (TSP) and non-ammoniated detergent. If mildew is a problem add 1 quart of liquid bleach.
b. Start at a lower corner of room, moisten 5 to 10 square feet of surface, then scrub with a

medium bristle brush to remove dirt. Thoroughly rinse surface, two rinses may be required, and wipe dry with clean wiping cloth.

c. Continue process on lower portion of walls around entire room, slightly overlapping preceding section. ALWAYS WASH THE LOWER PORTION FIRST BECAUSE SOLUTION STREAKS RUNNING DOWN A DIRTY WALL CANNOT BE REMOVED. Proceed to wash upper wall surfaces and ceiling, including any painted wood ornament, from ladder.

B. Cleaning Waxed Wood Surfaces:
NOTE: WAX IS AN IMPORTANT MAINTENANCE AGENT WHICH PROTECTS AGAINST MATERIAL ABRASION AND WETTING. ITS ADVANTAGE IS THAT IT IS EASY TO APPLY AND EASY TO REMOVE. IT CAN BE RECONDITIONED WITHOUT STRIPPING BY APPLYING MORE WAX AND REBUFFING. THE SOLVENT IN THE WAX RECONDITIONS THE PREVIOUS COAT AND MINIMIZES BUILD-UP.

1. For walls:
   a. Follow the above wall washing techniques, but keep the surface as dry as possible. Cleaning solution should contain only non-ionic detergent and water.
   b. Working in a well-ventilated area, remove paste wax by rubbing hard with a coarse cloth soaked in turpentine.
   c. Remove stubborn dirt spots by scrubbing lightly with 000 steel wool. Change cloth or steel wool when they become clogged with old wax.
   d. Apply wax with a clean, soft cloth. Waxing unpainted wood surfaces is imperative for protection from moisture and abrasion. Use a paste or microcrystalline wax that is removable by water or turpentine.
   e. Place a small amount on the cloth and wipe it over surface leaving a thin, even coating. Wipe off any stray wax grains.
   f. Buff wax before it hardens.

   NOTE: Paste wax can be reconditioned by applying more wax and rebuffing. The solvent in the paste wax reconditions previous coats and minimizes build-up.
2. For floors:
   NOTE: BE SURE THE WAX IS DESIGNATED FOR USE ON HARDWOOD FLOORS. DO NOT USE A LIQUID WAX WITH A WATER-BASE (I.E. FUTURE). NATIONAL OAK FLOORING MANUFACTURERS ASSOCIATION (NOFMA) RECOMMENDS USING ONLY A SOLVENT-BASE PRODUCT.
   a. Place a small amount of wax on dampened, clean, soft cloth and wipe it over the floor leaving a thin and even coating. It is not necessary to go right to the baseboards because the buffing operation will spread the wax to the edges of the room in every place except the inside corners.
   b. Buff floor using a 16" electric floor machine and lamb's wool pads. Reverse or replace pads as they become dirty. Buff to high gloss.

   NOTE: TAKE CARE NOT TO DAMAGE ADJACENT SURFACES.
   c. After polishing, sweep the floor to pick up stray wax grains that are loose on the floor. Wash all equipment before the wax hardens.

3.3 ADJUSTING/CLEANING

A. BOTH PASTE WAX AND TURPENTINE ARE FLAMMABLE, DISPOSE OF USED CLOTHS PROPERLY IN A METAL SAFETY CONTAINER TO GUARD AGAINST SPONTANEOUS COMBUSTION.

END OF SECTION

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SECTION 09 01 90.91

PAINTING RESTORATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. This Section includes the following:
   1. Cleaning and paint removal for exterior and interior historic items and surfaces.
   2. Surface preparation for painting of exterior and interior historic items and surfaces.
   3. Painting of exterior and interior historic items and surfaces using historic paint materials.
   4. Patching of minor damage to surfaces of historic items to be painted.
   5. Custom color matching.

B. Paint historic items and surfaces as indicated in the schedules at the end of Part 3.
   1. Comply with requirements in other Division 9 painting Sections for prefinished items, concealed surfaces, finished metal surfaces, operating parts, and labels.

C. Related Sections include the following:
   1. Division 9 painting Sections for use of modern (conventional) paint materials and application methods.

1.3 DEFINITIONS

A. General: Standard coating terms defined in ASTM D 16 apply to this Section.

B. Historic Paint Materials: Paint materials formulated to match historic formulations; either custom-formulated products or standard products available from manufacturers of historic paint materials.

1.4 SUBMITTALS

A. Product Data: For each paint system indicated.
   1. Material List: An inclusive list of required coating materials. Identify each material by manufacturer's number and classification.
   2. Manufacturer's Information: Manufacturer's technical information, including label analysis and instructions for handling, storing, and applying each coating material.

B. Samples for Verification: For each color and material to be applied, with texture to simulate actual conditions, on representative Samples of the actual substrate.
   1. Provide stepped Samples, defining each separate coat, including block fillers and primers. Use representative colors when preparing Samples for review. Resubmit until required sheen, color, and texture are achieved.
   2. Provide a list of materials and applications for each coat of each Sample. Label each Sample for location and application.
   3. Submit Samples on the following substrates for Architect's review of color and texture:
      a. Gypsum Wall Board: 4-by-8-inch (100-by-200-mm) Samples for each color and finish.

b. Painted Wood: 4-by-8-inch (100-by-200-mm) Samples for each color and material on hardboard.
c. Stained or Natural Wood: 4-by-8-inch (100-by-200-mm) Samples of natural- or stained-wood finish on representative surfaces.
d. Ferrous Metal: 4-by-8-inch (100-by-200-mm) Samples of flat metal and 8-inch-(200-mm-) long Samples of solid metal for each color and finish.

C. LEED Submittal:
1. Product Data for Credit EQ 4.2: For paints and coatings, including printed statement of VOC content.

D. Color Matching Certification: Submit certification of computer color matching performed by paint manufacturer.

E. Qualification Data: For painting restoration specialist.

F. Restoration program for each phase of restoration process including protection of surrounding materials on the building and Project site during operations. Describe in detail the materials, methods, equipment, and sequence of operations to be used for each phase of the Work.
1. If materials and methods alternative to those indicated are proposed for any phase of restoration work, provide a written description, including evidence of successful use on other comparable projects, and a testing program to demonstrate their effectiveness for this Project.

1.5 QUALITY ASSURANCE

A. Painting Restoration Specialist Qualifications: A firm or individual experienced in painting restoration similar in material, design, and extent to that indicated for this Project, whose work has resulted in applications with a record of successful in-service performance.
1. Field Supervision: Require that an experienced full-time supervisor be at Project site during times that painting restoration is in progress.

B. Benchmark Samples (Mockups): Provide a full-coat benchmark finish sample for each type of coating and substrate required. Comply with procedures specified in PDCA P5. Duplicate finish of approved sample submittals.
1. Architect will select one room or surface to represent surfaces and conditions for application of each type of coating and substrate.
a. Surface-Preparation Mockup: On existing surfaces using applicable specified methods of cleaning and surface preparation, provide mockup sample of at least 100 sq. ft. (9 sq. m).
b. Wall Surfaces: Provide Samples of at least 100 sq. ft. (9 sq. m).
c. Small Architectural Detail Areas and Items: Architect will designate items or areas required for mockups.
2. Apply benchmark samples, according to requirements for the completed Work, after permanent lighting and other environmental services have been activated. Provide required sheen, color, and texture on each surface.
a. After finishes are accepted, Architect will use the room or surface to evaluate coating systems of a similar nature.
3. Final approval of colors will be from benchmark samples.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials to Project site in manufacturer's original, unopened packages and containers bearing manufacturer's name and the following information:
   1. Product name or title of material.
   2. Product description (generic classification or binder type).
   3. Manufacturer's stock number and date of manufacture.
   4. Contents by volume, for pigment and vehicle constituents.
   5. Thinning instructions.
   6. Application instructions.
   7. Color name and number.
   8. VOC content.

B. Store materials not in use in tightly covered containers in a well-ventilated area at a minimum ambient temperature of 45 deg F (7 deg C). Maintain storage containers in a clean condition, free of foreign materials and residue.
   1. Keep storage area neat and orderly. Remove oily rags and waste daily.

1.7 PROJECT CONDITIONS

A. Apply waterborne paints only when temperatures of surfaces to be painted and surrounding air are between 50 and 90 deg F (10 and 32 deg C).

B. Apply solvent-thinned paints only when temperatures of surfaces to be painted and surrounding air are between 45 and 95 deg F (7 and 35 deg C).

C. Do not apply paint in snow, rain, fog, or mist; or when relative humidity exceeds 85 percent; or at temperatures less than 5 deg F (3 deg C) above the dew point; or to damp or wet surfaces.
   1. Painting may continue during inclement weather if surfaces and areas to be painted are enclosed and heated within temperature limits specified by manufacturer during application and drying periods.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, products listed in other Part 2 articles.

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

2.2 PAINT CLEANING AND REMOVAL MATERIALS

A. Alkaline Paste Paint Remover: Manufacturer's standard alkaline paste formulation for removing paint coatings from masonry, stone, wood, plaster, and metal.
   1. Provide chemical paint removers that do not contain methylene chloride.
   2. Available Products:
      a. Back to Nature Products Company; Lift-n-Strip.
      b. Dumond Chemicals, Inc.; Peel Away 1.
      c. Minnesota Mining and Manufacturing Company (3M), Specified Construction Products Division; Paint Stripper.

B. Biodegradable Paint Remover: Manufacturer's standard biodegradable formulation for removing paint coatings from masonry, stone, wood, plaster, and metal.

1. Available Products:
    a. Back to Nature Products Company; Multi-Strip.
    b. Back to Nature Products Company; Ready-Strip.

C. Solvent Paste Paint Remover: Manufacturer's standard solvent-based formulation for removing paint coatings from masonry, stone, wood, plaster, and metal.
1. Available Products:
    a. Dumond Chemicals, Inc.; Peel Away 6.
    b. Dumond Chemicals, Inc.; Peel Away 7.

2.3 COLOR MATCHING

A. Custom Color Matching: Colors shall be selected by color codes indicated. Obtain color chips indicated by color codes from one of the following color systems; computer match paint colors with color chips:
1. Munsell Color.
2. Plochere Color System.

2.4 INTERIOR PRIMERS

A. VOC Content of Interior Paints and Coatings: Provide products that comply with the following limits for VOC content when calculated according to 40 CFR 59, Subpart D (EPA Method 24):
1. Flat Paints, Coatings, and Primers: VOC content of not more than 50 g/L.
2. Non-Flat Paints, Coatings, and Primers: VOC content of not more than 150 g/L.
3. Anticorrosive and Anti-Rust Paints Applied to Ferrous Metals: VOC content of not more than 250 g/L.
4. Floor Coatings: VOC not more than 100 g/L.
5. Shellacs, Clear: VOC not more than 730 g/L.
6. Shellacs, Pigmented: VOC not more than 550 g/L.
7. Anti-Corrosive and Anti-Rust Paints Applied to Ferrous Metals: VOC not more than 250 g/L.
8. Floor Coatings: VOC not more than 100 g/L.
9. Shellacs, Clear: VOC not more than 730 g/L.
10. Shellacs, Pigmented: VOC not more than 550 g/L.
11. Primers, Sealers, and Undercoaters: VOC content of not more than 200 g/L.

B. Chemical Components of Field-Applied Interior Anti-Corrosive and Anti-Rust Paints Applied to Ferrous Metals: Provide products that comply with the following chemical restrictions:
1. Aromatic Compounds: Paints and coatings shall not contain more than 1.0 percent by weight of total aromatic compounds (hydrocarbon compounds containing one or more benzene rings).
2. Restricted Components: Paints and coatings shall not contain any of the following:
    a. Acrolein.
    b. Acrylonitrile.
    c. Antimony.
    d. Benzene.
    e. Butyl benzyl phthalate.
    f. Cadmium.
    g. Di (2-ethylhexyl) phthalate.
    h. Di-n-butyl phthalate.
    i. Di-n-octyl phthalate.
    j. 1,2-dichlorobenzene.
    k. Diethyl phthalate.

l. Dimethyl phthalate.
m. Ethylbenzene.
n. Formaldehyde.
o. Hexavalent chromium.
p. Isophorone.
q. Lead.
r. Mercury.
s. Methyl ethyl ketone.
t. Methyl isobutyl ketone.
u. Methylene chloride.
v. Naphthalene.
w. Toluene (methylbenzene).
x. 1,1,1-trichloroethane.
y. Vinyl chloride.

C. Interior Gypsum Board Primer: Factory-formulated, latex-based primer for interior application.

D. Interior Plaster Primer: Factory-formulated, latex-based primer for interior application.

E. Interior Wood Primer for Acrylic-Enamel and Semigloss Alkyd-Enamel Finishes: Factory-formulated, acrylic-latex- or alkyd-based interior wood primer for interior application.

F. Interior Wood Primer for Full-Gloss Alkyd-Enamel Finishes: Factory-formulated, acrylic-latex- or alkyd-based interior wood primer for interior application.

G. Interior Ferrous-Metal Primer: Factory-formulated, quick-drying, rust-inhibitive, alkyd-based metal primer for interior application.

H. Interior Cast-Iron Primer: Factory-formulated, quick-drying, rust-inhibitive, alkyd-based metal primer for interior application.

I. Interior Zinc-Coated Metal Primer: Factory-formulated, galvanized metal primer for interior application.

2.5 EXTERIOR FINISH COATS

A. Exterior Flat Acrylic Paint: Factory-formulated, flat, acrylic-emulsion latex paint for exterior application.

B. Exterior Low-Luster Acrylic Paint: Factory-formulated, low-sheen (eggshell) acrylic-latex paint for exterior application.

C. Exterior Semigloss Acrylic Enamel: Factory-formulated, semigloss, waterborne acrylic-latex enamel for exterior application.

D. Exterior Full-Gloss Acrylic Enamel for Concrete, Masonry, and Wood: Factory-formulated, full-gloss, waterborne acrylic-latex enamel for exterior application.

E. Exterior Full-Gloss Acrylic Enamel for Ferrous and Other Metals: Factory-formulated, full-gloss, waterborne acrylic-latex enamel for exterior application.

F. Exterior Full-Gloss Alkyd Enamel: Factory-formulated, full-gloss, alkyd enamel for exterior application.

2.6 INTERIOR FINISH COATS

A. VOC Content of Interior Paints and Coatings: Provide products that comply with the following limits for VOC content when calculated according to 40 CFR 59, Subpart D (EPA Method 24):
   1. Flat Paints and Coatings: VOC content of not more than 50 g/L.
   2. Non-Flat Paints and Coatings: VOC content of not more than 150 g/L.
   3. Anticorrosive and Anti-Rust Paints Applied to Ferrous Metals: VOC content of not more than 250 g/L.
   4. Floor Coatings: VOC not more than 100 g/L.
   5. Shellacs, Clear: VOC not more than 730 g/L.
   6. Shellacs, Pigmented: VOC not more than 550 g/L.
   7. Flat Topcoat Paints: VOC content of not more than 50 g/L.
   8. Nonflat Topcoat Paints: VOC content of not more than 150 g/L.
   9. Anti-Corrosive and Anti-Rust Paints Applied to Ferrous Metals: VOC not more than 250 g/L.
   10. Floor Coatings: VOC not more than 100 g/L.
   11. Shellacs, Clear: VOC not more than 730 g/L.
   12. Shellacs, Pigmented: VOC not more than 550 g/L.

B. Chemical Components of Field-Applied Interior Paints and Coatings: Provide products that comply with the following chemical restrictions:
   1. Aromatic Compounds: Paints and coatings shall not contain more than 1.0 percent by weight of total aromatic compounds (hydrocarbon compounds containing one or more benzene rings).
   2. Restricted Components: Paints and coatings shall not contain any of the following:
      a. Acrolein.
      b. Acrylonitrile.
      c. Antimony.
      d. Benzene.
      e. Butyl benzyl phthalate.
      f. Cadmium.
      g. Di (2-ethylhexyl) phthalate.
      h. Di-n-butyl phthalate.
      i. Di-n-octyl phthalate.
      j. 1,2-dichlorobenzene.
      k. Diethyl phthalate.
      l. Dimethyl phthalate.
      m. Ethylbenzene.
      n. Formaldehyde.
      o. Hexavalent chromium.
      p. Isophorone.
      q. Lead.
      r. Mercury.
      s. Methyl ethyl ketone.
      t. Methyl isobutyl ketone.
      u. Methylene chloride.
      v. Naphthalene.
      w. Toluene (methylbenzene).
      x. 1,1,1-trichloroethane.
      y. Vinyl chloride.

C. Interior Flat Acrylic Paint: Factory-formulated, flat, acrylic-emulsion latex paint for interior application.

D. Interior Flat Latex-Emulsion Size: Factory-formulated, flat, latex-based paint for interior application.

E. Interior Low-Luster Acrylic Enamel: Factory-formulated, eggshell, acrylic-latex enamel for interior application.

F. Interior Semigloss Acrylic Enamel: Factory-formulated, semigloss, acrylic-latex enamel for interior application.

G. Interior Full-Gloss Acrylic Enamel: Factory-formulated, full-gloss, acrylic-latex enamel for interior application.

H. Interior Semigloss Alkyd Enamel: Factory-formulated, semigloss, alkyd enamel for interior application.

I. Interior Full-Gloss Alkyd Enamel for Gypsum Board and Plaster: Factory-formulated, full-gloss, alkyd enamel for interior application.

J. Interior Full-Gloss Alkyd Enamel for Wood and Metal Surfaces: Factory-formulated, full-gloss, alkyd enamel for interior application.

2.7 WOOD STAINS AND VARNISHES

A. VOC Content of Interior Paints and Coatings: Provide products that comply with the following limits for VOC content when calculated according to 40 CFR 59, Subpart D (EPA Method 24):
   1. Clear Wood Finishes, Varnishes: VOC content of not more than 350 g/L.
   2. Clear Wood Finishes, Lacquers: VOC not more than 550 g/L.
   3. Floor Coatings: VOC not more than 100 g/L.
   4. Shellacs, Clear: VOC not more than 730 g/L.
   5. Shellacs, Pigmented: VOC not more than 550 g/L.
   6. Stains: VOC content of not more than 250 g/L.

B. Wood Filler: Factory-formulated, paste wood filler applied at spreading rate recommended by manufacturer

C. Wood Stain: Factory-formulated, alkyd-based penetrating wood stain for application applied at spreading rate recommended by manufacturer.

D. Clear Sanding Sealer: Factory-formulated, fast-drying, alkyd-based clear wood sealer applied at spreading rate recommended by manufacturer.

E. Alkyd- or Polyurethane-Based Clear Satin Varnish: Factory-formulated, alkyd- or polyurethane-based clear varnish applied at spreading rate recommended by manufacturer.

F. Waterborne Clear Satin Varnish: Factory-formulated, clear satin acrylic-based polyurethane varnish applied at spreading rate recommended by manufacturer.

G. Waterborne Clear Gloss Varnish: Factory-formulated, clear gloss acrylic-based polyurethane varnish applied at spreading rate recommended by manufacturer.

2.8 PATCHING MATERIALS

A. Wood Patching Compound: 2-part polyester or epoxy-resin wood compound with a 10- to 15-minute cure at 70 deg F (21 deg C), in knife grade formulation and recommended by manufacturer for type of wood repair indicated. Compound shall be produced for filling damaged wood materials that have deteriorated due to weathering and exposure. Filler shall be capable of filling deep holes and capable of spreading to featheredge.

B. Metal Patching Compound: 2-part polyester-resin metal patching compound with a 10- to 15-minute cure at 70 deg F (21 deg C), in knife grade formulation and recommended by manufacturer for type of metal repair indicated. Compound shall be produced for filling metal that has deteriorated due to corrosion. Filler shall be capable of filling deep holes and capable of spreading to featheredge.

C. Interior Cementitious Patching Compound Materials: Provide cementitious patching compounds and repair materials specifically manufactured for surface preparation and sanding prior to repainting.

2.9 MISCELLANEOUS MATERIALS

A. Detergent Cleaning Solution: Mix 2 cups (0.5 L) of tetrasodium polyphosphate, 1/2 cup (125 mL) of laundry detergent, 5 quarts (5 L) of 5 percent sodium hypochlorite bleach, and 15 quarts (15 L) of warm water for each 5 gal. (20 L) of solution required.

B. Job-Mixed Mold, Mildew, and Algae Remover: Mix 2 cups (0.5 L) of tetrasodium polyphosphate, 5 quarts (5 L) of 5 percent sodium hypochlorite bleach, and 15 quarts (15 L) of hot water for every 5 gal. (20 L) of solution required.

PART 3 - EXECUTION

3.1 PAINTING RESTORATION SPECIALIST

A. Available Painting Restoration Specialist Firms: Subject to compliance with requirements, firms that may provide painting restoration include, but are not limited to, the following:

B. Painting Restoration Specialist Firms: Subject to compliance with requirements, provide painting restoration by one of the following:

1. John Canning, Painting & Conservation Studios, 125 Commerce Court, Unit 5, Cheshire, CT 06410, Phone (203) 272-9868.

3.2 EXAMINATION

A. Examine substrates and conditions under which painting will be performed for compliance with paint application requirements.

1. Comply with manufacturer's requirements for inspection.
2. Start of painting will be construed as Applicator's acceptance of surfaces and conditions within a particular area.
3. Apply paint only after unsatisfactory conditions have been corrected.

B. Notify Architect a minimum of one working day prior to painting about possible problems resulting from using the specified materials over previously finished substrates.

C. Conduct alkali testing with litmus paper on exposed plaster, cementitious, and masonry surfaces, and do not begin painting if surfaces exceed alkalinity allowed by paint manufacturer

D. Test moisture content of surfaces using an electronic moisture meter. Do not begin application of coatings unless moisture content of exposed surfaces is below the following maximum values:
   1. Gypsum Wallboard: 12 percent.
   2. Plaster: 12 percent.
   3. Masonry Surfaces: 12 percent.
   4. Finish Woodwork: 7 to 10 percent moisture content.
   5. Wood Surfaces: 18 percent.
   6. Vertical Concrete Surfaces: 12 percent.
   7. Horizontal Concrete Surfaces: 8 percent.

E. Coordination of Work: Review other sections in which primers are specified to ensure compatibility for the total system with various substrates.

3.3 SURFACE PREPARATION, GENERAL REQUIREMENTS

A. Prepare existing surfaces as follows:
   1. Clean existing surfaces to remove loose dirt and dust.
   2. Remove surface films that will prevent proper adhesion.
   3. Treat paint finishes with gloss sheen to dull the surface with de-glosser.
   4. Remove loose, blistered, or otherwise defective paint; smooth edges with sandpaper.
   5. Clean corroded iron or steel surfaces to bright metal.
   6. Spackle and sand gypsum and plaster surfaces.
   7. Prime bare surfaces.

B. If existing surfaces cannot be prepared to an acceptable condition for proper finishing by using specified surface-preparation methods, notify Architect in writing.

C. Clean and prepare surfaces to be painted according to surface-preparation schedule at the end of Part 3 and with manufacturer's written instructions for each substrate condition.
   1. Provide barrier coats over incompatible previously painted surfaces or primers or remove coats and prime prepared surfaces. Notify Architect in writing about possible problems resulting from using the specified finish-coat material over substrates previously finished.

D. Deteriorated Paint: The following classifications of deteriorated paint films shall be used to determine the degree of surface preparation required. Measure adhesion by ASTM D 3359 Method A, tape test (multiply results by 2 to correlate with the 0 to 10 rating system).
   1. Sound Existing Paint, Including Tightly Adhered Paint Film: No evidence of cracking, checking, blistering, or lack of adhesion; slight chalking and mildew may be present.
      a. Adhesion: Rating of 10.
      b. Wash areas to be repainted; use mild detergent solution, and rinse with clean water until all detergent has been removed.
      c. Remove dirt and chalking from the surface without damaging the substrates or adjacent areas.
      d. Allow washed areas to dry before painting.
   2. Slightly to Moderately Deteriorated Paint Including Cracked or Loose Paint Film: Moderate cracking, checking, blistering, erosion, and loss of adhesion.
      a. Adhesion: Rating of 6 to 8.
      b. Treat areas as specified for sound existing paint above.
      c. After washing, carefully examine surface for cracking, blistering, peeling, or flaking paint.
      d. Remove cracked, blistered, and nonadhering paint.

e. Scrape and sand edges smooth so that edges will not telegraph through new paint finish.
f. Wipe surface clean to remove remaining dust.

3. Severely Deteriorated Paint Including Extensive Cracked and Loose Paint Film: Considerable cracking, checking, blistering, erosion, loss of adhesion, and severe chalking or mildew.
   a. Adhesion: Rating of 0 to 4.
   b. Remove old paint film down to bare substrate by using hand-tool removal, scraping and sanding, chemical removal, or a combination of all three methods.

E. Selection of surface-preparation tools and methods shall be the responsibility of painting restoration specialist, provided surface preparation complies with requirements specified for type of existing surface condition. Comply with the following general requirements for equipment:
1. Do not use power tools including sanders, grinders, and power brushing tools.
2. Heat gun (flameless) with temperature range of 700 to 1000 deg F (389 to 555 deg C) maximum temperature may be used.

3.4 SURFACE-PREPARATION METHODS

A. General: Use the cleaning methods specified in this article, using the gentlest appropriate method necessary to clean the surface.

B. Wash surfaces by hand cleaning using clean rags, sponges, water, and detergent.

C. Hand-Tool Cleaning: Use wet sanding and wet scraping methods only. Lightly mist substrate before sanding or scraping. Acceptable hand-tools include scrapers, wire brushes, sandpaper, steel wool, nonmetallic pads, and dusters. Because of varying substrates, selection of tools shall be the responsibility of Contractor. After hand-cleaning is attempted, power tool cleaning may be required to complete cleaning and surface preparation.

D. Solvent Cleaning: Solvent cleaning may be used to remove oil, grease, smoke, tar, and asphalt from painted or unpainted surfaces before preparation work begins. In addition, if necessary, spot-solvent cleaning may be employed just prior to the commencement of paint application, provided enough time is allowed for complete evaporation. Clean solvent and clean rags shall be used for the final wash to ensure that all foreign materials have been removed.

E. Power Tool Cleaning: Do not use power-operated cleaning equipment without painting restoration specialist's written approval based on submission by Contractor of a satisfactory quality-control program and demonstrated ability of operators to use tools without damaging historic surfaces. Quality-control program shall include provisions for supervising performance. Power tool equipment shall be used with vacuum filter attachments. The substrate to be cleaned and its existing condition will dictate the specific tools to be employed. Contractor shall select and use a combination of tools appropriate to the substrate.

3.5 PAINT REMOVAL METHODS

A. Removal Methods, General: Where cleaning methods have been attempted and further removal of the paint is required because of incompatible or unsatisfactory surfaces for repainting, use paint removal methods specified in this Article. Completely remove paint film from those items indicated or specified to have existing paint completely removed.

B. Chemical Removal: Chemical removal systems may be employed to remove parts or complete coatings of paint. Spread the remover over the surface from which coatings are to be removed. Remove the softened paint with a scraper (broad knife) or similar tool that painting restoration

specialist may select. Repeat the procedure until all paint and residue are removed as directed by manufacturer's written instructions. Rinse and neutralize as required by remover manufacturer. Allow enough time to elapse to permit the surface to dry before proceeding with refinishing.

C. Heat Removal: Use and selection of heat removal equipment shall be the responsibility of painting restoration specialist. Care must be taken to protect flammable materials. When a heat device is used, one hand shall direct the heat device to the surface and the other hand shall follow behind with the scraper. Scrape the paint off while it is soft and bubbling. Fire-fighting equipment shall be located directly at hand during this process. All burned-off surfaces shall be wet sanded and cleaned before coatings are applied.

D. Mechanical Removal: Use and selection of mechanical removal equipment shall be the responsibility of painting restoration specialist. Use of hand or power paint removal tools shall be the option of Contractor. Acceptable tools for manual paint removal include scrapers, wire brushes, sandpaper, and steel wool.

E. Mineral-Powder-Based Removal System: Remove existing deteriorated paint film with air-blasting, mineral-powder-based system according to manufacturer's written instructions.

3.6 SURFACE PREPARATION FOR EXISTING PAINTED WOOD

A. Repair damaged wood areas including dents, holes, and cracks by filling with patching compound and wet sand smooth. Reset or remove protruding nail heads.

B. Clean as required to remove existing deteriorated coatings and any foreign matter. Thick build-up of paint and runs and sags shall be wet sanded to achieve a smooth edge.

C. Clean wood surfaces of dirt, oil, and other foreign substances with scrapers, mineral spirits, and sandpaper.

3.7 SURFACE PREPARATION FOR EXISTING PAINTED PLASTER OR GYPSUM BOARD

A. Sound Existing Paint System: Wash all areas to be painted with a mild detergent solution; rinse with clean water until all detergent has been removed. Remove dirt and chalk from the surface without damaging the substrates or adjacent areas. Allow washed areas to dry thoroughly before painting.

B. Rout out surface cracks to remove loose, unsound material; fill with patching compound and wet sand; spot-prime with specified primer.

3.8 SURFACE PREPARATION FOR EXISTING BARE AND PAINTED METAL

A. Bare Metal Solvent Cleaning: Clean with solvents to remove oil, grease, and other contaminants before other cleaning treatments are used. Do not use solvents, including primer thinner and turpentine that leave residue.

B. Ferrous Metals: Clean ungalvanized ferrous-metal surfaces; remove rust, oil, grease, dirt, and other foreign substances. Use removal or cleaning methods that comply with paint manufacturer's written recommendations.

1. Touch up bare areas and prime coats that have been damaged. Wire-brush, clean with solvents recommended by paint manufacturer, and touch up with same primer as shop coat.

C. Galvanized Surfaces: Clean galvanized surfaces with nonpetroleum-based solvents until surfaces are free of oil and surface contaminants.

D. Metal Conditioner (Apply to Bare Metal): Apply phosphoric acid-based, etching-type surface treatments after solvent cleaning and according to manufacturers' written instructions. Rinse with clear water when reaction is complete. Allow at least 15 to 30 minutes but not less time than recommended by manufacturer for metal conditioner to condition the metal surface. Do not allow conditioner to dry before rinsing. If white rust (zinc oxide) appears after drying, wash clean with denatured alcohol immediately before priming.

E. Surface-Preparation Methods: Remove loose rust and mill scale, spatter, slag, and flux deposits. Prepare surfaces as follows:
1. SSPC-SP 2, "Hand Tool Cleaning."
2. SSPC-SP 3, "Power Tool Cleaning."
3. SSPC-SP 11, "Power Tool Cleaning to Bare Metal."

F. Priming: Immediately after surface preparation, apply primer according to manufacturer's instructions and at rate to provide a dry film thickness of not less than 1.5 mils (0.03 mm). Use priming methods that result in full coverage of joints, corners, edges, and exposed surfaces.
1. Stripe paint corners, crevices, bolts, welds, and sharp edges.
2. Apply two coats of shop paint to inaccessible surfaces.

3.9 APPLICATION, GENERAL

A. Comply with manufacturers' requirements for application methods and with other Division 9 painting Sections.

B. In addition to the number of coats specified in schedules in other Division 9 painting Sections, provide additional coats as required to produce the finishes to match sample and mockup finishes.

C. Blending: When painting new substrates patched into existing surfaces, furnish finishes specified for the specific substrate. Final finish coat shall be applied over entire surface from edge to edge and corner to corner.

3.10 FAUX FINISH APPLICATIONS

A. Decorative Painting, General: Apply decorative materials under adequate illumination. Decorative painting work shall be reviewed by Architect before application of succeeding specified coat.

3.11 CLEANING

A. Cleanup: At the end of each workday, remove empty cans, rags, rubbish, and other discarded paint materials from Project site.
1. After completing painting, clean glass and paint-spattered surfaces. Remove spattered paint by washing and scraping without scratching or damaging adjacent finished surfaces.

3.12 PROTECTION

A. Protect work of other trades, whether being painted or not, against damage from painting. Correct damage by cleaning, repairing or replacing, and repainting, as approved by Architect.

B. Provide "Wet Paint" signs to protect newly painted finishes. After completing painting operations, remove temporary protective wrappings provided by others to protect their work.

1. After work of other trades is complete, touch up and restore damaged or defaced painted surfaces. Comply with procedures specified in PDCA P1.

3.13 PAINT REMOVAL SCHEDULE

A. General: Prepare existing surfaces according to requirements for paint removal specified in this Schedule, which include descriptions of existing surface conditions before restoration painting begins.

B. Paint Removal Class PR-1:
   1. Description: Existing paint film in good condition and tightly adhered.
   2. Paint Removal: Paint removal not required.

C. Paint Removal Class PR-2:
   1. Description: Paint film cracked or broken but adhered.
   2. Paint Removal: Scrape by hand-tool cleaning methods to remove all loose paint film until only tightly adhered film remains.

D. Paint Removal Class PR-3:
   1. Description: Paint film loose, flaking, or peeling.
   2. Paint Removal: Remove loose, flaking, or peeling paint film by hand cleaning, power tool cleaning, or chemical removal methods.

E. Paint Removal Class PR-4:
   1. Description: Painted surface indicated to have paint completely removed.
   2. Paint Removal: Completely remove paint film by hand-tool, heat, or chemical removal methods.
   3. Remove severely deteriorated paint film down to bare substrate.
   4. Remove paint from surfaces of fine architectural detail work that have been covered by layers of paint film to reveal architectural details.

3.14 SURFACE-PREPARATION SCHEDULE

A. General: Prepare existing surfaces according to applicable requirements specified in this Schedule, which include descriptions of existing surface conditions before restoration painting begins.

B. Surface-Preparation Class SP-1:
   1. Description: Existing paint film in good condition and tightly adhered.
   2. Surface Preparation: Detergent wash with specified cleaning methods. Roughen or degloss existing paint surfaces to ensure adhesion.

C. Surface-Preparation Class SP-2:
   1. Description: Paint film cracked or broken but adhered.
   2. Surface Preparation: Following removal methods, detergent wash. Sand surfaces to smooth remaining paint film edges. Prepare bare cleaned surfaces to be repainted according to specified surface-preparation methods for substrate construction materials.

D. Surface-Preparation Class SP-3:
   1. Description: Paint film loose, flaking, or peeling.
   2. Surface Preparation: Following removal methods, detergent wash. Sand surfaces to smooth remaining paint film edges. Prepare bare cleaned surfaces to be repainted according to specified surface-preparation methods for substrate construction materials.

E. Surface-Preparation Class SP-4:
   1. Description: Painted surface indicated to have paint completely removed.
   2. Surface Preparation: Following paint removal, prepare bare cleaned surfaces to be repainted according to specified surface-preparation methods for substrate construction materials.

F. Surface-Preparation Class SP-5:
   1. Description: Missing material, including small holes, openings, and deteriorated or corroded substrate.
   2. Surface Preparation: Replace missing material by patching with compounds or splicing new material with old material. After patching, refinish new surface complying with surface preparation and painting specified for new construction materials. Provide surface preparation of adjacent existing materials to comply with surface-preparation class required for description of existing surface.

3.15 INTERIOR PAINTING RESTORATION SCHEDULE, SCHEDULED BY SUBSTRATE MATERIAL

A. Historic Plaster: Provide the following finish systems over interior historic plaster surfaces:
   1. Low-Luster Acrylic-Enamel Finish: Two finish coats over a primer.
      a. Primer: Interior plaster primer over replacement plaster work. Omit primer on previously painted plaster surfaces.
      b. Finish Coats: Interior low-luster acrylic enamel.
      c. Color Matching: Match Munsell Color Code.

END OF SECTION

SECTION 09 91 00
PAINTING

PART 1 - GENERAL

1.1 SECTION INCLUDES
A. Interior and exterior painting, including surface preparation.

1.2 RELATED SECTIONS
A. Section 05 50 00 - Metal Fabrications.
B. Section 06 20 00 - Finish Carpentry.
C. Section 09 21 16 – Gypsum Board Assemblies

1.3 REFERENCES
A. Green Seal Standard GS-11; May 20, 1993.
B. US Green Building Council, (USGBC) - Green Seal standards for LEED paint credits.
C. Occupational Safety and Health Act (OSHA) - Safety Standards.
D. American National Standards Institute (ANSI) - Performance Standards.
E. Paint Decorating Contractors of America (PDCA) - Application Standard.
F. National Paint and Coatings Association (NPCA) - Gloss Standard.
G. American Society for Testing Materials (ASTM) - Testing Methods.
H. Master Paint Institute (MPI #) - Established paint categories and standards.
I. Ozone Transmission Commission (OTC) - Established levels of Volatile Organic Compounds.
J. SCAQMD 1168 - South Coast Air Quality Management District Rule #1168; October 3, 2003.
K. SSPC (PM1) - Steel Structures Painting Manual, Vol. 1, Good Painting Practice; Society for Protective Coatings; 1993, Third Edition.
L. SSPC (PM2) - Steel Structures Painting Manual, Vol. 2, Systems and Specifications; Society for Protective Coatings; 1995, Seventh Edition.
M. 40 CFR 59, Subpart D - National Volatile Organic Compound Emission Standards for Architectural Coatings; U.S. Environmental Protection Agency; current edition.

1.4 DEFINITIONS
A. Commercial as used in this Section refers to a product well suited for a commercial application.

B. DFT as used in this Section refers to the Dry Film Thickness of the coating.

C. Enamel refers to any acrylic or alkyd (oil) base paint which dries leaving an eggshell, pearl, satin, semi-gloss or high gloss enamel finish.

D. DTM as used in this Section refers to paint that is applied Direct To Metal.

E. LEED as used in this Section refers to Leadership in Energy and Environmental Design. Products listed meet LEED criteria for environmentally safe interior primers, paints and coatings.

F. OTC as used in this Section refers to the Ozone Transmission Commission. OTC has established the following VOC levels for the Northeastern United States. Products shall meet the following OTC limits for VOC's.
1. Interior flat paints: 50 grams per liter or less, per gallon.

2. Interior enamels: 150 grams per liter or less, per gallon.
3. Interior stains: 250 grams per liter or less, per gallon.
4. Interior primers: 200 grams per liter or less, per gallon.
5. Rust preventive coatings: 400 grams per liter or less, per gallon.
6. Dry fog coatings: 400 grams per liter or less, per gallon.
7. Floor coatings: 250 grams per liter or less, per gallon.

G. Premium as used in this Section refers to the best quality product "top of the line".

H. VOC as used in this Section refers to Volatile Organic Compounds found in primers, paints, sealers and stains. The level of VOCs appears after each product listed in the Schedule in grams per liter (g/L).

I. Paints are available in a wide range of sheens or glosses, as measured by a gloss meter from a 60 and/or 85 degree angle from vertical, as a percentage of the amount of light that is reflected. The following terms are used to describe the gloss of our products. The list below is provided for general guidance; refer to the technical data sheet for the actual gloss/sheen level for each product.
1. Flat - Less than 5 Percent.
2. Eggshell - 5 - 20 Percent.
3. Satin - 20 - 35 Percent.
4. Semi-Gloss - 30 - 65 Percent.
5. Gloss - Over 65 Percent.

1.5 SUBMITTALS

A. Submit under provisions of Section 01 33 00 – Submittals

B. Product Data: Provide a complete list of all products to be used, with the following information for each:
1. Manufacturer's name, product name and/or catalog number, and general product category.
2. Cross-reference to specified paint system(s) that the product is to be used in; include description of each system.

C. Samples: Submit three paper samples, 5 inches by 7 inches (127mm x 178mm) in size, illustrating selected colors for each color and system selected with specified coats cascaded.

D. Manufacturer's Instructions: Indicate special surface preparation procedures.

E. Maintenance Data: Submit data on cleaning, touch-up, and repair of painted and coated surfaces.

1.6 QUALITY ASSURANCE

A. Manufacturer Qualifications: All primary products specified in this section will be supplied by a single manufacturer with a minimum of ten years experience.

B. Installer Qualifications: All products listed in this section are to be applied by a Painting Contractor with a minimum of five years demonstrated experience in surface preparation and field application of the same type and scope as specified.

C. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and

application workmanship.

1. Mock-up areas designated by Architect.
2. Do not proceed with remaining work until workmanship, color, and sheen are approved by Architect.
3. Approved mock-up areas will serve as the standard for remaining Work.
4. Refinish mock-up area as required to produce acceptable Work.

1.7 DELIVERY, STORAGE, AND HANDLING

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

B. Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction.

C. Disposal:

1. Never pour leftover coating down any sink or drain. Use up material on the job or seal can and store safely for future use.
2. Do not incinerate closed containers.
3. For specific disposal or recycle guidelines, contact the local waste management agency or district. Recycle whenever possible.

1.8 PROJECT CONDITIONS

A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.

1.9 WARRANTY

A. Inspection of all surfaces to be coated must be done by the manufacturer's representative to insure proper preparation prior to application. All thinners, fillers, primers and finish coatings shall be from the same manufacturer to support a product warranty. Products other than those submitted shall be accompanied by a letter stating its fitness for use and compatibility.

B. At project closeout, provide to the Owner or owner's representative an executed copy of the Manufacturer's standard form outlining the terms and conditions of and any exclusions to their Limited Warranty against Manufacturing Defect.

1.10 EXTRA MATERIALS

A. At project closeout, supply the Owner or owner's representative one gallon of each product for touch-up purposes. Cans shall be clearly marked with color name, number and type of paint.

B. At project closeout, provide the color mixture name and code to the Owner or owner's representative for accurate future color matching.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturer: Benjamin Moore & Co., which is located at: 101 Paragon Dr; Montvale, NJ 07645; Toll Free Tel: 855-724-6802 ; Email:request info (info@benjaminmoore.com); Web:www.benjaminmoore.com/en-us/for-architects-and-designers|www.benjaminmoore.ca

B. United States Gypsum Company, which is located at: 550 West Adams Street, Chicago IL 60661; Toll Free Tel: 800.874.4968; Web: www.usg.com

C. Substitutions:
   1. Sherwin Williams, which is located at: 101 Prospect Ave, Cleveland, OH 44115; Toll Free Tel: 800.474.3794; Web: www.sherwin-williams.com
   2. Pittsburgh Paints Industries, Inc., which is located at: One PPG Place, Pittsburgh, PA 15272; Toll Free Tel: 800.441.9695 ; Web: www.ppgpittsburghpaints.com

D. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.

2.2 LEED CRITERIA

A. LEED Version 3 - 2009: EQ CR4.2 Low Emitting Materials: 1 Credit - Paint.
   1. All architectural paints and coatings used must meet the VOC limits of Green Seal Standard GS-11, 1993.
   2. Interior: 50 g/l VOC or less for Flats, 150 g/l VOC for Non Flats, and 200 g/l or less for primer sealers/
   3. Anti-Corrosive Coatings GC-03, 1997: Interior 250 g/l VOC or less any sheen.
   4. Clear wood finishes, floor coatings, stains, and shellacs applied to interior elements: District (SCAQMD) Rule 1113, Architectural Coatings, rules in effect on January 1, 2004.
   5. Clear wood finishes: varnish 350 g/L; lacquer 550 g/L; Floor coatings; 100 g/L, waterproofing sealers 250 g/L; sanding sealers 275 g/L; Shellacs: Clear 730 g/L; pigmented 550 g/L; Stains: 250 g/L.

B. LEED Version 4:
   1. All interior paints and coatings wet-applied on site must meet the applicable VOC limits of the California Air Resources Board (CARB) 2007, Suggested Control Measure (SCM) for Architectural Coatings, or the South Coast Air Quality Management District (SCAQMD) Rule 1113, effective June 3, 2011 (50g/l or less for interior flats, 100 g/l or less for non-flats, 150 g/l or less for non-flats high gloss).
   2. Ninety percent of all interior paints and coatings must be tested and determined compliant in accordance with California Department of Public Health (CDPH) Standard Method v1.1-2010.

2.3 MATERIALS - GENERAL

A. Volatile Organic Compound (VOC) Content:
   1. Provide coatings that comply with the most stringent requirements specified in the following:
      a. 40 CFR 59, Subpart D-National Volatile Organic Compound Emission Standards for Architectural Coatings.
      b. Determination of VOC Content: Testing and calculation in accordance with 40 CFR 59, Subpart D (EPA Method 24), exclusive of colorants added to a tint base and water added at project site; or other method acceptable to authorities having jurisdiction.

B. Compatibility: Provide materials that are compatible with one another and the substrates indicated under conditions of service and application, as demonstrated by manufacturer based on testing and field experience.

2.4 MIXING AND TINTING

A. Except where specifically noted in this section, all paint shall be ready-mixed and pre-tinted. Agitate all paint prior to and during application to ensure uniform color, gloss, and consistency.

B. Thinner addition shall not exceed manufacturer's printed recommendations. Do not use kerosene or other organic solvents to thin water-based paints.

C. Where paint is to be sprayed, thin according to manufacturer's current guidelines.

2.5 INTERIOR PAINT SYSTEMS

A. METAL: Aluminum, Galvanized.
   1. Latex Systems:
      a. Semi-Gloss Finish High Performance:
         1) 1st Coat: Benjamin Moore Super Spec HP Acrylic Metal Primer P04 (47 g/L), MPI # 107, LEED 2009, CHPS Certified.
         2) 2nd Coat: Benjamin Moore Ultra Spec 500 Interior Latex Gloss N540 (0 g/L), MPI # 54, LEED 2009, LEED V4.
         3) 3rd Coat: Benjamin Moore Ultra Spec 500 Interior Latex Gloss N540 (0 g/L), MPI # 54, LEED 2009, LEED V4.
      b. Gloss Finish High Performance:
         1) 1st Coat: Benjamin Moore Super Spec HP Acrylic Metal Primer P04 (47 g/L), MPI # 107, X-Green 107, 134, LEED 2009, CHPS Certified.
         2) 2nd Coat: Benjamin Moore Ultra Spec D.T.M. Acrylic Gloss Enamel HP28 (45 g/L), MPI # 114, LEED 2009, LEED V4.
         3) 3rd Coat: Benjamin Moore Ultra Spec D.T.M. Acrylic Gloss Enamel HP28 (45 g/L), MPI # 114, LEED 2009, LEED V4.

B. WOOD - (Walls, Ceilings, Doors, Trim):
   1. Latex Systems:
      a. Semi - Gloss Finish:
         1) 1st Coat: Benjamin Moore Fresh Start Multi-Purpose Primer N023 (44 g/L), MPI # 6, LEED Credit, CHPS Certified.
         2) 2nd Coat: Coronado Rust Scat Waterborne Acrylic Semi-Gloss 90 (134 g/L), MPI # 153, LEED Credit.
         3) 3rd Coat: Coronado Rust Scat Waterborne Acrylic Semi-Gloss 90 (134 g/L), MPI # 153, LEED Credit.
      b. Eggshell / Satin Finish:
         1) 1st Coat: Benjamin Moore Fresh Start Multi-Purpose Primer N023 (44 g/L), MPI # 6, LEED Credit, CHPS Certified.
         2) 2nd Coat: Benjamin Moore Waterborne Satin Impervo N314 (137 g/L), MPI # 43, LEED Credit.
         3) 3rd Coat: Benjamin Moore Waterborne Satin Impervo N314 (137 g/L), MPI # 43, LEED Credit.

   2. Stain and Varnish System:
      a. Gloss Finish:
         1) 1st Coat: Lenmar Waterborne Interior Wiping Stain 1WB.1300 (240 g/L), MPI # 186, LEED Credit.
         2) 2nd Coat: Lenmar Waterborne Aqua-Plastic Urethane Gloss 1WB.1400

(322 g/L), MPI # 121, 130.
3) 3rd Coat: Lenmar Waterborne Aqua-Plastic Urethane Gloss 1WB.1400 (322 g/L), MPI # 121, 130.

b. Satin Finish:
1) 1st Coat: Lenmar Waterborne Interior Wiping Stain 1WB.1300 (240 g/L), MPI # 186 LEED Credit.
2) 2nd Coat: Lenmar Waterborne Aqua-Plastic Urethane Satin, 1WB.1427 (335 g/L), MPI # 121, 128.
3) 3rd Coat: Lenmar Waterborne Aqua-Plastic Urethane Satin, 1WB.1427 (335 g/L), MPI # 121, 128.

C. DRYWALL - (Walls, Ceilings, Gypsum Board and similar items)
1. Latex Systems:
a. Semi-Gloss System:
1) At all Level 4 Drywall conditions - Base coat: United States Gypsum Tuff-Hide Primer-Surfacer, VOC (22 g/l)
2) 1st Coat: Benjamin Moore Eco Spec WB Primer N372 (0 g/L) MPI # 50, LEED V4 CHPS Certified.
3) 2nd Coat: Benjamin Moore Eco Spec WB Semi-Gloss N376 (0 g/L) MPI # 54, LEED V4, CHPS Certified.
4) 3rd Coat: Benjamin Moore Eco Spec WB Semi-Gloss N376 (0 g/L) MPI # 54, LEED V4, CHPS Certified.

b. Eggshell / Satin System:
1) At all Level 4 Drywall conditions - Base coat: United States Gypsum Tuff-Hide Primer-Surfacer, VOC (22 g/l)
2) 1st Coat: Benjamin Moore Ultra Spec 500 Interior Latex Primer N534 (0 g/L), MPI # 50, LEED 2009, LEED V4, CHPS Certified.
3) 2nd Coat: Benjamin Moore Ultra Spec 500 Latex Eggshell N538 (0 g/L), MPI # 52, LEED 2009 LEED V4, CHPS Certified.
4) 3rd Coat: Benjamin Moore Ultra Spec 500 Latex Eggshell N538 (0 g/L), MPI # 52, LEED 2009, LEED V4, CHPS Certified.

D. PLASTER - (Walls, Ceilings).
1. Latex Systems:
a. Gloss Finish:
1) 1st Coat: Benjamin Moore Super Spec Interior/Exterior Acrylic High Build Masonry Primer N068 (97 g/L), MPI # 3, LEED 2009.
2) 2nd Coat: Benjamin Moore Ultra Spec D.T.M. Acrylic Gloss Enamel HP28 (45 g/L), MPI # 114, LEED 2009, LEED V4.
3) 3rd Coat: Benjamin Moore Ultra Spec D.T.M. Acrylic Gloss Enamel HP28 (45 g/L), MPI # 114, LEED 2009, LEED V4.

b. Semi-Gloss Finish:
1) 1st Coat: Benjamin Moore Super Spec Interior/Exterior Acrylic High Build Masonry Primer N068 (97 g/L), MPI # 3, LEED 2009.
2) 2nd Coat: Benjamin Moore Ultra Spec HP D.T.M. Acrylic Semi-Gloss Enamel, HP29 (45 g/L), MPI # 141, LEED 2009, LEED V4.
3) 3rd Coat: Benjamin Moore Ultra Spec HP D.T.M. Acrylic Semi-Gloss Enamel, HP29 (45 g/L), MPI # 141, LEED 2009, LEED V4.

2.6 EXTERIOR PAINT SYSTEMS

A. CONCRETE (Poured-in-place Cement).

1. Latex Systems:
    a. Semi-Gloss Finish:
        1) 1st Coat: Benjamin Moore Super Spec Interior/Exterior Acrylic High Build Masonry Primer N068 (97g/L), MPI # 3, LEED 2009.
        2) 2nd Coat: Benjamin Moore Regal Select Exterior High-Build Soft-Gloss N403 (43 g/L), MPI # 11, 311.
        3) 3rd Coat: Benjamin Moore Regal Select Exterior High-Build Soft-Gloss N403 (43 g/L), MPI # 11, 311.

B. MASONRY: Concrete Masonry Units (CMU) - Cinder or Concrete Block.
1. Latex Systems:
    a. High Build Coating
        1) 1st Coat: Coronado Texcrete WB Acrylic Masonry Waterproofer Smooth Finish 3194 (90 g/L), LEED Credit.
2. Clear Water Repellant:
    a. Clear Finish
        1) 1st Coat: Coronado Texcrete Silicone Water Repellant 194 (21 g/L), MPI # 117, LEED Credit.
        2) 2nd Coat: Coronado Texcrete Silicone Water Repellant 194 (21 g/L), MPI # 117, LEED Credit.

C. CONCRETE: Concrete Floors (non-vehicular), Patios, Porches, Steps and Platforms.
1. Acrylic System Water-Based:
    a. Floor Finish:
        1) 1st Coat: Benjamin Moore Floor & Patio Latex Enamel Low Sheen N122 (45 g/L), LEED 2009.
        2) 2nd Coat: Benjamin Moore Floor & Patio Latex Enamel Low Sheen N122 (45 g/L), LEED 2009.

D. METAL: Aluminum, Galvanized.
1. Latex Systems:
    a. Gloss Finish:
        1) 1st Coat: Benjamin Moore Ultra Spec EXT Gloss Finish N449 (46 g/L) MPI # 11.
        2) 2nd Coat: Benjamin Moore Ultra Spec EXT Gloss Finish N449 (46 g/L) MPI # 11.
    b. Gloss Finish- Early Moisture Resistant Finish
        1) 1st Coat: Benjamin Moore Ultra Spec D.T.M. Acrylic Gloss Enamel HP28 (45 g/L), MPI # 114, X-Green 114, LEED 2009, LEED V4.
        2) 2nd Coat: Benjamin Moore Ultra Spec D.T.M. Acrylic Gloss Enamel HP28 (45 g/L), MPI # 114, X-Green 114, 154, LEED 2009, LEED V4.
    c. Semi-Gloss Finish:
        1) 1st Coat: Benjamin Moore Ultra Spec HP Acrylic DTM Semi-Gloss Enamel HP29 (45 g/L), MPI # 141, LEED 2009.
        2) 2nd Coat: Benjamin Moore Ultra Spec HP Acrylic DTM Semi-Gloss Enamel HP29 (45 g/L), MPI # 141, LEED 2009.

E. METAL: Misc. Iron, Ornamental Iron, Structural Iron and Steel, Ferrous Metal.
1. Latex Systems:
    a. Gloss Finish
        1) 1st Coat: Corotech Acrylic Metal Primer V110 (199 g/L), LEED Credit.

2) 2nd Coat: Benjamin Moore Ultra Spec EXT Gloss Finish N449 (46 g/L) MPI # 11.
3) 3rd Coat: Benjamin Moore Ultra Spec EXT Gloss Finish N449 (46 g/L) MPI # 11.

b. Semi-Gloss Finish
1) 1st Coat: Corotech Acrylic Metal Primer V110 (199 g/L), LEED Credit.
2) 2nd Coat: Benjamin Moore Ultra Spec HP D.T.M. Acrylic Semi-Gloss Enamel, HP29 (45 g/L), MPI # 141, LEED 2009, LEED V4.
3) 3rd Coat: Benjamin Moore Ultra Spec HP D.T.M. Acrylic Semi-Gloss Enamel, HP29 (45 g/L), MPI # 141, LEED 2009, LEED V4.

F. DRYWALL: Gypsum Board, Exterior Drywall.
1. Latex Systems:
a. Gloss Finish:
1) 1st Coat: Benjamin Moore Fresh Start High-Hiding All Purpose Primer 046 (44 g/L), MPI # 6, LEED Credit, CHPS Certified.
2) 2nd Coat: Benjamin Moore Ben Waterborne Exterior Soft-Gloss 543 (45 g/L), MPI # 11.
3) 3rd Coat: Benjamin Moore Ben Waterborne Exterior Soft-Gloss 543 (45 g/L), MPI # 11.

b. Gloss Finish - Early Moisture Resistant Finish:
1) 1st Coat: Benjamin Moore Fresh Start High-Hiding All Purpose Primer 046 (44 g/L), MPI # 6, LEED Credit, CHPS Certified.
2) 2nd Coat: Benjamin Moore Regal Select Exterior High-Build Soft-Gloss N403 (43 g/L), MPI # 11, 311.
3) 3nd Coat: Benjamin Moore Regal Select Exterior High-Build Soft-Gloss N403 (43 g/L), MPI # 11, 311.

c. Semi-Gloss Finish:
1) 1st Coat: Benjamin Moore Fresh Start High-Hiding All Purpose Primer 046 (44 g/L), MPI # 6, LEED Credit, CHPS Certified.
2) 2nd Coat: Benjamin Moore Ultra Spec HP D.T.M. Acrylic Semi-Gloss Enamel, HP29 (45 g/L), MPI # 141, LEED 2009, LEED V4.
3) 3rd Coat: Benjamin Moore Ultra Spec HP D.T.M. Acrylic Semi-Gloss Enamel, HP29 (45 g/L), MPI # 141, LEED 2009, LEED V4.

PART 3 - EXECUTION

3.1 EXAMINATION

A. The Contractor shall review the product manufacturer's special instructions for surface preparation, application, temperature, re-coat times, and product limitations.

B. The Contractor shall review product health and safety precautions listed by the manufacturer.

C. The Contractor shall be responsible for enforcing on site health and safety requirements associated with the Work.

D. Do not begin installation until substrates have been properly prepared.

E. Ensure that surfaces to receive paint are dry immediately prior to application.

F. Ensure that moisture-retaining substrates to receive paint have moisture content within tolerances allowed by coating manufacturer. Where exceeding the following values, promptly notify Architect and obtain direction before beginning work.
   1. Concrete and Masonry: 3-5 percent. Allow new concrete to cure a minimum of 28 days.
   2. Exterior Wood: 17 percent.
   3. Interior Wood: 15 percent.
   4. Interior Finish Detail Woodwork, Including Trim, and Casework: 10 percent.
   5. Plaster and Gypsum: 15 percent.
   6. Concrete Slab-On-Grade: Perform calcium chloride test over 24 hour period or other acceptable test to manufacturer. Verify acceptable moisture transmission and pH levels.

G. Examine surfaces to receive coatings for surface imperfections and contaminants that could impair performance or appearance of coatings, including but not limited to, loose primer, rust, scale, oil, grease, mildew, algae, or fungus, stains or marks, cracks, indentations, or abrasions.

H. Correct conditions that could impair performance or appearance of coatings in accordance with specified surface preparation procedures before proceeding with coating application.

3.2 PREPARATION - GENERAL

A. Clean surfaces thoroughly prior to coating application.

B. Do not start work until surfaces to be finished are in proper condition to produce finished surfaces of uniform, satisfactory appearance.

C. Stains and Marks: Remove completely, if possible, using materials and methods recommended by coating manufacturer; cover stains and marks which cannot be completely removed with isolating primer or sealer recommended by coating manufacturer to prevent bleed-through.

D. Remove Mildew, Algae, and Fungus using materials and methods recommended by coating manufacturer.

E. Remove dust and loose particulate matter from surfaces to receive coatings immediately prior to coating application.

F. Remove or protect adjacent hardware, electrical equipment plates, mechanical grilles and louvers, lighting fixture trim, and other items not indicated to receive coatings.

G. Move or protect equipment and fixtures adjacent to surfaces indicated to receive coatings to allow application of coatings.

H. Protect adjacent surfaces not indicated to receive coatings.

I. Prepare surfaces in accordance with manufacturer's instructions for specified coatings and indicated materials, using only methods and materials recommended by coating manufacturer.

3.3 SURFACE PREPARATION

A. Concrete and Concrete Masonry: Clean surfaces free of loose particles, sand, efflorescence, laitance, form oil, curing compounds, and other substances which could impair coating performance or appearance.

B. Concrete Floors: Remove contaminants which could impair coating performance or appearance. Verify moisture transmission and alkaline-acid balance recommended by coating manufacturer; mechanically abrade surface to achieve 80-100 grit medium-sandpaper texture.

C. Existing Coatings:
   1. Remove surface irregularities by scraping or sanding to produce uniform substrate for coating application; apply one coat primer of type recommended by coating manufacturer for maximum coating adhesion.
   2. If presence of lead in existing coatings is suspected, cease surface preparation and notify Architect immediately.

D. Gypsum Board: Repair cracks, holes and other surface defects with joint compound to produce surface flush with adjacent surfaces.

E. Masonry Surfaces - Restored: Remove loose particles, sand, efflorescence, laitance, cleaning compounds and other substances that could impair coating performance or appearance.

F. Metals - Aluminum, Mill-Finish: Clean and etch surfaces with a phosphoric acid-water solution or water based industrial cleaner. Flush with clean water and allow to dry, before applying primer coat.

G. Metals - Copper: Clean surfaces with pressurized steam, pressurized water, or solvent washing.

H. Metals - Ferrous, Unprimed: Remove rust or scale, if present, by wire brush cleaning, power tool cleaning, or sandblast cleaning; remove grease, oil, and other contaminants which could impair coating performance or appearance by solvent cleaning, with phosphoric-acid solution cleaning of welds, bolts and nuts; spot-prime repaired welds with specified primer.

I. Metals - Ferrous, Shop-Primed: Remove loose primer and rust, if present, by scraping and sanding, feathering edges of cleaned areas to produce uniform flat surface; solvent-clean surfaces and spot-prime bare metal with specified primer, feathering edges to produce uniform flat surface.

J. Metals - Galvanized Steel (not passivated): Clean with a water-based industrial strength cleaner, apply an adhesion promoter followed by a clean water rinse. Alternately, wipe down surfaces using clean, lint-free cloths saturated with xylene or lacquer thinner; followed by wiping the surface dry using clean, lint-free cloths.

K. Metals - Galvanized Steel, Passivated: Clean with water-based industrial strength cleaner. After the surface has been prepared, apply recommended primer to a small area. Allow primer to cure for 7 days, and test adhesion using the "cross-hatch adhesion tape test" method in accordance with ASTM D 3359. If the adhesion of the primer is positive, proceed with a recommended coating system for galvanized metal.

L. Metals - Stainless Steel: Clean surfaces with pressurized steam, pressurized water, or water-based industrial cleaner.

M. Plaster: Repair cracks, holes and other surface defects as required to maintain proper surface adhesion. Apply patching plaster or Joint compound and sand to produce surface flush with adjacent undamaged surface. Allow a full cure prior to coating application as recommended by the patching compound manufacturer's recommendations.

N. Polyvinyl Chloride (PVC) Pipe: remove contaminants and markings with denatured alcohol scuff sand and wipe with solvent for maximum adhesion. Test adhesion before starting the job.

O. Textiles - Insulated Coverings, Canvas or Cotton: Clean using high-pressure air and solvent of type recommended for material.

P. Wood:
   1. Seal knots, pitch streaks, and sap areas with sealer recommended by coating manufacturer; fill nail recesses and cracks with filler recommended by coating manufacturer; sand surfaces smooth.
   2. Remove mill marks and ink stamped grade marks.
   3. Apply primer coat to back of wood trim and paneling.

Q. Wood Doors: Seal door tops and bottoms prior to finishing.

R. Wood Doors - Field-Glazed Frames and Sash: Prime or seal glazing channels prior to glazing.

3.4 APPLICATION - GENERAL

A. Application of primers, paints, stains or coatings, by the Contractor, will serve as acceptance that surfaces were properly prepared in accordance with the manufacturer's recommendation.

B. Apply each coat to uniform coating thickness in accordance with manufacturer's instructions, not exceeding manufacturer's specified maximum spread rate for indicated surface; thins, brush marks, roller marks, orange-peel, or other application imperfections are not permitted.

C. Allow manufacturer's specified drying time, and ensure correct coating adhesion, for each coat before applying next coat.

D. Inspect each coat before applying next coat; touch-up surface imperfections with coating material, feathering, and sanding if required; touch-up areas to achieve flat, uniform surface without surface defects visible from 5 feet (1.5 m).

E. Remove dust and other foreign materials from substrate immediately prior to applying each coat.

F. Where paint application abuts other materials or other coating color, terminate coating with a clean sharp termination line without coating overlap.

G. Where color changes occur between adjoining spaces, through framed openings that are of same color as adjoining surfaces, change color at outside stop corner nearest to face of closed door.

H. Re-prepare and re-coat unsatisfactory finishes; refinish entire area to corners or other natural terminations.

3.5 CLEANING

A. Clean excess coating materials, and coating materials deposited on surfaces not indicated to receive coatings, as construction activities of this section progress; do not allow to dry.

B. Re-install hardware, electrical equipment plates, mechanical grilles and louvers, lighting fixture trim, and other items that have been removed to protect from contact with coatings.

C. Reconnect equipment adjacent to surfaces indicated to receive coatings.

D. Relocate to original position equipment and fixtures that have been moved to allow application of coatings.

E. Remove protective materials.

3.6 PROTECTION AND REPAIR

A. Protect completed coating applications from damage by subsequent construction activities.

B. Repair to Architect's acceptance coatings damaged by subsequent construction activities. Where repairs cannot be made to Architect's acceptance, re-apply finish coating to nearest

adjacent change of surface plane, in both horizontal and vertical directions.

3.7 SCHEDULE - COLORS

A. Final Color Selections will be made by the Architect and Owner at a later date based on samples and product submissions in accordance with section 1.5.

END OF SECTION