

PROJECT MANUAL VOLUME 1 of 1

BID#GL-2019-06

**Glastonbury Police Department
Window Replacement**



Issued: September 11, 2018

**Architect: Cheryl Newton Architects LLC
2400 Main Street
Glastonbury, CT 06033
860-633-2477**

TOWN OF GLASTONBURY

INVITATION TO BID

<u>BID #</u>	<u>ITEM</u>	<u>DATE & TIME REQUIRED</u>
GL-2019-06	Glastonbury Police Department Window Replacement	October 02, 2018 @ 11:00 a.m.

The Town of Glastonbury is seeking bids for Window Replacement at Glastonbury Police Department, 2108 Main Street, Glastonbury, CT 06033.

A mandatory pre-bid meeting and site walk through will be held starting at the Glastonbury Police Department, 2108 Main Street, Glastonbury, CT 06033 on Tuesday, September 18, 2018 at 9:00 a.m. All bidders must attend in order for their bid to be considered.

Bid Forms, Plans and Specifications may be obtained from the Town's website at www.glastonbury-ct.gov at no cost. Bids will be received only at the Office of the Purchasing Agent, Town Hall (second level), 2155 Main Street, Glastonbury, CT 06033, Attention: Mary F. Visone, Purchasing Agent, at which time they will be publicly opened and read aloud. **No late bids will be accepted.**

Prevailing Wages: The contractor must comply with Section 31-53 of the Connecticut General Statutes as amended, including annual adjustments in prevailing wages.

Bid Security shall be issued payable to the "Town of Glastonbury" in the form of a certified check or Bid Bond in an amount not less than 10% of the total amount of the base bid. The Bid Bond must be issued by a surety company licensed in the State of Connecticut. Cashier's checks will not be accepted.

The Town reserves the right to waive informalities or reject any part of, or the entire bid, when said action is deemed to be in the best interest of the Town.

The Town of Glastonbury is an Affirmative Action/Equal Opportunity Employer. Minority/Women/Disadvantaged Business Enterprises are encouraged to bid.

Mary F. Visone
Purchasing Agent

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TOWN OF GLASTONBURY
Police Department Window Replacement
INFORMATION FOR BIDDERS

BID #GL-2019-06

1. Sealed bids (**one original and one copy**) on the attached Bid Forms will be received at the Office of the Purchasing Agent, Town Hall, 2155 Main Street, Glastonbury, Connecticut, 06033 (second level). At the designated time of opening, they will be publicly opened, read, recorded and placed on file.
2. Whenever it is deemed to be in the best interest of the Town, the Town Manager, Purchasing Agent or designated representative shall waive informalities in any and all bids. The right is reserved to reject any bid, or any part of any bid, when such action is deemed to be in the best interest of the Town of Glastonbury.
3. The basis of award will be based on the lump sum base bid plus the sum of any alternate(s) accepted by the Owner of the lowest qualified, responsible and responsive bidder.
4. Bids will be carefully evaluated as to conformance with stated specifications.
5. The envelope enclosing your bid should be clearly marked by your company name and address, bid number, time of bid opening, and date.
6. Specifications must be submitted complete in every detail and, when requested, samples shall be provided. If a bid involves any exception from stated specifications, they must be clearly noted as exceptions, underlined, and attached to the bid.
7. The Bid Documents contain the provisions required for the requested item. Information obtained from an officer, agent, or employee of the Town or any other person shall not affect the risks or obligations assumed by the Bidder or relieve him/her from fulfilling any of the conditions of the bid.
8. Each Bidder is held responsible for the examination and/or to have acquainted themselves with any conditions at the job site which would affect their work before submitting a bid. Failure to meet these criteria shall not relieve the Bidder of the responsibility of completing the bid without extra cost to the Town of Glastonbury.
9. Any bid may be withdrawn prior to the above-scheduled time for the opening of bids or authorized postponement thereof. Any bid received after the time and the date specified shall not be considered. No bidder may withdraw a bid within sixty (60) days after the actual date of the opening thereof. Should there be reasons why a bid cannot be awarded within the specified period, the time may be extended by mutual agreement between the Town and the Bidder.
10. Each bid must be accompanied by a bid bond payable to the Town for ten percent (10%) of the total amount of the bid. The bid bond of the successful bidder will be retained until the payment bond and performance bond have been executed and approved, after which it will be returned. A certified check may be used in lieu of a bid bond. The Town of Glastonbury will not be liable for the accrual of any interest on any certified check submitted. Cashier's checks will not be accepted.
11. A 100% Performance and Payment bond is required of the successful bidder. This bond shall cover all aspects of the specification and shall be delivered to the Purchasing Agent prior to the issuance of a purchase order. The Performance and Payment Bond will be returned upon the delivery and acceptance of the bid items.

12. The Bidder agrees and warrants that in the submission of this sealed Bid, they will not discriminate or permit discrimination against any person or group of persons on the grounds of race, color, religion, national origin, sex, or physical disability including, but not limited to blindness, unless it is shown by such Bidder that such disability prevents performance of that which must be done to successfully fulfill the terms of this sealed Bid or in any manner which is prohibited by the laws of the United States or the State of Connecticut: and further agrees to provide the Human Relations Commission with such information requested by the Commission concerning the employment practices and procedures of the Bidder. An Affirmative Action Statement will be required by the successful Bidder.
13. Bidder agrees to comply with all of the latest Federal and State Safety Standards and Regulations and certifies that all work required in this bid will conform to and comply with said standards and regulations. Bidder further agrees to indemnify and hold harmless the Town for all damages assessed against the Town as a result of Bidder's failure to comply with said standards and/or regulations.
14. All correspondence regarding any purchase made by the Town of Glastonbury shall reference the Town purchase order number. Each shipping container shall clearly indicate both purchase order number and item number.
15. Bidder is required to review the Town of Glastonbury Code of Ethics adopted July 8, 2003 and effective August 1, 2003 and revised October 29, 2013 and effective November 8, 2013. Bidder shall acknowledge that they have reviewed the document in the area provided on the bid / proposal response page (BP). The selected Bidder will also be required to complete and sign an Acknowledgement Form prior to award. The Code of Ethics and the Acknowledgement Form can be accessed at the Town of Glastonbury website at www.glastonbury-ct.gov. Upon entering the website click on **Bids & Proposals Icon**, which will bring you to the links for the **Code of Ethics** and the **Acknowledgement Form**. If the Bidder does not have access to the internet a copy of these documents can be obtained through the Purchasing Department at the address listed within this bid / proposal.
16. Any bidder, in order to be considered, shall be engaged primarily in the business of construction with for minimum of five (5) years, prior experience with **window replacements** and have a valid contractor's license in the State of Connecticut.
17. **Non-Resident Contractors (IF APPLICABLE):Resident Contractors:**

Upon award the Town is required to report names of nonresident (out of state) Contractors to the State of Connecticut, Department of Revenue Services (DRS) to ensure that Employment Taxes and other applicable taxes are being paid by Contractors. **A single surety bond for 5% of the entire contract price is required to be filed with DRS by any unverified nonresident prime or general contractor (if awarded) where the contract price for the project is \$250,000 or more.** The contractor will be required to promptly furnish to the Town a copy of the **Form AU-968 - Certificate of Compliance** issued by the State of Connecticut, DRS. See State of Connecticut **Notice SN 2012 (2).**
18. Bidder shall include on a sheet(s) attached to its proposal a complete disclosure of all past and pending mediation, arbitration and litigation cases that the bidder or its principals (regardless of their place of employment) have been involved in for the most recent five years. Please include a

statement of the issues in dispute and their resolution. Acceptability of Bidder based upon this disclosure shall lie solely with the Town.

19. Bidder or its principals, regardless of their place of employment, shall not have been convicted of, nor entered any plea of guilty, or nolo contendere, or otherwise have been found civilly liable or criminally responsible for any criminal offense or civil action. Bidder shall not be in violation of any State or local ethics standards or other offenses arising out of the submission of bids or proposals, or performance of work on public works projects or contracts.
20. After award of Contract, Owner will require the Contractor's Schedule of Values, which shall be submitted at the preconstruction meeting. The Schedule of Values must accurately reflect job costs and include a complete breakdown of material and labor costs.
21. Prevailing Wage Rates:

Bidders shall comply with State Statutes concerning Employment and Labor Practices, if applicable, and Section 31-53 of the Connecticut General Statutes, as amended (Prevailing Wages). Wage Rate Determination for this project from the State of Connecticut is included in the Bid Documents. Certified payrolls for site labor shall be submitted weekly to the Town's Representative or his designee on the correct State of Connecticut form. The Town reserves the right to, without prior notice, audit payroll checks given to workers on site in order to ascertain that wages and fringe benefits are being paid as required by the State of Connecticut. Please make special note of the State requirement to adjust wage and fringe benefit rates on each July 1st following the original published rates.

NOTE that bidder is to include in its bid proposal all costs required by such annual increases in the PREVAILING RATES. No Escalation Clauses are to be included in the bidder's proposal and no Escalation Clauses will be in the Contract Agreement. Bidder is to anticipate any future increases and include these costs in its quotation.

Contractor's invoices will not be paid if certified payrolls are incomplete, incorrect or not received in a timely manner.

All Apprentices must be registered with the State of Connecticut and their number shall not exceed the number allowed by law. Otherwise, all workers must be paid at least the Journeyman rate listed including benefits.

OSHA SAFETY AND HEALTH CERTIFICATION: Effective July 1, 2009: Any Mechanic, Laborer, or Worker, who performs work in a classification listed on the prevailing wage rate schedule on any public works project covered under C.G.S. Section 31-53, both on site and on or in the public building, must have completed a federal OSHA Safety and Health course within the last 5 years.

22. Each Bidder shall submit a list of similar projects completed within the last three years. In order to be eligible for consideration, the Bidder must have successfully completed a minimum of five (5) similar projects within the last three (3) years. Please provide project name and contact information for project coordinator (name, title, address, phone number). Please also provide contract value.

23. For technical questions regarding this Bid, please contact David Sacchitella, Building Superintendent, at (860) 652-7706, email dave.sacchitella@glastonbury-ct.gov. For administrative questions regarding this Bid, please contact Mary F. Visone, Purchasing Agent at (860) 652-7589, email purchasing@glastonbury-ct.gov. The request must be received at least five (5) business days prior to the advertised response deadline. All questions, answers, and/or addenda, as applicable, will be posted on the Town's website at www.glastonbury-ct.gov (Upon entering the website click on Bids & Proposals Icon; click the Bid Title to view all bid details and document links). It is the respondent's responsibility to check the website for addenda prior to submission of any proposal.

IMPORTANT:

- Failure to comply with general rules may result in disqualification of the Bidder.
- Municipal projects are exempt from Federal Excise Taxes, as well as, State of Connecticut Sales, Use and Service Taxes and should not be include in the Bidder's proposal.

01.00 WORKMANSHIP, MATERIALS AND EMPLOYEES

- 01.01 Wherever in this contract the word “Engineer” is used, it shall be understood as referring to the Building Superintendent of the Town of Glastonbury acting personally or through any assistants duly authorized.
- 01.02 The entire work described herein shall be completed in accordance with the plans and specifications to the full intent and meaning of the same. Unless otherwise specified, all materials incorporated in the permanent work shall be new, and both workmanship and material shall be of good quality. The Contractor shall, if required, furnish satisfactory evidence as to the kind and quality of materials.
- 01.03 The wording “furnish”, “install”, “construct”, “furnish and install”, or any similar terms, unless specifically noted to the contrary, shall include all labor, materials, water, tools, equipment, light, power, transportation, and any other services required for the completion of the work.
- 01.04 The Contractor shall at all times enforce strict discipline and good order among his employees, and shall seek to avoid employing on the work any unfit person or anyone not skilled in the work assigned to him.

02.00 SUPERINTENDENT

- 02.01 The Contractor shall keep on the work during its progress, in the absence of the Contractor, a competent Superintendent. The Superintendent shall be acceptable to the Engineer and shall fully represent the Contractor. All directions given to the Superintendent shall be binding as if given to the Contractor.

03.00 PRECONSTRUCTION MEETING

- 03.01 A Preconstruction Meeting will be held with the Engineer, Contractor, and any other interested parties prior to commencing any work. The Engineer shall arrange the meeting based on a mutually convenient time.

04.00 PERMITS

- 04.01 All permits, licenses, and fees required for the performance of the Contract work shall be secured and paid for by the Contractor. The local building permit fees will be waived.

05.00 PROPERTY ACCESS

- 05.01 The Contractor shall take all proper precautions to protect from injury or unnecessary interference, and provide proper means of access to abutting property where the existing access is cut off by the Contractor.
- 05.02 The Contractor shall take all proper precautions to protect persons from injury or unnecessary inconvenience and leave an unobstructed way along the public and private places for travelers, vehicles, and access to hydrants.

05.03 The Contractor shall make arrangements with the adjacent property owners for such trespass as he may reasonably anticipate in the performance of the work. All such arrangements shall be reported, in writing, to the Engineer.

06.00 PROTECTION OF THE PUBLIC AND OF WORK AND PROPERTY

06.01 The Contractor shall continuously maintain adequate protection of all work from damage, and shall take all reasonable precautions to protect the Town from injury or loss arising in connection with the Contract.

06.02 The Contractor shall adequately protect adjacent private and public property as provided by law and the Contract Documents.

06.03 The Contractor shall make good any damage, injury, or loss of work and to the property of the Town resulting from lack of reasonable protective precautions.

06.04 The police building involved will be occupied during the work and fully operational. The Contractor may be required to adjust his work schedule should the work have an adverse impact on operations. There will be no modification of the bid price should a schedule adjustment be required.

07.00 EXISTING IMPROVEMENTS

07.01 The Contractor shall conduct his work so as to minimize damage to existing improvements designated to remain. Except where specifically stated otherwise in the specifications, drawings, or as directed by the Engineer, it will be the responsibility of the Contractor to restore to their original condition, as near as practical, all improvements on public or private property. This shall include:

- a. Property within and adjacent to the work area such as shrubs, walks, driveways, fences, etc.
- b. Utility mains, ducts, poles, and services. The Contractor is hereby notified that utilities, if/where shown on the plans, are at approximate locations. These locations are subject to possible errors in the source of information and errors in transcription. The Contractor shall make certain of the exact location of all mains, ducts, poles, and services prior to excavation.

08.00 SEPARATE CONTRACTS

08.01 The Engineer reserves the right to let other contracts in connection with this work. The Contractor shall afford other contractors reasonable opportunity for the introduction and storage of their materials and the execution of their work, and shall properly connect and coordinate his work with theirs. Wherever work being done by the Town of Glastonbury forces or by other contractors is contiguous to work covered by this Contract, the respective rights of the various interests involved shall be established by the Engineer to secure the completion of the various portions of the work.

09.00 INSPECTION OF WORK

09.01 The Town shall provide sufficient personnel for the inspection of the work.

- 09.02 The Engineer shall at all times have access to the work whenever it is in preparation or progress, and the Contractor shall provide proper facilities for such access and for inspection.
- 09.03 If the specifications or the Engineer's instructions require any work to be specially tested or approved, the Contractor shall give the Engineer timely notice of its readiness for inspection and, if the inspection is by another authority other than the Engineer, of the date fixed for such inspection. Inspections by the Engineer shall be made promptly. If any work should be covered up without approval or consent of the Engineer, it must, if required by the Engineer, be uncovered for examination and properly restored at the Contractor's expense.
- 09.04 Re-inspection of any work may be ordered by the Engineer. If such work is found to be in accordance with the Contract Documents, the Town shall pay the cost of re-inspection and replacement. If such work is not in accordance with the Contract Documents, the Contractor shall pay such cost.

10.00 RIGHT TO INCREASE OR DECREASE WORK

- 10.01 The Town shall have the right to increase or decrease the amount of work herein specified as may be required.

11.00 RIGHT OF ENGINEER TO STOP WORK FOR WEATHER CONDITIONS

- 11.01 Should the work, in the opinion of the Engineer, be in danger by reason of inclemency of weather, or could not be finished in time to prevent such danger, the Contractor shall cease operations upon order of the Engineer, and shall not resume them until ordered to do so by the Engineer when the weather conditions are favorable. The Contractor shall, upon such orders, discontinue work, remove all materials or appliances for or in use upon the work, and place the premises in proper condition for use by the public during the time the work is suspended as herein provided, without cost to the Town.

12.00 CONTRACTOR TO BE RESPONSIBLE FOR IMPERFECT WORK OR MATERIALS

- 12.01 Any faithful work or imperfect material that may be discovered before the acceptance and the payment of the work shall be corrected upon the order of the Engineer. The acceptance and payment of the work does not in any manner relieve the Contractor of his obligation to construct work in the proper manner and the use of materials herein specified.

13.00 TOWN MAY NOTIFY CONTRACTOR IF WORK IS NOT CARRIED ON SATISFACTORILY

- 13.01 If, in the opinion of the Engineer, the Contractor is not proceeding with the work at a sufficient rate of progress so as to finish in the time specified, or has abandoned said work, or is not complying with the terms and stipulations or the Contract and specifications, the Engineer may serve notice on the Contractor to adopt such methods as will ensure the completion of the work in the time specified.
- 13.02 If, within five days after the Engineer has notified the Contractor that his work is not being carried on satisfactorily as before mentioned, the Engineer shall have the right to annul the

Contract and manage the work under the direction of the Engineer, or re-let, for the very best interest of the Town as a new contract, the work under said new Contract shall be considered the responsibility of the defaulting Contractor.

- 13.03 Additional costs incurred over and above the original Contract shall be borne by the Performance Bond.

14.00 DEDUCTIONS FOR UNCORRECTED WORK

- 14.01 If the Engineer deems it inexpedient to correct work that has been damaged or that was not done in accordance with the Contract, an equitable deduction from the Contract price shall be made there for.

- 14.02 The Contractor shall promptly remove from the premises all materials condemned by the Engineer as failing to meet Contract requirements, whether incorporated in the work or not, and the Contractor shall promptly replace and re-execute his own work in accordance with the Contract and without expense to the Town, and shall bear the expense of making good all work by other contractors destroyed or damaged by such removal or replacement.

- 14.03 If the Contractor does not remove such condemned work and materials as promptly as possible after written notice, the Engineer may remove them and store the materials at the expense of the Contractor.

15.00 CLEANING UP

- 15.01 The Contractor must remove all debris of every description as the work progresses and leave the surroundings in a neat and orderly condition to the satisfaction of the Engineer.

- 15.02 Upon completion, and before acceptance and final payment, the Contractor shall remove from the site all equipment, forms, surplus material, rubbish and miscellaneous debris and leave the site in a neat and presentable condition.

16.00 ROYALTIES AND PATENTS

- 16.01 The Contractor shall pay all royalties and license fees. He shall defend all suits or claims for infringement of any patent rights and shall save the Town of Glastonbury harmless from loss on account hereof, except that the Town of Glastonbury shall be responsible for all such loss when a particular manufacturer, product, or process is specified by the Town of Glastonbury.

17.00 ERRORS OR CONFLICT IN DRAWINGS AND SPECIFICATIONS

- 17.01 The Contractor shall immediately notify the Owner/Engineer should he find any errors or conflicts in the contract documents. The Owner/Engineer shall render his interpretation or instruction in writing on the items as soon as possible.

- 17.02 Any work undertaken by the Contractor containing possible errors or conflicts will be done at his own risk unless he has received prior written approval from the Owner/Engineer.

17.03 The Contractor shall be responsible for estimating and supplying all quantities, and where clarification or additional information is required, a request in writing to the Owner/Engineer shall be made. No extra charge or compensation will be allowed the Contractor unless there is a change in scope or dimension of the project resulting in need for extra material, equipment and/or labor. Said differences are to be handled under Article 18.

18.00 EXTRA WORK AND EXTRA COST

18.01 The Owner, without invalidating the contract documents, may order extra work or make changes by altering, adding to or deducting from the work, the contract price being adjusted accordingly. All such work shall be executed under the conditions of the original contract except that any claim of extension of time caused thereby shall be adjusted at the time of ordering the change.

18.02 No extra work or change shall be performed unless in pursuance of a written order from the Owner/Engineer, with the agreed price prior to the commencement of the work, and no claim for an addition to the contract price shall be valid unless so ordered.

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

- a) By estimate and acceptance on a lump sum.
- b) By unit prices named in the contract or subsequently agreed upon.
- c) By cost and percentage or by cost and a final fee.

19.00 SUBSTITUTIONS

19.01 The Contractor shall use materials as specified unless material list is of an open nature. Material other than specified will be permitted only after written application, including four (4) copies of specifications, is made by the Contractor and written approval received from the Engineer or Owner.

The material installed in the job site shall be new and of the quality specified.

The manufacturer's recommendation shall be followed for the installation of all equipment.

20.00 PRODUCT SUBMITTALS

20.01 Prior to ordering materials, the Contractor shall submit submittals as specified in the detailed specification sections. Three (3) copies of the submittals shall be forwarded to the Engineer for review and approval.

20.02 Submittals shall indicate specification Section for each product. Submittals not containing all the required information shall be returned to the contractor for re-submittal.

21.00 OWNER'S ACCEPTANCE

21.01 Within seven (7) days of the Contractor's notification that the installation is substantially complete, the Owner's authorized representative shall inspect the installation. The Owner, with the Contractor, shall take necessary steps to inspect the installation. Upon completion of the inspection, the Owner or the Owner's authorized representative may either accept the work

outright or prepare a "Punch List" that upon completion by the Contractor and acceptance by the Owner will signify final acceptance provided that all other applicable terms and provisions of the Contract have been completed to the Owner's satisfaction.

22.00 RESPONSIBILITY FOR MAINTENANCE

22.01 It will be the Contractor's responsibility to maintain the work as specified in the detailed specifications during the warranty period.

23.00 SERVICE BY THE CONTRACTOR

23.01 The Contractor shall maintain the work as specified during the warranty period.

24.00 WARRANTY

24.01 The guarantee shall be as specified in the respective sections of the specification.

24.02 The Contractor shall be responsible for the repair and/or replacement of all defective work and materials. All repair work shall be completed in a timely fashion.

24.04 Should the Contractor not respond promptly, the Owner may take any action he deems necessary to repair the defect and prevent further damage to his property, including the hiring of another contractor, or the repairing of such a defect with material supplied by the Contractor. In this event, the Contractor shall be liable for expenses incurred and property damages suffered by the Owner.

01.00 NOTICE TO CONTRACTOR

- 01.01 Intent of Contract: The intent of the Contract is to prescribe a complete work or improvement which the Contractor undertakes to do, in full compliance with the specifications, plans, special provisions, proposal and Contract. The Contractor shall perform all work in close conformity with the plans or as modified by written orders, including the furnishing of all materials, supplies, transportation, labor, and all other things necessary to the satisfactory prosecution and completion of the project.

The scope of the work shall include all labor, materials and equipment needed to provide and install new windows, complete and ready for use, as described in the plans and specifications for Glastonbury Police Department Window Replacement in Glastonbury, CT.

02.00 COMMUNICATIONS

- 02.01 All notices, demands, requests, instructions, approvals, proposals, and claims must be in writing.
- 02.02 Any notice to, or demand upon, the Contractor shall be sufficiently given if delivered at the office of the Contractor stated on the signature page of the Agreement (or at such other office as the Contractor may, from time to time, designate) in a sealed, postage-prepaid envelope or delivered with charges prepaid to any telegraph company for transmission, in each case addressed to such office.
- 02.03 All papers required to be delivered to the Town shall, unless otherwise specified in writing to the Contractor, be delivered to the Building Superintendent, 2143 Main Street, Glastonbury, CT 06033, and any notice to, or demand upon, the Town shall be delivered at the above address in a sealed, postage-prepaid envelope or delivered with charges prepaid to any telegraph company for transmission, in each case addressed to such office or to such other representatives of the Town, or to such other address as the Town may subsequently specify in writing to the Contractor for such purpose.
- 02.04 Any such notice shall be deemed to have been given as of the time of actual delivery or, in case of mailing, when the same should have been received in due course of post or, in the case of telegrams, at the time of actual receipt, as the case may be.

03.00 WORK BY OTHERS

- 03.01 Private utilities, contractors, developers or other parties may be expected to be working within the Contract area during this Contract. It shall be the responsibility of the contractor to coordinate his work with the work being done by others in order that the construction shall proceed in an efficient and logical manner. The Contractor shall have no claim or claims whatever against the Town, the Engineer, or other parties due to delays or other reasons caused by the work by others or his failure to coordinate such work.

04.00 CONTRACTOR'S WORK AND STORAGE AREA

- 04.01 The Contractor shall contact the Town to determine if any specific locations will be designated, or gain its approval prior to using any area for storage of equipment, materials and trailers during the period of this Contract. The Contractor shall confine his work/storage area to the limits as

designated or approved and shall be responsible for the security of the work/storage area. Upon completion of the Contract, the Contractor shall remove all equipment and materials, except as otherwise specified, and restore the site to its original condition as approved by the Engineer and at no cost to the Town.

05.00 DISPOSAL AREA

05.01 The Tryon Street Bulky Waste Facility will be available to the Contractor, at no charge, for disposal of materials that are accepted at that facility. No materials containing lead-based paint of any level shall be dumped at the Tryon Street facility. The Contractor is required to obtain a disposal area for all other unsuitable or surplus materials at no cost to the Town.

06.00 DUST CONTROL

06.01 During the progress of the work, the Contractor shall conduct his operations and maintain the area of his activities so as to minimize the creation and dispersion of dust. If the Engineer decides that it is necessary to use water or calcium chloride for more effective dust control, the Contractor shall furnish and spread the material, as directed, without additional compensation.

07.00 PROTECTION OF EXISTING UTILITIES

07.01 Before starting any excavation, the Contractor shall submit to the Engineer plans or details showing the proposed method the Contractor will use to support and protect all existing utilities during construction. The furnishing of such plans and details shall not serve to relieve the Contractor of any responsibility for the proper conduct of the work.

07.02 There will be no extra payment for submitting plans or details for supporting and protecting all existing utilities during construction.

08.00 TIME FOR COMPLETION/NOTICE TO PROCEED

08.01 Within ten (10) calendar days after the date of the Notice of Award, the Contractor must provide the appropriate insurance certificates to the Town Purchasing Agent and shall be issued a Notice to Proceed and a Purchase Order prior to initiating any work on the project.

08.02 Work shall commence within thirty (30) days of the date of the Notice to Proceed/Purchase Order.

08.03 After the work has begun, it will continue in an orderly fashion and shall be fully completed within 45 consecutive calendar days from the date of commencement. The Engineer reserves the right to extend the contract an additional thirty (30) days by mutual written agreement.

08.04 Because the facilities remain open during the installation period, the Contractor shall make every reasonable effort to complete the installation as expeditiously as possible.

09.00 MEASUREMENT AND PAYMENT

09.01 All direct, indirect, or incidental costs of work and/or services required by these specifications shall be included in the Lump Sum price.

09.02 Monthly progress payments will be made, based on the approved Schedule of Values, for work that has progressed in accordance with the contract documents, subject to a deduction of five percent (5%) of the amount of the application for payment to be retained by the Owner until completion of the entire contract in an acceptable manner and two and one half percent (2.5%) until the applicable one year warranty period has expired and all required inspections have been completed and results have been submitted and approved by the Engineer.

10.00 COMPLIANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL REQUIREMENTS

10.01 This award of bid is subject to the conformance of the Contractor to all Federal, State, and Local laws, statutes, regulations, ordinances or other requirements that are applicable to the type of work contained in these specifications.

INSURANCE

The Bidder shall, at its own expense and cost, obtain and keep in force during the entire duration of the Project or Work the following insurance coverage covering the Bidder and all of its agents, employees and sub-contractors and other providers of services and shall name the **Town of Glastonbury and its employees and agents as an Additional Insured** on a primary and non-contributory basis to the Bidders Commercial General Liability and Automobile Liability policies. **These requirements shall be clearly stated in the remarks section on the Bidders Certificate of Insurance.** Insurance shall be written with insurance carriers approved in the State of Connecticut and with a minimum Best's Rating of A-VIII. In addition, all carriers are subject to approval by the Town. Minimum Limits and requirements are stated below:

1) Worker's Compensation Insurance:

- Statutory Coverage
- Employer's Liability
- \$500,000 each accident/\$500,000 disease-policy limit/\$500,000 disease each employee
- A Waiver of Subrogation shall be provided in favor of the Town of Glastonbury and its employees and agents.

2) Commercial General Liability:

- Including Premises & Operations, Products and Completed Operations, Personal and Advertising Injury, Contractual Liability and Independent Contractors.
- Limits of Liability for Bodily Injury and Property Damage
Each Occurrence \$1,000,000
Aggregate \$2,000,000 (The Aggregate Limit shall apply separately to each job.)
- A Waiver of Subrogation shall be provided in favor of the Town of Glastonbury and its employees and agents.

3) Automobile Insurance:

- Including all owned, hired, borrowed and non-owned vehicles
- Limit of Liability for Bodily Injury and Property Damage: Per Accident \$1,000,000
- A Waiver of Subrogation shall be provided in favor of the Town of Glastonbury and its employees and agents.

The Bidder shall direct its Insurer to provide a Certificate of Insurance to the Town before any work is performed. The Contractor shall be responsible to notify the Town 60 days in advance with written notice of cancellation or non-renewal. The Certificate shall evidence all required coverage. The Bidder shall provide the Town copies of any such insurance policies upon request.

INDEMNIFICATION

To the fullest extent permitted by law, the Bidder shall indemnify and hold harmless the Town of Glastonbury and its consultants, agents, and employees from and against all claims, damages, losses and expenses, direct, indirect or consequential (including but not limited to fees and charges of engineers, attorneys and other professionals and court and arbitration costs) to the extent arising out of or resulting from the performance of the Bidder's work, provided that such claim, damage, loss or expense is caused in whole or in part by any negligent act or omission by the Bidder, or breach of its obligations herein or by any person or organization directly or indirectly employed or engaged by the Bidder to perform or furnish either of the services, or anyone for whose acts the Bidder may be liable.



TOWN OF GLASTONBURY * 2155 MAIN STREET * GLASTONBURY * CT

BID / PROPOSAL NO: GL-2019-06 DATE DUE: 10-02-18

DATE ADVERTISED: 09-11-18 TIME DUE: 11:00 AM

NAME OF PROJECT: Glastonbury Police Department Window Replacement

In compliance with this Invitation to Bid, the Bidder hereby proposes to provide goods and/or services as per this solicitation in strict accordance with the Bid Documents, within the time set forth therein, and at the prices submitted with their bid response.

It is the responsibility of the Bidder to clearly mark the outside of the bid envelope with the Company name and Address, Bid Number, Date and Time of Bid Opening, and it also THE RESPONSIBILITY OF THE BIDDER TO CHECK THE TOWN'S WEBSITE BEFORE SUBMITTING BID FOR ADDENDA POSTED PRIOR TO BID OPENING.

THE BIDDER ACKNOWLEDGES RECEIPT OF THE FOLLOWING ADDENDA AS REQUIRED:

Addendum #1 _____ (Initial/Date) **Addendum #2** _____ (Initial/Date) **Addendum #3** _____ (Initial/Date)

Other Items Required with Submission of Bid Proposal

The following bid checklist describes items required for inclusion with the above-referenced bid proposal package. It is provided for the convenience of the bidders and, therefore, should not be assumed to be a complete list.

- _____ Bid Bond (10% of total bid amount).
- _____ List of five (5) similar projects completed within last three (3) years.
- _____ Acknowledgement of Addendums (as applicable).
- _____ Acknowledgement of Code of Ethics on Bid Proposal page.
- _____ Sealed bids, one original and one copy.
- _____ Disclosure of past and pending mediation, arbitration and litigation cases that the Bidder or its principals have been involved in for the most recent five years (if applicable).
- _____ Copy of Bidder's Contractor's License (State of Connecticut).
- _____ Warranty information

Name of Bidder: _____

LUMP SUM BID:

Furnish and install window replacement at Glastonbury Police Department as specified in the Plans and Specifications for Bid GL-2019-06.

TOTAL OF LUMP SUM BID AMOUNT

\$ _____
(Numeric Bid Amount)

(Written Bid Amount)

ADD ALTERNATE 1:

Window Type D: Windows W28, W29 and W30 (See Drawings A.2, A.3, A.5)

\$ _____
(Numeric Bid Amount)

(Written Bid Amount)

NON-COLLUSION AFFIDAVIT:

By submission of this bid, the Bidder certifies, and in the case of a joint bid each party thereto certifies as to their own organization that this bid has been arrived at independently without consultation, communication, or agreement as to any matter relating to this bid with any other Bidder or with any competitor.

CODE OF ETHICS:

I / We have reviewed a copy of the Town of Glastonbury's Code of Ethics and agree to submit a Consultant Acknowledgement Form if I / We are selected. Yes _____ No _____ *

*Bidder is advised that effective August 1, 2003, the Town of Glastonbury cannot consider any bid or proposal where the bidder has not agreed to the above statement.

Print Name, Title of Individual

Doing Business as (Trade Name)

Signature of Individual

Street Address

Date

City, State, Zip Code

E:mail Address

Telephone Number / Fax Number

(Seal – If bid is by a Corporation)
Attest

Project: Police Department Window Replacement

**Minimum Rates and Classifications
for Building Construction**

ID# : B 25209

**Connecticut Department of Labor
Wage and Workplace Standards Division**

By virtue of the authority vested in the Labor Commissioner under provisions of Section 31-53 of the General Statutes of Connecticut, as amended, the following are declared to be the prevailing rates and welfare payments and will apply only where the contract is advertised for bid within 20 days of the date on which the rates are established. Any contractor or subcontractor not obligated by agreement to pay to the welfare and pension fund shall pay this amount to each employee as part of his/her hourly wages.

Project Number: GL-2019-06

Project Town: Glastonbury

State#:

FAP#:

Project: Police Department Window Replacement

CLASSIFICATION	Hourly Rate	Benefits
1a) Asbestos Worker/Insulator (Includes application of insulating materials, protective coverings, coatings, & finishes to all types of mechanical systems; application of firestopping material for wall openings & penetrations in walls, floors, ceilings	38.25	27.96
<hr/>		
1b) Asbestos/Toxic Waste Removal Laborers: Asbestos removal and encapsulation (except its removal from mechanical systems which are not to be scrapped), toxic waste removers, blasters.**See Laborers Group 7**		
<hr/>		
1c) Asbestos Worker/Heat and Frost Insulator	40.21	29.30

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Project: Police Department Window Replacement

2) Boilermaker	38.34	26.01
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3a) Bricklayer, Cement Mason, Concrete Finisher (including caulking), Stone Masons	33.48	32.06 + a
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3b) Tile Setter	34.90	25.87
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3c) Terrazzo Mechanics and Marble Setters	31.69	22.35
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3d) Tile, Marble & Terrazzo Finishers	26.70	21.75
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3e) Plasterer	33.48	32.06
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Project: Police Department Window Replacement

-----LABORERS-----

4) Group 1: Laborers (common or general), acetylene burners, carpenter tenders, concrete specialists, wrecking laborers, fire watchers.	30.05	20.10
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4a) Group 2: Mortar mixers, plaster tender, power buggy operators, powdermen, fireproofers/mixer/nozzleman (Person running mixer and spraying fireproof only).	30.30	20.10
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4b) Group 3: Jackhammer operators/pavement breaker, mason tender (brick), mason tender (cement/concrete), forklift operators and forklift operators (masonry).	30.55	20.10
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4c) **Group 4: Pipelayers (Installation of water, storm drainage or sewage lines outside of the building line with P6, P7 license) (the pipelayer rate shall apply only to one or two employees of the total crew who primary task is to actually perform the mating of pipe sections) P6 and P7 rate is \$26.80.	30.55	20.10
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4d) Group 5: Air track operator, sand blaster and hydraulic drills.	30.55	20.10
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4e) Group 6: Blasters, nuclear and toxic waste removal.	31.80	20.10
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4f) Group 7: Asbestos/lead removal and encapsulation (except it's removal from mechanical systems which are not to be scrapped).	31.05	20.10
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4g) Group 8: Bottom men on open air caisson, cylindrical work and boring crew.	28.38	20.10
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4h) Group 9: Top men on open air caisson, cylindrical work and boring crew.	27.86	20.10
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4i) Group 10: Traffic Control Signalman	16.00	20.10
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5) Carpenter, Acoustical Ceiling Installation, Soft Floor/Carpet Laying, Metal Stud Installation, Form Work and Scaffold Building, Drywall Hanging, Modular-Furniture Systems Installers, Lathers, Piledrivers, Resilient Floor Layers.	32.60	25.34
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5a) Millwrights 33.14 25.74

6) Electrical Worker (including low voltage wiring) (Trade License required: E1,2 L-5,6 C-5,6 T-1,2 L-1,2 V-1,2,7,8,9) 40.00 25.97+3% of gross wage

7a) Elevator Mechanic (Trade License required: R-1,2,5,6) 51.71 32.645+a+b

-----LINE CONSTRUCTION-----

Groundman 26.50 6.5% + 9.00

Linemen/Cable Splicer 48.19 6.5% + 22.00

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Project: Police Department Window Replacement

8) Glazier (Trade License required: FG-1,2) 37.18 21.05 + a

9) Ironworker, Ornamental, Reinforcing, Structural, and Precast Concrete Erection 35.47 35.14 + a

----OPERATORS----

Group 1: Crane handling or erecting structural steel or stone, hoisting engineer 2 drums or over, front end loader (7 cubic yards or over), work boat 26 ft. and over and Tunnel Boring Machines. (Trade License Required) 39.55 24.05 + a

Group 2: Cranes (100 ton rate capacity and over); Excavator over 2 cubic yards; Piledriver (\$3.00 premium when operator controls hammer); Bauer Drill/Caisson. (Trade License Required) 39.23 24.05 + a

Group 3: Excavator; Backhoe/Excavator under 2 cubic yards; Cranes (under 100 ton rated capacity), Grader/Blade; Master Mechanic; Hoisting Engineer (all types of equipment where a drum and cable are used to hoist or drag material regardless of motive power of operation), Rubber Tire Excavator (Drott-1085 or similar); Grader Operator; Bulldozer Fine Grade. (slopes, shaping, laser or GPS, etc.). (Trade License Required) 38.49 24.05 + a

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Group 4: Trenching Machines; Lighter Derrick; Concrete Finishing Machine; CMI Machine or Similar; Koehring Loader (Skooper).	38.10	24.05 + a
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Group 5: Specialty Railroad Equipment; Asphalt Paver; Asphalt Reclaiming Machine; Line Grinder; Concrete Pumps; Drills with Self Contained Power Units; Boring Machine; Post Hole Digger; Auger; Pounder; Well Digger; Milling Machine (over 24" Mandrell)	37.51	24.05 + a
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Group 5 continued: Side Boom; Combination Hoe and Loader; Directional Driller; Pile Testing Machine.	37.51	24.05 + a
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Group 6: Front End Loader (3 up to 7 cubic yards); Bulldozer (rough grade dozer).	37.20	24.05 + a
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Group 7: Asphalt roller, concrete saws and cutters (ride on types), vermeer concrete cutter, Stump Grinder; Scraper; Snooper; Skidder; Milling Machine (24" and under Mandrell).	36.86	24.05 + a
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Group 8: Mechanic, grease truck operator, hydroblaster; barrier mover; power stone spreader; welding; work boat under 26 ft.; transfer machine.	36.46	24.05 + a
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Group 9: Front end loader (under 3 cubic yards), skid steer loader regardless of attachments, (Bobcat or Similar): forklift, power chipper; landscape equipment (including Hydroseeder).	36.03	24.05 + a
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Group 10: Vibratory hammer; ice machine; diesel and air, hammer, etc.	33.99	24.05 + a
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Group 11: Conveyor, earth roller, power pavement breaker (whiphammer), robot demolition equipment.	33.99	24.05 + a
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Group 12: Wellpoint operator.	33.93	24.05 + a
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Group 13: Compressor battery operator.	33.35	24.05 + a
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Group 14: Elevator operator; tow motor operator (solid tire no rough terrain).	32.21	24.05 + a
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Group 15: Generator Operator; Compressor Operator; Pump Operator; Welding Machine Operator; Heater Operator.	31.80	24.05 + a
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Group 16: Maintenance Engineer/Oiler.	31.15	24.05 + a
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Group 17: Portable asphalt plant operator; portable crusher plant operator; portable concrete plant operator.	35.46	24.05 + a
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Group 18: Power safety boat; vacuum truck; zim mixer; sweeper; (Minimum for any job requiring a CDL license).	33.04	24.05 + a
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-----PAINTERS (Including Drywall Finishing)-----

10a) Brush and Roller	33.62	21.05
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10b) Taping Only/Drywall Finishing	34.37	21.05
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10c) Paperhanger and Red Label	34.12	21.05
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10e) Blast and Spray	36.62	21.05
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11) Plumber (excluding HVAC pipe installation) (Trade License required: P-1,2,6,7,8,9 J-1,2,3,4 SP-1,2)	42.62	31.21
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12) Well Digger, Pile Testing Machine	37.26	24.05 + a
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13) Roofer (composition)	35.97	19.73
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14) Roofer (slate & tile)	36.47	19.73
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15) Sheetmetal Worker (Trade License required for HVAC and Ductwork: SM-1,SM-2,SM-3,SM-4,SM-5,SM-6)	37.50	36.79
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16) Pipefitter (Including HVAC work) (Trade License required: S-1,2,3,4,5,6,7,8 B-1,2,3,4 D-1,2,3,4, G-1, G-2, G-8 & G-9)	42.62	31.21
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-----TRUCK DRIVERS-----

17a) 2 Axle	29.13	23.33 + a
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17b) 3 Axle, 2 Axle Ready Mix	29.23	23.33 + a
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17c) 3 Axle Ready Mix	29.28	23.33 + a
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17d) 4 Axle, Heavy Duty Trailer up to 40 tons	29.33	23.33 + a
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17e) 4 Axle Ready Mix	29.38	23.33 + a
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17f) Heavy Duty Trailer (40 Tons and Over)	29.58	23.33 + a
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17g) Specialized Earth Moving Equipment (Other Than Conventional Type on-the-Road Trucks and Semi-Trailers, Including Euclids)	29.38	23.33 + a
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18) Sprinkler Fitter (Trade License required: F-1,2,3,4)	43.92	15.84 + a
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Project: Police Department Window Replacement

19) Theatrical Stage Journeyman	25.76	7.34
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Project: Police Department Window Replacement

Welders: Rate for craft to which welding is incidental.

**Note: Hazardous waste removal work receives additional \$1.25 per hour for truck drivers.*

***Note: Hazardous waste premium \$3.00 per hour over classified rate*

ALL Cranes: When crane operator is operating equipment that requires a fully licensed crane operator to operate he receives an extra \$4.00 premium in addition to the hourly wage rate and benefit contributions:

1) Crane handling or erecting structural steel or stone; hoisting engineer (2 drums or over)

2) Cranes (100 ton rate capacity and over) Bauer Drill/Caisson

3) Cranes (under 100 ton rated capacity)

Crane with 150 ft. boom (including jib) - \$1.50 extra

Crane with 200 ft. boom (including jib) - \$2.50 extra

Crane with 250 ft. boom (including jib) - \$5.00 extra

Crane with 300 ft. boom (including jib) - \$7.00 extra

Crane with 400 ft. boom (including jib) - \$10.00 extra

All classifications that indicate a percentage of the fringe benefits must be calculated at the percentage rate times the "base hourly rate".

Apprentices duly registered under the Commissioner of Labor's regulations on "Work Training Standards for Apprenticeship and Training Programs" Section 31-51-d-1 to 12, are allowed to be paid the appropriate percentage of the prevailing journeymen hourly base and the full fringe benefit rate, providing the work site ratio shall not be less than one full-time journeyman instructing and supervising the work of each apprentice in a specific trade.

The Prevailing wage rates applicable to this project are subject to annual adjustments each July 1st for the duration of the project.

Each contractor shall pay the annual adjusted prevailing wage rate that is in effect each July 1st, as posted by the Department of Labor.

It is the contractor's responsibility to obtain the annual adjusted prevailing wage rate increases directly from the Department of Labor's website.

The annual adjustments will be posted on the Department of Labor's Web page: www.ct.gov/dol. For those without internet access, please contact the division listed below.

The Department of Labor will continue to issue the initial prevailing wage rate schedule to the Contracting Agency for the project.

All subsequent annual adjustments will be posted on our Web Site for contractor access.

Contracting Agencies are under no obligation pursuant to State labor law to pay any increase due to the annual adjustment provision.

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Effective October 1, 2005 - Public Act 05-50: any person performing the work of any mechanic, laborer, or worker shall be paid prevailing wage

All Person who perform work ON SITE must be paid prevailing wage for the appropriate mechanic, laborer, or worker classification.

All certified payrolls must list the hours worked and wages paid to All Persons who perform work ON SITE regardless of their ownership i.e.: (Owners, Corporate Officers, LLC Members, Independent Contractors, et. al)

Reporting and payment of wages is required regardless of any contractual relationship alleged to exist between the contractor and such person.

~~Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clause (29 CFR 5.5 (a) (1) (ii)).

Please direct any questions which you may have pertaining to classification of work and payment of prevailing wages to the Wage and Workplace Standards Division, telephone (860)263-6790.

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SECTION 02 41 49 - SELECTIVE DEMOLITION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including general and supplementary conditions and other Division 01 Specification Sections, apply to this section.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Demolition and removal of selected portions of building or structure.
- B. Related Sections include the following:
 - 1. Division 01 Section "Cutting and Patching" for cutting and patching procedures.

1.3 DEFINITIONS

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

1.4 MATERIALS OWNERSHIP

- A. Historic items, relics, and similar objects including, but not limited to, cornerstones and their contents, commemorative plaques and tablets, antiques, and other items of interest or value to Owner that may be encountered during selective demolition remain Owner's property. Carefully remove and salvage each item or object in a manner to prevent damage and deliver promptly to Owner.

1.5 SUBMITTALS

- A. Qualification Data: For demolition firm and professional engineer.
- B. Schedule of selective demolition activities: Indicate the following:

1. Detailed sequence of selective demolition and removal work, with starting and ending dates for each activity. Make sure Owner's on-site operations are uninterrupted.
 2. Coordination of Owner's continuing occupancy of portions of existing building.
 3. Means of protection for items to remain and items in path of waste removal from building.
- C. Inventory: After selective demolition is complete, submit a list of items that have been removed and salvaged.
- D. Pre-demolition Photographs or Videotapes: Show existing conditions of adjoining construction and site improvements, including finish surfaces that might be misconstrued as damage caused by selective demolition operations.
- E. Landfill Records: Indicate receipt and acceptance of hazardous wastes by a landfill facility licensed to accept hazardous wastes.

1.6 QUALITY ASSURANCE

- A. Demolition Firm Qualifications: An experienced firm that has specialized in demolition work similar in material and extent to that indicated for this Project.
- B. Regulatory Requirements: Comply with governing EPA notification regulations before beginning selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.
- C. Standards: Comply with ANSI A10.6 and NFPA 241.
- D. Pre-demolition Conference: Conduct conference at Project site to comply with requirements in Division 01 Section "Project Management and Coordination." Review methods and procedures related to selective demolition including, but not limited to, the following:
1. Inspect and discuss condition of construction to be selectively demolished.
 2. Review structural load limitations of existing structure.
 3. Review and finalize selective demolition schedule and verify availability of materials, demolition personnel, equipment, and facilities needed to make progress and avoid delays.
 4. Review requirements of work performed by other trades that rely on substrates exposed by selective demolition operations.
 5. Review areas where existing construction is to remain and requires protection.

1.7 PROJECT CONDITIONS

- A. Owner will occupy portions of building immediately adjacent to selective demolition area. Conduct selective demolition so Owner's operations will not be disrupted.
- B. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.
- C. Notify Architect of discrepancies between existing conditions and Drawings before proceeding with selective demolition.
- D. Hazardous Materials: It is not expected that hazardous materials will be encountered in the Work.

1. Hazardous materials will be removed by Owner before start of the Work.
 2. If materials suspected of containing hazardous materials are encountered, do not disturb; immediately notify Architect and Owner. Owner will remove hazardous materials under a separate contract.
- E. Storage or sale of removed items or materials on-site is not permitted.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify that utilities have been disconnected and capped.
- B. Survey existing conditions and correlate with requirements indicated to determine extent of selective demolition required.
- C. Inventory and record the condition of items to be removed and reinstalled and items to be removed and salvaged.
- D. When unanticipated mechanical, electrical, or structural elements that conflict with intended function or design are encountered, investigate and measure the nature and extent of conflict. Promptly submit a written report to Architect.
- E. Engage a professional engineer to survey condition of building to determine whether removing any element might result in structural deficiency or unplanned collapse of any portion of structure or adjacent structures during selective demolition operations.
- F. Survey of Existing Conditions: Record existing conditions by use of preconstruction photographs or preconstruction videotapes.
 1. Before selective demolition or removal of existing building elements that will be reproduced or duplicated in final Work, make permanent record of measurements, materials, and construction details required to make exact reproduction.
- G. Perform surveys as the Work progresses to detect hazards resulting from selective demolition activities.

3.2 PREPARATION

- A. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
 1. Comply with requirements for access and protection specified in Division 01 Section "Temporary Facilities and Controls."

- B. Temporary Facilities: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.
 - 1. Provide protection to ensure safe passage of people around selective demolition area and to and from occupied portions of building.
 - 2. Provide temporary weather protection, during interval between selective demolition of existing construction on exterior surfaces and new construction, to prevent water leakage and damage to structure and interior areas.
 - 3. Protect walls, ceilings, floors, and other existing finish work that are to remain or that are exposed during selective demolition operations.
 - 4. Cover and protect furniture, furnishings, and equipment that have not been removed.
- C. Temporary Shoring: Provide and maintain shoring, bracing, and structural supports as required to preserve stability and prevent movement, settlement, or collapse of construction and finishes to remain, and to prevent unexpected or uncontrolled movement or collapse of construction being demolished.
 - 1. Strengthen or add new supports when required during progress of selective demolition.

3.3 SELECTIVE DEMOLITION, GENERAL

- A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:
 - 1. Proceed with selective demolition systematically, from higher to lower level. Complete selective demolition operations above each floor or tier before disturbing supporting members on the next lower level.
 - 2. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping, to minimize disturbance of adjacent surfaces. Temporarily cover openings to remain.
 - 3. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
 - 4. Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations. Maintain fire watch and portable fire-suppression devices during flame-cutting operations.
 - 5. Maintain adequate ventilation when using cutting torches.
 - 6. Remove decayed, vermin-infested, or otherwise dangerous or unsuitable materials and promptly dispose of off-site.
 - 7. Remove structural framing members and lower to ground by method suitable to avoid free fall and to prevent ground impact or dust generation.
 - 8. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
 - 9. Dispose of demolished items and materials promptly.
- B. Removed and Salvaged Items:
 - 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

C. Removed and Reinstalled Items:

1. Clean and repair items to functional condition adequate for intended reuse. Paint equipment to match new equipment.
2. Pack or crate items after cleaning and repairing. Identify contents of containers.
3. Protect items from damage during transport and storage.
4. Reinstall items in locations indicated. Comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make item functional for use indicated.

D. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by Architect, items may be removed to a suitable, protected storage location during selective demolition, cleaned and reinstalled in their original locations after selective demolition operations are complete.

3.4 PATCHING AND REPAIRING

A. Promptly patch and repair holes and damaged surfaces caused to adjacent construction by selective demolition operations.

1. **Unscheduled Demolition:** Assume responsibility for such additional patching, repairs, and replacement work required as a result of unscheduled demolition of existing materials, systems or finishes indicated to remain in the finished work. Provide required patching, repair or replacement work which is consistent with the standards of the Documents for similar work and which meets quality standards acceptable to the Architect.

B. Where repairs to existing surfaces are required, patch to produce surfaces suitable for new materials.

1. Completely fill holes and depressions in existing masonry walls to remain with an approved masonry patching material, applied according to the manufacturer's written recommendations.

C. Restore exposed finishes of patched areas and extend finish restoration into adjoining construction to remain in a manner that eliminates evidence of patching, repairing and refinishing.

D. Patch and repair floor and wall surfaces where demolished walls or partitions extend one finished area into another. Provide a flush and even surface of uniform color and appearance.

1. Closely match texture and finish of existing adjacent surface.
2. Patch with durable seams that are as invisible as possible. Comply with specified tolerances.
3. Where patching smooth painted surfaces, extend final paint coat over entire unbroken surface containing the patch after the surface has received primer and second coat.
4. Remove existing floor and wall coverings and replace with new materials, if necessary, to achieve uniform color and appearance.

5. Inspect and test patched areas to demonstrate integrity of the installation, where feasible.
- E. Patch, repair or rehang existing ceilings as necessary to provide an even plane surface of uniform appearance.

3.5 DISPOSAL OF DEMOLISHED MATERIALS

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

3.4 CLEANING

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

END OF SECTION 02 41 19

SECTION 06 10 00 — ROUGH CARPENTRY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Work includes sills, plates, stud walls, blocking, wall and roof sheathing, exterior wall furring, temporary enclosures and duststops, shoring, bracing and rough hardware.

1.3 REFERENCE STANDARDS

- A. American Forest and Paper Association (AFPA): ANSI NDS-1997 "National Design Specification for Wood Construction"
- B. Southern Pine Inspection Bureau (SPIB): SPIB "Grading Rules" (latest edition)
- C. Western Wood Products Association (WWPA): WWPA "Grading Rules for Western Lumber" (latest edition)
- D. National Lumber Grades Authority (NLGA): NLGA - "Standard Grading Rules" (latest edition)
- E. American Plywood Association (APA): APA C-20 "Plywood Specification and Grade Guide"
- F. American Wood Preserver's Association (AWPA): LP-2 "Above Ground Use, Pressure Treated with Water-Bourne Preservatives"

1.4 SUBMITTALS

- A. Submit properly marked samples of materials prior to delivery to site

1.5 PRODUCT HANDLING

- A. All wood must be covered and completely weather protected and stored at least twelve (12") inches above grade

PART 2 - PRODUCTS

2.1 FRAMING LUMBER

- A. All horizontal or sloping framing lumber two by six (2x6), two by eight (2x8), two by ten (2x10), and two by twelve (2x12), shall be #2 Douglas-Fir, having an allowable extreme fiber stress in bending "Fb" of 875 psi for single use and 1000 psi for repetitive member uses, and an "E" value of 1,600,000 psi, unless otherwise shown.
- B. All two by six (2x6) bearing studs, unless otherwise shown, shall be Douglas Fir #2 Construction Grade,

having an allowable compression parallel to grain "Fc" of 1600 psi, and an "E" value of 1,500,000 psi.

- C. All horizontal sills in contact with earth bearing slabs, or concrete shall be Pressure-Treated.
- D. Light framing lumber used for studs in non-bearing walls and partitions shall not be less than Stud or Standard grade and shall have a compressive stress parallel to grain "Fc" of not less than 850 psi, Douglas Fir.
- E. Moisture content at delivery shall not exceed 19% for all general framing lumber. "Grade Mark", "Trade Mark" and Mill Identification Mark of Association having jurisdiction shall appear on each member.

2.2 ROUGH HARDWARE

- A. General: Provide fasteners of size and type indicated that comply with requirements and products specified in this Article for material and manufacture.
 - 1. Where carpentry is installed at exterior locations, provide fasteners with hot-dip zinc coating complying with ASTM A 153/A 153M, or Type 304 stainless steel fasteners, as recommended in writing by wood-preservative-treatment manufacturer.
- B. Nails, Wire, Brads, and Staples: FS FF-N-105
- C. Power-Driven Fasteners: CABO NER-272
- D. Wood Screws: ASME B18.6.1
- E. Lag Bolts: ASME B18.2.1. (ASME B18.2.3.8M)
- F. Bolts: Steel bolts complying with ASTM A 307, Grade A (ASTM F 568M, Property Class 4.6); with ASTM A 563 (ASTM A 563M) hex nuts and, where indicated, flat washers.
- G. Expansion Anchors: Anchor bolt and sleeve assembly of material indicated below with capability to sustain, without failure, a load equal to 6 times the load imposed when installed in unit masonry assemblies and equal to 4 times the load imposed when installed in concrete as determined by testing per ASTM E 488 conducted by a qualified independent testing and inspecting agency.
 - 1. Material: Carbon-steel components, zinc plated to comply with ASTM B 633, Class Fe/Zn 5, for interior applications
 - 2. Material: Stainless steel with bolts and nuts complying with ASTM F 593 and ASTM F 594, alloy Group 1 or 2 (ASTM F 738M and ASTM F 836M, Grade A1 or A4), for exterior applications.

2.3 LAMINATED VENEER LUMBER

- A. Provide sizes indicated on drawings. Provide extreme fiber stress in bending "Fb" of 2800 psi and an "E" value of 2,000,000 psi. "Micro=Lam" as manufactured by Truss Joist, Inc., Boise, ID or approved equal.

2.4 WOOD-PRESERVATIVE-TREATED MATERIALS

- A. Preservative Treatment by Pressure Process: AWPAC2 (lumber) and AWPAC9 (plywood), except that lumber that is not in contact with the ground and is continuously protected from liquid water may be treated according to AWPAC31 with inorganic boron (SBX).
 - 1. Preservative Chemicals: Acceptable to authorities having jurisdiction and containing no arsenic or chromium.
- B. Kiln-dry material after treatment to a maximum moisture content of 19 percent for lumber and 15 percent for plywood. Do not use material that is warped or does not comply with requirements for untreated material.
- C. Mark each treated item with the treatment quality mark of an inspection agency approved by the American Lumber Standards Committee Board of Review.
- D. Application: Treat items indicated on Drawings, and the following:
 - 1. Wood blocking, furring, stripping, and similar concealed members in contact with masonry or concrete.
 - 2. Blocking at perimeter of exterior wall openings.

2.5 OTHER MATERIAL

- A. All other material, not specifically described but required for a complete and proper installation as indicated, shall be new, suitable for the intended use, and subject to the approval of the Architect.

PART 3 - EXECUTION

3.1 ROUGH HARDWARE

- A. Bolts, screws, nails, etc., as required. All in accordance with requirements as indicated on Structural Drawings and State Building Code "Fastening Schedule".

3.2 TEMPORARY ENCLOSURE

- A. Provide temporary enclosures, doors and dust barriers as required to protect building from weather and construction damage and to ensure building security. Upon completion, remove all temporary work and repair any damage to permanent finishes and installations. Verify requirements with Architect and Owner.

3.3 SURFACE CONDITIONS

- A. Carefully inspect the installed work of other trades and verify that all such work is complete where this installation may properly commence. Verify that rough carpentry may be performed in strict accordance with the design and all pertinent codes and regulations. In the event of discrepancy, notify Architect. Do not proceed with work until directions are received from Architect.

3.4 GENERAL FRAMING

- A. General: All rough carpentry shall produce joints true, tight, and well nailed with all members assembled as indicated. Set all horizontal and sloped members with crown up. Double members minimum for

headers and trimmers.

- B. Selection of Lumber Pieces: Carefully select all members. Select individual pieces so that knots and obvious defects will not interfere with placing bolts or proper nailing or making proper connections. Cut out and discard all defects which will render a piece unable to serve its intended function. Lumber may be rejected by the Architect, whether or not it has been installed, for excessive warp, twist, bow, crook, mildew, fungus, or mold, as well as for improper cutting and fitting.
- C. Bearing: Make all bearings full unless otherwise indicated. Finish all bearing surfaces on which structural members are to rest to give sure and even support. Where framing members slope, cut or notch the ends as required to give uniform bearing surface. Minimum bearing one and one-half (1 1/2") inches on wood, four (4") inches on steel.
- D. Shimming: Do not shim any framing components.
- E. Alignment: On all framing members to receive a finished surface, alignment of the finish subsurface to vary not more than one-eighth (1/8") inch from the plane of surfaces of adjacent framing and furring members. Provide "padding" as required to achieve proper surfaces for finish materials.
- F. Holes and Notches: Do not bore holes closer than 2 inches from top or bottom of joists with hole diameter not to exceed one-third (1/3) the depth of member. Do not notch in middle third (1/3) of joist. Depth of notches in top or bottom of joists not to exceed one-sixth (1/6) the member depth. Notched ends not to exceed one-third (1/3) member depth. DO NOT cut holes or notches in truss members. Notches or holes over one (1") inch diameter in two by four (2x4) studs will require metal stud plates equal to Strong Tie SS Stud plates. Include nail stopper at all piping.
- G. Sills: Set in bed of Portland Cement mortar. Secure each member with a minimum of two (2) bolts. Secure sills to bolts with recessed washer and nut.
- H. Preservatives: Treat all wood in contact with concrete or masonry with wood preservative. Include blocking at perimeter of exterior wall openings.

3.5 BLOCKING

- A. Install all blocking required to support all items of finish and to cut off all concealed draft openings, both vertical and horizontal, between ceiling and floor areas. Firestop concealed spaces with wood blocking not less than two (2") inches thick unless blocked by other framing members. Provide blocking to support edges of all soffits, flashing, etc. Provide two (2")-inch solid blocking as required for securing edges of gypsumboard. Provide continuous blocking for gypsumboard ceiling at all edges. Also, provide blocking behind all wall or ceiling mounted accessories such as grab bars, cabinets, fans, light fixtures, plumbing lines, electrical panelboards, bathroom accessories, etc. Note that grab bars must be capable of supporting three hundred (300 LB) pounds after installation.

3.6 BACKBOARDS

- A. Install three-quarter (3/4") inch thick C-D fir plywood backboards for mounting of electrical, telephone panels, etc. Backboards are to be painted under Division 09 Section prior to installation of equipment

3.01 FASTENING

- A. Rough Hardware: Anchor and nail shall comply with State Building Code.
- B. Nailing: Use only common wire nails or spikes of the dimensions shown on the Fastening Schedule, except where otherwise specifically noted on the drawings. For conditions not covered in the Fastening Schedule, provide penetration into the piece receiving the point of no less than one-half (1/2") inch the length of the nail or spike, provided, however, that 16d nails may be used to connect two (2) pieces of two (2") inch (nominal) thickness. Do all nailing without splitting wood. Prebore as required. Replace all split members.
- C. Bolting: Drill holes one-sixteenth (1/16) inch larger in diameter than the bolts being used. Drill straight and true from one (1) side only. Bolt threads shall not bear on wood. Use washers under head and nut where both bear on wood. Use washers under all nuts.
- D. Screws: For lag screws and wood-screws, prebore holes same diameter as root of threads; enlarge holes to shank diameter for length of shank. Screw, do not drive, all lag-screws and wood-screws.

3.02 LAMINATED VENEER LUMBER

- A. Provide one-half (1/2") inch diameter at two (2') feet on center thru-bolts top and bottom of multiple units. Provide top flange hangers where laminated members are supported by trusses or other members.

END OF SECTION

SECTION 06 40 23 - INTERIOR ARCHITECTURAL WOODWORK

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes the following:

- 1. Interior trim.

- B. Related Sections include the following:

- 1. Division 06 Section "Rough Carpentry" for wood furring, blocking, shims, and hanging strips required for installing woodwork and concealed within other construction before woodwork installation.
- 2. Division 07 Section "Joint Sealants"
- 3. Division 08 Section "Aluminum Clad Wood Windows"
- 4. Division 09 Section "Interior and Exterior Painting"

1.3 DEFINITIONS

- A. Interior architectural woodwork includes wood furring, blocking, shims, and hanging strips for installing woodwork items unless concealed within other construction before woodwork installation.

1.4 SUBMITTALS

- A. Product Data: For wood products and finishing materials and processes.
- B. Shop Drawings: Show location of each item, dimensioned plans and elevations, large-scale details, attachment devices, and other components.
 - 1. Show locations and sizes of furring, blocking, and hanging strips, including concealed blocking and reinforcement specified in other Sections.
- C. Samples for Verification:
 - 1. Provide 4" section of the following:
 - a. Window Sill
 - b. Window Apron
 - c. Window Stop
- D. Product Certificates: For each type of product, signed by product manufacturer.
- E. Qualification Data: For fabricator.

1.5 QUALITY ASSURANCE

- A. Fabricator Qualifications: Shop that employs skilled workers who custom-fabricate products similar to those required for this Project and whose products have a record of successful in-service performance.
- B. Source Limitations: Engage a qualified woodworking firm to assume undivided responsibility for production of interior architectural woodwork.
- C. Quality Standard: Unless otherwise indicated, comply with AWI's "Architectural Woodwork Quality Standards" for grades of interior architectural woodwork indicated for construction, finishes, installation, and other requirements.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Do not deliver woodwork until painting and similar operations that could damage woodwork have been completed in installation areas. If woodwork must be stored in other than installation areas, store only in areas where environmental conditions comply with requirements specified in "Project Conditions" Article.

1.7 PROJECT CONDITIONS

- A. Environmental Limitations: Do not deliver or install woodwork until building is enclosed, wet work is complete, and HVAC system is operating and maintaining temperature and relative humidity at occupancy levels during the remainder of the construction period.
- B. Field Measurements: Where woodwork is indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication, and indicate measurements on Shop Drawings. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
 - 1. Locate concealed framing, blocking, and reinforcements that support woodwork by field measurements before being enclosed, and indicate measurements on Shop Drawings.
 - 2. Established Dimensions: Where field measurements cannot be made without delaying the Work, establish dimensions and proceed with fabricating woodwork without field measurements. Provide allowance for trimming at site, and coordinate construction to ensure that actual dimensions correspond to established dimensions.

1.8 COORDINATION

- A. Coordinate sizes and locations of framing, blocking, furring, reinforcements, and other related units of Work specified in other Sections to ensure that interior architectural woodwork can be supported and installed as indicated.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. General: Provide materials that comply with requirements of AWI's quality standard for each type of woodwork and quality grade specified, unless otherwise indicated.
- B. Wood Species and Cut for Painted Finish: White Pine or closed grain hardwood.
 - 1. Grade: Custom
- C. Wood Products: Comply with the following:
 - 1. FSC Certified

2.2 MISCELLANEOUS MATERIALS

- A. Furring, Blocking, Shims, and Hanging Strips: Softwood or hardwood lumber, kiln dried to less than 15 percent moisture content.
- B. Anchors: Select material, type, size, and finish required for each substrate for secure anchorage. Provide nonferrous-metal or hot-dip galvanized anchors and inserts on inside face of exterior walls and elsewhere as required for corrosion resistance. Provide toothed-steel or lead expansion sleeves for drilled-in-place anchors.
- C. Adhesives, General: Do not use adhesives that contain urea formaldehyde.

2.3 FABRICATION, GENERAL

- A. Interior Woodwork Grade: Unless otherwise indicated, provide Custom-grade interior woodwork complying with referenced quality standard.
- B. Wood Moisture Content: Comply with requirements of referenced quality standard for wood moisture content in relation to ambient relative humidity during fabrication and in installation areas.
- C. Fabricate woodwork to dimensions, profiles, and details indicated. Ease edges to radius indicated for the following:
 - 1. Edges of Solid-Wood (Lumber) Members 3/4 Inch (19 mm) Thick or Less: 1/16 inch (1.5 mm).
 - 2. Edges of Rails and Similar Members More Than 3/4 Inch (19 mm) Thick: 1/8 inch (3 mm).
- D. Complete fabrication, including assembly, finishing, and hardware application, to maximum extent possible before shipment to Project site. Disassemble components only as necessary for shipment and installation. Where necessary for fitting at site, provide ample allowance for scribing, trimming, and fitting.

2.4 INTERIOR STANDING AND RUNNING TRIM FOR PAINTED FINISH

- A. Grade: Custom.
- B. Wood Species and Cut: White Pine or approved closed grain hardwood.
- C. Backout or groove backs of flat trim members and kerf backs of other wide, flat members, except for members with ends exposed in finished work.
- D. Assemble casings in plant except where limitations of access to place of installation require field assembly.

2.5 SHOP FINISHING

- A. Grade: Provide finishes of same grades as items to be finished.
- B. General: Shop finish transparent-finished interior architectural woodwork at fabrication shop as specified in this Section. Refer to Division 09 painting Sections for finishing opaque-finished architectural woodwork.
- C. Shop Priming: Shop apply the prime coat including back-priming, if any, for items specified to be field finished. Refer to Division 09 painting Sections for material and application requirements.
- D. Preparation for Finishing: Comply with referenced quality standard for sanding, filling countersunk fasteners, sealing concealed surfaces, and similar preparations for finishing architectural woodwork, as applicable to each unit of work.
- E. Painted Finish: Refer to Division 09 painting Sections for material and application requirements.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Before installation, condition woodwork to average prevailing humidity conditions in installation areas.
- B. Before installing architectural woodwork, examine shop-fabricated work for completion and complete work as required, including removal of packing and back-priming.

3.2 INSTALLATION

- A. Grade: Install woodwork to comply with requirements for the same grade specified in Part 2 for fabrication of type of woodwork involved.
- B. Assemble woodwork and complete fabrication at Project site to comply with requirements for fabrication in Part 2, to extent that it was not completed in the shop.

- C. Install woodwork level, plumb, true, and straight. Shim as required with concealed shims. Install level and plumb (including tops) to a tolerance of 1/8 inch in 96 inches (3 mm in 2400 mm).
- D. Scribe and cut woodwork to fit adjoining work, refinish cut surfaces, and repair damaged finish at cuts.
- E. Anchor woodwork to anchors or blocking built in or directly attached to substrates. Secure with countersunk, concealed fasteners and blind nailing as required for complete installation. Use fine finishing nails or finishing screws for exposed fastening, countersunk and filled flush with woodwork and matching final finish if transparent finish is indicated.
- F. Standing and Running Trim: Install with minimum number of joints possible, using full-length pieces (from maximum length of lumber available) to greatest extent possible. Do not use pieces less than 96 inches (2400 mm) long, except where shorter single-length pieces are necessary. Scarf running joints and stagger in adjacent and related members.
 - 1. Fill gaps, if any, between top of base and wall with plastic wood filler, sand smooth, and finish same as wood base if finished.
 - 2. Install wall railings on indicated metal brackets securely fastened to wall framing.
 - 3. Install standing and running trim with no more variation from a straight line than 1/8 inch in 96 inches (3 mm in 2400 mm).
- G. Touch up finishing work specified in this Section after installation of woodwork. Fill nail holes with matching filler where exposed.
- H. Refer to Division 09 Sections for final finishing of installed architectural woodwork not indicated to be shop finished.

3.3 ADJUSTING AND CLEANING

- A. Repair damaged and defective woodwork, where possible, to eliminate functional and visual defects; where not possible to repair, replace woodwork. Adjust joinery for uniform appearance.
- B. Clean woodwork on exposed and semi-exposed surfaces. Touch up shop-applied finishes to restore damaged or soiled areas.

END OF SECTION

SECTION 06 60 00 - CELLULAR PVC FABRICATIONS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Cellular PVC fabrications including the following:
 - 1. Sheets
 - 2. Detail Moulding

1.2 RELATED SECTIONS

- A. Division 6 "Rough Division 9 Section "Painting"

1.3 REFERENCES

- A. ASTM International (ASTM): ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials.

1.4 SUBMITTALS

- A. Submit under provisions of Section 01 30 00 - Administrative Requirements.
- 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. Verification Samples: For each finish product specified, two samples, minimum size 6 inches (150 mm) square representing actual product, color, and patterns.

1.5 QUALITY ASSURANCE

- A. Regulatory Requirements: Comply with requirements of authorities having jurisdiction and applicable codes at the location of the project.
- B. Manufacturer Qualifications: Minimum 5 years' experience manufacturing similar products.
- C. Installer Qualifications: Minimum 2 years' experience installing similar products.
- D. Mock-Ups: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.

1.6 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. Comply with manufacturer's recommendations. Handle materials to avoid damage.

1.7 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.

1.8 WARRANTY

- A. Provide manufacturer's standard limited warranty for products, stating that components will be free from defects in material that occur as a direct result of the manufacturing process, occur under normal use and service, occur during the warranty period and result in blistering, peeling, flaking, cracking, splitting, cupping, rotting or structural defects from termites or fungal decay.
 - 1. Azek Trim Warranty Period: 25 years.
 - 2. Azek Moulding Warranty Period: 25 years.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturer: Azek Building Products, Inc., which is located at: 894 Prairie Ave.; Wilmington, OH 45177; Toll Free Tel: 877-ASK-AZEK; Tel: 570-346-8797; Fax: 570-346-5080
- B. Substitutions: Not permitted.
- C. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.
- D. PVC Sheet: Material shall have the following characteristics:
 - 1. Material: Solid Cellular PVC.
 - 2. Style: Traditional.
 - 3. Sheet Size:
 - a. 1/2 inches x 4 feet x 8 feet actual dimension.
 - b. 1/2 inches x 4 feet x 10 feet actual dimension.
- E. Detail Profiles: Material shall have the following characteristics:
 - 1. Material: Solid Cellular PVC.
 - 2. Detail Profile:
 - a. Band Moulding AZM217

2.2 ACCESSORIES

- A. Fasteners: Stainless steel or hot-dip galvanized, with thin shank, blunt point, full round head as recommended by the manufacturer.
- B. Adhesives: Azek Adhesive, a non-toxic, odorless, UV stable, water-based PVC cement.
- C. Sealants: Urethane, polyurethane or acrylic based sealants without silicone.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verification of Conditions: Examine areas and conditions under which Work is to be performed and identify conditions that may be detrimental to proper or timely completion.

- B. Do not proceed until unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. General: Install products in accordance with manufacturer's instructions, approved submittals, and in proper relationship with adjacent construction.
 - 1. Use manufacturer's recommended fasteners, not more than 2 inches from ends.
 - 2. Glue joints to eliminate joint separation.
 - 3. Allow for expansion and contraction at ends of the runs.

3.3 CLEANING AND PROTECTION

- A. Protect from damage during construction operations. Promptly repair any damaged surfaces. Remove and replace work which cannot be satisfactorily repaired.
- B. Clean products, prior to Substantial Completion, using materials recommended by the manufacturer to remove stains, dirt and debris prior to final acceptance.

END OF SECTION

SECTION 06 65 00 – EXTERIOR SYNTHETIC TRIM

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes: Exterior synthetic (poly-ash) trim.

B. Related Sections: Section(s) related to this section include:

1. Division 8, Section “Aluminum Clad Wood Windows”
2. Division 7, Section “Joint Sealants”
3. Division 9, Section “Painting”

1.2 REFERENCE STANDARDS

- A. ASTM C 1185 – Standard Test Methods for Sampling and Testing Non-Asbestos Fiber-Cement Flat Sheet, Roofing and Siding Shingles, and Clapboards.
- B. ASTM D 570 – Standard Test Method for Water Absorption of Plastics.
- C. ASTM D 1761 – Standard Test Methods for Mechanical Fasteners in Wood.
- D. ASTM D 6341 – Standard Test Method for Determination of the Linear Coefficient of Thermal Expansion of Plastic Lumber and Plastic Lumber Shapes Between -30 and 140°F (-34.4 and 60°C).
- E. ASTM E 84 – Standard Test Method for Surface Burning Characteristics of Building Materials.
- F. AWPA E1 – Standard Method for Laboratory Evaluation to Determine Resistance to Subterranean Termites.
- G. AWPA E10 – Standard Method of Testing Wood Preservatives by Laboratory Soil-Block Cultures.

1.3 ADMINISTRATIVE REQUIREMENTS

- A. Pre-installation Meetings: Conduct pre-installation meeting to clarify Project requirements, substrate conditions, manufacturer’s installation instructions and manufacturer’s warranty requirements.

1.4 SUBMITTALS

- A. Product Data: Submit manufacturer’s product data, including installation instructions.
- B. Samples: Submit manufacturer’s sample of exterior synthetic trim, minimum 1 inch by 4 inches by 8 inches long.
- C. Manufacturer’s Certification: Submit manufacturer’s certification that materials comply with specified requirements and are suitable for intended application.

- D. Warranty Documentation: Submit manufacturer's standard warranty.

1.5 DELIVERY, STORAGE AND HANDLING

A. Storage and Handling Requirements:

1. Store and handle materials in accordance with manufacturer's instructions.
2. Keep materials in protective covering until installation.
3. Store materials in clean, dry area.
4. Store exterior synthetic trim on flat, level surface.
5. Keep exterior synthetic trim covered and free of dirt and debris.
6. Protect materials and finish during storage, handling, and installation to prevent damage.

1.8 WARRANTY

A. Warranty Period for Exterior Synthetic Trim: 20-year limited warranty.

1. No decay due to rot.
2. No excess swelling from moisture.
3. Resist termite damage.

PART 2 PRODUCTS

2.1 MANUFACTURER

- A. Boral Composites Inc., 200 Mansell Court East, Suite 305, Roswell, Georgia 30076. Toll Free 888-926-7259. www.BoralTruExterior.com. info@TruExterior.com.

2.2 EXTERIOR SYNTHETIC TRIM

A. Exterior Synthetic (Poly-ash) Trim: Boral TruExterior® Trim.

B. Composition:

1. Post-Industrial Recycled Content: Minimum 70 percent, by weight.
2. Post-Consumer Recycled Content: Minimum 2 percent, by weight
3. Pigments and dyes.

C. Physical Properties:

1. Density, ASTM C 1185: 40 to 50 pcf.
2. Water Absorption, ASTM D 570: Less than 1.5 percent.
3. Fungi Rot, AWWA E10:
 - a. White Rot: Negligible loss
 - b. Brown Rot: Negligible loss
4. Termite Resistance, AWWA E1: Greater than 9.0, with 10 being impervious.

D. Mechanical Properties:

1. Flexural Strength, ASTM C 1185: Greater than 1,600 psi

2. Nail Withdrawal, ASTM D 1761: Greater than 40 lbf/in
- E. Thermal Properties:
1. Coefficient of Linear Expansion, ASTM D 6341, Typical: 1.40E-05 in/in/degree F, tested at minus 30 to 140 degrees F
 2. Flame Spread, ASTM E 84: Between 25 and 29
 3. Smoke Developed, ASTM E 84: Less than 450
- F. Trim Sizes:
1. Custom Trim Sizes per Details on the Architectural Drawings.
 2. Manufacturing Tolerances:
 - a. Width: Plus or minus 1/16 inch
 - b. Thickness: Plus or minus 1/16 inch
 - c. Length: Plus 2 inches, minus 0 inch
 - d. Edge Cut: Plus or minus 2 degrees
 3. Exposed Texture: Smooth.

2.3 FINISHES

- A. Primer:
1. Acrylic based
 2. Low VOC
 3. Factory applied on all sides
- B. Factory Finish:
1. Acrylic based
 2. Low VOC
 3. Factory applied on all sides

2.4 FASTENERS

- A. Type: Nails
1. Size: 3" minimum for 2" trim, 1 1/2" minimum for 3/4" trim.
 2. Finish: Stainless steel.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Examine surfaces to receive exterior synthetic trim.
- B. Notify Architect of conditions that would adversely affect installation or subsequent use.
- C. Do not begin installation until unacceptable conditions are corrected.

3.2 INSTALLATION

- A. Install exterior synthetic trim in accordance with manufacturer's instructions at locations indicated on the Drawings.
- B. Do not install exterior synthetic trim in structural or load-bearing applications.
- C. Install exterior synthetic trim plumb, level, and square.
- D. Install exterior synthetic trim with flush, tight joints.
- E. Install Fasteners: Maximum of 24 inches on center. Within 2 inches of end of boards.
- F. Fill nail and screw holes with acrylic caulk, wood filler, or auto body filler.
- G. Repair minor damages to exterior synthetic trim in accordance with manufacturer's instructions and as approved by Architect.
- H. Remove and replace damaged exterior synthetic trim that cannot be successfully repaired as determined by Architect.
- I. Painting: As specified in Section 09 91 00.
 - 1. Touch up all exposed surfaces of installed trim within 150 days of installing trim.

3.3 PROTECTION

- A. Protect installed exterior synthetic trim to ensure that, except for normal weathering, trim will be without damage or deterioration at time of Substantial Completion.

END OF SECTION

SECTION 07 92 00 - JOINT SEALANTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes sealants for the following applications, including those specified by reference to this Section:

- 1. Interior joints in the following vertical surfaces:

- a. Perimeter joints between interior wall surfaces and frames of windows.
 - b. Other joints as indicated.

- 2. Exterior joints in the following vertical surfaces:

- a. Perimeter joints between masonry wall surfaces and frames of windows.
 - b. Other joints as indicated.

- B. Related Sections include the following:

- 1. Division 08 Section "Glazing" for glazing sealants.

1.3 PERFORMANCE REQUIREMENTS

- A. Provide elastomeric joint sealants that establish and maintain watertight and airtight continuous joint seals without staining or deteriorating joint substrates.
- B. Provide joint sealants for interior applications that establish and maintain airtight and water-resistant continuous joint seals without staining or deteriorating joint substrates.

1.4 SUBMITTALS

- A. Product Data: For each joint-sealant product indicated.
- B. Samples for Initial Selection: Manufacturer's color charts consisting of strips of cured sealants showing the full range of colors available for each product exposed to view.

- C. Samples for Verification: For each type and color of joint sealant required. Install joint sealants in 1/2-inch-(13-mm-) wide joints formed between two 6-inch-(150-mm-) long strips of material matching the appearance of exposed surfaces adjacent to joint sealants.
- D. Product Certificates: Signed by manufacturers of joint sealants certifying that products furnished comply with requirements and are suitable for the use indicated.

1.5 QUALITY ASSURANCE

- A. Installer Qualifications: An experienced installer who has specialized in installing joint sealants similar in material, design, and extent to those indicated for this Project and whose work has resulted in joint-sealant installations with a record of successful in-service performance.
- B. Source Limitations: Obtain each type of joint sealant through one source from a single manufacturer.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to Project site in original unopened containers or bundles with labels indicating manufacturer, product name and designation, color, expiration date, pot life, curing time, and mixing instructions for multicomponent materials.
- B. Store and handle materials in compliance with manufacturer's written instructions to prevent their deterioration or damage due to moisture, high or low temperatures, contaminants, or other causes.

1.7 PROJECT CONDITIONS

- A. Environmental Limitations: Do not proceed with installation of joint sealants under the following conditions:
 - 1. When ambient and substrate temperature conditions are outside limits permitted by joint sealant manufacturer or are below 40 deg F(4.4 deg C).
 - 2. When joint substrates are wet.
- B. Joint-Width Conditions: Do not proceed with installation of joint sealants where joint widths are less than those allowed by joint sealant manufacturer for applications indicated.
- C. Joint-Substrate Conditions: Do not proceed with installation of joint sealants until contaminants capable of interfering with adhesion are removed from joint substrates.

PART 2 - PRODUCTS

2.1 PRODUCTS AND MANUFACTURERS

- A. Products: Subject to compliance with requirements, provide one of the products indicated for each type in the sealant schedules at the end of Part 3.

2.2 MATERIALS, GENERAL

- A. Compatibility: Provide joint sealants, backings, and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by sealant manufacturer based on testing and field experience.
- B. Colors of Exposed Joint Sealants: As selected by Architect from manufacturer's full range for this characteristic.

2.3 ELASTOMERIC JOINT SEALANTS

- A. Elastomeric Sealant Standard: Comply with ASTM C 920 and other requirements indicated for each liquid-applied chemically curing sealant in the Elastomeric Joint-Sealant Schedule at the end of Part 3, including those referencing ASTM C 920 classifications for type, grade, class, and uses.
- B. Additional Movement Capability: Where additional movement capability is specified in the Elastomeric Joint-Sealant Schedule, provide products with the capability, when tested for adhesion and cohesion under maximum cyclic movement per ASTM C 719, to withstand the specified percentage change in the joint width existing at the time of installation and remain in compliance with other requirements of ASTM C 920 for uses indicated.
- C. Stain-Test-Response Characteristics: Where elastomeric sealants are specified in the Elastomeric Joint-Sealant Schedule to be nonstaining to porous substrates, provide products that have undergone testing according to ASTM C 1248 and have not stained porous joint substrates indicated for Project.

2.4 LATEX JOINT SEALANTS

- A. Latex Sealant Standard: Comply with ASTM C 834 for each product of this description indicated in the Latex Joint-Sealant Schedule at the end of Part 3.

2.5 SILICONE JOINT SEALANTS

- A. Silicone Sealant Standard: Single-Component, Nonsag, Neutral-Curing Silicone Joint Sealant: ASTM C 920, Type S, Grade NS, Class 100/50, for Use NT.

2.6 JOINT-SEALANT BACKING

- A. General: Provide sealant backings of material and type that are nonstaining; are compatible with joint substrates, sealants, primers, and other joint fillers; and are approved for applications indicated by sealant manufacturer based on field experience and laboratory testing.
- B. Cylindrical Sealant Backings: ASTM C 1330, of type indicated below and of size and density to control sealant depth and otherwise contribute to producing optimum sealant performance:
 - 1. Type C: Closed-cell material with a surface skin.
 - 2. Type O: Open-cell material.

- C. Elastomeric Tubing Sealant Backings: Neoprene, butyl, EPDM, or silicone tubing complying with ASTM D 1056, nonabsorbent to water and gas, and capable of remaining resilient at temperatures down to minus 26 deg F(minus 32 deg C). Provide products with low compression set and of size and shape to provide a secondary seal, to control sealant depth, and otherwise contribute to optimum sealant performance.
- D. Bond-Breaker Tape: Polyethylene tape or other plastic tape recommended by sealant manufacturer for preventing sealant from adhering to rigid, inflexible joint-filler materials or joint surfaces at back of joint where such adhesion would result in sealant failure. Provide self-adhesive tape where applicable.

2.7 MISCELLANEOUS MATERIALS

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

PART 3 - EXECUTION

3.1 EXAMINATION

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

3.2 PREPARATION

- A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with joint sealant manufacturer's written instructions and the following requirements:
 - 1. Remove all foreign material from joint substrates that could interfere with adhesion of joint sealant, including dust, paints (except for permanent, protective coatings tested and approved for sealant adhesion and compatibility by sealant manufacturer), old joint sealants, oil, grease, waterproofing, water repellents, water, surface dirt, and frost.
 - 2. Clean porous joint substrate surfaces by brushing, grinding, blast cleaning, mechanical abrading, or a combination of these methods to produce a clean, sound substrate capable of developing optimum bond with joint sealants. Remove loose particles remaining from above cleaning operations by vacuuming or blowing out joints with oil-free compressed air. Porous joint surfaces include the following:
 - a. Concrete.
 - b. Masonry.

3. Remove laitance and form-release agents from concrete.
4. Clean nonporous surfaces with chemical cleaners or other means that do not stain, harm substrates, or leave residues capable of interfering with adhesion of joint sealants.

- a. Metal.
- b. Glass.

B. Joint Priming: Prime joint substrates where recommended in writing by joint sealant manufacturer, based on preconstruction joint-sealant-substrate tests or prior experience. Apply primer to comply with joint sealant manufacturer's written instructions. Confine primers to areas of joint-sealant bond; do not allow spillage or migration onto adjoining surfaces.

C. Masking Tape: Use masking tape where required to prevent contact of sealant with adjoining surfaces that otherwise would be permanently stained or damaged by such contact or by cleaning methods required to remove sealant smears. Remove tape immediately after tooling without disturbing joint seal.

3.3 INSTALLATION OF JOINT SEALANTS

A. General: Comply with joint sealant manufacturer's written installation instructions for products and applications indicated, unless more stringent requirements apply.

B. Sealant Installation Standard: Comply with recommendations of ASTM C 1193 for use of joint sealants as applicable to materials, applications, and conditions indicated.

C. Acoustical Sealant Application Standard: Comply with recommendations of ASTM C 919 for use of joint sealants in acoustical applications as applicable to materials, applications, and conditions indicated.

D. Install sealant backings of type indicated to support sealants during application and at position required to produce cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability.

1. Do not leave gaps between ends of sealant backings.
2. Do not stretch, twist, puncture, or tear sealant backings.
3. Remove absorbent sealant backings that have become wet before sealant application and replace them with dry materials.

E. Install bond-breaker tape behind sealants where sealant backings are not used between sealants and back of joints.

F. Install sealants by proven techniques to comply with the following and at the same time backings are installed:

1. Place sealants so they directly contact and fully wet joint substrates.
2. Completely fill recesses provided for each joint configuration.
3. Produce uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability.

G. Tooling of Nonsag Sealants: Immediately after sealant application and before skinning or curing begins, tool sealants according to requirements specified below to form smooth, uniform beads of

configuration indicated; to eliminate air pockets; and to ensure contact and adhesion of sealant with sides of joint.

1. Remove excess sealants from surfaces adjacent to joint.
2. Use tooling agents that are approved in writing by sealant manufacturer and that do not discolor sealants or adjacent surfaces.
3. Provide concave joint configuration per Figure 5A in ASTM C 1193, unless otherwise indicated.

3.4 CLEANING

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

3.5 PROTECTION

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

3.6 LATEX JOINT-SEALANT SCHEDULE

- A. Latex Sealant: Where joint sealants of this type are indicated, provide products complying with the following:
 1. Products: Provide one of the following:
 - a. Chem-Calk 600; Bostik Inc.
 - b. AC-20; Pecora Corporation.
 2. Applications: Paintable interior joints at wood interior trim and surrounding wall construction, and other interior joints requiring paint application.

3.7 SILICONE JOINT-SEALANT SCHEDULE

- A. Silicone Sealant: Where joint sealants of this type are indicated, provide products complying with the following:
 1. Products: Provide one of the following:
 - a. 890 NST; Pecora Corporation.
 2. Applications: Control and Expansion Joints in unit masonry, joints between masonry and frames of windows, and other joints indicated.

END OF SECTION

SECTION 08 52 13 – ALUMINUM-CLAD WOOD WINDOWS

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes: Wood-framed, aluminum-clad windows of the following types: **double-hung**.

B. Related Sections: Section(s) related to this section include:

1. Flashing
2. Joint Sealants
3. Interior Trim

1.2 REFERENCES

A. American Architectural Manufacturers Association (AAMA):

B. Andersen E-Series Product Installation Guides.

C. ASTM International (ASTM):

1. ASTM E2190 - Standard Specification for Insulating Glass Unit Performance and Evaluation.

F. Forest Stewardship Council (FSC): FSC Chain-of-Custody Certification.

G. Insulating Glass Certification Council (IGCC): Insulating Glass Unit Certification.

J. National Fenestration Rating Council (NFRC):

1. NFRC 100 - Procedure for Determining Fenestration Product U-Factors
2. NFRC 200 - Procedure for Determining Fenestration Product Solar Heat Gain Coefficient and Visible Transmittance at Normal Incidence

L. Window and Door Manufacturers Association (WDMA):

1. WDMA Hallmark Certification Program for Manufacturers
2. WDMA I.S. 4 - Industry Specification for Preservative Treatment for Millwork

1.3 ADMINISTRATIVE REQUIREMENTS

A. Pre-installation Meetings: Conduct pre-installation meeting to clarify Project requirements, substrate conditions, manufacturer's installation instructions and manufacturer's warranty requirements.

1. Conduct 1 Meeting Prior to Ordering Windows
2. Conduct 1 Meeting Prior to Starting the Installation.

1.4 SUBMITTALS

A. Product Data: For each type of product required.

- B. Shop Drawings: Showing methods of installation, plans, sections, elevations and details of walls, specified loads, flashings, vents, sealants, and interfaces with all materials not supplied by the window manufacturer, and identification of proposed component parts and finishes.
- C. Samples: Selection and verification samples for finishes, colors and textures. Submit two complete sample sets of each type of material required.
- D. Certificates: Signed by manufacturer certifying materials comply with specified performance characteristics, criteria and physical requirements.
- E. Test and Evaluation Reports: Showing compliance with specified performance characteristics and physical properties.
- F. Manufacturer Instructions: Manufacturer installation, storage, and other instructions.
- G. Qualification Statements: For manufacturer and installer.

1.6 QUALITY ASSURANCE

A. Manufacturer Qualifications:

1. Member in good standing of the Insulating Glass Certification Council (IGCC).
2. Hallmark Certified Manufacturer and member in good standing of the Window and Door Manufacturers Association (WDMA).

B. Installer Qualifications:

1. Minimum five years' experience in the commercial installation of products required for the Project.
2. Experience on at least five projects of similar size, type and complexity as the Project.
3. An entity utilizing workers competent in techniques required by manufacturer for product types and applications indicated

1.7 DELIVERY, STORAGE AND HANDLING

- A. Comply with manufacturer's ordering instructions and lead time requirements to avoid construction delays.
- B. Deliver materials to Project in manufacturer's original unopened, undamaged containers with identification labels intact.
- C. Storage and Protection: Store materials and accessories protected from exposure to harmful environmental conditions and at temperature and humidity conditions recommended by manufacturer off ground, under cover and not exposed to weather and construction activities.

1.8 WARRANTY

A. Special Warranty: Manufacturer's transferrable, non-prorated limited warranty.

1. Warranty Period, Glass: 20 years.

2. Warranty Period, Non-Glass Parts: 10 years.

B. Special Warranty: Installer's standard form in which installer agrees to repair or replace windows that fail due to poor workmanship or faulty installation within the specified warranty period.

1. Warranty Period: **5** years from date of Substantial Completion.

PART 2 PRODUCTS

2.1 METAL-CLAD WOOD WINDOWS

A. General: Provide windows complying with the performance requirements indicated and tested according to NAFS.

B. Basis-of-Design Product: Subject to compliance with requirements provide Andersen Corporation: Andersen E-Series windows. (Security Application: E-Series / Protector Series)

C. Substitution Limitations: **No substitutions**

2.2 MATERIALS

A. Construction:

1. Cladding: Extruded aluminum, minimum thickness 0.050 inch (1.27 mm).
2. Frame: Preservative treated laminated veneer lumber.
3. Interior Exposed Frame: Preservative treated solid lumber, kiln dried and suitable for stain or painted finish.
4. Sash: Preservative treated solid lumber, kiln dried and suitable for stain or painted finish.

B. Wood Species: **Pine**

C. Interior Finish:

1. Painted: Factory-applied before assembly, **Dove Gray**

D. Exterior Finish:

1. Painted Frame: Factory-applied baked-on silicone polyester enamel, in compliance with **AAMA 2604 Colony White**.
2. Painted Sash: Factory-applied baked-on silicone polyester enamel, in compliance with **AAMA 2604 Colony White**.

E. Glazing: **Low E 272 Standard Glass**

2.3 WINDOW Type S -SECURITY

A. Window Type and Performance Requirements: **Double-Hung Full-Frame**.

1. **Double-Hung Full-Frame** Performance Class LC and Grade, Impact-Resistant: **PG50**.
2. **Double-Hung Full-Frame** Performance Class LC and Grade, Non-Impact-Resistant: **PG50**.

B. Environmental Certifications:

1. ENERGY STAR performance requirements.

2. Indoor air quality performance.

C. Weatherstrip:

1. Type and Material for Hung or Gliding: Three fins and pile, polypropylene.

D. Installation Flange Type: **Extruded vinyl.**

E. Hardware:

1. Sash Lock and Sash Lift Finish: Pewter
2. Balancer Type and Material: Spring-loaded block and tackle.
3. Jamb Liner:
 - a. Type and Material: Concealed, rigid vinyl.
 - b. Color: **White.**
 - c. Interior Inserts: **Vinyl**, color to match window.
 - d. Exterior Inserts: **Aluminum, color to match window.**
4. Window Opening Control Device: Provide device to restrict operable sash to less than four inches maximum clear opening and releasable, in compliance with ASTM F2090.
5. Sash Lock Mechanism Type and Material: Flush mounted die-cast zinc.
6. Sash Lift Type and Material: Surface mounted die-cast zinc.
7. Sash Lock and Lift Color: **Black.**
8. Roller Type and Material: Dual adjustable, brass.
9. Head and Sill Track Material and Color: Rigid vinyl, **White.**

F. Divided Lights:

1. Type: Divided Light Grilles.
 - a. Profile: **Ovolo.**
 - b. Width: **5/8 inch.**
 - c. Exterior Attachment: **Permanently adhered to glass.**
 - d. Glass Spacer Material: **Stainless steel.**
 - e. Interior Attachment: **Permanently adhered to glass**
 - f. Pattern: As shown in Drawings.
 - g. Exterior Aluminum Color: **Colony White.**
 - h. Interior Wood Species: **Pine**
 - i. Interior Wood Finish: **Dove Grey.**
- G. Insect Screens: None

I. Exterior Trim and Accessories: None

2.4 IMPACT-RESISTANT GLAZING: TYPE S – SECURITY.

- A. Thermal Transmission (U-Factor), NFRC 100: Double-Hung: **0.32 with grilles**
- B. Solar Heat Gain Coefficient (SHGC), NFRC 200: Double-Hung: **0.27 with grilles**
- C. Visible Light Transmittance (VLT), NFRC 200: Double-Hung: **0.45 with grilles**
- D. Sound Transmission Class (STC)/Outdoor Indoor Transmission Classification (OITC), ASTM E90: Double-Hung: **33/29 with laminated glass**
- E. Glass Units: Provide insulating glass units certified through **Insulating Glass Certification Council as conforming to the requirements of IGCC and ASTM E2190.**
 - 1. Manufacturer Designation: Andersen High-Performance Low-E4 Glass.
 - 2. Glazing Configuration: **Dual-pane.**
 - 3. Tint: **None.**
 - 4. Seal and Spacer Type: Dual sealed insulating glass units with polyisobutylene primary seal, silicone secondary seal and stainless steel spacers.
 - 5. Glass Type: **Annealed glass, ASTM C1036.**
 - 6. Opacity: **None.**
 - 7. Laminate Interlayer Thickness: **0.030** inch.

2.5 NON-IMPACT-RESISTANT GLAZING TYPICAL ALL WINDOWS EXCEPT “S”- SECURITY.

- A. Thermal Transmission (U-Factor), NFRC 100: Double-Hung: **0.32 with grilles**
- B. Solar Heat Gain Coefficient (SHGC), NFRC 200: Double-Hung: **0.27 with grilles**
- D. Visible Light Transmittance (VLT), NFRC 200: Double-Hung: **0.45 with grilles**
- D. Sound Transmission Class (STC)/Outdoor Indoor Transmission Classification (OITC), ASTM E90: Double-Hung: **28/24.**
- E. Glass Units: Provide insulating glass units certified through **Insulating Glass Certification Council as conforming to the requirements of IGCC and ASTM E2190.**
 - 1. Manufacturer Designation: Andersen High-Performance Low-E4 Glass.
 - 2. Glazing Configuration: **Dual-pane.**
 - 3. Tint: **None.**
 - 4. Seal and Spacer Type: Dual sealed insulating glass units with polyisobutylene primary seal, silicone secondary seal and stainless steel spacers.
 - 5. Glass Type: **Annealed glass, ASTM C1036.**
 - 6. Opacity: **None.**

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify that all substrate conditions are suitable for installation in compliance with manufacturer's recommendations.
- B. Do not begin installation until substrates have been properly prepared and any conditions not in compliance with manufacturer's recommendations have been corrected.

3.2 INSTALLATION

- A. General: Comply with manufacturer's product recommendations, including but not limited to the Andersen Unit Installation Guide, installation information in product literature and on product packaging. Comply with Drawings **and Shop Drawings** for installing windows, hardware, accessories, and other components.
- B. Install windows plumb, level and square. Anchor windows securely to structure in correct orientation to flashing and adjacent construction as indicated. Comply with product installation instructions for proper flashing integration into wall system. Install windows so as to drain water penetration to the exterior.
- C. Adjust sashes, insect screens, ventilators, hardware and accessories as applicable for correct fit. Adjust weatherstrip for smooth operation and weather-tight closure.
- D. In order to prevent any issues with flashing, sealant and adhesives, installation shall not be done if the temperature drops below 32 degrees F.

3.3 FIELD QUALITY CONTROL

- A. Manufacturer's Field Services: Provide manufacturer's field service consisting of product use recommendations and periodic site visits for observation of product installation in accordance with manufacturer's recommendations.
- B. Field Testing: Provide field testing of installed units.
 - 1. Test units in compliance with AAMA 502.
 - 2. Use test equipment calibrated according to ASTM E1105.

3.4 CLEANING

- A. Remove protective films and non-permanent labels prior to 90 days after installation.
- B. Remove excess sealant, soiling, dirt and other substances. Clean window frame and glass surfaces. Avoid damaging coatings and finishes.
- C. Touch-up, repair or replace glass or other window components broken, scratched or damaged during construction prior to Substantial Completion.
- D. Remove and lawfully dispose of construction debris from Project site.

3.5 PROTECTION

- A. Protect installed windows and finish surfaces from damage during construction until completion of Project and acceptance by Owner.

END OF SECTION

SECTION 09 91 23 –INTERIOR AND EXTERIOR PAINTING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes surface preparation and field painting of exposed interior and exterior surfaces.
 - 1. Surface preparation, priming, and finish coats specified in this Section are in addition to shop priming and surface treatment specified in other Sections.
- B. Paint exposed surfaces, except where these Specifications indicate that the surface or material is not to be painted or is to remain natural. If an item or a surface is not specifically mentioned, paint the item or surface the same as similar adjacent materials or surfaces. If a color of finish is not indicated, Architect will select from standard colors and finishes available.
- C. Do not paint prefinished items, concealed surfaces, finished metal surfaces, operating parts, and labels.
 - 1. Prefinished items include the following factory-finished components:
 - a. Architectural woodwork.
 - b. Finished mechanical and electrical equipment.
 - c. Light fixtures.
 - 2. Concealed surfaces include walls or ceilings in the following generally inaccessible spaces:
 - a. Furred areas.
 - b. Ceiling plenums.
 - c. Pipe spaces.
 - d. Duct shafts.
 - 3. Finished metal surfaces include the following:
 - a. Anodized aluminum.
 - b. Stainless steel.
 - c. Chromium plate.
 - d. Copper and copper alloys.
 - e. Bronze and brass.
 - 4. Operating parts include moving parts of operating equipment and the following:
 - a. Valve and damper operators.
 - b. Linkages.
 - c. Sensing devices.
 - d. Motor and fan shafts.
 - 5. Labels: Do not paint over UL, FMG, or other code-required labels or equipment name, identification, performance rating, or nomenclature plates.

- D. Related Sections include the following:
 - 1. Division 02 Section "Selective Demolition".
 - 2. Division 06 Section "Interior Architectural Woodwork".
 - 3. Division 06 Section "Exterior Synthetic Trim".

1.3 DEFINITIONS

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

1.4 SUBMITTALS

- A. Product Data: For each paint system indicated. Include primers.
 - 1. Material List: An inclusive list of required coating materials. Indicate each material and cross-reference specific coating, finish system, and application. Identify each material by manufacturer's catalog number and general classification.
 - 2. Manufacturer's Information: Manufacturer's technical information, including label analysis and instructions for handling, storing, and applying each coating material.
- 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 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 two Samples on the following substrates for Architect's review of color and texture only:
 - a. Painted Wood: 8-inch-(200-mm-) square Samples for each color.
 - b. Painted Synthetic Exterior Trim: 8-inch-(200-mm-) square Samples for each color.
- C. Qualification Data: For Applicator.

1.5 QUALITY ASSURANCE

- A. Applicator Qualifications: A firm or individual experienced in applying paints and coatings similar in material, design, and extent to those indicated for this Project, whose work has resulted in applications with a record of successful in-service performance.
- B. Source Limitations: Obtain primers for each coating system from the same manufacturer as the finish coats.

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 label and the following information:
 - 1. Product name or title of material.
 - 2. Product description (generic classification or binder type).
 - 3. Manufacturer's stock number and date of manufacture.
 - 4. Contents by volume, for pigment and vehicle constituents.
 - 5. Thinning instructions.
 - 6. Application instructions.
 - 7. Color name and number.
 - 8. VOC content.

- B. Store materials not in use in tightly covered containers in a well-ventilated area at a minimum ambient temperature of 45 deg F (7 deg C). Maintain storage containers in a clean condition, free of foreign materials and residue.
 - 1. Protect from freezing. 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. Do not apply paint 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.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Basis-of-Design Products: Subject to compliance with requirements, provide paint materials by
 - 1. Benjamin Moore.

2.2 PAINT MATERIALS, GENERAL

- A. Material Compatibility: Provide primers, and finish-coat materials that are compatible with one another and with the substrates indicated under conditions of service and application, as demonstrated by manufacturer based on testing and field experience.

- B. Material Quality: Provide manufacturer's best-quality paint material of the various coating types specified that are factory formulated and recommended by manufacturer for application indicated. Paint-material containers not displaying manufacturer's product identification will not be acceptable.

- C. Colors: Match Architect's Sample.

2.3 INTERIOR AND EXTERIOR PRIMERS

- A. Interior Gypsum Board Primer: Factory-formulated latex-based primer for interior application.

1. Prime Coat: Primer sealer, latex, interior: Benjamin Moore Fresh Start High Hiding All Purpose 046, 44g/L, at 6.0 mils wet, 2.5 mils dry.
- B. Interior Wood Primer for Acrylic-Enamel and Semigloss Alkyd-Enamel Finishes: Factory-formulated alkyd- or acrylic-latex-based interior wood primer.
 1. Prime Coat: Primer sealer, latex, interior: Benjamin Moore Fresh Start High Hiding All Purpose 046, 44g/L, at 6.0 mils wet, 2.5 mils dry.
- C. Exterior: Factory-formulated latex-based primer for interior application.
 1. Prime Coat: Primer sealer, latex, exterior: Benjamin Moore Fresh Start High Hiding All Purpose 046, 44g/L, at 6.0 mils wet, 2.5 mils dry.

2.4 FINISH COATS

- A. Interior Acrylic Paint: Factory-formulated acrylic latex interior paint.
 1. Benjamin Moore: Interior Aura® 522, Match Adjacent Wall Color and Sheen, at 4.0 mils wet, 1.6 mils dry, per coat.
- B. Interior Semi-Gloss Acrylic Paint: Factory-formulated acrylic-latex interior paint.
 1. Benjamin Moore: Interior Aura® Semi Gloss 528, Match Anderson Eagle Windows Color “Dove Grey”, at 4.0 mils wet, 1.6 mils dry, per coat.
- C. Exterior Soft Gloss Acrylic Paint: Factory-formulated soft gloss acrylic-latex enamel for exterior application.
 1. Benjamin Moore; Exterior ben® Ext Soft Gloss 543, Match Anderson Eagle Windows Color “Colony White”, at 4.0 mils wet, 1.6 mils dry, per coat.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Applicator present, for compliance with requirements for paint application. Comply with procedures specified in PDCA P4.
 1. Proceed with paint application only after unsatisfactory conditions have been corrected and surfaces receiving paint are thoroughly dry.
 2. Start of painting will be construed as Applicator's acceptance of surfaces and conditions within a particular area.
- B. Coordination of Work: Review other Sections in which primers are provided to ensure compatibility of the total system for various substrates. On request, furnish information on characteristics of finish materials to ensure use of compatible primers.
 1. Notify Architect about anticipated problems when using the materials specified over substrates primed by others.

3.2 PREPARATION

- A. General: Remove hardware and hardware accessories, plates, machined surfaces, lighting fixtures, and similar items already installed that are not to be painted. If removal is impractical or impossible because of size or weight of the item, provide surface-applied protection before surface preparation and painting.
 - 1. After completing painting operations in each space or area, reinstall items removed using workers skilled in the trades involved.
- B. Cleaning: Before applying paint or other surface treatments, clean substrates of substances that could impair bond of the various coatings. Remove oil and grease before cleaning.
 - 1. Schedule cleaning and painting so dust and other contaminants from the cleaning process will not fall on wet, newly painted surfaces.
- C. Surface Preparation: Clean and prepare surfaces to be painted according to manufacturer's written instructions for each particular substrate condition and as specified.
 - 1. Provide barrier coats over incompatible primers or remove and re-prime.
 - 2. Wood: Clean surfaces of dirt, oil, and other foreign substances with scrapers, mineral spirits, and sandpaper, as required. Sand surfaces exposed to view smooth and dust off.
 - a. Scrape and clean small, dry, seasoned knots, and apply a thin coat of white shellac or other recommended knot sealer before applying primer. After priming, fill holes and imperfections in finish surfaces with putty or plastic wood filler. Sand smooth when dried.
 - b. Prime, stain, or seal wood to be painted immediately on delivery. Prime edges, ends, faces, undersides, and back sides of wood, including cabinets, counters, cases, and paneling.
 - c. If transparent finish is required, backprime with spar varnish.
 - d. Backprime paneling on interior partitions where masonry, plaster, or other wet wall construction occurs on back side
- D. Material Preparation: Mix and prepare paint materials according to manufacturer's written instructions.
 - 1. Maintain containers used in mixing and applying paint in a clean condition, free of foreign materials and residue.
 - 2. Stir material before application to produce a mixture of uniform density. Stir as required during application. Do not stir surface film into material. If necessary, remove surface film and strain material before using.
 - 3. Use only thinners approved by paint manufacturer and only within recommended limits.
- E. Tinting: Tint each undercoat a lighter shade to simplify identification of each coat when multiple coats of same material are applied. Tint undercoats to match the color of the finish coat but provide sufficient differences in shade of undercoats to distinguish each separate coat.

3.3 APPLICATION

- A. General: Apply paint according to manufacturer's written instructions. Use applicators and techniques best suited for substrate and type of material being applied.
 - 1. Paint colors, surface treatments, and finishes are indicated in the paint schedules.
 - 2. Do not paint over dirt, rust, scale, grease, moisture, scuffed surfaces, or conditions detrimental to formation of a durable paint film.
 - 3. Provide finish coats that are compatible with primers used.
 - 4. The term "exposed surfaces" includes areas visible when permanent or built-in fixtures, grilles, convactor covers, covers for finned-tube radiation, and similar components are in place. Extend coatings in these areas, as required, to maintain system integrity and provide desired protection.

5. Paint surfaces behind movable equipment and furniture the same as similar exposed surfaces. Before final installation of equipment, paint surfaces behind permanently fixed equipment or furniture with prime coat only.
 6. Paint interior surfaces of ducts with a flat, non-specular black paint where visible through registers or grilles.
 7. Paint back sides of access panels and removable or hinged covers to match exposed surfaces.
 8. Sand lightly between each succeeding enamel or varnish coat.
- B. Scheduling Painting: Apply first coat to surfaces that have been cleaned, pretreated, or otherwise prepared for painting as soon as practicable after preparation and before subsequent surface deterioration.
1. The number of coats and film thickness required are the same regardless of application method. Do not apply succeeding coats until previous coat has cured as recommended by manufacturer. If sanding is required to produce a smooth, even surface according to manufacturer's written instructions, sand between applications.
 2. Omit primer over metal surfaces that have been shop primed and touchup painted.
 3. If undercoats, stains, or other conditions show through final coat of paint, apply additional coats until paint film is of uniform finish, color, and appearance. Give special attention to ensure that edges, corners, crevices, welds, and exposed fasteners receive a dry film thickness equivalent to that of flat surfaces.
 4. Allow sufficient time between successive coats to permit proper drying. Do not recoat surfaces until paint has dried to where it feels firm and does not deform or feel sticky under moderate thumb pressure, and until application of another coat of paint does not cause undercoat to lift or lose adhesion.
- C. Application Procedures: Apply paints and coatings by brush, roller, spray, or other applicators according to manufacturer's written instructions.
1. Brushes: Use brushes best suited for type of material applied. Use brush of appropriate size for surface or item being painted.
 2. Rollers: Use rollers of carpet, velvet-back, or high-pile sheep's wool as recommended by manufacturer for material and texture required.
 3. Spray Equipment: Use airless spray equipment with orifice size as recommended by manufacturer for material and texture required.
- D. Minimum Coating Thickness: Apply paint materials no thinner than manufacturer's recommended spreading rate to achieve dry film thickness indicated. Provide total dry film thickness of the entire system as recommended by manufacturer.
- E. Prime Coats: Before applying finish coats, apply a prime coat, as recommended by manufacturer, to material that is required to be painted or finished and that has not been prime coated by others. Recoat primed and sealed surfaces where evidence of suction spots or unsealed areas in first coat appears, to ensure a finish coat with no burn-through or other defects due to insufficient sealing.
- F. Pigmented (Opaque) Finishes: Completely cover surfaces as necessary to provide a smooth, opaque surface of uniform finish, color, appearance, and coverage. Cloudiness, spotting, holidays, laps, brush marks, runs, sags, ropiness, or other surface imperfections will not be acceptable.
- G. Completed Work: Match approved samples for color, texture, and coverage. Remove, refinish, or repaint work not complying with requirements.

3.4 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.

3.5 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.

3.6 PAINT SCHEDULE

- A. Gypsum Board and Plaster: Provide the following finish systems over interior gypsum board surfaces:
 - 1. Low Sheen Acrylic Finish: Two finish coats over a primer, typical on gypsum board walls and plaster finishes.
 - a. Primer: Interior gypsum board primer.
 - b. Finish Coats: Interior low-luster acrylic enamel.
- B. Interior Wood: Provide the following paint finish systems over new interior wood trim surfaces:
 - 1. Semigloss Acrylic-Enamel Finish: Two finish coats over a wood undercoat.
 - a. Primer: Interior wood primer for acrylic-enamel finishes.
 - b. Finish Coats: Interior semigloss acrylic enamel.
- C. Exterior Synthetic Trim and Cellular PVC Fabrications: Provide the following finish systems over synthetic material:
 - 1. Soft Gloss Acrylic-Enamel Finish: Two finish coats over a primer.
 - a. Primer: Exterior wood primer.
 - b. Finish Coats: Exterior Soft gloss acrylic enamel.

END OF SECTION