

**BID PACKAGE**  
for  
**Garner Gymnasium Repairs**  
**15DOC0503AA**  
**BI-JA-461**

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**STATE OF CONNECTICUT**



Dannel P. Malloy, Governor

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**Department of Correction**  
Scott Semple, Interim, Commissioner

Facilities Management and Engineering Unit  
24 Wolcott Hill Road  
Wethersfield, CT 06109  
**860-692-7565**

Cheryl Cepelak,  
Deputy Commissioner

Steve Link,  
Director

Kathy Woodward,  
Associate Fiscal Administrative Officer

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**APPENDIX:**

**Minimum Rates and Classifications for Building Construction**

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**Informational Bulletin- The 10 Hour OSHA Construction Safety and Health Course**

**Connecticut General Statute 31-55a**

**Informational Bulletin- Occupational Classifications**

**Contractors Wage Certification Form**

**Pre-Bid Representative Form**

**DOC Employment Information Form**

**Gift and Campaign Contribution Certification**

**Bid Form Check List**

**Standard Bid Proposal Form (STO-93)**

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**1. INSTRUCTIONS TO BIDDERS**

**IB 1.01 General**

1. These instructions to bidders are for the complete project known as: **Garner Gymnasium Repairs, BI-JA-461**, (the “Project”). Bids for the Project shall be bid in strict accordance and compliance with this Bid Package and Technical Specifications as prepared and promulgated by the Connecticut Department of Correction (“DOC”).
2. The bid must include all costs associated with the Project, including but not limited to the costs of supervision, labor, equipment, services and materials required to complete the Project pursuant to the Project Specifications.
3. The proposed dollar amount of each bid shall be deemed to include all costs and expenses required to complete the Project, as specified per Project Specifications, ready for use. Risks of all such costs and expenses shall be assumed by the successful bidder.
4. The Project Specifications call for finished and completed work. The Project shall have been tested, inspected and shall be ready for operation before the Project is considered complete. Any work of any kind necessary to make the Project complete and ready for operation shall be provided by the successful bidder (hereinafter “Contractor”) without additional compensation. Products, parts, material and/or other items required for installation, operation and completion of the Project shall be provided by the Contractor in a manner consistent with the Project Specifications.
5. It shall be recognized and accepted that during construction in a correctional facility, there may be delays, closures, or other interference due to various security issues and facility lock downs. This factor shall be considered and reflected in the submitted bid proposal. The DOC shall not authorize additional compensation for such delays, closures, or other interference.
6. The DOC shall assign a department representative of the DOC’s choosing who shall work with the Contractor as liaison between the Contractor and the DOC administration.

**IB 1.02 Bid Form and Acceptance**

1. All sealed bids must be ***received*** by the date and time specified at the office of Kathy Woodward, Associate Fiscal Administrative Officer (AFAO) at the following address:  
Department of Correction  
Fiscal Services / 2nd Floor  
24 Wolcott Hill Road  
Wethersfield, CT 06109  
Attn: Kathy Woodward

## INSTRUCTION TO BIDDERS

It is recommended that you call prior to the bid opening to verify that your bid has been received.

2. Bid envelopes must clearly indicate the bid number as well as the date and time of bid opening.
3. Enclosed with this specification is a Standard Bid Proposal Form (STO-93) on which bids shall be submitted.
4. The project shall be bid on the enclosed Standard Bid Proposal Form (STO-93) as follows:
  - a. Base Bid - complete as described.
  - b. Supplemental Bid (if any), completed as described.  
(Supplemental Bids may be accepted or rejected by the DOC. If accepted, the total bid amount shall be determined by the total Base Bid amount and the Supplemental Bid.
  - c. All STO-93 Proposal Forms shall be signed by a person duly authorized to sign bids on behalf of the bidder. Unsigned bids will be rejected.
5. If you do not wish to submit a bid, you must return the STO-93 Form, indicating "No Bid Submitted."
6. The DOC reserves the right to accept or reject bid within sixty (60) calendar days of the bid opening date. All proposed bid prices must be fixed for this sixty (60) day period.
7. The Contract will be awarded to the lowest responsible and qualified bidder within the budget figure.
8. Liquidated damages in the amount of \$350.00 per day shall be charged to the Contractor for failure to complete the contract as outlined in IB 1.09.

### **IB 1.03 Accompanying Documents to Bid Form**

In addition to the Standard Bid Proposal Form, each bidder shall submit with his/her bid:

1. Employment Information Form
2. Bid bond, if bid price exceeds amounts outlined in IB 1.11.
3. A Department of Labor Wage Certificate if bid exceeds the amount outlined in IB 1.10
4. Pre-Bid Representative Form
5. A signed Security Regulations Section
6. Qualification documents as outlined in IB 1.06.
7. State of CT Small Contractors Set-Aside Program Certificate

## INSTRUCTION TO BIDDERS

8. Minority Set-Aside Information, if applicable, as outlined in IB 1.17
9. Gift and Campaign Contribution Certification

### **IB 1.04 Scope of Work**

1. The bid must include all costs associated with the Project in its entirety, including but not limited to all required labor, supervision, equipment, services and materials necessary to complete the Project pursuant to the Project Specifications.

### **IB 1.05 Location and Examination of Site**

1. The Project site is:  

**Garner Correctional Institution  
50 Nunnawauk Rd.  
Newtown, CT 06470**
2. Prior to submitting a bid, all bidders or bidders' designated representative(s) bidding for this Project are required to visit and examine the Project site in order to verify job conditions and site dimensions. A pre-bid meeting shall be scheduled and the time and place of such meeting shall be indicated on the STO-93. No bid will be honored if the Contractor or designated representative does not attend the pre-bid meeting
3. Any questions pertaining to the Project after the pre-bid meeting must be submitted in writing at least one (1) week prior to the bid opening to: Kathy Woodward, AFAO. Copies of all questions and responses shall be provided in writing to all bidders by the DOC Project Manager.
4. All bidders will receive (1) set of plans and one copy of the Project's technical specifications. It is the bidder's responsibility to provide a set to any proposed Subcontractors.

### **IB 1.06 Contractor Qualification Requirement**

1. The bidder shall demonstrate the capability to execute the Project pursuant to the Project Specifications by submitting evidence and documentation of the following
  - a. The completion of three (3) projects of similar size and scope to the Project performed within the last twelve (12) months. Include the name, address and telephone number of a contact at each job that can be contacted, who is familiar with the job, and who is able to provide a reference for the bidder.
  - b. Valid Connecticut license(s) required to perform any and all of the work associated with the Project and, if applicable, any additional qualifications required to satisfy the Project's Specifications.

### **IB 1.07 Protection of Work and Property**

## INSTRUCTION TO BIDDERS

1. All property related to the Project, including but not limited to all buildings, equipment, furnishings, and grounds landscaping, shall be protected by the Contractor and Subcontractors from damage of any description and any such damage shall be repaired by the Contractor and the Contractor shall return the property to its original condition as existed prior to any such damage, in a timely manner, at no expense to the State and to the satisfaction of the DOC Project Manager.
2. The Contractor shall supply and install any and all protective precautions, including but not limited to protective coverings and barricades necessary to protect at all times any and all individuals from any injury. Security barriers shall be provided and installed by the Contractor to separate the work area from the facility's and/or the facilities' normal operations.
3. The Contractor shall be held responsible for, and must rectify at his or her expense, any and all damage, including but not limited to water damage, due to the installation, placement and/or use of improper protective coverings.
4. The Contractor shall, at all times, assume all responsibilities for loss or damage by fire to the Project site and any and all of the existing areas adjoining the Project site and to any and all of the materials to be used as specified in the Contract until the satisfaction of the Contract. No flammable materials(s) shall be stored on or in the Project site in excess of the amounts allowed by all authorities having jurisdiction over the Project site.
5. The Contractor shall be responsible for all compliance with any and all current State of Connecticut statutes and regulations, including but not limited to OSHA, State Fire Safety Codes (and supplements thereto), and the State Building Code (and supplements thereto).
6. The Contractor shall at all times maintain the premises and keep the premises free of all waste materials, including but not limited to rubbish and refuse, resulting from any activities related to the execution of this contract. All accumulated waste materials shall be removed from the Project site on a daily basis, at the Contractor's expense.

### **IB 1.08 Form of Guarantee--Warranty**

1. The General Contractor shall furnish the foregoing documents in the following manner:

Address to:

Department of Correction  
Facilities Management & Engineering Unit  
24 Wolcott Hill Road  
Wethersfield, CT 06109  
Attn: Kathy Woodward, AFAO

Provide name and number of project.

I (we) hereby guarantee, (or warrantee), this project against failures of workmanship, equipment and materials for a minimum period of one (1) year and as defined in each section of the technical specifications. The guarantee (or warrantee) period shall commence from the Agency's approved completion date.

2. All guarantees supplied by subcontractors, suppliers or manufacturers shall be in writing and countersigned by the General Contractor.

**IB 1.09 Time of Completion**

1. The contractor shall complete the project within **Forty Five ( 45)** calendar days of contract award or notice to proceed. Once on site, the contractor's work force shall remain mobilized until work is completed unless otherwise specifically approved by the AFAO. Working days for this project shall be Monday through Friday, exclusive of State or national Holidays. No Saturday or Sunday work shall be allowed without special agency permission. Unless a time extension is approved in writing by the AFAO, failure to comply with IB 1.09 shall result in liquidated damages defined in IB 1.02(8).

**IB 1.10 Wage Rates**

1. Prevailing wage rates are applicable if the accepted bid exceeds the sum of \$100,000. The Contractor is responsible for the payment of wages that are in accordance with the rate published by the Connecticut State Labor DOC that is relevant to the Project site. See [www.ctdol.state.ct.us/wgwkstnd/prevaling-rates/rates.htm](http://www.ctdol.state.ct.us/wgwkstnd/prevaling-rates/rates.htm). See also Connecticut General Statutes section 31-53.
2. In accordance with the provisions of Connecticut General Statute Section 31-53, the following shall apply to the execution of the Contract:
  - (a)... The wages paid on an hourly basis to any person performing the work of any mechanic, laborer or worker on the work herein contracted to be done and the amount of payment or contribution paid or payable on behalf of each such person to any employee welfare fund, as defined in subsection (h) of this section, shall be at a rate equal to the rate customary or prevailing for the same work in the same trade or occupation in the town in which such public works project is being constructed. Any Contractor who is not obligated by agreement to make payment or contribution on behalf of such persons to any such employee welfare fund shall pay to each mechanic, laborer or worker as part of such person's wages the amount of payment or contribution for such person's classification on each pay day ... (h) As used in this section, ... "employee welfare fund" means any trust fund established by one or more employers and one or more labor organizations or one or more other third parties not affiliated with the employers to provide from moneys in the fund, whether through the purchase of insurance

## INSTRUCTION TO BIDDERS

or annuity contracts or otherwise, benefits under an employee welfare plan . . . and “benefits under an employee welfare plan” means one or more benefits or services under any plan established or maintained for persons performing the work of any mechanics, laborers or workers or their families or dependents, or for both, including, but not limited to, medical, surgical or hospital care; benefits in the event of sickness, accident, disability or death; benefits in the event of unemployment, or retirement benefits.

3. All Contractors must submit on a weekly basis a certified payroll and compliance statement to the DOC, Facilities Management and Engineering Unit, Attn: Kathy Woodward, AFAO. The certified payroll shall be considered a public record, and any individual or other requestor shall have the right to inspect and copy such records in accordance with the Connecticut Freedom of Information Act, Connecticut General Statutes sections 1-212, et seq. A Payroll Certification for Public Works Projects Form has been attached hereto.

### **IB 1.11 Bonds**

1. If the bid exceeds \$50,000, a bid surety of not less than 10% of the bid amount must accompany the bid in the form of a bond or a certified check made out to the Comptroller of the State of Connecticut.
2. If the bid amount exceeds \$50,000, a performance and labor and material payment surety of not less than 100% of the bid amount must be submitted by the bidder in the form of a bond made out to the Comptroller of the State of Connecticut. Said surety shall be submitted to the DOC prior to award of Contract and issuance of purchase order.

### **IB 1.12 Insurance**

1. The Contractor shall not commence work under this Contract until he or she has obtained the required insurance detailed in this Section and until said insurance has been approved by the DOC. The Contractor shall not permit any Subcontractor(s) to commence work until the insurance required for the Subcontractor(s) has been obtained and approved by the DOC. The Contractor shall submit the insurance certificate to Kathy Woodward, AFAO.
2. Pursuant to Connecticut General Statutes section 31-275, et seq., the Contractor shall maintain and provide Workers' Compensation insurance for all employees working at the Project Site and, in the case that any work is sublet, the Contractor shall require each Subcontractor to maintain and provide Workers' Compensation insurance for all of the Subcontractor's employees. All Workers' Compensation insurance shall be maintained for the life of the Contract. In case any class of employees or individual employee engaged in hazardous work pursuant to this Contract is not protected under Connecticut General Statutes section 31-275, et seq., the Contractor shall provide, at the Contractor's expense, and shall cause each Subcontractor to provide at the Subcontractor's expense,

**INSTRUCTION TO BIDDERS**

insurance coverage for such employees or employee. See *also* Connecticut General Statutes sections 31-286a, 31-286b.

3. For the life of the Contract, the Contractor shall maintain public liability and property damage insurance to protect both the Contractor’s and the DOC’s interests related to all aspects of the Project. The Contractor and, in the case that any work is sublet, any and all Subcontractors(s), shall maintain insurance protection for claims of damage(s) for injury, including but not limited to accidental death, and for property damage which may arise from any operations under this Contract, whether such operations be performed by the Contractor or the Subcontractor(s) or by any employee(s) of the Contractor or Subcontractor(s). Types and amounts of insurance required are as follows:

DESCRIPTION	COVERAGE	SINGLE LIMIT	EACH ACCIDENT	AGGREGATE
Protective Liability	BI	\$1,000,000		
Protective Liability	PD	\$100,000		\$500,000
(for and in the name of the State of Connecticut)				
Contractor's Liability	BI	\$1,000,000		
Contractor's Liability	PD	\$100,000		\$500,000
Contractor's Protective Liability	BI	\$1,000,000		
Contractor's Protective Liability	PD	\$100,000		\$500,000

Coverage for damage or loss resulting from Type C - Collapse or Structural Injury, Type U - Underground Damage, Type X - explosion or blasting, ordinarily excluded from coverage, shall be provided in the amounts and manner specified in this article if required in the proposal for the specified project. Builders Risk insurance, not ordinarily required, shall be provided in accordance with the amount and manner specified in the proposal for the specified project if such insurance is required in the proposal.

**IB 1.13 Licenses**

## INSTRUCTION TO BIDDERS

1. It is the responsibility of the Contractor to secure all licenses, permits, approvals or other documents necessary to execute and complete the Project.

### **IB 1.14 Security**

1. The contractor and, if any Subcontractor(s), shall abide by all Security Regulations as described in or attached to this documentation or any other Regulations or Administrative Directives promulgated by the DOC.

### **IB 1.15 Commencement of Work**

1. The Contractor will not commence work until he or she has a fully executed and approved purchase order distributed by the DOC. Within five (5) working days after receipt of such purchase order and prior to the start of work associated with the Project, the DOC Project Manager shall schedule a pre-construction meeting with the Contractor. At that meeting, a start date and construction schedule will be established.

### **IB 1.16 Payment**

1. Payment will be processed as follows:
  - a. Projects under \$50,000.00: A single invoice shall be submitted to the AFAO by the Contractor following the acceptance of the completed Project.
  - b. Projects over \$50,000.00: Three (3) invoices shall be submitted to the AFAO by the Contractor: (1) the first invoice shall be submitted to the AFAO when the Project is at least 50% complete based on the approved schedule of values and validated by the DOC Project Manager; (2) the second invoice shall be submitted to the AFAO when the Project is at least 80% complete based on the approved schedule of values and validated by the DOC Project Manager; and (3) the third invoice shall be submitted to the AFAO when the Project is completed and accepted by the DOC.
  - c. At least 10% of the first and second invoice amounts will be withheld by DOC as retainage and paid when the Project is completed and accepted by the DOC.

### **IB 1.17 Minority Business & Small Contractors' Set-Aside Program**

1. Pursuant to Connecticut General Statutes Sections 4a-60g, et seq., 25% of each state agency's contracts are to be set aside for small business enterprises. In addition, 25% of that amount (6.25%) shall be reserved for small businesses which are minority/women owned.
2. The Contractor shall submit the names and addresses of the business/es to be utilized, as

## **INSTRUCTION TO BIDDERS**

part of the Bid Package on company letterhead. If any Minority-owned Business Enterprise (“MBE”) changes in any way or form during the life of the Contract, such information shall be forwarded to Kathy Woodward, AFAO.

End of Section – INSTRUCTION TO BIDDERS

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**2. GENERAL CONDITIONS**

**GC 2.01 General**

1. In addition to the conditions set forth in Section 1, "Instructions to Bidders," the following General Conditions shall apply and form an equal part of the Contract documents.

**GC 2.02 Use of the Premises**

1. Unless specifically noted, nothing contained in the Project Specifications shall be interpreted as providing the Contractor exclusive use of the premises where the work related to the Project is being performed.
2. The Contractor shall be held solely responsible for any and all damage(s) to the existing site of the Project, including but not limited to existing structures, systems, equipment, property, or other aspects of the existing site caused by the Contractor, Subcontractor(s), the Contractor's agents, employees or invitees. The Contractor shall repair such damage(s) and/or replace such damaged structures, systems, equipment, property, or other aspects of the existing site of the Project. Such repair and/or replacement shall take place as directed by the Project Manager in a timely manner and at no additional cost to the DOC.
3. The work of the Contract shall not interfere with the normal conditions, safe operation and security of the facility and the site. If such interference occurs, becomes, or appears possible because of work of the Project, including but not limited to the new construction, existing work or for other reasons, the work involved shall be scheduled for a time and in a manner as directed by the Project Manager as a part of the Contract.
4. At all times throughout the duration of the Contract, the Project Manager shall direct the schedule and manner of work in order to preserve the integrity of the facility's or facilities' safety and security.

**GC 2.03 Scheduling of Escorts**

1. The Contractor shall provide the Project Manager and other designated facility personnel 48 hour notice of the need for an escort(s) for the Contractor, Subcontractor(s), or the Contractor's employees, agents or invitees to enter a facility. Notice shall include: (1) the number of personnel requiring entry to the facility; (2) indication of whether such personnel will need access to more than one area of the facility; (3) which area(s) of the facility must be entered; (4) the month, date, hour of arrival; and (5) the number of hours to be spent in the facility.

## GENERAL CONDITIONS

2. Once an escort(s) is scheduled, the Contractor shall provide 48-hour notice of any scheduling changes to the Project Manager and designated facility personnel. Failure to notify the Project Manager and designated facility personnel of scheduling change that results in the assignment of unnecessary escorts shall constitute a “no show occurrence” and result in a fine as set forth in this Section.
3. The Contractor shall be fined \$360.00 per escort per day for any “no show occurrence”.
4. Bona fide emergency situations, including but not limited to severe weather, vehicular breakdown or accident or contractor personnel illness that require cancelling an escort(s) on a scheduled date, require notice to the Project Manager and designated facility personnel two-hours before scheduled arrival time, if possible. Emergency situations shall be evaluated by the Project Manager on a case by case basis.
5. Names of designated facility personnel and a 24-hour contact telephone number shall be provided to the Contractor upon Contract award.

### **GC 2.04 Storage of Equipment and Materials**

1. All materials, tools, equipment, and other items necessary for the completion of the Project (“materials”) shall be delivered only to the Contractor and only when the Contractor is present on the site. DOC personnel shall not receive or accept any deliveries at any time.
2. The Contractor shall obtain instructions from the Project Manager as to available space and/or staging areas for storing any and all materials. If adequate space is not available, the Contractor shall provide his or her own secure storage facility and in all cases be responsible for the security of such storage facilities and the safety and condition of the materials stored therein.
3. The Contractor shall maintain and store all materials used throughout the life of the Project in a manner so as not to obstruct traffic, impede the progress of the Project, or interfere with DOC operations. The Project Manager reserves the right to direct such proper maintenance and storage.
4. The Contractor shall protect all materials delivered to the Project site from any and all damages to such materials, including but not limited to weather damage, loss or vandalism. All materials shall remain the Contractor’s property and shall remain under his or her control until completion of the Project.

**GC 2.05 Codes, Rules, Ordinances and Approvals**

1. All materials furnished and all work installed and completed shall comply with the rules and regulations set forth by the State of Connecticut and must comply with all applicable State and local codes, laws, ordinances, rules and regulations, with all requirements of local utility companies, and with the recommendations of the Insurance Rating Organization having jurisdiction over the Project.
2. The Contractor shall, at his or her expense, obtain all notices, permits, licenses, approvals, assessments of fees and costs, and certifications of inspection. The Contractor shall provide and deliver same to Kathy Woodward, AFAO, before requesting acceptance and final payment.
3. All apparatus, materials, equipment, including but not limited to ladders, scaffolding, chutes, and dumpsters, shall be in the condition(s) and operated in the manner(s) required by the Manual of Accident Prevention in Construction, published by the Associated General Contractors of America, OSHA, including all updated revisions thereto, and any other relevant guidelines.
4. The Contractor shall at all times maintain a fire-safe environment. Fire extinguishers are to be provided by the Contractor at all work sites and must be of the size and type required for the work performed. There shall be fire extinguisher operators on-site at all times. Fire extinguisher operators shall be certified in the use of fire extinguishers of the size and type utilized at the Project site. The DOC facility's fire sprinkler and alarm systems shall not be shut down or impaired without the approval of the Project Manager. Welding shall be performed only by certified welders. It shall be the responsibility of the Contractor to obtain a "Hot Work Permit" from the DOC Fire Safety Unit or the Facility Maintenance Supervisor. All work shall be in accordance with the National Fire Protection Association (NFPA) 241 Standard for Safeguarding Construction, Alteration and Demolition operations and the DOC Facilities Management and Engineering Policy, Document Number 008.
5. All codes, laws, rules, ordinances, regulations and recommendations must be complied with at all times. If there is a violation of any codes, laws, rules, ordinances, regulations, recommendations or any of the above provisions by the actions of the Contractor or as a result of the Project Specifications, the Contractor shall alert the Project Manager of any and all such violations prior to making any changes or alterations to the Project Specifications or before proceeding with the Project.

**GC 2.06 Salvage and Disposal**

1. All materials that are salvageable are the property of the DOC. The Project Specifications shall specify which materials the DOC shall retain and which materials the Contractor shall retain. DOC retained material(s) is to be relocated by the Contractor, at the Contractors' expense, to an area designated by the Project Manager.

2. All debris, rubbish, garbage or other disposable materials resulting from the performance of this Contract shall be the property of the Contractor and shall be removed from the Project site on a weekly basis or as directed by the Project Manager. The Project Manager shall designate what materials are to be deemed debris, rubbish, garbage or disposable for any reason.
3. The Contractor shall supply, use and maintain all chutes and dumpster containers designed to keep dust and spillage to a minimum at all times deemed necessary by the Project Manager.
4. The Contractor shall be solely responsible for obtaining all permits, manifests, fees or other requirements for the proper disposal of the materials cited in this Section. The Contractor shall be solely responsible for keeping such permits and manifests current pursuant to law.

### **GC 2.07 Maintenance of Utilities**

1. The DOC has the responsibility for and control of the operation of the entire utility distribution system on site. Any operational function related to the Project, including but not limited to all operational changes, shall be approved, coordinated and scheduled by the Project Manager.
2. When installation of new work requires the temporary shutdown of an existing operating system, such new work shall be performed at such time as designated by the DOC in coordination with the Project Manager. The DOC reserves the right to limit the duration of the shutdown to a specified number of net hours and to set the date and time of each occasion of any complete shutdown. The Contractor shall notify the Project Manager of the estimated duration of the shutdown period at least seven (7) days in advance of the date the work necessitating such shutdown is to be performed. Approval of any shutdown is at the discretion of the Project Manager.
3. The Contractor shall be responsible for and shall have all tools, supplies, equipment and labor necessary for the work to be performed immediately upon the onset of shutdown period. The Project Manager reserves the right to inspect such materials at any time.
4. When any shutdown to services that will interrupt critical operations of the facility or facilities must take place, the Contractor shall be responsible for the provision of a safe and adequate temporary means of service replacement for the duration of the shutdown. This service replacement shall be provided at the expense of the Contractor and shall be approved prior to replacement by the Project Manager. The Contractor shall remove any service replacement when it is no longer required.

**GC 2.08 Change Orders**

1. No additional time or compensation shall be granted beyond that noted on the original Purchase Order, unless approved in writing by Kathy Woodward, AFAO. Changes or approvals from any other entity shall not be honored.

**GC 2.09 Shop Drawings**

1. Shop drawings shall be submitted as required in accordance with the Project Specifications and any other Technical Specifications.
2. The Contractor shall make any corrections to the shop drawings as required by the Project Manager at no additional cost to the State. At the Contractor's expense, the Contractor shall resubmit the required number of copies of the proposed corrected copies until such proposed correction(s) is approved by the Project Manager.
3. The Contractor shall notify the Project Manager of any and all deviations from or changes to the Contract documents. An approval of such deviation or change shall not be considered an acceptance of same unless the approval has been clearly and explicitly identified in writing by Kathy Woodward, AFAO.

**GC 2.10 Substitutions**

1. Unless specifically noted in the Contract, only named products are used to indicate a level of quality and standard of performance. Other products may be substituted for the named product(s), providing that the Contractor supplies the Project Manager documentation demonstrating that the proposed substitution(s) is of equal or greater quality and meets an equal or greater standard of performance compared to the product(s) that is specified in the Contract. All such documentation shall be submitted and approved or rejected in writing by the Project Manager prior to the award of the Contract.
2. The Project Manager retains the right to determine, based on the submitted documentation, whether the proposed product(s) is of equal or greater quality compared to the named products(s).

End of Section - GENERAL CONDITIONS

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### **3. SECURITY REGULATIONS FOR CONTRACT FORCES**

#### **SR 3.01 Admittance to Facility**

1. Due to the location and nature of the work related to the Project, the DOC shall issue security badges to the Contractor, Subcontractors, and any and all of the Contractors' employees, agents or invitees. These security badges shall be worn and visible at all times within the confines of the correctional facility or facilities and anywhere on DOC grounds.
2. All bidders and contracted personnel shall complete a Security Division "Collect Background Report for Vendors" form which will require the following information at least two weeks prior to the individual(s) admittance to DOC facilities.
  - a. Name of the individual
  - b. Date of Birth
  - c. Social Security Number
  - d. Driver's License Number
  - e. Physical Characteristics (i.e. age, weight, height, etc.)
3. The completed report shall be faxed to the number indicated on the form.

#### **SR 3.02 Official Working Rules**

1. The Contractor is required to adhere to DOC Official Working Rules at all times as follows:
  - a. There shall be no verbal or personal contact with any inmate;
  - b. All individuals working pursuant to the Contract shall be under the observation of a DOC official at all times;
  - c. The entry and exit of all individuals working pursuant to the Contract shall be monitored by a DOC official at all times;
  - d. The DOC official reserves the right to refuse admittance to any individual working pursuant to the Contract for any cause determined by the DOC to be sufficient;
  - e. Any and all equipment shall be inspected by DOC personnel on a daily basis and, when not in use, shall be locked in a secure place as the DOC official may direct;
  - f. When not in use, the Contractor shall make any and all materials unusable by inmates and/or shall supervise the security of any and all materials so that such materials are unusable by inmates;
  - g. Any and all dangerous instruments, including but not limited to hacksaws, blades, and files, determined as such by a DOC official, shall remain in the custody of a DOC official at all times, except such time(s) as the instrument(s) is in use;
  - h. In the event of any emergency, all individuals working pursuant to the Contract

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- shall be escorted off DOC grounds by a DOC official;
- i. All questions pertaining to interruptions of service or the safety of the facility shall be addressed to the appropriate DOC official;
  - j. Work at the facility or on DOC grounds shall be executed between the hours of 8:00 a.m. and 12:00 noon and 12:30 p.m. and 4:30 p.m. The maximum working day is eight (8) hours. No work shall be executed at the facility or on DOC grounds on any weekend or designated holiday; and
  - k. The Contractor shall provide the DOC a copy of all material safety data sheets for any and all products used in the process of completion of the Project, including but not limited to construction materials and any other products brought onto DOC grounds.

### **SR 3.03 Rules and Regulations of the Dept. of Correction Facility**

1. All persons employed by or entering a DOC facility, including the Contractor, Subcontractor(s), the Contractor's employees, agents or invitees, shall read SR 3.01-SR 3.08. Each individual governed by this Contract shall sign at the end of this document to attest that he or she has read SR 3.01-SR 3.08 and understands such Rules and Regulations and relevant law and the penalties imposed by any and all violation(s) of the Rules and Regulations and relevant law. The signed and dated copy of the Security Regulations for Contract Forces document shall be submitted to the Project Manager prior to initial admittance to a DOC facility.

### **SR 3.04 Restricted Areas**

1. Upon entering the grounds of any DOC facility, all persons except DOC personnel, shall be restricted to the immediate area of the Project site as determined by the Project Manager. Only persons having official business and security clearance shall be admitted to the Project site. In order to gain admittance to other areas of DOC grounds, written permission must be granted by the supervisory DOC official.

### **SR 3.05 Inmates**

1. There may be times when inmates may be working adjacent to or in the same area as Project personnel. All persons are prohibited from accepting or giving anything to an inmate. Inmates are accountable to DOC personnel only; no other person(s) shall have any conversations or dealings of any kind with any inmate without the prior approval of DOC authorities.

### **SR 3.06 Vehicle Control**

1. Any and all persons entering DOC grounds shall remove ignition keys from their vehicle(s) and lock their vehicle(s).

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**SR 3.07 Contraband**

1. Clothing or contraband shall not be brought into or onto the DOC grounds or left in a vehicle. Contraband is defined in subsequent subsections of this Section and all persons are subject to DOC Facility Rules and Regulations concerning contraband when on DOC grounds.
2. The introduction or attempt to introduce into or upon DOC grounds or the taking or attempt to take or send there from any items(s) deemed contraband pursuant to DOC Rules and Regulations without the knowledge and approval of the Facility Supervisor is prohibited.
3. Contraband is defined as any article whatsoever which is unauthorized by DOC Rules and Regulations and may include but is not limited to letters, stamps, tools, weapons, papers, floor implements, writing materials, messages (written and verbal), and instruments. Any questions which may arise regarding such matters must be discussed promptly with the Facility Supervisor.
4. Failure or negligence to comply with DOC Rules and Regulations shall result in immediate disciplinary action and/or removal from the Project site. The Connecticut State Police shall be notified of all violations of these DOC Rules and Regulations.

**SR 3.08 "State Laws Governing Contraband"**

1. Connecticut General Statutes section 53a-174 provides:
  - a. Any person not authorized by law who conveys or passes, or causes to be conveyed or passed, into any correctional or humane institution or on the grounds or buildings thereof, or to any inmate of such an institution who is outside the premises thereof and known to the person so conveying or passing or causing such conveying or passing to be such an inmate, any controlled drug, as defined in Connecticut General Statute section 21a-240, any intoxicating liquors, any firearm, weapon, dangerous instrument or explosive of any kind, any United States currency, or any rope, ladder or other instrument or device for use in making, attempting or aiding an escape, shall be guilty of a class D felony. The unauthorized conveying, passing or possession of any rope or ladder or other instrument or device, adapted for use in making or aiding an escape, into any such institution or the grounds or buildings thereof, shall be presumptive evidence that it was so conveyed, passed or possessed for such use.
  - b. Any person not authorized by law who conveys into any such institution any letter or any missive which is intended for any person confined therein, or who conveys from within the enclosure to the outside of such institution any letter or other missive written or given by any person confined therein, shall be guilty of a class A misdemeanor.

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- c. Any person or visitor who enters or attempts to enter a correctional institution or facility by using a misleading or false name or title shall be guilty of a class A misdemeanor.
- 2. Connecticut General Statutes section 53a-174a provides:
  - a. Any person is guilty of possession of a weapon or dangerous instrument in a correctional institution when, being an inmate of such institution when, being an inmate of such institution, he knowingly makes, conveys from place to place or has in his possession or under his control any firearm, weapon, dangerous instrument, explosive or any other substance or thing designed to kill, injure or disable.
  - b. Possession of a weapon or dangerous instrument in a correctional institution is a Class B felony.
- 3. Connecticut General Statutes section 53a-174b provides:
  - a. Any person not authorized by the Commissioner of Correction or the commissioner's designee who (1) conveys or possesses with intent to convey an electronic wireless communication device to an inmate of a correctional institution while such inmate is in the institution, or (2) uses an electronic wireless communication device to take a photographic or digital image in a correctional institution, shall be guilty of a class A misdemeanor.
- 4. Connecticut General Statutes section 53a-35a provides in relevant part: "For any felony committed on or after July 1, 1981, the sentence of imprisonment shall be a definite sentence and the term shall be fixed by the court as follows:  
...(6) for a class B felony other than manslaughter in the first degree... a term not less than one year nor more than twenty years... (8) for a class D felony, a term not less than one year nor more than five years..."
- 5. Connecticut General Statutes section 53a-36 provides in relevant part: "A sentence of imprisonment for a misdemeanor shall be a definite sentence and the term shall be fixed by the court as follows: (1) For a class A misdemeanor, a term not to exceed one year..."

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I hereby attest to the fact that I have read SR 3.01-SR 3.08 and understand the Rules and Regulations and relevant law and the penalties imposed by any and all violation(s) of the Rules and Regulations and relevant law.

Signed: \_\_\_\_\_

Printed: \_\_\_\_\_

Dated: \_\_\_\_\_

## SECTION 07920 - JOINT SEALANTS

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

- A. This Section includes joint sealants for the following applications:
  - 1. Exterior joints in the following vertical surfaces and horizontal nontraffic surfaces:
    - a. Control and expansion joints in unit masonry.
    - b. Other joints as indicated.
  - 2. Interior joints in the following vertical surfaces and horizontal nontraffic surfaces:
    - a. Control and expansion joints on exposed interior surfaces of exterior walls.
    - b. Vertical joints on exposed surfaces of interior unit masonry walls and partitions.
    - c. Other joints as indicated.
- B. Related Sections include the following:
  - 1. Division 4 Section "Unit Masonry Assemblies" for masonry control and expansion joint fillers and gaskets.

#### 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.

#### 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, provide Samples with 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: For each type of joint sealant and accessory, signed by product manufacturer.
- E. SWRI Validation Certificate: For each elastomeric sealant specified to be validated by SWRI's Sealant Validation Program.
- F. Qualification Data: For Installer.
- G. Preconstruction Field Test Reports: Indicate which sealants and joint preparation methods resulted in optimum adhesion to joint substrates based on preconstruction testing specified in "Quality Assurance" Article.
- H. Compatibility and Adhesion Test Reports: From sealant manufacturer, indicating the following:
  - 1. Materials forming joint substrates and joint-sealant backings have been tested for compatibility and adhesion with joint sealants.
  - 2. Interpretation of test results and written recommendations for primers and substrate preparation needed for adhesion.
- I. Field Test Report Log: For each elastomeric sealant application.
- J. Product Test Reports: Based on comprehensive testing of product formulations performed by a qualified testing agency, indicating that sealants comply with requirements.
- K. Warranties: Special warranties specified in this Section.

#### 1.5 QUALITY ASSURANCE

- A. Installer Qualifications: Manufacturer's authorized Installer who is approved or licensed for installation of elastomeric sealants required for this Project.
- B. Source Limitations: Obtain each type of joint sealant through one source from a single manufacturer.
- C. Preconstruction Compatibility and Adhesion Testing: Submit to joint-sealant manufacturers, for testing indicated below, samples of materials that will contact or affect joint sealants.
  - 1. Use manufacturer's standard test method to determine whether priming and other specific joint preparation techniques are required to obtain rapid, optimum adhesion of joint sealants to joint substrates.
  - 2. Submit not fewer than eight pieces of each type of material, including joint substrates, shims, joint-sealant backings, secondary seals, and miscellaneous materials.
  - 3. Schedule sufficient time for testing and analyzing results to prevent delaying the Work.
  - 4. For materials failing tests, obtain joint-sealant manufacturer's written instructions for corrective measures including use of specially formulated primers.
  - 5. Testing will not be required if joint-sealant manufacturers submit joint preparation data that are based on previous testing of current sealant products for adhesion to, and compatibility with, joint substrates and other materials matching those submitted.

- D. Product Testing: Obtain test results for "Product Test Reports" Paragraph in "Submittals" Article from a qualified testing agency based on testing current sealant formulations within a 36-month period preceding the commencement of the Work.
1. Testing Agency Qualifications: An independent testing agency qualified according to ASTM C 1021 to conduct the testing indicated, as documented according to ASTM E 548.
  2. Test other joint sealants for compliance with requirements indicated by referencing standard specifications and test methods.
- E. Preconstruction Field-Adhesion Testing: Before installing elastomeric sealants, field test their adhesion to Project joint substrates as follows:
1. Locate test joints where indicated on Project or, if not indicated, as directed by Engineer.
  2. Conduct field tests for each application indicated below:
    - a. Each type of elastomeric sealant and joint substrate indicated.
    - b. Each type of nonelastomeric sealant and joint substrate indicated.
  3. Notify Engineer seven days in advance of dates and times when test joints will be erected.
  4. Arrange for tests to take place with joint-sealant manufacturer's technical representative present.
    - a. Test Method: Test joint sealants according to Method A, Field-Applied Sealant Joint Hand Pull Tab, in Appendix X1 in ASTM C 1193.
      - 1) For joints with dissimilar substrates, verify adhesion to each substrate separately; extend cut along one side, verifying adhesion to opposite side. Repeat procedure for opposite side.
  5. Report whether sealant in joint connected to pulled-out portion failed to adhere to joint substrates or tore cohesively. Include data on pull distance used to test each type of product and joint substrate. For sealants that fail adhesively, retest until satisfactory adhesion is obtained.
  6. Evaluation of Preconstruction Field-Adhesion-Test Results: Sealants not evidencing adhesive failure from testing, in absence of other indications of noncompliance with requirements, will be considered satisfactory. Do not use sealants that fail to adhere to joint substrates during testing.
- F. Preinstallation Conference: Conduct conference at Project site to comply with requirements in Division 1 Section "Project Management and Coordination."

## 1.6 PROJECT CONDITIONS

- A. Do not proceed with installation of joint sealants under the following conditions:
1. When ambient and substrate temperature conditions are outside limits permitted by joint-sealant manufacturer or are below 40 deg F.

2. When joint substrates are wet.
3. Where joint widths are less than those allowed by joint-sealant manufacturer for applications indicated.
4. Contaminants capable of interfering with adhesion have not yet been removed from joint substrates.

## 1.7 WARRANTY

- A. Special Installer's Warranty: Installer's standard form in which Installer agrees to repair or replace elastomeric joint sealants that do not comply with performance and other requirements specified in this Section within specified warranty period.
  1. Warranty Period: Two years from date of Substantial Completion.
- B. Special Manufacturer's Warranty: Manufacturer's standard form in which elastomeric sealant manufacturer agrees to furnish elastomeric joint sealants to repair or replace those that do not comply with performance and other requirements specified in this Section within specified warranty period.
  1. Warranty Period: 15 years from date of Substantial Completion.
- C. Special warranties specified in this Article exclude deterioration or failure of elastomeric joint sealants from the following:
  1. Movement of the structure resulting in stresses on the sealant exceeding sealant manufacturer's written specifications for sealant elongation and compression caused by structural settlement or errors attributable to design or construction.
  2. Disintegration of joint substrates from natural causes exceeding design specifications.
  3. Mechanical damage caused by individuals, tools, or other outside agents.
  4. Changes in sealant appearance caused by accumulation of dirt or other atmospheric contaminants.

## PART 2 - PRODUCTS

### 2.1 MANUFACTURERS

- A. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, products listed in other Part 2 articles.

### 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 required to match adjacent existing construction as selected from manufacturer's full range.

### 2.3 ELASTOMERIC JOINT SEALANTS

- A. Elastomeric Sealants: Comply with ASTM C 920 and other requirements indicated for each liquid-applied chemically curing sealant specified, including those referencing ASTM C 920 classifications for type, grade, class, and uses related to exposure and joint substrates.
- B. Stain-Test-Response Characteristics: Where elastomeric sealants are specified 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.
- C. Suitability for Immersion in Liquids. Where elastomeric sealants are indicated for Use I for joints that will be continuously immersed in liquids, provide products that have undergone testing according to ASTM C 1247 and qualify for the length of exposure indicated by reference to ASTM C 920 for Class 1 or 2. Liquid used for testing sealants is deionized water, unless otherwise indicated.
- D. Suitability for Contact with Food: Where elastomeric sealants are indicated for joints that will come in repeated contact with food, provide products that comply with 21 CFR 177.2600.
- E. Single-Component Neutral- and Basic-Curing Silicone Sealant:
  - 1. Available Products:
    - a. Dow Corning Corporation; 790.
    - b. GE Silicones; SilPruf LM SCS2700.
    - c. Tremco; Spectrem 1 (Basic).
    - d. GE Silicones; SilPruf SCS2000.
    - e. Pecora Corporation; 864.
    - f. Pecora Corporation; 890.
    - g. Polymeric Systems Inc.; PSI-641.
    - h. Sonneborn, Division of ChemRex Inc.; Omniseal.
    - i. Tremco; Spectrem 3.
    - j. Dow Corning Corporation; 791.
    - k. Dow Corning Corporation; 795
    - l. GE Silicones; SilPruf NB SCS9000.
    - m. GE Silicones; UltraPruf II SCS2900.
    - n. Pecora Corporation; 865.
    - o. Pecora Corporation; 895.
    - p. Pecora Corporation; 898.
  - 2. Type and Grade: S (single component) and NS (nonsag).
  - 3. Class: 50.
  - 4. Use Related to Exposure: NT (nontraffic).
  - 5. Uses Related to Joint Substrates: M, G, A, and, as applicable to joint substrates indicated, O.

a. Use O Joint Substrates: Masonry and Steel

6. Stain-Test-Response Characteristics: Nonstaining to porous substrates per ASTM C 1248.

## 2.4 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, Type C (closed-cell material with a surface skin), O (open-cell material), B (bicellular material with a surface skin) or any of the preceding types, as approved in writing by joint-sealant manufacturer for joint application indicated, and of size and density to control sealant depth and otherwise contribute to producing optimum sealant performance:
- 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. Provide products with low compression set and of size and shape to provide a secondary seal, to control sealant depth, and to 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.

## 2.5 MISCELLANEOUS MATERIALS

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

### PART 3 - EXECUTION

#### 3.1 EXAMINATION

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

#### 3.2 PREPARATION

- A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with joint-sealant manufacturer's written instructions and the following requirements:
  - 1. Remove all foreign material from joint substrates that could interfere with adhesion of joint sealant, including dust, paints (except for permanent, protective coatings tested and approved for sealant adhesion and compatibility by sealant manufacturer), old joint sealants, oil, grease, waterproofing, water repellents, water, surface dirt, and frost.
  - 2. Clean porous joint substrate surfaces by brushing, grinding, blast cleaning, mechanical abrading, or a combination of these methods to produce a clean, sound substrate capable of developing optimum bond with joint sealants. Remove loose particles remaining after cleaning operations above by vacuuming or blowing out joints with oil-free compressed air. Porous joint substrates include the following:
    - a. Concrete.
  - 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. Nonporous joint substrates include the following:
    - a. Metal.
- 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 in ASTM C 1193 for use of joint sealants as applicable to materials, applications, and conditions indicated.
- C. 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.
- D. Install bond-breaker tape behind sealants where sealant backings are not used between sealants and backs of joints.
- E. Install sealants using proven techniques that 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 in each joint configuration.
  - 3. Produce uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability.
- F. Tooling of Nonsag Sealants: Immediately after sealant application and before skinning or curing begins, tool sealants according to requirements specified below to form smooth, uniform beads of configuration indicated; to eliminate air pockets; and to ensure contact and adhesion of sealant with sides of joint.
  - 1. Remove excess sealant from surfaces adjacent to joints.
  - 2. Use tooling agents that are approved in writing by sealant manufacturer and that do not discolor sealants or adjacent surfaces.
  - 3. Provide concave joint configuration per Figure 5A in ASTM C 1193, unless otherwise indicated.
  - 4. Provide flush joint configuration where indicated per Figure 5B in ASTM C 1193.
  - 5. Provide recessed joint configuration of recess depth and at locations indicated per Figure 5C in ASTM C 1193.
    - a. Use masking tape to protect surfaces adjacent to recessed tooled joints.

### 3.4 FIELD QUALITY CONTROL

- A. Field-Adhesion Testing: Field test joint-sealant adhesion to joint substrates as follows:
  - 1. Extent of Testing: Test completed elastomeric sealant joints as follows:

- a. Perform 5 tests for the first 500 feet of joint length for each type of elastomeric sealant and joint substrate.
  - b. Perform 2 test for each 500 feet of joint length thereafter.
2. Test Method: Test joint sealants according to Method A (Field-Applied Sealant Joint Hand Pull Tab), Method B (Exposed Surface Finish Hand Pull Tab), Method C (Field-Applied Sealant Joint Hand Pull Flap), Method D (Water Immersion) in Appendix X1 in ASTM C 1193 or as appropriate for type of joint-sealant application indicated.
    - a. For joints with dissimilar substrates, verify adhesion to each substrate separately; do this by extending cut along one side, verifying adhesion to opposite side. Repeat procedure for opposite side.
  3. Inspect joints for complete fill, for absence of voids, and for joint configuration complying with specified requirements. Record results in a field-adhesion-test log.
  4. Inspect tested joints and report on the following:
    - a. Whether sealants in joints connected to pulled-out portion failed to adhere to joint substrates or tore cohesively. Include data on pull distance used to test each type of product and joint substrate. Compare these results to determine if adhesion passes sealant manufacturer's field-adhesion hand-pull test criteria.
    - b. Whether sealants filled joint cavities and are free of voids.
    - c. Whether sealant dimensions and configurations comply with specified requirements.
  5. Record test results in a field-adhesion-test log. Include dates when sealants were installed, names of persons who installed sealants, test dates, test locations, whether joints were primed, adhesion results and percent elongations, sealant fill, sealant configuration, and sealant dimensions.
  6. Repair sealants pulled from test area by applying new sealants following same procedures used originally to seal joints. Ensure that original sealant surfaces are clean and that new sealant contacts original sealant.
- B. Evaluation of Field Test Results: Sealants not evidencing adhesive failure from testing or noncompliance with other indicated requirements will be considered satisfactory. Remove sealants that fail to adhere to joint substrates during testing or to comply with other requirements. Retest failed applications until test results prove sealants comply with indicated requirements.

### 3.5 CLEANING

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

### 3.6 PROTECTION

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

### 3.7 JOINT-SEALANT SCHEDULE

- A. Joint-Sealant Application: Exterior vertical control and expansion joints in unit masonry.
  - 1. Joint Sealant: Single-component neutral- and basic-curing silicone sealant.
  - 2. Joint-Sealant Color: As selected from manufacturer's full range to match the color of the existing adjacent construction.
- B. Joint-Sealant Application: Vertical control and expansion joints on exposed interior surfaces of exterior walls.
  - 1. Joint Sealant: Single-component neutral- and basic-curing silicone sealant.
  - 2. Joint-Sealant Color: As selected from manufacturer's full range to match the paint color of the adjacent construction.
- C. Joint-Sealant Application: Vertical joints on exposed surfaces of interior unit masonry walls and partitions.
  - 1. Joint Sealant: Single-component neutral- and basic-curing silicone sealant.
  - 2. Joint-Sealant Color: As selected from manufacturer's full range to match the paint color of the adjacent construction.

END OF SECTION 07920

## SECTION 024119 - SELECTIVE DEMOLITION

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. Section Includes:
  - 1. Demolition and removal of selected portions of building or structure.

#### 1.3 DEFINITIONS

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

#### 1.4 MATERIALS OWNERSHIP

- A. Unless otherwise indicated, demolition waste becomes property of Contractor.

#### 1.5 PREINSTALLATION MEETINGS

- A. Predemolition Conference: Conduct conference at Project site.
  - 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 areas where existing construction is to remain and requires protection.

## 1.6 INFORMATIONAL SUBMITTALS

- A. Proposed Protection Measures: Submit report, including drawings, that indicates the measures proposed for protecting individuals and property, for environmental protection, for dust control and for noise control. Indicate proposed locations and construction of barriers.
- 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. Ensure Owner's on-site operations are uninterrupted.
  - 2. Interruption of utility services. Indicate how long utility services will be interrupted.
  - 3. Coordination for shutoff, capping, and continuation of utility services.
  - 4. Use of elevator and stairs.
  - 5. Coordination of Owner's continuing occupancy of portions of existing building and of Owner's partial occupancy of completed Work.
- C. Inventory: Submit a list of items to be removed and salvaged and deliver to Owner prior to start of demolition.
- D. Predemolition Photographs or Video: Submit before Work begins.

## 1.7 FIELD 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 Engineer 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. If suspected hazardous materials are encountered, do not disturb; immediately notify Engineer and Owner. Hazardous materials will be removed by Owner under a separate contract.
- E. Storage or sale of removed items or materials on-site is not permitted.
- F. Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.
  - 1. Maintain fire-protection facilities in service during selective demolition operations.

## PART 2 - PRODUCTS

### 2.1 PERFORMANCE REQUIREMENTS

- A. Regulatory Requirements: Comply with governing EPA notification regulations before beginning selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.
- B. Standards: Comply with ANSI/ASSE A10.6 and NFPA 241.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Verify that utilities have been disconnected and capped before starting selective demolition operations.
- B. Review record documents of existing construction provided by Owner. Owner does not guarantee that existing conditions are same as those indicated in record documents.
- C. Survey existing conditions and correlate with requirements indicated to determine extent of selective demolition required.
- 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 Engineer.

### 3.2 UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS

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

### 3.3 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.
- 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.

### 3.4 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.
- B. Removed and Reinstalled Items:
1. Clean and repair items to functional condition adequate for intended reuse.
  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.

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

### 3.5 SELECTIVE DEMOLITION PROCEDURES FOR SPECIFIC MATERIALS

- A. Masonry: Demolish in small sections. Cut masonry at junctures with construction to remain, using power-driven saw, then remove masonry between saw cuts.

### 3.6 DISPOSAL OF DEMOLISHED MATERIALS

- A. General: Except for items or materials indicated to be reused, salvaged, reinstalled, or otherwise indicated to remain Owner's property, remove demolished materials from Project site 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.
  - 4. Comply with requirements specified in Section 017419 "Construction Waste Management and Disposal."
- B. Burning: Do not burn demolished materials.
- C. Disposal: Transport demolished materials off Owner's property and legally dispose of them.

### 3.7 CLEANING

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

END OF SECTION 024119

## SECTION 040120 - MAINTENANCE OF UNIT MASONRY

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. Section includes maintenance and repair of unit masonry consisting of concrete masonry unit masonry restoration and cleaning as follows:
  - 1. Repairing unit masonry, including replacing units.
  - 2. Repointing joints.
  - 3. Final Cleaning.
- B. Owner-Furnished Material: None.
- C. Related Sections:
  - 1. Section 024119 "Selective Demolition".
  - 2. Section 042200 "Concrete Unit Masonry".
  - 3. Section 079200 "Joint Sealants".

#### 1.3 ALLOWANCES

- A. Allowances for masonry restoration are specified in Section 012100 "Allowances."
  - 1. Perform masonry restoration work under quantity allowances and only as authorized. Authorized work includes work required by Drawings and the Specifications and only work authorized in writing by Engineer.
  - 2. Notify Engineer weekly of extent of work performed that is attributable to quantity allowances.
  - 3. Perform work that exceeds quantity allowances only as authorized by Change Orders.
- B. Remove and replace masonry as part of masonry removal and replacement allowance.
- C. Reanchor masonry as part of reanchoring masonry allowance.
- D. Patch masonry units as part of masonry unit patching allowance.
- E. Repoint masonry as part of repointing masonry allowance.

#### 1.4 UNIT PRICES

- A. Work of this Section is affected by unit prices specified in Section 012200 "Unit Prices."
  - 1. Unit prices apply to authorized work covered by quantity allowances.
  - 2. Unit prices apply to additions to and deletions from Work as authorized by Change Orders.

#### 1.5 DEFINITIONS

- A. Very Low-Pressure Spray: Under 100 psi.
- B. Low-Pressure Spray: 100 to 400 psi; 4 to 6 gpm.
- C. Medium-Pressure Spray: 400 to 800 psi; 4 to 6 gpm.
- D. High-Pressure Spray: 800 to 1200 psi; 4 to 6 gpm.
- E. Saturation Coefficient: Ratio of the weight of water absorbed during immersion in cold water to weight absorbed during immersion in boiling water; used as an indication of resistance of masonry units to freezing and thawing.

#### 1.6 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated. Include recommendations for application and use. Include test data substantiating that products comply with requirements.
- B. Shop Drawings: For the following:
  - 1. Provisions for expansion joints or other sealant joints.
  - 2. Replacement and repair anchors. Include details of anchors within individual masonry units, with locations of anchors and dimensions of holes and recesses in units required for anchors.
- C. Samples for Initial Selection: For the following:
  - 1. Pointing Mortar: Submit sets of mortar for pointing in the form of sample mortar strips, 6 inches long by 1/2 inch wide, set in aluminum or plastic channels.
    - a. Have each set contain a close color range of at least three Samples of different mixes of colored sands and cements that produce a mortar matching the cleaned masonry when cured and dry.
    - b. Submit with precise measurements on ingredients, proportions, gradations, and sources of colored sands from which each Sample was made.
  - 2. Patching Compound: Submit sets of patching compound Samples in the form of plugs (patches in drilled holes) in sample units of masonry representative of the range of masonry colors on the building.

- a. Have each set contain a close color range of at least three Samples of different mixes of patching compound that matches the variations in existing masonry when cured and dry.
  3. Sealant Materials: See Section 079200 "Joint Sealants."
  4. Include similar Samples of accessories involving color selection.
- D. Samples for Verification: For the following:
1. Each type of masonry unit to be used for replacing existing units. Include sets of Samples as necessary to show the full range of shape, color, and texture to be expected.
    - a. For each block type, provide straps or panels containing at least four blocks. Include multiple straps for blocks with a wide range.
  2. Each type of sand used for pointing mortar; minimum 1 lb of each in plastic screw-top jars.
    - a. For blended sands, provide Samples of each component and blend.
    - b. Identify sources, both supplier and quarry, of each type of sand.
  3. Each type, color, and texture of pointing mortar in the form of sample mortar strips, 6 inches long by 1/2 inch wide, set in aluminum or plastic channels.
    - a. Include with each Sample a list of ingredients with proportions of each. Identify sources, both supplier and quarry, of each type of sand and brand names of cementitious materials and pigments if any.
  4. Each type of masonry patching compound in the form of briquettes, at least 3 inches long by 1-1/2 inches wide. Document each Sample with manufacturer and stock number or other information necessary to order additional material.
  5. Sealant Materials: See Section 079200 "Joint Sealants."
  6. Accessories: Each type of anchor, accessory, and miscellaneous support.

#### 1.7 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For restoration specialists including field supervisors and restoration workers.
- B. Quality-Control Program.
- C. Restoration and Repair Program.
- D. Cleaning Program.

## 1.8 QUALITY ASSURANCE

- A. Restoration Specialist Qualifications: Engage an experienced masonry restoration and cleaning firm to perform work of this Section. Firm shall have completed work similar in material, design, and extent to that indicated for this Project with a record of successful in-service performance. Experience installing standard unit masonry is not sufficient experience for masonry restoration work.
1. At Contractor's option, work may be divided between two specialist firms: one for cleaning work and one for repair work.
  2. Field Supervision: Restoration specialist firms shall maintain experienced full-time supervisors on Project site during times that masonry restoration, repair and cleaning work is in progress. Supervisors shall not be changed during Project except for causes beyond the control of restoration specialist firm.
  3. Restoration Worker Qualifications: Persons who are experienced in restoration work of types they will be performing. When masonry units are being patched, assign at least one worker among those performing patching work who is trained and certified by manufacturer of patching compound to apply its products.
- B. Source Limitations: Obtain each type of material for masonry restoration (masonry unit, cement, sand, etc.) from one source with resources to provide materials of consistent quality in appearance and physical properties.
- C. Quality-Control Program: Prepare a written quality-control program for this Project to systematically demonstrate the ability of personnel to properly follow methods and use materials and tools without damaging masonry. Include provisions for supervising performance and preventing damage due to worker fatigue.
- D. Repair Program: Prepare a written, detailed description of materials, methods, equipment, and sequence of operations to be used for each phase of repair work including protection of surrounding materials and Project site.
1. Include methods for keeping pointing mortar damp during curing period.
  2. If materials and methods other than those indicated are proposed for any phase of restoration work, add to the Quality-Control Program a written description of such materials and methods, including evidence of successful use on comparable projects, and demonstrations to show their effectiveness for this Project and worker's ability to use such materials and methods properly.
- E. Cleaning Program: Prepare a written cleaning program that describes cleaning process in detail, including materials, methods, and equipment to be used, protection of surrounding materials, and control of runoff during operations.
1. If materials and methods other than those indicated are proposed for any phase of restoration work, add to the Quality-Control Program a written description of such materials and methods, including evidence of successful use on comparable projects, and demonstrations to show their effectiveness for this Project and worker's ability to use such materials and methods properly.

- F. Cleaning and Repair Appearance Standard: Cleaned and repaired surfaces are to have a uniform appearance as viewed from 20 feet away by Engineer. Perform additional general cleaning, and spot cleaning of small areas that are noticeably different, so that surface blends smoothly into surrounding areas.
- G. Mockups: Prepare mockups of restoration and cleaning to demonstrate aesthetic effects and set quality standards for materials and execution and for fabrication and installation.
1. Masonry Repair: Prepare sample areas for each type of masonry material indicated to have repair work performed. If not otherwise indicated, size each mockup not smaller than 2 adjacent whole units or approximately 48 inches in least dimension. Erect sample areas in existing walls unless otherwise indicated, to demonstrate quality of materials, workmanship, and blending with existing work. Include the following as a minimum:
    - a. Replacement: Two masonry units replaced.
    - b. Reanchoring Veneers: Install three masonry repair anchors in mockup wall assembly of each anchor type required.
    - c. Patching: Three small holes at least 1 inch in diameter for each type of masonry material indicated to be patched, so as to leave no evidence of repair.
    - d. Widening Joints: Widen a joint in 2 separate locations, each approximately 12 inches long.
  2. Repointing: Rake out joints in 2 separate areas, each approximately 36 inches high by 48 inches wide for each type of repointing required and repoint one of the areas.
  3. Cleaning: Clean an area approximately 25 sq. ft. for each type of masonry and surface condition.
    - a. Test cleaners and methods on samples of adjacent materials for possible adverse reactions. Do not use cleaners and methods known to have deleterious effect.
    - b. Allow a waiting period of not less than seven days after completion of sample cleaning to permit a study of sample panels for negative reactions.
  4. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
  5. Approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.
- H. Preinstallation Conference: Conduct conference at Project site.
1. Review methods and procedures related to masonry restoration and cleaning including, but not limited to, the following:
    - a. Construction schedule. Verify availability of materials, Restoration Specialist's personnel, equipment, and facilities needed to make progress and avoid delays.
    - b. Materials, material application, sequencing, tolerances, and required clearances.

1.9 DELIVERY, STORAGE, AND HANDLING

- A. Deliver masonry units to Project site strapped together in suitable packs or pallets or in heavy-duty cartons.
- B. Deliver other materials to Project site in manufacturer's original and unopened containers, labeled with manufacturer's name and type of products.
- C. Store cementitious materials on elevated platforms, under cover, and in a dry location. Do not use cementitious materials that have become damp.
- D. Store hydrated lime in manufacturer's original and unopened containers. Discard lime if containers have been damaged or have been opened for more than two days.
- E. Store lime putty covered with water in sealed containers.
- F. Store sand where grading and other required characteristics can be maintained and contamination avoided.

1.10 PROJECT CONDITIONS

- A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit masonry restoration and cleaning work to be performed according to manufacturers' written instructions and specified requirements.
- B. Repair masonry units and repoint mortar joints only when air temperature is between 40 and 90 deg F and is predicted to remain so for at least 7 days after completion of the Work unless otherwise indicated.
- C. Cold-Weather Requirements: Comply with the following procedures for masonry repair and mortar-joint pointing unless otherwise indicated:
  - 1. When air temperature is below 40 deg F, heat mortar ingredients, masonry repair materials, and existing masonry walls to produce temperatures between 40 and 120 deg F.
  - 2. When mean daily air temperature is below 40 deg F, provide enclosure and heat to maintain temperatures above 32 deg F within the enclosure for 7 days after repair and pointing.
- D. Hot-Weather Requirements: Protect masonry repair and mortar-joint pointing when temperature and humidity conditions produce excessive evaporation of water from mortar and repair materials. Provide artificial shade and wind breaks and use cooled materials as required to minimize evaporation. Do not apply mortar to substrates with temperatures of 90 deg F and above unless otherwise indicated.
- E. For manufactured repair materials, perform work within the environmental limits set by each manufacturer.

- F. Clean masonry surfaces only when air temperature is 40 deg F and above and is predicted to remain so for at least 7 days after completion of cleaning.

#### 1.11 COORDINATION

- A. Coordinate masonry repairs and cleaning with public circulation patterns at Project site. Some work is near public circulation patterns. Public circulation patterns cannot be closed off entirely, and in places can be only temporarily redirected around small areas of work. Plan and execute the Work accordingly.

#### 1.12 SEQUENCING AND SCHEDULING

- A. Order replacement materials at earliest possible date to avoid delaying completion of the Work.
- B. Order sand and gray portland cement for pointing mortar immediately after approval of Samples and mockups. Take delivery of and store at Project site a sufficient quantity to complete Project.
- C. Perform masonry repair work in the following sequence:
  - 1. Remove plant growth.
  - 2. Inspect for open mortar joints and repair before cleaning to prevent the intrusion of water and other cleaning materials into the wall.
  - 3. Remove paint that will interfere with the repair work.
  - 4. Clean masonry surfaces as needed to complete repairs.
  - 5. Rake out mortar and any sealant from joints surrounding masonry to be replaced and from joints adjacent to masonry repairs along joints.
  - 6. Repair masonry, including replacing existing masonry with new masonry materials.
  - 7. Rake out mortar and sealant from joints to be repointed.
  - 8. Point mortar and sealant joints.
  - 9. After repairs and repointing have been completed and cured, perform a final cleaning to remove residues from this work.
  - 10. Inspect for open mortar joints and repair before cleaning to prevent the intrusion of water and other cleaning materials into the wall.
  - 11. Remove paint.
  - 12. Clean masonry surfaces.
- D. As scaffolding is removed, patch anchor holes used to attach scaffolding. Patch holes in masonry units to comply with "Masonry Unit Patching" Article. Patch holes in mortar joints to comply with "Repointing Masonry" Article.

## PART 2 - PRODUCTS

### 2.1 MASONRY MATERIALS

- A. Masonry Units: Provide new masonry units, including specially molded, ground, cut, or sawed shapes where required to complete masonry repair work.
  - 1. Provide units with colors, color variation within units, surface texture, size, and shape to match existing masonry and with physical properties as listed in Section 042200 "Concrete Unit Masonry"
  - 2. Special Shapes:
    - a. Provide specially molded, 100 percent solid shapes for applications where core holes or "frogs" could be exposed to view or weather when in final position and where shapes produced by sawing would result in sawed surfaces being exposed to view.
    - b. Mechanical chopping or breaking masonry, or bonding pieces of masonry together by adhesive, are not acceptable procedures for fabricating special shapes.
  - 3. Tolerances as Fabricated: Comply with tolerance requirements in ASTM C 216.

### 2.2 MORTAR MATERIALS

- A. Portland Cement: ASTM C 150, Type I or Type II, white or gray or both where required for color matching of exposed mortar.
  - 1. Provide cement containing not more than 0.60 percent total alkali when tested according to ASTM C 114.
- B. Hydrated Lime: ASTM C 207, Type S.
- C. Factory-Prepared Lime Putty: ASTM C 1489.
- D. Quicklime: ASTM C 5, pulverized lime.
- E. Mortar Sand: ASTM C 144 unless otherwise indicated.
  - 1. Color: Provide natural sand or ground marble, granite, or other sound stone of color necessary to produce required mortar color.
  - 2. For pointing mortar, provide sand with rounded edges.
  - 3. Match size, texture, and gradation of existing mortar sand as closely as possible. Blend several sands if necessary to achieve suitable match.
- F. Mortar Pigments: Natural and synthetic iron oxides, compounded for mortar mixes. Use only pigments with a record of satisfactory performance in masonry mortars.
- G. Water: Potable.

## 2.3 MANUFACTURED REPAIR MATERIALS

- A. Masonry Patching Compound: Factory-mixed cementitious product that is custom manufactured for patching masonry.
1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
    - a. Cathedral Stone Products, Inc.; Jahn M100 Terra Cotta and Brick Repair Mortar.
    - b. Conproco Corporation; Mimic or Matrix.
    - c. Edison Coatings, Inc.; Custom System 45.
  2. Use formulation that is vapor- and water permeable (equal to or more than the masonry unit), exhibits low shrinkage, has lower modulus of elasticity than the masonry units being repaired, and develops high bond strength to all types of masonry.
  3. Use formulation having working qualities and retardation control to permit forming and sculpturing where necessary.
  4. Formulate patching compound used for patching masonry in colors and textures to match each masonry unit being patched. Provide sufficient number of colors to enable matching the color, texture, and variation of each unit.

## 2.4 PAINT REMOVERS

- A. Alkaline Paste Paint Remover: Manufacturer's standard alkaline paste formulation for removing paint coatings from masonry.
1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
    - a. ABR Products, Inc.; 800 Brush Grade.
    - b. Diedrich Technologies Inc.; 606 Multi-Layer Paint Remover or 606X Extra Thick Multi-Layer Paint Remover.
    - c. Hydroclean, Hydrochemical Techniques, Inc.; Hydroclean HT-716 Heavy Duty Paint Remover.
    - d. Price Research, Ltd.; Price Heavy Duty Paint Stripper.
    - e. PROSOCO; Enviro Klean Safety Peel 2, Sure Klean Heavy-Duty Paint Stripper or Sure Klean Heavy-Duty Paint Stripper D.
- B. Covered or Skin-Forming Alkaline Paint Remover: Manufacturer's standard covered or skin-forming alkaline formulation for removing paint coatings from masonry.
1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
    - a. ABR Products, Inc.; Grip 'N Strip 800 Fast Acting.
    - b. Diedrich Technologies Inc.; 606 Multi-Layer Paint Remover or 606X Extra Thick Multi-Layer Paint Remover with pull-off removal system.
    - c. Dumond Chemicals, Inc.; Peel Away 1 System.

- d. PROSOCO; Enviro Klean Safety Peel 1 or Enviro Klean Safety Peel 3 with Enviro Klean Overcoat.
- C. Solvent-Type Paint Remover: Manufacturer's standard water-rinsable, solvent-type gel formulation for removing paint coatings from masonry for exterior applications only.
1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
    - a. ABR Products, Inc.; Super Bio Strip Gel.
    - b. Diedrich Technologies Inc.; 505 Special Coatings Stripper.
    - c. Dumond Chemicals, Inc.; Peel Away 2.
    - d. Hydroclean, Hydrochemical Techniques, Inc.; Hydroclean HT-300 Solvent Paint Remover.
    - e. Price Research, Ltd.; Price Strip-All.
    - f. PROSOCO; Sure Klean Fast Acting Stripper.
- D. Low-Odor, Solvent-Type Paint Remover: Manufacturer's standard low-odor, water-rinsable solvent-type gel formulation, containing no methanol or methylene chloride, for removing paint coatings from masonry.
1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
    - a. ABR Products, Inc.; Super Bio Strip Gel.
    - b. Cathedral Stone Products, Inc.; S-301, S-303 or S-305.
    - c. Dumond Chemicals, Inc.; Peel Away 6, Peel Away 7 or Peel Away 21.
    - d. PROSOCO; Enviro Klean Safety Peel 1 or Enviro Klean Safety Peel 3.

## 2.5 CLEANING MATERIALS

- A. Water: Potable.
- B. Hot Water: Water heated to a temperature of 140 to 160 deg F.
- C. Job-Mixed Detergent Solution: Solution prepared by mixing 2 cups of tetrasodium polyphosphate, 1/2 cup of laundry detergent, and 20 quarts of hot water for every 5 gal. of solution required.
- D. Job-Mixed Mold, Mildew, and Algae Remover: Solution prepared by mixing 2 cups of tetrasodium polyphosphate, 5 quarts of 5 percent sodium hypochlorite (bleach), and 15 quarts of hot water for every 5 gal. of solution required.
- E. Nonacidic Gel Cleaner: Manufacturer's standard gel formulation, with pH between 6 and 9, that contains detergents with chelating agents and is specifically formulated for cleaning masonry surfaces.
  1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:

- a. Price Research, Ltd.; Price Marble Cleaner-Gel.
  - b. PROSOCO; Sure Klean 942 Limestone and Marble Cleaner.
- F. Nonacidic Liquid Cleaner: Manufacturer's standard mildly alkaline liquid cleaner formulated for removing mold, mildew, and other organic soiling from ordinary building materials, including polished stone, brick, aluminum, plastics, and wood.
1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
    - a. Diedrich Technologies Inc.; Diedrich 910PM Polished Marble Cleaner.
    - b. Dominion Restoration Products, Inc.; Bio-Cleanse.
    - c. Dumond Chemicals, Inc.; Safe n' Easy Architectural Cleaner/Restorer.
    - d. Price Research, Ltd.; Price Non-Acid Masonry Cleaner.
    - e. PROSOCO; Enviro Klean 2010 All Surface Cleaner.
- G. Mild Acidic Cleaner: Manufacturer's standard mildly acidic cleaner containing no muriatic (hydrochloric), hydrofluoric, or sulfuric acid; or ammonium bifluoride or chlorine bleaches.
1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
    - a. ABR Products, Inc.; X-190 Limestone & Concrete Cleaner.
    - b. Diedrich Technologies Inc.; Envirostore 100.
    - c. Dominion Restoration Products, Inc.; DR-60 Stone and Masonry Cleaner.
    - d. PROSOCO; Enviro Klean BioWash.
- H. Acidic Cleaner: Manufacturer's standard acidic masonry cleaner composed of hydrofluoric acid or ammonium bifluoride blended with other acids, detergents, wetting agents, and inhibitors.
1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
    - a. ABR Products, Inc.; 801 Heavy Duty Masonry Cleaner.
    - b. Diedrich Technologies Inc.; Diedrich 101 Masonry Restorer or Diedrich 101G Granite, Terra Cotta, and Brick Cleaner.
    - c. Dumond Chemicals, Inc.; Safe n' Easy Ultimate Stone and Masonry Cleaner or Safe n' Easy Heavy Duty Restoration Cleaner.
    - d. EaCo Chem, Inc.; GS-Restoration or HD-Acid
    - e. Hydroclean, Hydrochemical Techniques, Inc.; Hydroclean Brick, Granite, Sandstone and Terra Cotta Cleaner (HT-626).
    - f. Price Research, Ltd.; Price Heavy Duty Restoration Cleaner or Price Restoration Cleaner.
    - g. PROSOCO; Enviro Klean Restoration Cleaner Sure Klean Restoration Cleaner or Sure Klean Heavy-Duty Restoration Cleaner.
    - h. Insert manufacturer's name; product name or designation.
- I. Two-Part Chemical Cleaner: Manufacturer's standard system consisting of potassium or sodium hydroxide based, alkaline prewash cleaner and acidic afterwash cleaner that does not contain hydrofluoric acid.

1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
  - a. ABR Products, Inc.; 500 Limestone Prewash Cleaner followed by 500 Limestone Afterwash.
  - b. Diedrich Technologies Inc.; Diedrich 808 Limestone Pre-Wash or Diedrich 808X Black Encrustation Remover - Super Strong followed by 707N Limestone Neutralizer After-Rinse.
  - c. PROSOCO; Enviro Klean BioKlean followed by Sure Klean Limestone & Masonry Afterwash or Sure Klean 766 Limestone Prewash followed by SureKlean Limestone & Masonry Afterwash.

## 2.6 ACCESSORY MATERIALS

- A. Liquid Strippable Masking Agent: Manufacturer's standard liquid, film-forming, strippable masking material for protecting glass, metal, and polished stone surfaces from damaging effects of acidic and alkaline masonry cleaners.
  1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
    - a. ABR Products, Inc.; Rubber Mask.
    - b. Price Research, Ltd.; Price Mask.
    - c. PROSOCO; Sure Klean Strippable Masking.
- B. Masonry Repair Anchors, Expansion Type: Mechanical fasteners designed for masonry veneer stabilization consisting of 1/4-inch-diameter, Type 304 or Type 316 stainless-steel rod with brass expanding shells at each end and water-shedding washer in the middle. Expanding shells shall be designed to provide positive mechanical anchorage to veneer on one end and backup masonry on the other.
  1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
    - a. BLOK-LOK Limited; Torq-Lok.
    - b. Dur-O-Wal, a division of Dayton Superior; Dur-O-Wal Repair Anchor.
    - c. Hohmann & Barnard, Inc.; #521RA-B Restoration Anchor.
- C. Masonry Repair Anchors, Spiral Type: Type 304 or Type 316 stainless-steel spiral rods designed to anchor to backing and veneer. Anchors are flexible in plane of veneer but rigid perpendicular to it.
  1. Provide adhesive-installed anchors complete with manufacturer's standard epoxy adhesive and injection tubes, or other devices required for installation.
  2. Provide driven-in anchors designed to be installed in drilled holes and relying on screw effect rather than adhesive to secure them to backup and veneer.
  3. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:

- a. BLOK-LOK Limited; Spira-Lok.
  - b. Dur-O-Wal, a division of Dayton Superior; Dur-O-Pair Resin Anchor or Dur-O-Flex Friction Pin Anchor.
  - c. Heckmann Building Products Inc.; #391 Remedial Tie.
  - d. Hohmann & Barnard, Inc.; Helix Spiro-Ties.
- D. Masonry Repair Anchors, Rod/Screen Tube Type: Stainless-steel screen tube with or without Type 304 or Type 316 stainless-steel rod, adhesive installed by injection with manufacturer's standard epoxy adhesive, complete with other devices required for installation.
1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
    - a. BLOK-LOK Limited; Chem-Lok.
    - b. Hohmann & Barnard, Inc.; #520RA.
- E. Sealant Materials:
1. Provide manufacturer's standard chemically curing, elastomeric sealant(s) of base polymer and characteristics indicated below that comply with applicable requirements in Section 079200 "Joint Sealants."
    - a. Single-component, nonsag urethane sealant.
  2. Colors: Provide colors of exposed sealants to match colors of masonry adjoining installed sealant unless otherwise indicated.
  3. Ground-Mortar Aggregate: Custom crushed and ground pointing mortar sand or existing mortar retrieved from joints. Grind to a particle size that matches the adjacent mortar aggregate and color. Remove all fines passing the 100 sieve.
- F. Joint-Sealant Backing:
1. Cylindrical Sealant Backings: ASTM C 1330, Type C (closed-cell material with a surface skin) or Type B (bicellular material with a surface skin), and of size and density to control sealant depth and otherwise contribute to producing optimum sealant performance.
  2. 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 acceptable.
- G. Setting Buttons: Resilient plastic buttons, nonstaining to masonry, sized to suit joint thicknesses and bed depths of masonry units without intruding into required depths of pointing materials.
- H. Masking Tape: Nonstaining, nonabsorbent material, compatible with pointing mortar, joint primers, sealants, and surfaces adjacent to joints; that will easily come off entirely, including adhesive.

- I. Antirust Coating: Fast-curing, lead- and chromate-free, self-curing, universal modified-alkyd primer complying with MPI #79, Alkyd Anticorrosive Metal Primer or SSPC-Paint 20 or SSPC-Paint 29 zinc-rich coating.
  - 1. Use coating requiring no better than SSPC-SP 2, "Hand Tool Cleaning" surface preparation according to manufacturer's literature or certified statement.
  - 2. Use coating with a VOC content of 420 g/L or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24).
  
- J. Miscellaneous Products: Select materials and methods of use based on the following, subject to approval of a mockup:
  - 1. Previous effectiveness in performing the work involved.
  - 2. Little possibility of damaging exposed surfaces.
  - 3. Consistency of each application.
  - 4. Uniformity of the resulting overall appearance.
  - 5. Do not use products or tools that could do the following:
    - a. Remove, alter, or in any way harm the present condition or future preservation of existing surfaces, including surrounding surfaces not in contract.
    - b. Leave a residue on surfaces.

## 2.7 MORTAR MIXES

- A. General: See Section 042200 "Concrete Unit Masonry" for mortar mixes at new construction.
  
- B. Preparing Lime Putty: Slake quicklime and prepare lime putty according to appendix to ASTM C 5 and manufacturer's written instructions.
  
- C. Measurement and Mixing: Measure cementitious materials and sand in a dry condition by volume or equivalent weight. Do not measure by shovel; use known measure. Mix materials in a clean, mechanical batch mixer.
  - 1. Mixing Pointing Mortar: Thoroughly mix cementitious materials and sand together before adding any water. Then mix again adding only enough water to produce a damp, unworkable mix that will retain its form when pressed into a ball. Maintain mortar in this dampened condition for 15 to 30 minutes. Add remaining water in small portions until mortar reaches desired consistency. Use mortar within one hour of final mixing; do not retemper or use partially hardened material.
  
- D. Colored Mortar: Produce mortar of color required by using specified ingredients. Do not alter specified proportions without Architect's approval.
  - 1. Mortar Pigments: Where mortar pigments are indicated, do not exceed a pigment-to-cement ratio of 1:10 by weight.
  
- E. Do not use admixtures in mortar unless otherwise indicated.
  
- F. Mortar Proportions: See Section 042200 "Concrete Unit Masonry"

## 2.8 CHEMICAL CLEANING SOLUTIONS

- A. Dilute chemical cleaners with water to produce solutions not exceeding concentration recommended by chemical-cleaner manufacturer.
- B. Acidic Cleaner Solution for Masonry: Dilute with water to produce hydrofluoric acid content of 3 percent or less, but not greater than that recommended by chemical-cleaner manufacturer.
- C. Acidic Cleaner Solution for Glazed Terra Cotta: Dilute with water to concentration demonstrated by testing that does not etch or otherwise damage terra cotta surface, but not greater than that recommended by chemical-cleaner manufacturer.

## PART 3 - EXECUTION

### 3.1 PROTECTION

- A. Protect persons, motor vehicles, surrounding surfaces of building being restored, building site, plants, and surrounding buildings from harm resulting from masonry restoration work.
  - 1. Erect temporary protective covers over walkways and at points of pedestrian and vehicular entrance and exit that must remain in service during course of restoration and cleaning work.
  - 2. Erect dust enclosures as required to contain all dust and debris within the work area.
- B. Comply with chemical-cleaner manufacturer's written instructions for protecting building and other surfaces against damage from exposure to its products. Prevent chemical-cleaning solutions from coming into contact with people, motor vehicles, landscaping, buildings, and other surfaces that could be harmed by such contact.
  - 1. Cover adjacent surfaces with materials that are proven to resist chemical cleaners used unless chemical cleaners being used will not damage adjacent surfaces. Use materials that contain only waterproof, UV-resistant adhesives. Apply masking agents to comply with manufacturer's written instructions. Do not apply liquid masking agent to painted or porous surfaces. When no longer needed, promptly remove masking to prevent adhesive staining.
  - 2. Keep wall wet below area being cleaned to prevent streaking from runoff.
  - 3. Do not clean masonry during winds of sufficient force to spread cleaning solutions to unprotected surfaces.
  - 4. Neutralize and collect alkaline and acid wastes for disposal off Owner's property.
  - 5. Dispose of runoff from cleaning operations by legal means and in a manner that prevents soil erosion, undermining of paving and foundations, damage to landscaping, and water penetration into building interiors.
- C. Prevent mortar from staining face of surrounding masonry and other surfaces.

1. Cover sills, ledges, and projections to protect from mortar droppings.
  2. Keep wall area wet below rebuilding and pointing work to discourage mortar from adhering.
  3. Immediately remove mortar in contact with exposed masonry and other surfaces.
  4. Clean mortar splatters from scaffolding at end of each day.
- D. Remove surface mounted items and equipment adjacent to masonry and store during masonry restoration and cleaning. Reinstall when masonry restoration and cleaning are complete.

### 3.2 MASONRY REMOVAL AND REPLACEMENT

- A. At locations indicated, remove masonry units that are damaged, spalled, or deteriorated. Carefully demolish or remove entire units from joint to joint, without damaging surrounding masonry, in a manner that permits replacement with full-size units.
1. When removing single units, remove material from center of unit and work toward outside edges.
- B. Support and protect remaining masonry that surrounds removal area. Maintain flashing, reinforcement, lintels, and adjoining construction in an undamaged condition.
- C. Notify Engineer of unforeseen detrimental conditions including voids, cracks, bulges, and loose units in existing masonry backup, rotted wood, rusted metal, and other deteriorated items.
- D. Remove in an undamaged condition as many whole units as possible.
1. Remove mortar, loose particles, and soil from masonry by cleaning with hand chisels, brushes, and water.
  2. Remove sealants by cutting close to masonry unit with utility knife and cleaning with solvents.
  3. Store units for reuse if undamaged. Store off ground, on skids, and protected from weather.
  4. Deliver cleaned masonry units not required for reuse to Owner unless otherwise indicated.
- E. Clean masonry units surrounding removal areas by removing mortar, dust, and loose particles in preparation for replacement.
- F. Replace removed damaged masonry with other removed masonry in good quality, where possible, or with new brick matching existing brick, including size. Do not use broken units unless they can be cut to usable size.
- G. Install replacement masonry into bonding and coursing pattern of existing masonry. If cutting is required, use a motor-driven saw designed to cut masonry with clean, sharp, unchipped edges.
1. Maintain joint width for replacement units to match existing joints.
  2. Use setting buttons or shims to set units accurately spaced with uniform joints.

- H. Lay replacement masonry units with completely filled bed, head, and collar joints. Butter ends with sufficient mortar to fill head joints and shove into place. Wet both replacement and surrounding units that have ASTM C 67 initial rates of absorption (suction) of more than 30 g/30 sq. in. per min.. Use wetting methods that ensure that units are nearly saturated but surface is dry when laid.
  - 1. Tool exposed mortar joints in repaired areas to match joints of surrounding existing brickwork.
  - 2. Rake out mortar used for laying units before mortar sets and point new mortar joints in repaired area to comply with requirements for repointing existing masonry, and at same time as repointing of surrounding area.
  - 3. When mortar is sufficiently hard to support units, remove shims and other devices interfering with pointing of joints.

### 3.3 REANCHORING VENEERS

- A. Install masonry repair anchors in horizontal mortar joints and according to manufacturer's written instructions. Install at not more than 16 inches o.c. vertically and 16 inches o.c. horizontally unless otherwise indicated. Install at locations to avoid penetrating flashing.
- B. Recess anchors at least 5/8 inch from surface of mortar joint and fill recess with pointing mortar.

### 3.4 PAINTING STEEL UNCOVERED DURING THE WORK

- A. Inspect steel exposed during masonry removal. Where Engineer determines that it is structural, or for other reasons cannot be totally removed, prepare and paint it as follows:
  - 1. Remove paint, rust, and other contaminants according to SSPC-SP 2, "Hand Tool Cleaning", as applicable to meet paint manufacturer's recommended preparation.
  - 2. Immediately paint exposed steel with two coats of antirust coating, following coating manufacturer's written instructions and without exceeding manufacturer's recommended rate of application (dry film thickness per coat).
- B. If on inspection and rust removal, the cross section of a steel member is found to be reduced from rust by more than 1/16 inch, notify Engineer before proceeding.

### 3.5 MASONRY UNIT PATCHING

- A. Patch the following masonry units unless another type of replacement or repair is indicated:
  - 1. Units indicated to be patched.
  - 2. Units with holes.
  - 3. Units with chipped edges or corners.
  - 4. Units with small areas of deep deterioration.
- B. Remove and replace existing patches unless otherwise indicated or approved by Engineer.

C. Patching Masonry Units:

1. Remove loose material from masonry surface. Carefully remove additional material so patch will not have feathered edges but will have square or slightly undercut edges on area to be patched and will be at least 1/4 inch thick, but not less than recommended by patching compound manufacturer.
2. Mask adjacent mortar joint or rake out for repointing if patch will extend to edge of masonry unit.
3. Mix patching compound in individual batches to match each unit being patched. Combine one or more colors of patching compound, as needed, to produce exact match.
4. Rinse surface to be patched and leave damp, but without standing water.
5. Brush-coat surfaces with slurry coat of patching compound according to manufacturer's written instructions.
6. Place patching compound in layers as recommended by patching compound manufacturer, but not less than 1/4 inch or more than 2 inches thick. Roughen surface of each layer to provide a key for next layer.
7. Trowel, scrape, or carve surface of patch to match texture and surrounding surface plane or contour of the masonry unit. Shape and finish surface before or after curing, as determined by testing, to best match existing masonry unit.
8. Keep each layer damp for 72 hours or until patching compound has set.

3.6 WIDENING JOINTS

- A. Do not widen a joint, except where indicated or approved by Architect.
- B. Location Guideline: Where an existing masonry unit abuts another or the joint is less than 1/8 inch, widen the joint for length indicated and to depth required for repointing after obtaining Architect's approval.
- C. Carefully perform widening by cutting, grinding, routing, or filing procedures demonstrated in an approved mockup.
- D. Widen joint to width equal to or less than predominant width of other joints on building. Make sides of widened joint uniform and parallel. Ensure that edges of units along widened joint are in alignment with joint edges at unaltered joints.

3.7 CLEANING MASONRY, GENERAL

- A. Proceed with cleaning in an orderly manner; work from top to bottom of each scaffold width and from one end of each elevation to the other. Ensure that dirty residues and rinse water will not wash over cleaned, dry surfaces.
- B. Use only those cleaning methods indicated for each masonry material and location.
  1. Do not use wire brushes or brushes that are not resistant to chemical cleaner being used. Do not use plastic-bristle brushes if natural-fiber brushes will resist chemical cleaner being used.

2. Use spray equipment that provides controlled application at volume and pressure indicated, measured at spray tip. Adjust pressure and volume to ensure that cleaning methods do not damage masonry.
    - a. Equip units with pressure gages.
  3. For chemical-cleaner spray application, use low-pressure tank or chemical pump suitable for chemical cleaner indicated, equipped with cone-shaped spray tip.
  4. For water-spray application, use fan-shaped spray tip that disperses water at an angle of 25 to 50 degrees.
  5. For high-pressure water-spray application, use fan-shaped spray tip that disperses water at an angle of at least 40 degrees.
  6. For heated water-spray application, use equipment capable of maintaining temperature between 140 and 160 deg F at flow rates indicated.
  7. For steam application, use steam generator capable of delivering live steam at nozzle.
- C. Perform each cleaning method indicated in a manner that results in uniform coverage of all surfaces, including corners, moldings, and interstices, and that produces an even effect without streaking or damaging masonry surfaces.
- D. Water Application Methods:
1. Water-Soak Application: Soak masonry surfaces by applying water continuously and uniformly to limited area for time indicated. Apply water at low pressures and low volumes in multiple fine sprays using perforated hoses or multiple spray nozzles. Erect a protective enclosure constructed of polyethylene sheeting to cover area being sprayed.
  2. Water-Spray Applications: Unless otherwise indicated, hold spray nozzle at least 6 inches from surface of masonry and apply water in horizontal back and forth sweeping motion, overlapping previous strokes to produce uniform coverage.
- E. Steam Cleaning: Apply steam to masonry surfaces at the very low pressures indicated for each type of masonry material. Hold nozzle at least 6 inches from surface of masonry and apply steam in horizontal back and forth sweeping motion, overlapping previous strokes to produce uniform coverage.
- F. Chemical-Cleaner Application Methods: Apply chemical cleaners to masonry surfaces to comply with chemical-cleaner manufacturer's written instructions; use brush or spray application. Do not spray apply at pressures exceeding 50 psi Do not allow chemicals to remain on surface for periods longer than those indicated or recommended by manufacturer.
- G. Rinse off chemical residue and soil by working upward from bottom to top of each treated area at each stage or scaffold setting. Periodically during each rinse, test pH of rinse water running off of cleaned area to determine that chemical cleaner is completely removed.
1. Apply neutralizing agent and repeat rinse if necessary to produce tested pH of between 6.7 and 7.5.
- H. After cleaning is complete, remove protection no longer required. Remove tape and adhesive marks.

### 3.8 PRELIMINARY CLEANING

- A. Removing Plant Growth: Completely remove visible plant, moss, and shrub growth from masonry surfaces. Carefully remove plants, creepers, and vegetation by cutting at roots and allowing to dry as long as possible before removal. Remove loose soil and debris from open masonry joints to whatever depth they occur.
- B. Preliminary Cleaning: Before beginning general cleaning, remove extraneous substances that are resistant to cleaning methods being used. Extraneous substances include paint, calking, asphalt, and tar.
  - 1. Carefully remove heavy accumulations of material from surface of masonry with a sharp chisel. Do not scratch or chip masonry surface.
  - 2. Remove paint and calking with alkaline paint remover.
    - a. Comply with requirements in "Paint Removal" Article.
    - b. Repeat application up to two times if needed.
  - 3. Remove asphalt and tar with solvent-type paint remover.
    - a. Comply with requirements in "Paint Removal" Article.
    - b. Apply paint remover only to asphalt and tar by brush without prewetting.
    - c. Allow paint remover to remain on surface for 10 to 30 minutes.
    - d. Repeat application if needed.

### 3.9 PAINT REMOVAL

- A. Paint Removal with Alkaline Paste Paint Remover:
  - 1. Remove loose and peeling paint using medium-pressure spray, scrapers, stiff brushes, or a combination of these. Let surface dry thoroughly.
  - 2. Apply paint remover to dry, painted masonry with brushes.
  - 3. Allow paint remover to remain on surface for period recommended by manufacturer.
  - 4. Rinse with cold or hot water applied by low-pressure spray to remove chemicals and paint residue.
  - 5. Repeat process if necessary to remove all paint.
  - 6. Apply acidic cleaner or manufacturer's recommended afterwash to masonry, while surface is still wet, using low-pressure spray equipment or soft-fiber brush. Let cleaner or afterwash remain on surface as a neutralizing agent for period recommended by chemical cleaner or afterwash manufacturer.
  - 7. Rinse with cold water applied by low-pressure spray to remove chemicals and soil.
- B. Paint Removal with Covered or Skin-Forming Alkaline Paint Remover:
  - 1. Remove loose and peeling paint using medium-pressure spray, scrapers, stiff brushes, or a combination of these. Let surface dry thoroughly.
  - 2. Apply paint remover to dry, painted masonry with trowel, spatula, or as recommended by manufacturer.
  - 3. Apply cover, if required by manufacturer, per manufacturer's written instructions.

4. Allow paint remover to remain on surface for period recommended by manufacturer or as determined in test panels.
5. Scrape off paint and remover and collect for disposal.
6. Rinse with cold or hot water applied by low-pressure spray to remove chemicals and paint residue.
7. Use alkaline paste paint remover, according to "Paint Removal with Alkaline Paste Paint Remover" Paragraph, if necessary to remove remaining paint.
8. Apply acidic cleaner or manufacturer's recommended afterwash to masonry, while surface is still wet, using low-pressure spray equipment or soft-fiber brush. Let cleaner or afterwash remain on surface as a neutralizing agent for period recommended by chemical-cleaner or afterwash manufacturer.
9. Rinse with cold water applied by low-pressure spray to remove chemicals and soil.

C. Paint Removal with Solvent-Type Paint Remover:

1. Remove loose and peeling paint using medium-pressure spray, scrapers, stiff brushes, or a combination of these. Let surface dry thoroughly.
2. Apply thick coating of paint remover to painted masonry with natural-fiber cleaning brush, deep-nap roller, or large paint brush.
3. Allow paint remover to remain on surface for period recommended by manufacturer. Agitate periodically with stiff-fiber brush if recommended by product manufacturer.
4. Rinse with cold or hot water applied by low-pressure spray to remove chemicals and paint residue.

### 3.10 CLEANING MASONRY UNITS

A. Cold-Water Soak:

1. Apply cold water by intermittent spraying to keep surface moist.
2. Use perforated hoses or other means that will apply a fine water mist to entire surface being cleaned.
3. Apply water in cycles with at least 30 minutes between cycles.
4. Continue spraying until surface encrustation has softened sufficiently to permit its removal by water wash, as indicated by cleaning tests.
5. Continue spraying for 72 hours.
6. Remove soil and softened surface encrustation from masonry with cold water applied by low-pressure spray.

B. Cold-Water Wash: Use cold water applied by medium-pressure spray.

C. Hot-Water Wash: Use hot water applied by medium-pressure spray.

D. Steam Cleaning: Apply steam at very low pressures not exceeding 30 psi. Remove dirt softened by steam with wood scrapers, stiff-nylon or -fiber brushes, or cold-water wash, as indicated by cleaning tests.

E. Detergent Cleaning:

1. Wet masonry with cold or hot water applied by low-pressure spray.

2. Scrub masonry with detergent solution using medium-soft brushes until soil is thoroughly dislodged and can be removed by rinsing. Use small brushes to remove soil from mortar joints and crevices. Dip brush in solution often to ensure that adequate fresh detergent is used and that masonry surface remains wet.
3. Rinse with cold or hot water applied by low-pressure spray to remove detergent solution and soil.
4. Repeat cleaning procedure above where required to produce cleaning effect established by mockup.

F. Mold, Mildew, and Algae Removal:

1. Wet masonry with cold or hot water applied by low-pressure spray.
2. Apply mold, mildew, and algae remover by brush or low-pressure spray.
3. Scrub masonry with medium-soft brushes until mold, mildew, and algae are thoroughly dislodged and can be removed by rinsing. Use small brushes for mortar joints and crevices. Dip brush in mold, mildew, and algae remover often to ensure that adequate fresh cleaner is used and that masonry surface remains wet.
4. Rinse with cold or hot water applied by low-pressure spray to remove mold, mildew, and algae remover and soil.
5. Repeat cleaning procedure above where required to produce cleaning effect established by mockup.

G. Nonacidic Gel Chemical Cleaning:

1. Wet masonry with cold or hot water applied by low-pressure spray.
2. Apply nonacidic gel cleaner in 1/8-inch thickness by brush, working into joints and crevices. Apply quickly and do not brush out excessively so area will be uniformly covered with fresh cleaner and dwell time will be uniform throughout area being cleaned.
3. Let cleaner remain on surface for period indicated below:
  - a. As recommended by chemical-cleaner manufacturer.
  - b. As established by mockup.
4. Remove bulk of nonacidic gel cleaner by squeegeeing into containers for disposal.
5. Rinse with cold or hot water applied by low-pressure spray to remove chemicals and soil.
6. Repeat cleaning procedure above where required to produce cleaning effect established by mockup. Do not repeat more than once. If additional cleaning is required, use steam cleaning.

H. Nonacidic Liquid Chemical Cleaning:

1. Wet masonry with cold or hot water applied by low-pressure spray.
2. Apply cleaner to masonry in two applications by brush or low-pressure spray. Let cleaner remain on surface for period indicated below:
  - a. As recommended by chemical-cleaner manufacturer.
  - b. As established by mockup.
  - c. Two to three minutes.
3. Rinse with cold or hot water applied by low-pressure spray to remove chemicals and soil.

4. Repeat cleaning procedure above where required to produce cleaning effect established by mockup. Do not repeat more than once. If additional cleaning is required, use steam cleaning.

I. Mild Acidic or Acidic Chemical Cleaning:

1. Wet masonry with cold water applied by low-pressure spray.
2. Apply cleaner to masonry in two applications by brush or low-pressure spray. Let cleaner remain on surface for period indicated below:
  - a. As recommended by chemical-cleaner manufacturer.
  - b. As established by mockup.
  - c. Two to three minutes.
3. Rinse with cold water applied by low-pressure spray to remove chemicals and soil.
4. Repeat cleaning procedure above where required to produce cleaning effect established by mockup. Do not repeat more than once. If additional cleaning is required, use a steam cleaning.

3.11 REPOINTING MASONRY

A. Rake out and repoint joints to the following extent:

1. All joints in areas indicated.
2. Joints where mortar is missing or where they contain holes.
3. Cracked joints where cracks can be penetrated at least 1/4 inch by a knife blade 0.027 inch thick.
4. Cracked joints where cracks are 1/16 inch or more in width and of any depth.
5. Joints where they sound hollow when tapped by metal object.
6. Joints where they are worn back 1/4 inch or more from surface.
7. Joints where they are deteriorated to point that mortar can be easily removed by hand, without tools.
8. Joints where they have been filled with substances other than mortar.
9. Joints indicated as sealant-filled joints.

B. Do not rake out and repoint joints where not required.

C. Rake out joints as follows, according to procedures demonstrated in approved mockup:

1. Remove mortar from joints to depth of 2 times joint width, but not less than 1/2 inch or not less than that required to expose sound, unweathered mortar. Remove all sealant from joints to be repointed.
2. Remove mortar from masonry surfaces within raked-out joints to provide reveals with square backs and to expose masonry for contact with pointing mortar. Brush, vacuum, or flush joints to remove dirt and loose debris.
3. Do not spall edges of masonry units or widen joints. Replace or patch damaged masonry units as directed by Engineer.

- a. Cut out mortar by hand with chisel and resilient mallet. Do not use power-operated grinders without Engineer's written approval based on approved quality-control program.
  - b. Cut out center of mortar bed joints using angle grinders with diamond-impregnated metal blades. Remove remaining mortar by hand with chisel and resilient mallet. Strictly adhere to approved quality-control program.
- D. Notify Engineer of unforeseen detrimental conditions including voids in mortar joints, cracks, loose masonry units, rotted wood, rusted metal, and other deteriorated items.
- E. Pointing with Mortar:
1. Rinse joint surfaces with water to remove dust and mortar particles. Time rinsing application so, at time of pointing, joint surfaces are damp but free of standing water. If rinse water dries, dampen joint surfaces before pointing.
  2. Apply pointing mortar first to areas where existing mortar was removed to depths greater than surrounding areas. Apply in layers not greater than 3/8 inch until a uniform depth is formed. Fully compact each layer thoroughly and allow it to become thumbprint hard before applying next layer.
  3. After low areas have been filled to same depth as remaining joints, point all joints by placing mortar in layers not greater than 3/8 inch. Fully compact each layer and allow to become thumbprint hard before applying next layer. Where existing masonry units have worn or rounded edges, slightly recess finished mortar surface below face of masonry to avoid widened joint faces. Take care not to spread mortar beyond joint edges onto exposed masonry surfaces or to featheredge the mortar.
  4. When mortar is thumbprint hard, tool joints to match original appearance of joints as demonstrated in approved mockup. Remove excess mortar from edge of joint by brushing.
  5. Cure mortar by maintaining in thoroughly damp condition for at least 72 consecutive hours including weekends and holidays.
    - a. Acceptable curing methods include covering with wet burlap and plastic sheeting, periodic hand misting, and periodic mist spraying using system of pipes, mist heads, and timers.
    - b. Adjust curing methods to ensure that pointing mortar is damp throughout its depth without eroding surface mortar.
  6. Hairline cracking within the mortar or mortar separation at edge of a joint is unacceptable. Completely remove such mortar and repoint.
- F. Pointing with Sealant:
1. After raking out, keep joints dry and free of mortar and debris.
  2. Clean and prepare joint surfaces according to Section 079200 "Joint Sealants." Prime joint surfaces unless sealant manufacturer recommends against priming. Do not allow primer to spill or migrate onto adjoining surfaces.
  3. Fill sealant joints with specified joint sealant according to Section 079200 "Joint Sealants" and the following:

- a. Install cylindrical sealant backing beneath the sealant, except where space is insufficient. There, install bond-breaker tape.
  - b. Install sealant using only proven installation techniques that will ensure that sealant will be deposited in a uniform, continuous ribbon, without gaps or air pockets, and with complete wetting of the joint bond surfaces equally on both sides. Fill joint flush with surrounding masonry and matching the contour of adjoining mortar joints.
  - c. Install sealant as recommended by sealant manufacturer but within the following general limitations, measured at the center (thin) section of the bead:
    - 1) Fill joints to a depth equal to joint width, but not more than 1/2 inch deep or less than 1/4 inch deep.
  - d. Immediately after first tooling, apply ground-mortar aggregate to sealant, gently pushing aggregate into the surface of sealant. Retool sealant to form smooth, uniform beads, slightly concave. Remove excess sealant and aggregate from surfaces adjacent to joint.
  - e. Do not allow sealant to overflow or spill onto adjoining surfaces, or to migrate into the voids of adjoining surfaces, particularly rough textures. Remove excess and spillage of sealant promptly as the work progresses. Clean adjoining surfaces by the means necessary to eliminate evidence of spillage, without damage to adjoining surfaces or finishes, as demonstrated in an approved mockup.
4. Cure sealant according to Section 079200 "Joint Sealants."
- G. Where repointing work precedes cleaning of existing masonry, allow mortar to harden at least 30 days before beginning cleaning work.

### 3.12 FINAL CLEANING

- A. After mortar has fully hardened, thoroughly clean exposed masonry surfaces of excess mortar and foreign matter; use wood scrapers, stiff-nylon or -fiber brushes, and clean water, spray applied at low pressure.
  1. Do not use metal scrapers or brushes.
  2. Do not use acidic or alkaline cleaners.
- B. Wash adjacent nonmasonry surfaces. Use detergent and soft brushes or cloths.
- C. Clean mortar and debris from roof; remove debris from gutters and downspouts. Rinse off roof and flush gutters and downspouts.
- D. Sweep and rake adjacent pavement and grounds to remove mortar and debris. Where necessary, pressure wash pavement surfaces to remove mortar, dust, dirt, and stains.

3.13 FIELD QUALITY CONTROL

- A. Inspectors: Owner will engage qualified independent inspectors to perform inspections and prepare test reports. Allow inspectors use of lift devices and scaffolding, as needed, to perform inspections.
- B. Engineer's Project Representatives: Engineer will assign Project representatives to help carry out Engineer's responsibilities at the site, including observing progress and quality of portion of the Work completed. Allow Engineer's Project representatives use of lift devices and scaffolding, as needed, to observe progress and quality of portion of the Work completed.
- C. Notify Inspectors and Engineer's Project representatives in advance of times when lift devices and scaffolding will be relocated. Do not relocate lift devices and scaffolding until Inspectors and Engineer's Project representatives have had reasonable opportunity to make inspections and observations of work areas at lift device or scaffold location.

END OF SECTION 040120

## SECTION 042200 - CONCRETE UNIT MASONRY

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. Section Includes:

1. Concrete masonry units.
2. Decorative concrete masonry units.
3. Mortar and grout.
4. Masonry joint reinforcement.
5. Ties and anchors.
6. Miscellaneous masonry accessories.

- B. Related Sections:

1. Section 040120 "Maintenance of Unit Masonry".
2. Section 079200 "Joint Sealants".

#### 1.3 DEFINITIONS

- A. CMU(s): Concrete masonry unit(s).

#### 1.4 PERFORMANCE REQUIREMENTS

- A. Provide structural unit masonry that develops indicated net-area compressive strengths at 28 days.
  1. Determine net-area compressive strength of masonry from average net-area compressive strengths of masonry units and mortar types (unit-strength method) according to Tables 1 and 2 in ACI 530.1/ASCE 6/TMS 602.
  2. Determine net-area compressive strength of masonry by testing masonry prisms according to ASTM C 1314.

## 1.5 PRECONSTRUCTION TESTING

- A. Preconstruction Testing Service: Owner will engage a qualified independent testing agency to perform preconstruction testing indicated below. Retesting of materials that fail to comply with specified requirements shall be done at Contractor's expense.
1. Concrete Masonry Unit Test: For each type of unit required, according to ASTM C 140 for compressive strength.
  2. Mortar Test (Property Specification): For each mix required, according to ASTM C 109/C 109M for compressive strength, ASTM C 1506 for water retention, and ASTM C 91 for air content.
  3. Mortar Test (Property Specification): For each mix required, according to ASTM C 780 for compressive strength.
  4. Grout Test (Compressive Strength): For each mix required, according to ASTM C 1019.
  5. Prism Test: For each type of construction required, according to ASTM C 1314.

## 1.6 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Samples for Verification: For each type and color of the following:
1. Exposed and Decorative CMUs.
  2. Pigmented and colored-aggregate mortar. Make Samples using same sand and mortar ingredients to be used on Project.

## 1.7 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For testing agency.
- B. Material Certificates: For each type and size of the following:
1. Masonry units.
    - a. Include data on material properties and material test reports substantiating compliance with requirements.
    - b. For masonry units used in structural masonry, include data and calculations establishing average net-area compressive strength of units.
  2. Cementitious materials. Include brand, type, and name of manufacturer.
  3. Preblended, dry mortar mixes. Include description of type and proportions of ingredients.
  4. Grout mixes. Include description of type and proportions of ingredients.
  5. Joint reinforcement.
  6. Anchors, ties, and metal accessories.
- C. Mix Designs: For each type of mortar and grout. Include description of type and proportions of ingredients.

1. Include test reports for mortar mixes required to comply with property specification. Test according to ASTM C 109/C 109M for compressive strength, ASTM C 1506 for water retention, and ASTM C 91 for air content.
  2. Include test reports, according to ASTM C 1019, for grout mixes required to comply with compressive strength requirement.
- D. Statement of Compressive Strength of Masonry: For each combination of masonry unit type and mortar type, provide statement of average net-area compressive strength of masonry units, mortar type, and resulting net-area compressive strength of masonry determined according to Tables 1 and 2 in ACI 530.1/ASCE 6/TMS 602.
- E. Cold-Weather[ and Hot-Weather] Procedures: Detailed description of methods, materials, and equipment to be used to comply with requirements.

#### 1.8 QUALITY ASSURANCE

- A. Testing Agency Qualifications: Qualified according to ASTM C 1093 for testing indicated.
- B. Source Limitations for Masonry Units: Obtain exposed masonry units of a uniform texture and color, or a uniform blend within the ranges accepted for these characteristics, from single source from single manufacturer for each product required.
- C. Source Limitations for Mortar Materials: Obtain mortar ingredients of a uniform quality, including color for exposed masonry, from single manufacturer for each cementitious component and from single source or producer for each aggregate.
- D. Masonry Standard: Comply with ACI 530.1/ASCE 6/TMS 602 unless modified by requirements in the Contract Documents.
- E. Preinstallation Conference: Conduct conference at Project site to comply with requirements in Section 013100 "Project Management and Coordination."

#### 1.9 DELIVERY, STORAGE, AND HANDLING

- A. Store masonry units on elevated platforms in a dry location. If units are not stored in an enclosed location, cover tops and sides of stacks with waterproof sheeting, securely tied. If units become wet, do not install until they are dry.
- B. Store cementitious materials on elevated platforms, under cover, and in a dry location. Do not use cementitious materials that have become damp.
- C. Store aggregates where grading and other required characteristics can be maintained and contamination avoided.
- D. Deliver preblended, dry mortar mix in moisture-resistant containers designed for use with dispensing silos. Store preblended, dry mortar mix in delivery containers on elevated platforms, under cover, and in a dry location or in covered weatherproof dispensing silos.

- E. Store masonry accessories, including metal items, to prevent corrosion and accumulation of dirt and oil.

#### 1.10 PROJECT CONDITIONS

- A. Protection of Masonry: During construction, cover tops of walls, projections, and sills with waterproof sheeting at end of each day's work. Cover partially completed masonry when construction is not in progress.
  - 1. Extend cover a minimum of 24 inches down both sides of walls and hold cover securely in place.
- B. Do not apply uniform floor or roof loads for at least 12 hours and concentrated loads for at least three days after building masonry walls or columns.
- C. Stain Prevention: Prevent grout, mortar, and soil from staining the face of masonry to be left exposed or painted. Immediately remove grout, mortar, and soil that come in contact with such masonry.
  - 1. Protect base of walls from rain-splashed mud and from mortar splatter by spreading coverings on ground and over wall surface.
  - 2. Protect sills, ledges, and projections from mortar droppings.
  - 3. Protect surfaces of window and door frames, as well as similar products with painted and integral finishes, from mortar droppings.
  - 4. Turn scaffold boards near the wall on edge at the end of each day to prevent rain from splashing mortar and dirt onto completed masonry.
- D. Cold-Weather Requirements: Do not use frozen materials or materials mixed or coated with ice or frost. Do not build on frozen substrates. Remove and replace unit masonry damaged by frost or by freezing conditions. Comply with cold-weather construction requirements contained in ACI 530.1/ASCE 6/TMS 602.
  - 1. Cold-Weather Cleaning: Use liquid cleaning methods only when air temperature is 40 deg F and higher and will remain so until masonry has dried, but not less than 7 days after completing cleaning.
- E. Hot-Weather Requirements: Comply with hot-weather construction requirements contained in ACI 530.1/ASCE 6/TMS 602.

## PART 2 - PRODUCTS

### 2.1 MASONRY UNITS, GENERAL

- A. Defective Units: Referenced masonry unit standards may allow a certain percentage of units to contain chips, cracks, or other defects exceeding limits stated in the standard. Do not use units where such defects will be exposed in the completed Work.

- B. Fire-Resistance Ratings: Where indicated, provide units that comply with requirements for fire-resistance ratings indicated as determined by testing according to ASTM E 119, by equivalent masonry thickness, or by other means, as acceptable to authorities having jurisdiction.

## 2.2 CONCRETE MASONRY UNITS

- A. Regional Materials: CMUs shall be manufactured within 500 miles of Project site from aggregates and cement that have been extracted, harvested, or recovered, as well as manufactured, within 500 miles of Project site.
- B. Shapes: Provide shapes indicated and as follows, with exposed surfaces matching exposed faces of adjacent units unless otherwise indicated.
  - 1. Provide special shapes for lintels, corners, jambs, sashes, movement joints, headers, bonding, and other special conditions.
  - 2. Provide bullnose units for interior outside corners and square-edged units for exterior outside corners unless otherwise indicated. Unit profiles to match adjacent existing construction in all instances.
- C. Integral Water Repellent: Provide units made with integral water repellent for exposed units.
  - 1. Integral Water Repellent: Liquid polymeric, integral water-repellent admixture that does not reduce flexural bond strength. Units made with integral water repellent, when tested according to ASTM E 514 as a wall assembly made with mortar containing integral water-repellent manufacturer's mortar additive, with test period extended to 24 hours, shall show no visible water or leaks on the back of test specimen.
    - a. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
      - 1) ACM Chemistries, Inc.; RainBloc.
      - 2) BASF Aktiengesellschaft; Rheopel Plus.
      - 3) Grace Construction Products, W. R. Grace & Co. - Conn.; Dry-Block.
- D. CMUs: ASTM C 90.
  - 1. Unit Compressive Strength: Provide units with minimum average net-area compressive strength of 2500 psi.
  - 2. Density Classification: Lightweight.
  - 3. Size (Width): Manufactured to dimensions 3/8 inch less than nominal dimensions.
  - 4. Exposed Faces: Provide color and texture matching the existing adjacent construction.
- E. Concrete Building Brick: ASTM C 55.
  - 1. Unit Compressive Strength: Provide units with minimum average net-area compressive strength of 2800 psi.
  - 2. Density Classification: Lightweight.

3. Size (Actual Dimensions): 3-5/8 inches wide by 7-5/8 inches (194 mm) long. Height may be 2-1/4 inches, 2-3/4 inches or 3-5/8 inches as required to match existing adjacent construction.

F. Decorative CMUs: ASTM C 90.

1. Products: Subject to compliance with requirements, provide units that match the existing adjacent construction.
2. Unit Compressive Strength: Provide units with minimum average net-area compressive strength of 2500 psi.
3. Density Classification: Lightweight.
4. Size (Width): Manufactured to dimensions specified in "CMUs" Paragraph.
5. Pattern and Texture:
  - a. Standard pattern, split-face finish. Match existing adjacent construction.
6. Colors: Match existing adjacent construction.
7. Special Aggregate: Provide units made with aggregate matching existing adjacent construction.

## 2.3 MORTAR AND GROUT MATERIALS

- A. Regional Materials: Aggregate for mortar and grout, cement, and lime shall be extracted, harvested, or recovered, as well as manufactured, within 500 miles of Project site.
- B. Portland Cement: ASTM C 150, Type I or II, except Type III may be used for cold-weather construction. Provide natural color or white cement as required to produce mortar color indicated.
- C. Hydrated Lime: ASTM C 207, Type S.
- D. Portland Cement-Lime Mix: Packaged blend of portland cement and hydrated lime containing no other ingredients.
- E. Masonry Cement: ASTM C 91.
  1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
    - a. Capital Materials Corporation; Flamingo Color Masonry Cement.
    - b. Cemex S.A.B. de C.V.; Citadel Type S, Dixie Type S.
    - c. Essroc, Italcementi Group; Brixment or Velvet.
    - d. Holcim (US) Inc.; Mortamix Masonry Cement, Rainbow Mortamix Custom Buff Masonry Cement or White Mortamix Masonry Cement.
    - e. Lafarge North America Inc.; Magnolia Masonry Cement, Lafarge Masonry Cement or Trinity White Masonry Cement.
    - f. Lehigh Cement Company; Lehigh Masonry Cement or Lehigh White Masonry Cement.

- g. National Cement Company, Inc.; Coosa Masonry Cement.
- F. Mortar Cement: ASTM C 1329.
- 1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
    - a. Lafarge North America Inc.; Lafarge Mortar Cement or Magnolia Superbond Mortar Cement.
- G. Mortar Pigments: Natural and synthetic iron oxides and chromium oxides, compounded for use in mortar mixes and complying with ASTM C 979. Use only pigments with a record of satisfactory performance in masonry mortar.
- 1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
    - a. Davis Colors; True Tone Mortar Colors.
    - b. Lanxess Corporation; Bayferrox Iron Oxide Pigments.
    - c. Solomon Colors, Inc.; SGS Mortar Colors.
- H. Colored Cement Product: Packaged blend made from portland cement and hydrated lime, masonry cement or mortar cement and mortar pigments, all complying with specified requirements, and containing no other ingredients.
- 1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
    - a. Colored Portland Cement-Lime Mix:
      - 1) Capital Materials Corporation; Riverton Portland Cement Lime Custom Color.
      - 2) Holcim (US) Inc.; Rainbow Mortamix Custom Color Cement/Lime.
      - 3) Lafarge North America Inc.; Eaglebond Portland & Lime.
      - 4) Lehigh Cement Company; Lehigh Custom Color Portland/Lime Cement.
    - b. Colored Masonry Cement:
      - 1) Capital Materials Corporation; Flamingo Color Masonry Cement.
      - 2) Cemex S.A.B. de C.V.; Richcolor Masonry Cement.
      - 3) Essroc, Italcementi Group; Brixment-in-Color.
      - 4) Holcim (US) Inc.; Rainbow Mortamix Custom Color Masonry Cement.
      - 5) Lafarge North America Inc.; U.S. Cement Custom Color Masonry Cement.
      - 6) Lehigh Cement Company; Lehigh Custom Color Masonry Cement.
      - 7) National Cement Company, Inc.; Coosa Masonry Cement.
  - 2. Formulate blend as required to produce color indicated or, if not indicated, as selected from manufacturer's standard colors.
  - 3. Pigments shall not exceed 10 percent of portland cement by weight.
  - 4. Pigments shall not exceed 5 percent of masonry cement or mortar cement by weight.

- I. Aggregate for Mortar: ASTM C 144.
  - 1. For mortar that is exposed to view, use washed aggregate consisting of natural sand or crushed stone.
  - 2. For joints less than 1/4 inch (6 mm) thick, use aggregate graded with 100 percent passing the No. 16 (1.18-mm) sieve.
  - 3. White-Mortar Aggregates: Natural white sand or crushed white stone.
  - 4. Colored-Mortar Aggregates: Natural sand or crushed stone of color necessary to produce required mortar color.
  
- J. Aggregate for Grout: ASTM C 404.
  
- K. Cold-Weather Admixture: Nonchloride, noncorrosive, accelerating admixture complying with ASTM C 494/C 494M, Type C, and recommended by manufacturer for use in masonry mortar of composition indicated.
  - 1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
    - a. Euclid Chemical Company (The); Accelguard 80.
    - b. Grace Construction Products, W. R. Grace & Co. - Conn.; Morset.
    - c. Sonneborn Products, BASF Aktiengesellschaft; Trimix-NCA.
  
- L. Water-Repellent Admixture: Liquid water-repellent mortar admixture intended for use with CMUs, containing integral water repellent by same manufacturer.
  - 1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
    - a. ACM Chemistries, Inc.; RainBloc for Mortar.
    - b. BASF Aktiengesellschaft; Rheopel Mortar Admixture.
    - c. Grace Construction Products, W. R. Grace & Co. - Conn.; Dry-Block Mortar Admixture.
  
- M. Water: Potable.

## 2.4 TIES AND ANCHORS

- A. Materials: Provide ties and anchors specified in this article that are made from materials that comply with the following unless otherwise indicated.
  - 1. Mill-Galvanized, Carbon-Steel Wire: ASTM A 82/A 82M; with ASTM A 641/A 641M, Class 1 coating.
  - 2. Hot-Dip Galvanized, Carbon-Steel Wire: ASTM A 82/A 82M; with ASTM A 153/A 153M, Class B-2 coating.
  - 3. Stainless-Steel Wire: ASTM A 580/A 580M, Type 304 or Type 316.
  - 4. Galvanized Steel Sheet: ASTM A 653/A 653M, Commercial Steel, G60 zinc coating.
  - 5. Steel Sheet, Galvanized after Fabrication: ASTM A 1008/A 1008M, Commercial Steel, with ASTM A 153/A 153M, Class B coating.

6. Stainless-Steel Sheet: ASTM A 666, Type 304 or Type 316.
7. Steel Plates, Shapes, and Bars: ASTM A 36/A 36M.
8. Stainless-Steel Bars: ASTM A 276 or ASTM A 666, Type 304.

B. Adjustable Anchors for Connecting to Structural Steel Framing: Provide anchors that allow vertical or horizontal adjustment but resist tension and compression forces perpendicular to plane of wall.

1. Anchor Section for Welding to Steel Frame: Crimped 1/4-inch-diameter, hot-dip galvanized steel wire. Mill-galvanized wire may be used at interior walls unless otherwise indicated.
2. Tie Section: Triangular-shaped wire tie, sized to extend within 1 inch of masonry face, made from 0.187-inch-diameter, hot-dip galvanized steel wire. Mill-galvanized wire may be used at interior walls, unless otherwise indicated.

## 2.5 MISCELLANEOUS MASONRY ACCESSORIES

- A. Compressible Filler: Premolded filler strips complying with ASTM D 1056, Grade 2A1; compressible up to 35 percent; of width and thickness indicated; formulated from neoprene, urethane or PVC.
- B. Preformed Control-Joint Gaskets: Made from styrene-butadiene-rubber compound, complying with ASTM D 2000, Designation M2AA-805 or PVC, complying with ASTM D 2287, Type PVC-65406 and designed to fit standard sash block and to maintain lateral stability in masonry wall; size and configuration as indicated.
- C. Bond-Breaker Strips: Asphalt-saturated, organic roofing felt complying with ASTM D 226, Type I (No. 15 asphalt felt).

## 2.6 MORTAR AND GROUT MIXES

- A. General: Do not use admixtures, including pigments, air-entraining agents, accelerators, retarders, water-repellent agents, antifreeze compounds, or other admixtures unless otherwise indicated.
  1. Do not use calcium chloride in mortar or grout.
  2. Use portland cement-lime, masonry cement or mortar cement mortar unless otherwise indicated.
  3. Add cold-weather admixture (if used) at same rate for all mortar that will be exposed to view, regardless of weather conditions, to ensure that mortar color is consistent.
- B. Preblended, Dry Mortar Mix: Furnish dry mortar ingredients in form of a preblended mix. Measure quantities by weight to ensure accurate proportions, and thoroughly blend ingredients before delivering to Project site.
- C. Mortar for Unit Masonry: Type S conforming to ASTM C 270.

- D. Pigmented Mortar: Use colored cement product or select and proportion pigments with other ingredients to produce color required. Do not add pigments to colored cement products.
1. Pigments shall not exceed 10 percent of portland cement by weight.
  2. Pigments shall not exceed 5 percent of masonry cement or mortar cement by weight.
  3. Mix to match existing adjacent construction.
  4. Application: Use pigmented mortar for exposed mortar joints to match existing adjacent construction:
- E. Colored-Aggregate Mortar: Produce required mortar color by using colored aggregates and natural color or white cement as necessary to produce required mortar.
1. Mix to match color to match existing adjacent construction.
  2. Application: Use colored aggregate mortar for exposed mortar joints color to match existing adjacent construction.
- F. Grout for Unit Masonry: Comply with ASTM C 476.
1. Use grout of type indicated or, if not otherwise indicated, of type (fine or coarse) that will comply with Table 1.15.1 in ACI 530.1/ASCE 6/TMS 602 for dimensions of grout spaces and pour height.
  2. Proportion grout in accordance with ASTM C 476, Table 1 or paragraph 4.2.2 for specified 28-day compressive strength indicated, but not less than 2000 psi.
  3. Provide grout with a slump of 8 to 11 inches as measured according to ASTM C 143/C 143M.

### PART 3 - EXECUTION

#### 3.1 EXAMINATION

- A. Proceed with installation only after unsatisfactory conditions have been corrected.

#### 3.2 INSTALLATION, GENERAL

- A. Use full-size units without cutting if possible. If cutting is required to provide a continuous pattern or to fit adjoining construction, cut units with motor-driven saws; provide clean, sharp, unchipped edges. Allow units to dry before laying unless wetting of units is specified. Install cut units with cut surfaces and, where possible, cut edges concealed.
- B. Matching Existing Masonry Work: Match coursing, bonding, color and texture of new masonry work with existing adjacent construction.

#### 3.3 TOLERANCES

- A. Dimensions and Locations of Elements:

1. For dimensions in cross section or elevation do not vary by more than plus 1/2 inch or minus 1/4 inch.
2. For location of elements in plan do not vary from that indicated by more than plus or minus 1/2 inch.
3. For location of elements in elevation do not vary from that indicated by more than plus or minus 1/4 inch in a story height or 1/2 inch total.

B. Lines and Levels:

1. For bed joints and top surfaces of bearing walls do not vary from level by more than 1/4 inch in 10 feet, or 1/2 inch maximum.
2. For conspicuous horizontal lines, such as lintels, sills, parapets, and reveals, do not vary from level by more than 1/8 inch in 10 feet, 1/4 inch in 20 feet, or 1/2 inch maximum.
3. For vertical lines and surfaces do not vary from plumb by more than 1/4 inch in 10 feet, 3/8 inch in 20 feet, or 1/2 inch maximum.
4. For conspicuous vertical lines, such as external corners, door jambs, reveals, and expansion and control joints, do not vary from plumb by more than 1/8 inch in 10 feet, 1/4 inch in 20 feet, or 1/2 inch maximum.
5. For lines and surfaces do not vary from straight by more than 1/4 inch in 10 feet, 3/8 inch in 20 feet, or 1/2 inch maximum.
6. For vertical alignment of exposed head joints, do not vary from plumb by more than 1/4 inch in 10 feet, or 1/2 inch maximum.

C. Joints:

1. For bed joints, do not vary from thickness indicated by more than plus or minus 1/8 inch, with a maximum thickness limited to 1/2 inch.
2. For exposed bed joints, do not vary from bed-joint thickness of adjacent courses by more than 1/8 inch.
3. For head and collar joints, do not vary from thickness indicated by more than plus 3/8 inch or minus 1/4 inch.
4. For exposed head joints, do not vary from thickness indicated by more than plus or minus 1/8 inch.

### 3.4 LAYING MASONRY WALLS

- A. Lay out walls in advance for accurate spacing of surface bond patterns with uniform joint thicknesses and for accurate location of openings, movement-type joints, returns, and offsets. Avoid using less-than-half-size units, particularly at corners, jambs, and, where possible, at other locations.
- B. Bond Pattern for Exposed Masonry: Unless otherwise indicated, lay exposed masonry in same pattern as existing adjacent construction; do not use units with less than nominal 4-inch horizontal face dimensions at corners or jambs.
- C. Lay concealed masonry with all units in a wythe in running bond or bonded by lapping not less than 4-inches. Bond and interlock each course of each wythe at corners. Do not use units with less than nominal 4-inch horizontal face dimensions at corners or jambs.

- D. Stopping and Resuming Work: Stop work by racking back units in each course from those in course below; do not tooth. When resuming work, clean masonry surfaces that are to receive mortar before laying fresh masonry.
- E. Built-in Work: As construction progresses, build in items specified in this and other Sections. Fill in solidly with masonry around built-in items.
- F. Fill space between steel frames and masonry solidly with mortar unless otherwise indicated.
- G. Where built-in items are to be embedded in cores of hollow masonry units, place a layer of metal lath, wire mesh, or plastic mesh in the joint below and rod mortar or grout into core.
- H. Fill cores in hollow CMUs with grout 24 inches under bearing plates, beams, lintels, posts, and similar items unless otherwise indicated.

### 3.5 MORTAR BEDDING AND JOINTING

- A. Lay hollow CMUs as follows:
  - 1. With face shells fully bedded in mortar and with head joints of depth equal to bed joints.
  - 2. With webs fully bedded in mortar in all courses of piers, columns, and pilasters.
  - 3. With webs fully bedded in mortar in grouted masonry, including starting course on footings.
  - 4. With entire units, including areas under cells, fully bedded in mortar at starting course on footings where cells are not grouted.
- B. Lay solid masonry units with completely filled bed and head joints; butter ends with sufficient mortar to fill head joints and shove into place. Do not deeply furrow bed joints or slush head joints.

### 3.6 MASONRY JOINT REINFORCEMENT

- A. General: Install entire length of longitudinal side rods in mortar with a minimum cover of 5/8 inch on exterior side of walls, 1/2 inch elsewhere. Lap reinforcement a minimum of 6 inches.
  - 1. Space reinforcement not more than 16 inches o.c.
- B. Interrupt joint reinforcement at control and expansion joints unless otherwise indicated.
- C. Provide continuity at wall intersections by using prefabricated T-shaped units.
- D. Provide continuity at corners by using prefabricated L-shaped units.
- E. Cut and bend reinforcing units as directed by manufacturer for continuity at returns, offsets, column fireproofing, pipe enclosures, and other special conditions.

### 3.7 ANCHORING MASONRY TO STRUCTURAL STEEL AND CONCRETE

- A. Anchor masonry to structural steel and concrete where masonry abuts or faces structural steel or concrete to comply with the following:
  - 1. Provide an open space not less than 1/2 inch wide between masonry and structural steel or concrete unless otherwise indicated. Keep open space free of mortar and other rigid materials.
  - 2. Anchor masonry with anchors embedded in masonry joints and attached to structure.
  - 3. Space anchors as indicated, but not more than 24 inches o.c. vertically and 36 inches o.c. horizontally.

### 3.8 CONTROL AND EXPANSION JOINTS

- A. General: Install control and expansion joint materials in unit masonry as masonry progresses. Do not allow materials to span control and expansion joints without provision to allow for in-plane wall or partition movement.
- B. Form control joints in concrete masonry using one of the following methods:
  - 1. Fit bond-breaker strips into hollow contour in ends of CMUs on one side of control joint. Fill resultant core with grout and rake out joints in exposed faces for application of sealant.
  - 2. Install preformed control-joint gaskets designed to fit standard sash block.
  - 3. Install interlocking units designed for control joints. Install bond-breaker strips at joint. Keep head joints free and clear of mortar or rake out joint for application of sealant.
  - 4. Install temporary foam-plastic filler in head joints and remove filler when unit masonry is complete for application of sealant.

### 3.9 FLASHING

- A. General: Reinstall existing flashing in masonry at lintels, ledges, other obstructions to downward flow of water in wall. Repair existing flashing as required to reinstall.
- B. Prepare masonry surfaces so they are smooth and free from projections that could puncture flashing. Where flashing is within mortar joint, place through-wall flashing on sloping bed of mortar and cover with mortar. Before covering with mortar, seal penetrations in flashing with adhesive, sealant, or tape as required.
- C. Install reglets and nailers for flashing and other related construction where required to reinstall existing flashing.

### 3.10 GROUT INSTALLATION

- A. Temporary Formwork and Shores: Construct formwork and shores as needed to support reinforced masonry elements during construction.

1. Construct formwork to provide shape, line, and dimensions of completed masonry as indicated. Make forms sufficiently tight to prevent leakage of mortar and grout. Brace, tie, and support forms to maintain position and shape during construction and curing of reinforced masonry.
  2. Do not remove forms and shores until reinforced masonry members have hardened sufficiently to carry their own weight and other loads that may be placed on them during construction.
- B. Grouting: Do not place grout until entire height of masonry to be grouted has attained enough strength to resist grout pressure.
1. Comply with requirements in ACI 530.1/ASCE 6/TMS 602 for cleanouts and for grout placement, including minimum grout space and maximum pour height.
  2. Limit height of vertical grout pours to not more than 60 inches.

### 3.11 FIELD QUALITY CONTROL

- A. Testing and Inspecting: Owner will engage special inspectors to perform tests and inspections and prepare reports. Allow inspectors access to scaffolding and work areas, as needed to perform tests and inspections. Retesting of materials that fail to meet specified requirements shall be done at Contractor's expense.
- B. Inspections: Level 1 special inspections according to the "International Building Code."
1. Begin masonry construction only after inspectors have verified proportions of site-prepared mortar.
  2. Place grout only after inspectors have verified compliance of grout spaces and of grades, sizes, and locations of reinforcement.
  3. Place grout only after inspectors have verified proportions of site-prepared grout.
- C. Testing Prior to Construction: One set of tests.
- D. Testing Frequency: One set of tests for each 5000 sq. ft. (464 sq. m) of wall area or portion thereof.
- E. Concrete Masonry Unit Test: For each type of unit provided, according to ASTM C 140 for compressive strength.
- F. Mortar Aggregate Ratio Test (Proportion Specification): For each mix provided, according to ASTM C 780.
- G. Mortar Test (Property Specification): For each mix provided, according to ASTM C 780. Test mortar for [mortar air content] [and] [compressive strength].
- H. Grout Test (Compressive Strength): For each mix provided, according to ASTM C 1019.
- I. Prism Test: For each type of construction provided, according to ASTM C 1314 at [7 days and at ]28 days.

### 3.12 REPAIRING, POINTING, AND CLEANING

- A. Remove and replace masonry units that are loose, chipped, broken, stained, or otherwise damaged or that do not match adjoining units. Install new units to match adjoining units; install in fresh mortar, pointed to eliminate evidence of replacement.
- B. Pointing: During the tooling of joints, enlarge voids and holes, except weep holes, and completely fill with mortar. Point up joints, including corners, openings, and adjacent construction, to provide a neat, uniform appearance. Prepare joints for sealant application, where indicated.
- C. In-Progress Cleaning: Clean unit masonry as work progresses by dry brushing to remove mortar fins and smears before tooling joints.
- D. Final Cleaning: After mortar is thoroughly set and cured, clean exposed masonry as follows:
  - 1. Remove large mortar particles by hand with wooden paddles and nonmetallic scrape hoes or chisels.
  - 2. Test cleaning methods on sample wall panel; leave one-half of panel uncleaned for comparison purposes. Obtain Architect's approval of sample cleaning before proceeding with cleaning of masonry.
  - 3. Protect adjacent stone and nonmasonry surfaces from contact with cleaner by covering them with liquid strippable masking agent or polyethylene film and waterproof masking tape.
  - 4. Wet wall surfaces with water before applying cleaners; remove cleaners promptly by rinsing surfaces thoroughly with clear water.
  - 5. Clean concrete masonry by cleaning method indicated in NCMA TEK 8-2A applicable to type of stain on exposed surfaces.

### 3.13 MASONRY WASTE DISPOSAL

- A. Salvageable Materials: Unless otherwise indicated, excess masonry materials are Contractor's property. At completion of unit masonry work, remove from Project site.

END OF SECTION 042200

## SECTION 099110 - PAINTING

### PART 1 - GENERAL

#### 1.1 SUMMARY

- A. This Section includes surface preparation and field painting of exposed interior items and surfaces.

#### 1.2 SUBMITTALS

- A. Product Data: For each product indicated.
- B. Samples: For each type of finish-coat material indicated.

#### 1.3 QUALITY ASSURANCE

- A. Benchmark Samples (Mockups): Provide a full-coat benchmark finish sample for each type of coating and substrate required. Comply with procedures specified in PDCA P5.
  - 1. Wall Surfaces: Provide samples on at least 100 sq. ft.
  - 2. Final approval of colors will be from benchmark samples.

#### 1.4 PROJECT CONDITIONS

- A. Store materials not in use in tightly covered containers in a well-ventilated area at a minimum ambient temperature of 45 deg F. Maintain storage containers in a clean condition, free of foreign materials and residue.
- B. Apply waterborne paints only when temperatures of surfaces to be painted and surrounding air are between 50 and 90 deg F.
- C. Apply solvent-thinned paints only when temperatures of surfaces to be painted and surrounding air are between 45 and 95 deg F.

#### 1.5 EXTRA MATERIALS

- A. Furnish extra paint materials from the same production run as the materials applied and in the quantities described below. Package with protective covering for storage and identify with labels describing contents. Deliver extra materials to Owner.
  - 1. Quantity: 5 percent, but not less than 1 gal. or 1 case, as appropriate, of each material and color applied.

## PART 2 - PRODUCTS

### 2.1 MANUFACTURERS

- A. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, products listed in other Part 2 articles.
- B. Products: Subject to compliance with requirements, provide one of the products listed in other Part 2 articles.
- C. Manufacturers' Names: Shortened versions (shown in parentheses) of the following manufacturers' names are used in other Part 2 articles:
  - 1. Benjamin Moore & Co. (Benjamin Moore).
  - 2. Coronado Paint Company (Coronado).
  - 3. ICI Dulux Paint Centers (ICI Dulux Paints).
  - 4. Kelly-Moore Paint Co. (Kelly-Moore).
  - 5. M. A. Bruder & Sons, Inc. (M. A. B. Paint).
  - 6. PPG Industries, Inc. (Pittsburgh Paints).
  - 7. Sherwin-Williams Co. (Sherwin-Williams).

### 2.2 PAINT MATERIALS, GENERAL

- A. Material Compatibility: Provide block fillers, 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 existing color as selected from manufacturer's full range.

### 2.3 PREPARATORY COATS

- A. Concrete Unit Masonry Block Filler: High-performance latex block filler of finish coat manufacturer and recommended in writing by manufacturer for use with finish coat and on substrate indicated.
- B. Interior Primer: Interior latex-based or alkyd primer of finish coat manufacturer and recommended in writing by manufacturer for use with finish coat and on substrate indicated.
  - 1. Where manufacturer does not recommend a separate primer formulation on substrate indicated, use paint specified for finish coat.

## 2.4 INTERIOR FINISH COATS

### A. Interior Flat Acrylic Paint:

1. Benjamin Moore; Regal Wall Satin No. 215 Premium Interior Finishes Flat Finish.
2. Coronado; 26 Line Gold Acrylic Latex Flat Wall Paint.
3. ICI Dulux Paints; 1201-XXXX Dulux Ultra Velvet Sheen Interior Flat Latex Wall & Trim Finish.
4. Kelly-Moore; 550 Super Latex Interior Flat Wall Paint.
5. M. A. B. Paint; Rich Lux Wal-Shield Latex Flat 041 Line.
6. Pittsburgh Paints; 80-Line Wallhide Interior Wall Flat Latex Paint.
7. Sherwin-Williams; SuperPaint Interior Latex Flat Wall Paint, A86 Series.

### B. Interior Flat Latex-Emulsion Size:

1. Benjamin Moore; Colorscapes Interior Latex Flat No. 515.
2. Coronado; 28 Line Super Kote 5000 Vinyl Latex Flat Wall.
3. ICI Dulux Paints; 1201-XXXX Dulux Ultra Velvet Sheen Interior Flat Latex Wall & Trim Finish.
4. Kelly-Moore; 550 Super Latex Interior Flat Wall Paint.
5. M. A. B. Paint; Rich Lux Wal-Shield Latex Flat 041 Line.
6. Pittsburgh Paints; 6-700 Series SpeedHide Ultra Interior Wall Flat Latex 100 Percent Acrylic.
7. Sherwin-Williams; SuperPaint Flat Wall Paint A86 Series.

### C. Interior Low-Luster Acrylic Enamel:

1. Benjamin Moore; Moore's Regal AquaVelvet No. 319.
2. Coronado; Tough Walls Acrylic Eggshell Wall & Trim Enamel.
3. ICI Dulux Paints; 1403-XXXX Dulux Ultra Eggshell Interior Latex Wall & Trim Enamel.
4. Kelly-Moore; 1610 Sat-N-Sheen Interior Latex Low Sheen Wall and Trim Finish.
5. Kelly-Moore; 1686 Dura-Poxy Eggshell Acrylic Enamel.
6. M. A. B. Paint; Rich Lux Low Lustre Latex Enamel 028 Line.
7. Pittsburgh Paints; 89-Line Manor Hall Interior Eggshell Wall and Trim.
8. Sherwin-Williams; SuperPaint Interior Latex Satin Wall Paint A87 Series.

### D. Interior Semigloss Acrylic Enamel:

1. Benjamin Moore; Regal AquaGlo No. 333 Premium Interior Finishes Latex Semi-Gloss.
2. Coronado; 22 Line Tough Walls Acrylic Semi-Gloss Enamel.
3. ICI Dulux Paints; 1407-XXXX Dulux Ultra Semi-Gloss Interior Acrylic Wall & Trim Enamel.
4. Kelly-Moore; 1650 Acry-Plex Latex Interior Latex Semi-Gloss Enamel.
5. Kelly-Moore; 1685 Dura-Poxy Semi-Gloss Acrylic Enamel.
6. M. A. B. Paint; Rich Lux Semi-Gloss Latex Enamel 023 Line.
7. Pittsburgh Paints; 88-110 Satinhide Interior Enamel Wall & Trim Lo-Lustre Semi-Gloss Latex.
8. Sherwin-Williams; SuperPaint Interior Latex Semi-Gloss Enamel A88 Series.

E. Interior Full-Gloss Acrylic Enamel:

1. Benjamin Moore; Impervex Enamel No. 309.
2. Coronado; 414 Line Super Kote 5000 Acrylic High Gloss Enamel.
3. ICI Dulux Paints; 3028-XXXX Dulux Interior/Exterior Acrylic Gloss Finish.
4. Kelly-Moore; 1680 Dura-Poxy Gloss Acrylic Enamel.
5. M. A. B. Paint; Rich Lux Architectural High Gloss Latex Enamel 022-127 Line.
6. Pittsburgh Paints; 51 Line Brilliant Reflections Interior/Exterior Latex Gloss Enamel.
7. Sherwin-Williams; ProMar 200 Interior Latex Gloss Enamel B21W201.

F. Interior Semigloss Alkyd Enamel:

1. Benjamin Moore; Satin Impervo Alkyd Low Lustre Enamel No. 235.
2. Coronado; 23 Line Premium Gold Collection Alkyd Semi-Gloss Enamel.
3. ICI Dulux Paints; 1516-XXXX Ultra-Hide Alkyd Semi-Gloss Interior Wall & Trim Enamel.
4. Kelly-Moore; 1630--Kel-Cote Interior Alkyd Semi-Gloss Enamel.
5. M. A. B. Paint; Fresh Kote Semi-Gloss 403 Line.
6. Pittsburgh Paints; 27 Line Wallhide Low Odor Interior Enamel Wall and Trim Semi-Gloss Oil.
7. Sherwin-Williams; Classic 99 Interior Alkyd Semi-Gloss Enamel A-40 Series.

## PART 3 - EXECUTION

### 3.1 APPLICATION

- A. Examine substrates, areas, and conditions, with Applicator present, for compliance with requirements for paint application.
- 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.
- C. 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.
- D. Surface Preparation: Clean and prepare surfaces to be painted according to manufacturer's written instructions for each particular substrate condition and as specified.
  1. Provide barrier coats over incompatible primers or remove and reprime.
  2. Cementitious Materials: Remove efflorescence, chalk, dust, dirt, grease, oils, and release agents. Roughen as required to remove glaze. If hardeners or sealers have been used to improve curing, use mechanical methods of surface preparation.

- E. Material Preparation:
  - 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.
- F. Exposed Surfaces: Include areas visible when permanent or built-in fixtures, grilles, convector 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.
  - 1. 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.
- G. 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. 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.
- H. Application Procedures: Apply paints and coatings by brush, roller, spray, or other applicators according to manufacturer's written instructions.
- I. Minimum Coating Thickness: Apply paint materials no thinner than manufacturer's recommended spreading rate. Provide total dry film thickness of the entire system as recommended by manufacturer.
- J. Block Fillers: Apply block fillers to concrete masonry block at a rate to ensure complete coverage with pores filled.
- K. 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.

### 3.2 CLEANING AND PROTECTING

- A. At the end of each workday, remove empty cans, rags, rubbish, and other discarded paint materials from Project site.
- B. 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.
- C. 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.

### 3.3 INTERIOR PAINT SCHEDULE

#### A. Concrete Unit Masonry:

1. Acrylic Finish: Two finish coats over a block filler.
  - a. Block Filler: Concrete unit masonry block filler.
  - b. Finish Coats: Interior flat acrylic paint, low-luster acrylic enamel or semigloss acrylic enamel as required to match existing condition.
2. Alkyd-Enamel Finish: Two finish coats over a filled surface.
  - a. Block Filler: Concrete unit masonry block filler.
  - b. Finish Coat: Interior semigloss alkyd enamel as required to match existing condition.

END OF SECTION 099110

## **EXHIBIT A**

### **BID# 15DOC0503AA Garner Gymnasium Repairs Project # BI-JA-461**

The contractor who is selected to perform this State project must file and receive an approved Affirmative Action Plan by the Commission on Human Rights and Opportunities prior to the commencement of construction.

The contractor shall be required to make best good faith efforts to place not less than twenty-five (25%) percent of cost, to subcontracts to be awarded by the general contractor with eligible contractors holding current certification from the Connecticut Department of Administrative Services ("DAS") under the provisions of Connecticut General Statutes Section 4a-60g, all contemplated and provided for therein. Reference is hereby made to the DAS website, [www.biznet.ct.gov/disabi](http://www.biznet.ct.gov/disabi). (25% of the work with DAS certified Small and Minority owned business(s) and of that work, 25% subcontracted with DAS certified Minority, Women and/or disabled owned business(s).)

#### **SCOPE OF WORK**

The Department of Corrections is soliciting bids for Gymnasium repairs at Garner Correction Institution according to the Department of Corrections Specifications attached.

#### **PLANS/DRAWINGS**

Plans/Drawing will be electronically submitted prior to the pre-bid meeting.

#### **PREVAILING WAGES**

Prevailing Wage rates are applicable if the accepted bid exceeds the sum of \$100,000. The Contractor is responsible for the payment of wages that are in accordance with the rate published by the Connecticut State Labor Department. The prevailing wage rates will be posted in an Addendum.

#### **PRE-BID CONFERENCE MEETING**

All potential bidders are required to attend a **MANDATORY PRE-BID Meeting to be held at the Garner CI, at 50 Nunnawauk, Rd, Newtown, CT 06470 on *Tuesday September 9, 2014, at 10:00 am.* Directions can be located on the Department of Correction Website or Contact: Thomas Levesque, PFE1 at (203)806-2667. Please email your confirmation of attendance to [Kathy.Woodward@ct.gov](mailto:Kathy.Woodward@ct.gov) by September 5, 2014, for security clearance purposes include the names and birth dates of all attendees.**

#### **QUESTIONS**

Questions for the purpose of clarifying the RFP must be submitted in writing to [Kathy.Woodward@ct.gov](mailto:Kathy.Woodward@ct.gov) and must be received in Procurement Services no later than 2:00PM September 15, 2014.

## **BID OPENING DATE**

**September 29, 2014 2:00 PM (Monday)**

## **BID PRICES**

All rates shall be firm and prices shall be net including all delivery and transportation charges fully prepaid by the contractor, F.O.B. Destination.

## **HOURS OF OPERATION**

The Department of Corrections facilities operate on a continual 24 hour basis, 365 days per year. Work shall take place Monday through Friday, during normal business hours of 7:00 a.m. to 3:00 pm, excluding state holidays.

## **SECURITY REGULATIONS**

All persons entering a correctional facility are required to comply with the Department's Security Regulation Requirements. (See Attachment entitled "Security Regulations").

## **SECURITY CLEARANCE**

Upon award of contract, Contractor(s) are required to provide a completed "**Collect Background Report**" form for all technicians to be assigned to and/or request admittance to any of the agency's facilities.

DOC will provide a written security clearance confirmation list for individuals that have been security cleared. No technician will be granted admittance to any facility without proper clearance. Technicians are advised to carry a copy of their authorized security clearance confirmation with them at all times. Any changes in personnel must be security cleared at least **10 business days** in advance of requested admittance.

Questions relating to the Collect Background Report Form should be directed to Sharon Urso by e-mail at address [Sharon.Urso@ct.gov](mailto:Sharon.Urso@ct.gov). Completed and signed forms should be faxed to secure fax number 860-692-7755.

## **BILLING REQUIREMENTS**

All contractor invoicing must contain:

- 1) **Purchase Order No**
- 2) Date of Service
- 3) Location of Service
- 4) Description of Work performed
- 5) Be Itemized by Service Rate, Labor Hours and/or Labor Rate (as applicable)
- 6) Be Itemized by Part Number and Part Unit pricing (if applicable)
- 7) A legible copy of the signed service report must accompany invoicing.

**PAYMENT TERMS**

The State payment terms are Net 45 following delivery and/or service completion.

**DEPARTMENT OF CORRECTION PURCHASING ADDRESS**

Questions regarding purchase orders from the Department of Correction should be directed to Kathy Woodward at telephone number (860) 692-7849.

State of CT - Department of Correction  
Attn: Purchasing Dept – Kathy Woodward  
24 Wolcott Hill Road  
Wethersfield, CT 06109  
e-mail: Kathy.Woodward@ct.gov

**DEPARTMENT OF CORRECTION PAYMENT ADDRESS**

Payment and invoicing inquiries relating to DOC should be sent to the Accounts Payable Unit at telephone number (860) 692-7800. Invoices should be sent to the following address:

State of CT - Department of Correction  
Attn: Accounts Payable  
P.O. Box 290891  
Wethersfield, CT 06129-0891

**ADDRESS AND BUSINESS CHANGES**

In the event that the awarded contractor moves, changes telephone number, or changes business name, it is the contractor's responsibility to advise the Department of Correction of such changes in writing. The State will not be held responsible for payments or purchase orders which are delayed due to additional routing caused by the lack of notification on the contractor's part.

**STATE OF CONNECTICUT  
DEPARTMENT OF CORRECTION  
PURCHASING DEPARTMENT  
24 Wolcott Hill Road  
Wethersfield, CT 06109**

**BID PROPOSAL**

Bid No: <b>15DOC0503AA</b>	Bid Opening Date: <b>September 29, 2014</b>	Bid Opening Time: <b>2:00 PM</b>
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*Note: Bidder means Individual/ Sole Proprietor, Partnership or Corporation name.*

**IMPORTANT: Both pages of this form, Sections 1 through 3 must be completed, signed and returned by the bidder as part of the bid package. Failure to submit both pages constitutes grounds for rejection of your bid.**

Section 1 of 3 - **BIDDER INFORMATION**

COMPLETE BIDDER NAME (TRADE NAME, DOING BUSINESS AS)		SSN OR FEIN NUMBER
BIDDER ADDRESS	STREET	CITY STATE ZIP CODE
CONTACT NAME (TYPED OR PRINTED)	PHONE NUMBER (INCLUDE TOLL-FREE NUMBERS)	FAX NUMBER
SIGNATURE OF PERSON AUTHORIZED TO SIGN BIDS ON BEHALF OF THE ABOVE NAMED BIDDER		DATE
TYPE OR PRINT NAME OF AUTHORIZED PERSON		TITLE OF AUTHORIZED PERSON
BIDDER E-MAIL ADDRESS		BIDDER WEB SITE
IS YOUR BUSINESS A: <input type="checkbox"/> PROPRIETORSHIP (INDIVIDUAL) <input type="checkbox"/> PARTNERSHIP OR <input type="checkbox"/> CORPORATION? (TYPE OF CORPORATION - _____)		
IS YOUR BUSINESS <b>CURRENTLY</b> A DAS <i>CERTIFIED</i> SMALL BUSINESS ENTERPRISE? <input type="checkbox"/> YES (ATTACH CERTIFICATE COPY TO BID) <input type="checkbox"/> NO		
IF YOUR BUSINESS IS A <b>PARTNERSHIP</b> , YOU <b>MUST</b> ATTACH THE NAMES AND TITLES OF ALL PARTNERS TO THIS BID WHEN RETURNED.		
IF YOUR BUSINESS IS A <b>CORPORATION</b> , IN WHICH STATE ARE YOU INCORPORATED?		
IS YOU ARE A <b>STATE EMPLOYEE</b> , INDICATE YOUR POSITION, AGENCY NAME & ADDRESS:		
IS YOUR BUSINESS REPORTABLE TO THE IRS? <input type="checkbox"/> YES <input type="checkbox"/> NO IF YES, A 1099/W2 WILL BE MAILED TO YOU AT YEAR-END.		
<b>REMITTANCE INFORMATION: IN THIS BOX, INDICATE THE REMITTANCE ADDRESS OF YOUR BUSINESS IF DEFFERENT FROM ABOVE.</b>		

## **BID PROPOSAL**

**Bid No:** 15DOC0503AA

### Section 2 of 3 - **IMPORTANT INFORMATION FOR BIDDERS**

**AFFIRMATION OF BIDDER: The undersigned bidder affirms and declares:**

1. That this proposal is executed and signed by said bidder with full knowledge and acceptance of the provisions of the STANDARD BID AND CONTRACT TERMS AND CONDITIONS (3 pages) of current issue and in effect on the date of bid issue. The form Standard Bid and Contract Terms and Conditions are made a part of the contract.
2. That should any part of this proposal be accepted in writing by the Department of Correction within thirty (30) calendar days from the date of bid opening unless an earlier date for acceptance is specified by bidder in proposal schedule, said bidder will furnish and deliver the commodities and/or service for which this proposal is made, in the quantities and at the prices bid, and in compliance with the provisions of the STANDARD BID AND CONTRACT TERMS AND CONDITIONS, SECURITY REGULATIONS AND PROPOSAL SCHEDULE. Should award of any part of this proposal be delayed beyond the period of thirty (30) days of an earlier date specified by the bidder in proposal schedule, such award shall be conditioned upon bidder's acceptance.
3. Acceptance of the conditions set forth herein, agreement in strict accordance therewith, and will furnish and deliver the commodities and/or services to the Department of Correction named in the PROPOSAL SCHEDULE at the prices bid therein.
4. **Should the Department of Correction determine that bidder has not completed Section 3 - Bidder Debarment and/or Suspension included as part of this document, then such determination may be just cause for disqualification from the evaluation of this bid.**

### Section 3 of 3 - **BIDDER DEBARMENT AND/OR SUSPENSION**

The undersigned bidder further affirms and declares that neither the bidder and/or any company official nor any subcontractor to the bidder and/or any company official has received any notices of debarment and/or suspension from contracting with the State of Connecticut or the Federal Government.

Yes    No

The undersigned bidder further affirms and declares that neither the bidder and/or any company official nor any subcontractor to the bidder and/or any company official has received any notices of debarment and/or suspension from contracting with other states within the United States.

Yes    No

If the undersigned bidder and/or company official or any subcontractor to the bidder and/or any company official has received notices of debarment and/or suspension with the State of Connecticut, other states within the United States or Federal Government, said notices must be attached to this document when submitting this proposal.

Number of notices attached \_\_\_\_\_.

**SIGNATURE OF AUTHORIZED PERSON IN SECTION 1, CONSTITUTES AGREEMENT WITH ALL PROCEDURES INDICATED ABOVE.**

# STATE OF CONNECTICUT DEPARTMENT OF CORRECTION

## BIDDER'S CHECKLIST

THIS FORM IS NOT TO BE RETURNED WITH YOUR BID. HOWEVER, IT IS SUGGESTED THAT YOU REVIEW AND CHECK OFF EACH ACTION AS YOU COMPLETE IT.

- The Bid Proposal must be signed by a duly authorized representative of the company (unsigned bids are automatically rejected) and the **Price List SP - 16** must be included with your bid.
- The bid prices you have offered in **Price List SP - 16** have been reviewed and verified.
- The price extensions and totals have been checked. (In case of discrepancy between unit prices and total prices, the unit price will govern the bid evaluation).
- Any errors, alterations, corrections or erasures to unit prices, total prices, etc. must be initialed by the person who signs the bid proposal or his designee. Such change made and not initialed means automatic rejection of bid.
- The payment terms are NET 45 Days. Net Terms for periods less than 45 days (Ex. Net 30) may result in bid rejection. (You may offer cash discounts for prompt payment.) *Exception:* State of CT Small Business Set-Aside bids payment terms shall be in accordance with CGS 32-09h.
- Reference **Exhibit A** for any technical or descriptive literature, drawing or bid samples that are required have been included with the bid.
- The delivery information block has been completed. (Be specific: In most cases, "as ordered" or "as required" is not complete information.)
- Any addenda to the bid have been signed and included.
- **The Sealed bid must mailed, or hand-delivered** in time to be received no later than the designated opening date and time. Late bids are not accepted under any circumstances. Please allow enough time if mailing in your bid.
- Read, sign and return the Department of Correction's Security Regulations for Contract Forces form (2 pages) with your Bid Proposal.
- All CHRO forms (4 pages) must be completed entirely regardless of the number of employees, even if the company is family owned and/or operated and must be submitted with each bid or bid may be rejected.
- Complete, sign and notarize the OSHA CERTIFICATE OF COMPLIANCE form.
- Complete and sign the BIDDER'S STATEMENT OF QUALIFICATIONS.
- VENDOR NAME MUST APPEAR ON ALL BID DOCUMENTS.
- **VERIFY THE FOLLOWING FORMS ARE INCLUDED IN YOUR BID PACKAGE:**
  - BID PROPOSAL - 2 PAGES / COMPLETE AND SIGN
  - PRICE LIST SP/PROPOSAL TO BE DISCUSSED AT PRE\_BID MEETING
  - BIDDER'S STATEMENT OF QUALIFICATIONS - 2 PAGES / COMPLETE AND SIGN
  - CHRO FORMS - 4 PAGES / COMPLETE AND SIGN
  - OSHA CERTIFICATE OF COMPLIANCE - COMPLETE, SIGN AND NOTARIZE
  - CERTIFICATE OF AUTHORITY – COMPLETE AND SIGN
  - NONDISCRIMINATION CERTIFICATION FORM A - FOR INDIVIDUALS  
1 PAGE - COMPLETE AND SIGN - **OR**  
NONDISCRIMINATION CERTIFICATION FORM B - FOR ENTITIES - 1 PAGE
  - GIFT AND CAMPAIGN CONTRIBUTION CERTIFICATION
  - BID ADDENDUM (IF APPLICABLE) – REVIEW & SIGN
  - CERTIFIED CORPORATE RESOLUTION – REVIEW
  - CONTRACTORS WAGE CERTIFICATION FORM



**STATE OF CONNECTICUT**  
**COMMISSION ON**  
**HUMAN RIGHTS AND OPPORTUNITIES (CHRO)**  
**CHRO-4**

<b>Bid Number:</b> <b>15DOC0503AA</b>
Project #BI-JA-461

Page 1 of 4

**CONTRACT COMPLIANCE REGULATIONS**  
**NOTIFICATION TO BIDDERS**

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

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

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

- (A) the bidder’s success in implementing an affirmative action plan;
- (B) the bidder’s success in developing an apprenticeship program complying with Sections 46a-68-1 to 46a-68-17 inclusive, of the Regulations of Connecticut State Agencies;
- (C) the bidder’s promise to develop and implement a successful affirmative action plan;
- (D) the bidder’s submission of EEO-1 data indicating that the composition of its workforce is at or near parity when compared to the racial and gender composition of the workforce in the relevant labor market area; and,
- (E) the bidder’s promise to set aside a portion of the contract for legitimate minority business enterprises. See Section 46a-68j-30(10)(E) of the Contract Compliance Regulations.

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**INSTRUCTIONS AND OTHER INFORMATION**

**The following two (2) sided BIDDER CONTRACT COMPLIANCE MONITORING REPORT must be completed in full, signed, and submitted with the bid for this contract.**

The contract awarding agency and the Commission on Human Rights and Opportunities will use the information contained thereon to determine the bidder’s compliance to Sections 4a-60 and 4a-60a CONN. GEN. STAT., and Sections 46a-68j-23 of the Regulations of Connecticut State Agencies regarding equal employment opportunity, and the bidder’s “good faith efforts” to include minority business enterprises as subcontractors and suppliers for the work of the contract.

**1) Definition of Small Contractor**

Section 32-9e CONN. GEN. STAT. defines a small contractor as a company that has been doing business under the same management and control and has maintained its principal place of business in Connecticut for a one year period immediately prior to its application for certification under this section, had gross revenues not exceeding ten million dollars in the most recently completed fiscal year, and at least fifty-one percent of the ownership of which is held by a person or persons who are active in the daily affairs of the company, and have the power to direct the management and policies of the company, except that a non-profit corporation shall be construed to be a small contractor if such nonprofit corporation meets the requirements of subparagraphs (A) and (B) of subdivision 32-9e CONN. GEN. STAT.

**STATE OF CONNECTICUT**  
COMMISSION ON  
**HUMAN RIGHTS AND OPPORTUNITIES (CHRO)**  
CHRO-4

**Bid Number:**  
**15DOC0503AA**

**Project**  
**#BI-JA-461**

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

**Officials, Managers and Supervisors** - Occupations requiring administrative personnel who set broad policies, exercise over-all responsibility for execution of these policies, and direct individual departments or special phases of a firm's operations. Includes officials, executives, middle management, plant managers, department managers, and superintendents, salaried forepersons who are members of management, purchasing agents and buyers, and kindred workers.

**Professionals** - Occupations requiring either college graduation or experience of such kind and amount as to provide a comparable background. Includes: accountants and auditors, airplane pilots and navigators, architects, artists, chemists, designers, dietitians, editors, engineers, lawyers, librarians, mathematicians, natural scientists, personnel and labor relations workers, physical scientists, physicians, social scientists, teachers, kindred workers.

**Technicians** - Occupations requiring a combination of basic scientific knowledge and manual skill which can be obtained through about 2 years of post high school education, such as is offered in technical institutes and junior colleges, or through equivalent on-the-job training. Includes: draftspersons, engineering aides, junior engineers, mathematical aides, nurses, photographers, radio operators, scientific assistants, surveyors, technical illustrators, technicians (medical, dental, electronic, physical sciences), and kindred workers.

**Sales Workers** - Occupations engaging wholly or primarily in direct selling. Includes: advertising agents and sales persons, insurance agents and brokers, real estate agents and brokers, stock and bond salespersons, demonstrators, sales people and sales clerks, and kindred workers.

**Office and Clerical Workers** - Includes all clerical type work regardless of level of difficulty, where the activities are predominantly non-manual though some manual work not directly involved with altering or transporting the products is included. Includes: bookkeepers, cashiers, collectors (bills and accounts), messengers and office workers, office machine and computer operators, shipping and receiving clerks, stenographers, typists and secretaries, telegraph and telephone operators, and kindred workers.

**Skilled Workers** - Manual workers of relatively high skill level having a thorough and comprehensive knowledge of the processes in their work. They exercise considerable independent judgment and usually receive an extensive period of training. Includes: building trades hourly paid forepersons and leadpersons who are not members of management, mechanics and repair people, skilled machining occupations, compositors and typesetters, electricians, engravers, job setters (metal), motion picture projectionists, pattern and model makers, stationary engineers, tailors, and kindred workers.

**Semi-Skilled Workers** - Workers who operate machine or processing equipment or perform other factory type duties of intermediate skill level which can be mastered in a few weeks and require only limited training.

**Unskilled Workers** - Workers in manual occupations which generally require no special training. Perform elementary duties that may be learned in a few days and require application of little or no independent judgment. Includes: garage laborers, car washers and greasers, gardeners (except farm) and grounds keepers, longshore persons and stevedores, wood cutters and choppers, laborers performing lifting, digging, mixing, loading, and pulling operations, and kindred workers.

**Service Workers** - Workers in both protective and non-protective service occupations. Includes: attendants (hospital and other institution, professional, and personal service), barbers, cleaning workers, cooks (except house-hold), counter and fountain workers, fire fighters, police officers and detectives, security workers and doorkeepers, stewards, janitors, porters, food servers and kindred workers.

**Apprentices** - Persons employed in a program including work training and related instruction to learn a trade or craft which is traditionally considered an apprenticeship, regardless of whether the program is registered with a state or federal agency.

**Trainees** - Persons engaged in a formal training for craft worker when not trained under an apprenticeship program. Includes: operatives, laborer and service occupations. Also includes persons engaged in formal training for official, managerial, professional, technical, sales, office, and clerical occupations.

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

**White** (not of Hispanic Origin) - All persons having origins in any of the original peoples of Europe, North Africa, or the Middle East.

**Black** (not of Hispanic Origin) - All persons having origins in any of the Black racial groups of Africa.

**Hispanic** All persons of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race.

**Asian or Pacific Islander** All persons having origins in any of the original peoples of the Far East, Southeast Asia, Indian subcontinent or Pacific Islands. Includes China, India, Japan, Korea, Philippine Islands, & Samoa.

**American Indian or Alaskan Native** All persons having origins in any of the original peoples of North America, and who maintain cultural identification through tribal affiliation or community recognition.

**STATE OF CONNECTICUT**  
**COMMISSION ON**  
**HUMAN RIGHTS AND OPPORTUNITIES (CHRO)**  
CHRO-4

<b>Bid Number:</b> <b>15DOC0503AA</b>
<b>Project</b> #BI-JA-461

**BIDDER CONTRACT COMPLIANCE MONITORING REPORT**

**PART I - Bidder Information**

Company Name Street Address City & State Chief Executive	Bidder Federal Employer Identification Number (FEIN) or Social Security Number (SSN)
Major Business Activity (brief description)	Bidder Identification (response optional/definitions on page 1) -Is bidder a small contractor? <input type="checkbox"/> Yes <input type="checkbox"/> No
Bidder Parent Company (if any)	-Is bidder a minority business enterprise? <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, check ownership category <input type="checkbox"/> Black <input type="checkbox"/> Hispanic <input type="checkbox"/> Asian American <input type="checkbox"/> American Indian/Alaskan Native <input type="checkbox"/> Iberian Peninsula <input type="checkbox"/> Individual(s) with a Physical Disability <input type="checkbox"/> Female
Other Locations in CT (if any)	-Is bidder certified as above by the State of CT (DAS)? <input type="checkbox"/> Yes <input type="checkbox"/> No

**PART II - Bidder Non-Discrimination Policies & Procedures**

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

**PART III - Bidder Subcontracting Practices**

1. Will the work of this contract include subcontractors or suppliers? <input type="checkbox"/> Yes <input type="checkbox"/> No 1a. If yes, list all the subcontractors and suppliers and report if they are a small contractor and/or a minority business enterprise (as defined on page 1). Attach additional sheets if necessary.
1b. Will the work of this contract require additional subcontractors or suppliers other than those identified in 1a. above? <input type="checkbox"/> Yes <input type="checkbox"/> No

# STATE OF CONNECTICUT

## COMMISSION ON HUMAN RIGHTS AND OPPORTUNITIES (CHRO) CHRO-4

**Bid Number:**  
**15DOC0503AA**

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**Project**  
**#BI-JA-461**

### PART IV - Bidder Employment Information

JOB CATEGORY	OVERALL TOTALS	WHITE (NOT OF HISPANIC ORIGIN)		BLACK (NOT OF HISPANIC ORIGIN)		HISPANIC		ASIAN / PACIFIC ISLANDER		AMERICAN INDIAN OR ALASKAN NATIVE	
		Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Officials/Managers											
Professionals											
Technicians											
Sales Workers											
Office/Clerical											
Craft Workers (Skilled)											
Laborers (Unskilled)											
Service Workers											
TOTALS ABOVE											
Total One Year Ago											
FORMAL ON-THE-JOB TRAINEES (ENTER FIGURES FOR THE SAME CATEGORIES AS ARE SHOWN ABOVE)											
Apprentices											
Trainees											

According to the above employment report, is the composition of your workforce at or near parity when compared with the racial and gender composition of the workforce in the relevant labor market area?  Yes  No

### PART V - Bidder Hiring and Recruitment Practices

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

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

Signature	Title	Date Signed	Telephone
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# STATE OF CONNECTICUT

## BIDDER'S STATEMENT OF QUALIFICATIONS

**Bid Number:**  
**15DOC0503AA**

Page 1 of 2

THIS FORM WILL BE USED IN ASSESSING A BIDDER'S QUALIFICATIONS AND TO DETERMINE IF THE BID SUBMITTED IS FROM A RESPONSIBLE BIDDER. STATE LAW DESIGNATES THAT CONTRACTS BE AWARDED TO THE LOWEST RESPONSIBLE QUALIFIED BIDDER. FACTORS SUCH AS PAST PERFORMANCE, INTEGRITY OF THE BIDDER, CONFORMITY TO THE SPECIFICATIONS, ETC. WILL BE USED IN EVALUATING BIDS. ATTACH ADDITIONAL SHEETS IF NECESSARY

COMPANY NAME: \_\_\_\_\_  
&  
ADDRESS: \_\_\_\_\_

NUMBER OF YEARS COMPANY HAS BEEN ENGAGED IN BUSINESS UNDER THIS NAME: \_\_\_\_\_ YEARS

LIST ANY CONTRACT AWARDS TO YOUR COMPANY BY THE STATE OF CONNECTICUT WITHIN THE LAST THREE (3) YEARS, **THAT YOU ACTUALLY PERFORMED SERVICE AGAINST**. INDICATE WHICH STATE AGENCY, AND PROVIDE CONTRACT NAME AND NUMBER, AND THE NAME AND TELEPHONE NUMBER OF THE PURCHASING AGENT ADMINISTERING THE CONTRACT.

<u>CONTRACT NO.</u>	<u>CONTRACT NAME</u>	<u>STATE AGENCY</u>	<u>PURCHASING AGENT</u>	<u>TEL. NO.</u>
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

List any contract awards to your company by the State of Connecticut within the last three (3) years, **THAT YOUR COMPANY DID NOT PERFORM SERVICE AGAINST**. Indicate which State Agency, and provide contract Name and Number, and the name and telephone number of the purchasing agent administering the contract.

<u>CONTRACT NO.</u>	<u>CONTRACT NAME</u>	<u>STATE AGENCY</u>	<u>PURCHASING AGENT</u>	<u>TEL. NO.</u>
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

LIST OTHER NAMES YOUR COMPANY GOES BY: \_\_\_\_\_  
\_\_\_\_\_

LIST PREVIOUS COMPANY NAME (S) \_\_\_\_\_  
\_\_\_\_\_

LIST AT LEAST THREE COMPLETED PROJECTS SIMILAR IN NATURE TO THIS **INVITATION FOR BIDS** WHICH DEMONSTRATES YOUR COMPANY'S ABILITY TO PERFORM THE REQUIRED SERVICES.

	<u>Company Name and Address</u>	<u>Telephone No.:</u>	<u>Dollar Value:</u>
1.	_____	_____	_____
2.	_____	_____	_____
3.	_____	_____	_____
	_____	_____	_____

# STATE OF CONNECTICUT

## BIDDER'S STATEMENT OF QUALIFICATIONS

**Bid Number:**  
**15DOC0503AA**

Page 2 of 2

COMPANY NAME: \_\_\_\_\_

SIZE OF COMPANY  
OR CORPORATION: NUMBER OF EMPLOYEES: FULL TIME \_\_\_\_\_ PART TIME \_\_\_\_\_

COMPANY VALUE: EQUIPMENT ASSETS \_\_\_\_\_ TOTAL ASSETS \_\_\_\_\_

IS YOUR COMPANY REGISTERED WITH THE OFFICE OF THE CONNECTICUT SECRETARY OF STATE?  YES  NO

REGISTRATION DATE, IF AVAILABLE: \_\_\_\_\_

IF REQUESTED, WOULD YOUR COMPANY PROVIDE A "GOOD STANDING" CERTIFICATE  
ISSUED BY THE CONNECTICUT SECRETARY OF STATE'S OFFICE?  YES  NO

LIST OF EQUIPMENT TO BE USED FOR THIS SERVICE (INCLUDE MODEL, YEAR & MANUFACTURER):

<u>MODEL</u>	<u>YEAR</u>	<u>MANUFACTURER</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

(Attach additional sheets if necessary)

LIST ANY RELEVANT CERTIFICATIONS, LICENSES, REGISTRATIONS, ETC. WHICH QUALIFY YOUR COMPANY TO MEET THE REQUIREMENTS OF THIS BID.

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(Attach additional sheets if necessary)

LIST ANY ADMINISTRATIVE ACTIONS EITHER PENDING REVIEW BY THE STATE OR DETERMINATIONS THAT THE STATE HAS MADE REGARDING YOUR COMPANY OR CORPORATION. THIS WOULD INCLUDE COURT JUDGEMENTS AND SUITS PENDING BY A STATE OR FEDERAL COURT. INCLUDE A LISTING OF OSHA VIOLATIONS AND ANY ACTIONS OR ORDERS PENDING OR RESOLVED WITH ANY STATE AGENCY SUCH AS THE DEPARTMENT OF CONSUMER PROTECTION, THE DEPARTMENT OF ENVIRONMENTAL PROTECTION, ETC. DETAIL THIS INFORMATION ON A SEPARATE SHEET OF PAPER. SUCH INFORMATION SHOULD BE FOR THE LAST THREE (3) YEARS.

I HEREBY CERTIFY THAT ALL THE INFORMATION SUPPLIED IS COMPLETE AND TRUE.

\_\_\_\_\_  
SIGNATURE

\_\_\_\_\_  
DATE

\_\_\_\_\_  
TITLE

**STATE OF CONNECTICUT**  
**Certificate of Compliance with**  
**Connecticut General Statute Section 31 - 57b**

**Bid Number:**  
**15DOC0503AA**

I hereby certify that all of the statements herein contained below have been examined by me, and to the best of my knowledge and belief are true and correct.

The \_\_\_\_\_ **HAS / HAS NOT**  
*Company Name* (Cross out Non-applicable)

been cited for three (3) or more willful or serious or serious violations of any Occupational Safety and Health Act (OSHA) or of any standard, order or regulation promulgated pursuant to such act, during the three year period preceding the bid, provided such violations were cited in accordance with the provisions of any State Occupational Safety and Health Act of 1970, and not abated within the time fixed by the citation and such citation has not been set aside following appeal to the appropriate agency of court having jurisdiction or **HAS / HAS NOT** (Cross out Non-applicable) received one or more criminal convictions related to the injury or death of any employee in the three-year period preceding the bid.

The list of violations (if applicable) is attached.

\_\_\_\_\_  
*(Name of Firm, Organization or Corporation)*

**Signed:**

\_\_\_\_\_  
*Written Signature:*

\_\_\_\_\_  
*Name Typed: (Corporation Seal)*

**Title:**

\_\_\_\_\_  
*(Title of Above Person, typed)*

**Dated:**

*State of* \_\_\_\_\_ )

*County of* \_\_\_\_\_ ) **ss:** *A.D., 20* \_\_\_\_\_ )

Sworn to and personally appeared before me for the above, \_\_\_\_\_,  
*(Name of Firm, Organization, Corporation)*

Signer and Sealer of the foregoing instrument of and acknowledged the same to be the free act and deed of

\_\_\_\_\_, and his/her free act and deed as  
*(Name of Person appearing in front of Notary or Clerk)*

\_\_\_\_\_  
*(Title of Person appearing in front of Notary or Clerk)*

My Commission Expires:

\_\_\_\_\_  
*(Notary Public)*

\_\_\_\_\_  
*(Seal)*

# STATE OF CONNECTICUT

Bid Number:  
15DOC0503AA

## Department of Correction Contractor Security Requirements 2/20/14

### A. Facility Admittance

- (1) Contractors shall not allow any of their employees to enter the grounds of or any structures in any Department of Correction (“DOC”) facility (“Facility”) or undertake any part of the Performance unless the employees shall have first been issued an individual, valid, security identification badge which they shall display properly at all times while at the Facility.
- (2) Contractor employees who seek admittance to a DOC Facility must first undergo a background check to confirm their eligibility to be admitted into the DOC Facility. Accordingly, Contractors must obtain from the DOC a form for each such employee and complete and submit that form to DOC at least 10 business days prior to the date that the employee is scheduled to arrive at the DOC Facility for the Performance. Information on the form includes the following:
  - a) Name
  - b) Date of Birth
  - c) Social Security Number
  - d) Driver's License Number
  - e) Physical Characteristics (such as age, height, weight, etc.)

### B. Official Working Rules

Contractors shall adhere to the following Official Working Rules of the DOC:

- (1) All Contractors shall report to the Facility’s security front desk for sign-in, regardless of work location, immediately upon arrival at the Facility.
- (2) All Contractor personnel shall work under the observation of an assigned correctional officer or supervisor, who will provide escort for the duration of the work.
- (3) No verbal or personal contact with any inmates.
- (4) Equipment will be checked daily and, when not in use, locked in a secure place as the Facility officials may direct.
- (5) Hacksaws, blades and files will remain in the custody of the officer assigned, except when actually being used.
- (6) The correctional officials may refuse admittance to any Contractor personnel for any cause the correctional officials deem to be sufficient.
- (7) In the event of any emergency, all Contractor personnel will be escorted outside the Facility by correctional officials.
- (8) Contractors shall address all questions pertaining to interruptions of service or to safety of the Facility to the appropriate correctional official.
- (9) Work at the Facility shall be carried on during the time between 8:00 a.m. and 12:00 Noon and between 12:30 p.m. and 4:30 p.m., the maximum allowable working day being 8 hours. The Contractor shall not Perform any work at any Facility on any Saturday, Sunday or Holiday, unless DOC determines, in its sole discretion, that there is an emergency.
- (10) The Contractor shall ensure that when all equipment is not in use, it will be unusable or be supervised to prevent use by inmates.
- (11) The Contractor shall supply to DOC a copy of all material safety data sheets for all products used in the process of construction, construction materials, and products brought onto the Facility.

# STATE OF CONNECTICUT

Bid Number:  
15DOC0503AA

## Department of Correction Contractor Security Requirements 2/20/14

- (12) All Contractors shall sign out at the Facility's security front desk prior to departure following completion of any work.

### C. Rules Concerning Department of Correction Facilities

Contractors shall adhere to the Facilities rules ("Facilities Rules") described in this section. At the time that Contractors and Contractor Parties seek to enter a Facility, DOC staff will present to them a document setting forth the following Facilities Rules and extracts of the laws governing the introduction and control of contraband. Contractors and Contractor Parties must read, understand and sign that document as a condition precedent to entering the Facility and as evidence that they understand the consequences imposed for violating these Facilities Rules:

#### (1) Restricted Areas

All persons except DOC personnel, upon entering the grounds are restricted to the immediate area of their work assignment. In order to go to other areas, Contractor personnel must first obtain written permission from the supervisory correctional official in charge. Only persons having official business will be admitted to construction sites.

#### (2) Inmates

There may be times when inmates may be working adjacent to or in the same area as construction personnel. All persons are prohibited from accepting or giving anything from and to an inmate. Inmates are accountable to DOC personnel only, no other person shall have any conversation or dealings with inmates without the approval of the DOC supervisory official in charge.

#### (3) Vehicle Control

Any Contractor personnel entering upon the Facility shall remove the ignition keys of their vehicle and lock the vehicle when they leave it for any reason. Contractors shall ensure that all equipment in, on or around the vehicles is secured and inaccessible to anyone else while in the Facility.

#### (4) Contraband

Contractors shall not bring clothing or contraband into or onto the Facility's grounds or leave clothing or contraband in a vehicle located on the grounds of the Facility outside of an area designated by DOC personnel. Contraband is defined below and all persons are subject to these DOC Facilities Rules concerning contraband when on the Facility's grounds.

Contractor shall not introduce into or upon, take or send to or from, or attempt the same to or from, the grounds of the Facility anything whatsoever without the knowledge of the Facility supervisor.

"Contraband" means any tangible or intangible article whatsoever which DOC has not previously authorized and may include letters, stamps, tools, weapons, papers, floor implements, writing materials, messages (written and verbal), instruments and the like. Contractors shall discuss any questions regarding such matters with the Facility supervisor immediately upon those questions arising.

Cigarettes and Cell Phones are "contraband." Accordingly, Contractors shall leave them secured inside their locked vehicles in an area designated by DOC personnel.

Failure to comply with these Facilities Rules, in the sole determination of DOC, will result in the Contractor being removed from the Facility.

# STATE OF CONNECTICUT

Bid Number:  
15DOC0502AA

## Department of Correction Contractor Security Requirements 2/20/14

### D. State Laws Governing Unauthorized Conveyance, Possession or Use of Items, Weapons and Certain Devices

(1) Unauthorized conveyance of certain items brought into the Facility is governed by Conn. Gen. Stat. Sec. 53a-174, which provides as follows:

- a) Any person not authorized by law who conveys or passes or causes to be conveyed or passed, into any correctional or humane institution or the grounds or buildings thereof, or to any inmate of such an institution who is outside the premises thereof and known to the person so conveying or passing or causing such convey or passing to be such an inmate, any controlled drug, as defined in section 21a-240, any intoxicating liquors, any firearm, weapon, dangerous instruments or explosives of any kind, any United States currency, or any rope, ladder or other instrument or device for use in making, attempting or aiding an escape, shall be guilty of a class D felony. [Penalty for a Class "D" felony per Sec. 53a-35 subsection a, b, c, d is a term not to exceed five (5) years.] The unauthorized conveying, passing, or possessing of any rope or ladder or other instrument or device, adapted for use in making or aiding an escape, into any such institution or the grounds or building thereof, shall be presumptive evidence that it was so conveyed, passed or possessed for such use.
- b) Any person not authorized by law who conveys into any such institution any letter or other missive which is intended for any person confined therein, or who conveys from within the enclosure to the outside of such institution any letter or other missive written or given by any person confined therein, shall be guilty of a class A misdemeanor. [Penalty for a Class "A" misdemeanor per Sec. 53a-36 subsection 1, the term is not to exceed one (1) year.]
- c) Any person or visitor who enters or attempts to enter a correctional institution or Facility by using a misleading or false name or title shall be guilty of a class A misdemeanor.

(2) Possession of weapons or dangerous instruments in the Facility is governed by Conn. Gen. Stat. Sec.53a-174a, which provides as follows:

- a) A person is guilty of possession of a weapon or dangerous instrument in a correctional institution when, being an inmate of such institution, he knowingly makes, conveys from place to place or has in his possession or under his control any firearm, weapon dangerous instrument, explosive, or any other substance or thing designed to kill, injure or disable.
- b) Possession of a weapon or dangerous instrument in a correctional institution is a class B felony. [Penalty for a Class "B" felony per Sec. 53a-35 subsection a, b, c, d is a term not to exceed twenty (20) years.]

(3) Conveyance or use of electronic or wireless communication devices in the Facility is governed by Conn. Gen. Stat. Sec. 53a-174b, which provides as follows:

- a) A person is guilty of conveyance or use of an electronic wireless communication device in a correctional institution when such person, without authorization by the Commissioner of Correction or the commissioner's designee, (1) conveys or possesses with intent to convey an electronic wireless communication device to any inmate of a correctional institution while such inmate is in such institution, or (2) uses an electronic wireless communication device to take a photographic or digital image in a correctional institution.
- b) Conveyance or use of an electronic wireless communication device in a correctional institution is a class A misdemeanor.

Signed: \_\_\_\_\_ Date: \_\_\_\_\_

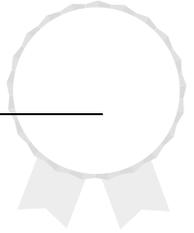
**Certified Corporate Resolution**  
*(must be submitted on company letterhead)*

I, *(name of Secretary of the Board)*, Secretary of *(name of Corporation)*, a Connecticut Corporation, DO HEREBY certify that the following is a true and correct copy of a resolution duly adopted at a meeting of the Board of Directors of *(name of Corporation)* duly held and convened on *(date of meeting)*, at which meeting a duly constituted quorum of the Board of Directors was present and acting throughout and that such resolution has not been modified, rescinded or revoked and is at present in full force and effect:

RESOLVED: That *(name of contract signatory)*, *(title of contract signatory)*, is empowered to execute and deliver in the name and on behalf of this Company contracts with the State of Connecticut, Department of Correction, and to affix the corporate seal.

IN WITNESS WHEREOF, the undersigned has affixed his/her signature and the corporate seal of the Company this date of     , 200     .

\_\_\_\_\_  
*(name of Secretary of the Board)*  
Secretary



- Notes:
1. The date of the meeting (paragraph 1) must be **prior** to the signature date of contract.
  2. The date of the meeting (paragraph 1) must be within one year of the signature date of contract.
  3. The date listed in paragraph 3 must be **on or after** the date on which the contract was signed.
  4. If your company does not have a Corporate Seal, **delete all references to a seal and put an "LS" immediately after the Secretary's signature.** "LS" should be written after the Secretary of the Board signature in parenthesis.
  5. If your company has a Corporate Seal, it should be applied after the Secretary has signed and dated the Resolution, so that it crosses over the signature and date without obliterating either (the intent is to show that the seal was applied after the Secretary signed and dated the final paragraph).
  6. It is also **VERY** important that the name of the person authorized to sign contracts is spelled out **EXACTLY** as the person will sign their name on the contract (i.e., middle initial, Jr./Sr., etc.).
  7. While the person signing the certification is usually the Secretary of the Board, it can be any officer. However, the person signing as certifier **cannot** be the person authorized to sign contracts (one cannot authorize themselves to sign contracts – the name in Paragraph 1 cannot be the same as the signature on the bottom)

**Example**









# **Informational Bulletin**

## **THE 10-HOUR OSHA CONSTRUCTION SAFETY AND HEALTH COURSE**

(applicable to public building contracts entered into *on or after July 1, 2007*, where the total cost of all work to be performed is at least \$100,000)

- (1) This requirement was created by Public Act No. 06-175, which is codified in Section 31-53b of the Connecticut General Statutes (pertaining to the prevailing wage statutes);
- (2) The course is required for public building construction contracts (projects funded in whole or in part by the state or any political subdivision of the state) entered into on or after July 1, 2007;
- (3) It is required of private employees (not state or municipal employees) and apprentices who perform manual labor for a general contractor or subcontractor on a public building project where the total cost of all work to be performed is at least \$100,000;
- (4) The ten-hour construction course pertains to the ten-hour Outreach Course conducted in accordance with federal OSHA Training Institute standards, and, for telecommunications workers, a ten-hour training course conducted in accordance with federal OSHA standard, 29 CFR 1910.268;
- (5) The internet website for the federal OSHA Training Institute is [http://www.osha.gov/fso/ote/training/edcenters/fact\\_sheet.html](http://www.osha.gov/fso/ote/training/edcenters/fact_sheet.html);
- (6) The statutory language leaves it to the contractor and its employees to determine who pays for the cost of the ten-hour Outreach Course;
- (7) Within 30 days of receiving a contract award, a general contractor must furnish proof to the Labor Commissioner that all employees and apprentices performing manual labor on the project will have completed such a course;
- (8) Proof of completion may be demonstrated through either: (a) the presentation of a *bona fide* student course completion card issued by the federal OSHA Training Institute; *or* (2) the presentation of documentation provided to an employee by a trainer certified by the Institute pending the actual issuance of the completion card;
- (9) Any card with an issuance date more than 5 years prior to the commencement date of the construction project shall not constitute proof of compliance;

- (10) Each employer shall affix a copy of the construction safety course completion card to the certified payroll submitted to the contracting agency in accordance with Conn. Gen. Stat. § 31-53(f) on which such employee's name first appears;
- (11) Any employee found to be in non-compliance shall be subject to removal from the worksite if such employee does not provide satisfactory proof of course completion to the Labor Commissioner by the fifteenth day after the date the employee is determined to be in noncompliance;
- (12) Any such employee who is determined to be in noncompliance may continue to work on a public building construction project for a maximum of fourteen consecutive calendar days while bringing his or her status into compliance;
- (13) The Labor Commissioner may make complaint to the prosecuting authorities regarding any employer or agent of the employer, or officer or agent of the corporation who files a false certified payroll with respect to the status of an employee who is performing manual labor on a public building construction project;
- (14) The statute provides the minimum standards required for the completion of a safety course by manual laborers on public construction contracts; any contractor can exceed these minimum requirements; and
- (15) Regulations clarifying the statute are currently in the regulatory process, and shall be posted on the CTDOL website as soon as they are adopted in final form.
- (16) Any questions regarding this statute may be directed to the Wage and Workplace Standards Division of the Connecticut Labor Department via the internet website of <http://www.ctdol.state.ct.us/wgwkstnd/wgemenu.htm>; or by telephone at (860)263-6790.

**THE ABOVE INFORMATION IS PROVIDED EXCLUSIVELY AS AN EDUCATIONAL RESOURCE, AND IS NOT INTENDED AS A SUBSTITUTE FOR LEGAL INTERPRETATIONS WHICH MAY ULTIMATELY ARISE CONCERNING THE CONSTRUCTION OF THE STATUTE OR THE REGULATIONS.**

**Sec. 31-53b. Construction safety and health course. New miner training program. Proof of completion required for mechanics, laborers and workers on public works projects. Enforcement. Regulations. Exceptions.** (a) Each contract for a public works project entered into on or after July 1, 2009, by the state or any of its agents, or by any political subdivision of the state or any of its agents, described in subsection (g) of section 31-53, shall contain a provision requiring that each contractor furnish proof with the weekly certified payroll form for the first week each employee begins work on such project that any person performing the work of a mechanic, laborer or worker pursuant to the classifications of labor under section 31-53 on such public works project, pursuant to such contract, has completed a course of at least ten hours in duration in construction safety and health approved by the federal Occupational Safety and Health Administration or, has completed a new miner training program approved by the Federal Mine Safety and Health Administration in accordance with 30 CFR 48 or, in the case of telecommunications employees, has completed at least ten hours of training in accordance with 29 CFR 1910.268.

(b) Any person required to complete a course or program under subsection (a) of this section who has not completed the course or program shall be subject to removal from the worksite if the person does not provide documentation of having completed such course or program by the fifteenth day after the date the person is found to be in noncompliance. The Labor Commissioner or said commissioner's designee shall enforce this section.

(c) Not later than January 1, 2009, the Labor Commissioner shall adopt regulations, in accordance with the provisions of chapter 54, to implement the provisions of subsections (a) and (b) of this section. Such regulations shall require that the ten-hour construction safety and health courses required under subsection (a) of this section be conducted in accordance with federal Occupational Safety and Health Administration Training Institute standards, or in accordance with Federal Mine Safety and Health Administration Standards or in accordance with 29 CFR 1910.268, as appropriate. The Labor Commissioner shall accept as sufficient proof of compliance with the provisions of subsection (a) or (b) of this section a student course completion card issued by the federal Occupational Safety and Health Administration Training Institute, or such other proof of compliance said commissioner deems appropriate, dated no earlier than five years before the commencement date of such public works project.

(d) This section shall not apply to employees of public service companies, as defined in section 16-1, or drivers of commercial motor vehicles driving the vehicle on the public works project and delivering or picking up cargo from public works projects provided they perform no labor relating to the project other than the loading and unloading of their cargo.

(P.A. 06-175, S. 1; P.A. 08-83, S. 1.)

History: P.A. 08-83 amended Subsec. (a) by making provisions applicable to public works project contracts entered into on or after July 1, 2009, replacing provision re total cost of work with reference to Sec. 31-53(g), requiring proof in certified payroll form that new mechanic, laborer or worker has completed a 10-hour or more construction safety course and adding provision re new miner training program, amended Subsec. (b) by substituting "person" for "employee" and adding "or program", amended Subsec. (c) by adding "or in accordance with Federal Mine Safety and Health Administration Standards" and setting new deadline of January 1, 2009, deleted former Subsec. (d) re "public building", added new Subsec. (d) re exemptions for public service company employees and delivery drivers who perform no labor other than delivery and made conforming and technical changes, effective January 1, 2009.