

# PROJECT MANUAL

## PROJECT NAME:

## IMCC Door Replacement

## PROJECT ADDRESS:

2700 Coral Ridge Ave  
Coralville, IA 52241

**PROJECT DATE:** March 13, 2019

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## OWNER:

Iowa Department of Administrative Services  
General Services Enterprise – Design & Construction Bureau  
109 Southeast 13<sup>th</sup> Street  
Des Moines, Iowa 50319



**OWNER PROJECT NUMBER:** 9064.00

**OWNER REQUEST FOR BID NUMBER:** RFB 0919335107

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## CONSTRUCTION MANAGER:

The Samuels Group  
317 6<sup>th</sup> Ave.  
Suite 720  
Des Moines, IA 50309



**CONSTRUCTION MANAGER PROJECT NUMBER:** 7122

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## ARCHITECT:

Shive Hattery  
4125 Westown Pkwy #100  
West Des Moines, IA 50266



**ARCHITECT PROJECT NUMBER:** 4186070



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**SECTION 00 0105**

**CERTIFICATIONS PAGE**

**STATE OF IOWA**

	<p>I hereby certify that the portion of this technical submission described below was prepared by me or under my direct supervision and responsible charge. I am a duly Licensed Architect under the laws of the State of Iowa.</p> <p><b>Printed or typed name:</b> Richard C. Cleaveland</p> <p></p> <hr/> <p><b>Signature</b> <span style="float: right;"><b>Date</b> 3/25/2019</span></p> <p>License Expires: 06-30-2020 Pages, Sheets, or Divisions covered by this Seal: 00, 01, 07, 08, 09, 26 &amp; 28</p>
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**END OF SECTION**

**SECTION 00 0115**

**LIST OF DRAWING SHEETS**

(Drawings Bound Separately)

**DRAWINGS**

<b>1.01</b>	<b>SHEET</b>	<b>TITLE</b>
A.	G000	Cover Sheet
B.	A101	Facility Map
C.	A102	Floor Plans
D.	A103	Stoop and Concrete Specs
E.	A600	Door Information
F.	A601	Details

**END OF SECTION**

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**SECTION 00 1113**

**NOTICE TO BIDDERS**

**RFB #0919335107**

The Iowa Department of Administrative Services – Central Procurement Bureau, Hoover State Office Building, Level 3, 1305 East Walnut Street, Des Moines, Iowa 50319 will be receiving bids for the replacement of approximately 24 security doors, frames, and misc. door hardware items located at the Iowa Medical Classification Center (IMCC), 2700 Coral Ridge Ave., Coralville, Iowa, 52241.

The Iowa Department of Administrative Services anticipates the construction to begin July 29, 2019 and end by November 01, 2019.

Bids must be received no later than **2:00 pm, local time, Wednesday, April 24<sup>th</sup>, 2019**. Late bids will not be considered. Sealed bids are to be delivered to the Office of the Department of Administrative Services – Central Procurement Bureau, Hoover State Office Building, Level 3, 1305 East Walnut Street, Des Moines, Iowa, 50319. Bids shall be submitted on the Bid Form and shall be accompanied by a Bid Security as set forth in the Instructions to Bidders in the amount of 5% of the total bid amount. Each bid shall be accompanied by a bid bond, cashier's check or a certified check drawn upon a solvent bank chartered under the laws of the United States of America.

The Iowa Department of Administrative Services reserves the right to reject any and all bids, and to waive irregularities and to accept a bid that is deemed in the best interest of the State of Iowa.

Bidders must comply with all affirmative action/equal employment opportunity provisions of the State of Iowa and the Federal Government.

This project is exempt from Iowa Sales Tax. Davis Bacon Wages **will not** apply to this project.

An **optional** Pre-Bid meeting will be held on **Monday, April 8<sup>th</sup>, 2019 at 1:30 pm** at the Iowa Medical Classification Center (IMCC), 2700 Coral Ridge Ave., Coralville, Iowa, 52241. Attendees shall meet at the Administration Building. **This meeting is not mandatory but is highly recommended.**

Bidding Documents may be obtained from [www.rapidsrepro.com](http://www.rapidsrepro.com) or by calling (515)-251-3222 on **Thursday, March 28<sup>th</sup>, 2019**.

For further information regarding this project contact:  
Steve Oberbroeckling – Issuing Officer  
Iowa Department of Administrative Services – Central Procurement Bureau  
1305 East Walnut Street  
Des Moines, Iowa, 50319  
Phone: (515) 725-2893  
E-Mail: [steve.oberbroeckling@iowa.gov](mailto:steve.oberbroeckling@iowa.gov)

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**SECTION 00 2113**  
**INSTRUCTIONS TO BIDDERS**  
**RFB #0919335107**

**PART 1 - GENERAL**

**1.01 SECTION INCLUDES**

- A. Project Description
- B. Owner
- C. State Agency Representatives and Contacts
- D. Proposal Form and Submissions
- E. Taxes
- F. Alternate Bids
- G. Drawings
- H. Bid Security
- I. Due Date and Time for Receipt of Bids
- J. Commencement and Completion Date
- K. Site Visit
- L. Pre-bid Meeting
- M. Questions
- N. Addenda and Interpretations of the Contract Documents
- O. Substitutions
- P. Obligation of Bidder
- Q. Public Records and Requests for Confidential Treatment
- R. Withdrawal of Bid
- S. Bid Closing
- T. Basis of Bids
- U. Informalities/Rejection of Bids
- V. Consideration of Bids
- W. Preference
- X. Qualifications
- Y. Insurance
- Z. Form of Agreement between Owner and Contractor
- AA. Execution of Contract
- BB. Laws and Regulations
- CC. Contract Documents and Order of Precedence
- DD. Conditions of the Work
- EE. Subcontracts
- FF. Project Manual/Drawings

**1.02 PROJECT DESCRIPTION**

- A. Project Description: The project includes the replacement of approximately 24 security doors, frames, and misc. door hardware items located at the Iowa Medical Classification Center (IMCC), 2700 Coral Ridge Ave., Coralville, Iowa, 52241. The project also includes the addition of concrete stoop footing and removal/replacement of 5" PCC paving.

**1.03 OWNER**

- A. State of Iowa, Department of Administrative Services, 109 SE 13<sup>th</sup> St, Des Moines, IA 50319

**1.04 STATE AGENCY REPRESENTATIVES AND CONTACTS**

- A. PURCHASING AGENT: Steve Oberbroeckling – Issuing Officer, State of Iowa, Department of Administrative Services, Central Procurement Bureau, Hoover State Office Building, 3<sup>rd</sup> floor, 1305 East Walnut Street, Des Moines, IA 50319-0105, Phone: 515-725-2090; email: [steve.oberbroeckling@iowa.gov](mailto:steve.oberbroeckling@iowa.gov)
- B. OWNER REPRESENTATIVE: Jennifer Kleene, State of Iowa, Department of Administrative Services State Design and Construction Resources Bureau, 109 SE 13<sup>th</sup> Street, Des Moines, IA 50319, Phone: 515-725-0454; email: [jennifer.kleene@iowa.gov](mailto:jennifer.kleene@iowa.gov)
- C. ON-SITE COORDINATOR: Greg Wagner, Plant Operations Manager (POM), 2700 Coral Ridge Road, Phone: 319-626-4260; email: [greg.wagner@iowa.gov](mailto:greg.wagner@iowa.gov)
- D. CONSTRUCTION MANAGER CONTACT: Jerry Dehnke, The Samuels Group, 317 6<sup>th</sup> Ave., Des Moines, IA 50309, Phone: 515-661-7142; email: [jdehnke@samuelsgroup.net](mailto:jdehnke@samuelsgroup.net)
- E. DESIGN PROFESSIONAL CONTACT: Richard Cleveland, Shive Hattery, 4125 Westown Pkwy #100, West Des Moines, IA 50266, Phone: 515-233-8104; email: [rcleveland@shive-hattery.com](mailto:rcleveland@shive-hattery.com)

## PART 2 - PRODUCTS – NOT USED

## PART 3 - EXECUTION

### 3.01 PROPOSAL FORM AND SUBMISSION

- A. A properly prepared and submitted bid document is the bidder's responsibility. Bids are to be made in accordance with these Instructions to Bidders and items included on the Bid Form. Failure to comply may be cause for rejection.
- B. The Bid is to consist of the "Bid Form" (required) or exact copy of the form, together with the other documents specified below to be submitted with the Bid, in which copies are included with these Bidding Documents.
  - 1. The total bid package submitted is required to include the following documents (properly completed) and submitted in properly labeled envelopes:
    - a. A **SEALED BID** envelope (a regular envelope furnished by the Bidder) identified with the name and address of the company submitting the bid, the project name, the bid package name and/or number, sealed bid number, due date and time for bids' receipt, and clearly labeled **SEALED BID** containing:
      - 1) Bid Form (blank form included in Project Manual) (Required)
      - 2) Non-discrimination Clause form (blank form included in Project Manual)
      - 3) Targeted Small Business Pre-bid Contact form (blank form included in Project Manual)
      - 4) Bid Security (documentation provided by Bidder) (Is to be submitted in a separate envelope) (Required)
- C. All blank spaces on each document are to be completed, in ink or typewritten, unless the blank has otherwise been noted by Owner as "Not Applicable to this Project." Erasures or corrections shall be initialed by the person signing the bid. Where requested, amounts shall be stated in both words and figures. If words and figures do not agree, the amount written in words shall be considered correct.
- D. Include the amount for performing all work described in the drawings and specifications for Base Bid and for each Alternate Bid requested.
- E. Acknowledge receipt of all Addenda issued, where so indicated on the Bid Form.
- F. The Bid Form and other required documents are to be signed, where so indicated, by an officer of the company having authority to bind the company in a contract. The name of the person signing the bid and his/her title shall be typed or printed below the signature.
- G. Commencement of the work of the contract shall begin with the Contractor's receipt of a fully executed contract (signed by both parties).



- H. The Owner reserves the right to award a contract for Base Bid only, or for Base Bid in combination with any, or all, identified Alternate Bids. The Owner reserves the right to award a contract for individual Bid Packages, or any combination of Bid Packages. Each Bidder must comply with all of the General Requirements of the project and any requirements of the Project manual that apply to their scope of work.
- I. The company's Federal I.D. Number and the Iowa Contractors Registration Number shall be included in the Bid Form.
- J. Unless indicated otherwise, the Bid shall be for a single responsibility contract for all work as indicated on the Drawings and specified in the Project Manual, and shall be a lump sum amount. All requested Alternate Bids are to be bid. Failure to do so may result in disqualification of your bid. If no change in the Base Bid amount is required with respect to consideration of a particular Alternate Bid, enter "No Change" in the blank for that Alternate Bid.
- K. Where so requested, provide Unit Prices for the designated types of work and in the units specified, in which the Unit Prices would be used as adjustments to the quantities described in the Bidding Documents as the basis for the Base Bid and any Alternate Bid work. A Unit Price would be applicable in the event the Owner should request additional work of that type beyond the extent and quantity that has been established as the scope of the work by graphic delineation and notations on the Drawings, or by otherwise stipulating in the Bidding Documents a numerical quantity of the work, for the Bidder's use in determining the lump sum bid amount for the Base Bid and any requested Alternate Bid containing such work. The Unit Prices shall also be used to adjust the Contract Amount for actual quantities of work involved when the work subject to Unit Price adjustment differs by being less in quantity than that contemplated by the Bidding Documents' original scope of work for the respective Base Bid or Alternate Bid.
- L. A Completed State of Iowa Nondiscrimination Clause form and Subcontractor Targeted Small Business Enterprise Pre-Bid Contact Information form, included in these Bidding Documents, are to accompany the Bid. Bidders shall comply with all affirmative action/equal opportunity provisions of State and Federal laws. The Owner seeks to provide opportunities for Targeted Small Businesses in accordance with the provisions of Chapter 73 of the Code of Iowa.
- M. The completed Bid Form, and above referenced documents, are to be placed in the Sealed Bid envelope included with these Bidding Documents. Any required Bid Security shall be provided, in the form and amount specified elsewhere in these Instructions to Bidders, at the time of submission of the Bid. When a site visit is mandatory as specified elsewhere in these Instructions to Bidders, and a Certificate of Site Visit is required to be submitted with the Bid as evidence of such visit having occurred for purposes of observing the conditions of the site and the work proposed therein, the Certificate shall be enclosed in the Sealed Bid envelope containing the Bid Form, Bid Security and other documents.

### **3.02 TAXES**

- A. In accordance with Section 423 of the Code of Iowa and 701-19 of the Iowa Administrative Rules, Iowa Construction Sales Tax Exemption Certificates for this project will be issued. Do not include Iowa sales tax or use tax, or any local option sales tax, on construction materials in determining your bid prices. The successful Contractor will be required to notify the Department of Administrative Services project manager of all Subcontractors within forty-eight (48) hours after the published date and time by which bids must be submitted. Information on the Contractor and each Subcontractor shall include the firms' name, address, contact person, federal tax identification number, and the Iowa contractor registration number. For the Contractor and each Subcontractor, designate the type of trade or category of work that is to be provided on the project. The Construction Manager for the Department of Administrative Services must be informed when any Subcontractor is added to the project. Following receipt of the information, the Construction Manager for the Department of Administrative Services will arrange to have an authorization letter and certificate (please see sample, included in the Project Manual) issued on behalf of the Contractor and each Subcontractor and will forward the documents to the Contractor for distribution and use by each in purchasing construction materials for this project. Certificates issued for this project shall be used for tax-exempt purchasing construction materials for this project only.

### **3.03 ALTERNATE BIDS**

- A. Bidders are to bid all Alternates requested on the Bid Form. Alternates quoted will be reviewed and accepted or rejected at the option of the Department of Administrative Services. Accepted Alternates will be identified in the Owner-Contractor agreement. Indicate the price for Alternates described, as shown on the Drawings and specified in the Project Manual, and identify in the correct location on the Bid Form.

### **3.04 DRAWINGS**

- A. All drawing sheets bearing the project name: IMCC Door Replacement dated 3/13/19.

### **3.05 BID SECURITY**

- A. Each Bid shall be accompanied by Bid Security in a separate sealed envelope.
- B. The Bid Security shall be in the form of a Certified check, Cashier's check or a Bid Bond in an amount not less than five percent (5%) of the maximum value of the Bid, including any additive Alternates. **NOTE:** Checks other than Certified checks and Cashier's checks will not be accepted. Bonds shall be issued by a bonding company licensed to transact business in the State of Iowa. The Attorney in Fact who signs the Bond shall file with the Bond a certified and effectively dated copy of their Power of Attorney. The Bid Security shall be made payable to the Iowa Department of Administrative Services, and shall accompany the Bid. If a Bid Bond is not used, Certified checks or Cashier's checks must be hand delivered or mailed in a sealed envelope. The Bid Security shall serve as a guarantee that a Bidder who is offered a contract will enter into an Agreement with the State of Iowa and will file an approved surety company's Performance Bond, Payment Bond and the Insurance Certificates as evidence of the required Insurance within ten days of execution of the Contract for construction of this Project, but not later than the start of construction in any event. Upon failure to comply, the Bid Security shall be forfeited as liquidated damages. The governmental entity shall retain the bid security furnished by the successful bidder until the approved contract form has been fully executed, a bond has been filed by the bidder guaranteeing the performance of the contract, and the contract and bond have been approved by the governmental entity. The provisions of chapter 573, where applicable, apply to contracts awarded under this chapter. The governmental entity shall promptly return the checks or bidder's bonds of unsuccessful bidders to the bidders once the Notice of Intent to Award is issued.

### **3.06 DUE DATE AND TIME FOR RECEIPT OF BIDS**

- A. Properly completed Bids shall be received at the place, and not later than the time, specified below for receipt of Bids, or any extension thereof made by Addendum issued subsequent to issuing the Bidding Documents. Oral or telephonic Bids are invalid, and will not receive consideration. The Bidder shall assume full responsibility for the timely delivery and receipt of the Bid by the Procurement Division of the Department of Administrative Services at the location herein specified. Late bids will not be accepted, and will be returned unopened to the Bidder.
- B. Sealed Bids will be received at the time and location as follows:
  - 1. On or before 2:00 pm Central Time, April 24<sup>th</sup>, 2019  
State of Iowa, Department of Administrative Services  
Central Procurement Bureau  
Hoover State Office Building, Level 3  
1305 East Walnut Street  
Des Moines, Iowa 50319-0105  
Attention: Steve Oberbroeckling – Issuing Officer
- C. Modification of Bids. Bids may be modified by mail or email notice received at the place designated in the Invitation to Bid, not later than the time set for the opening of bids. A

modification shall not reveal the bid price, but shall provide the addition or subtraction or the modification so that the final prices or terms will not be known to the public corporation until the sealed bid is opened (see Section 00 4116.03 Modification To Bid Form).

1. A modification may not be withdrawn after the time set for the opening of bids. No bid made shall be changed or altered by telephone. No oral changes, alterations or conditions will be accepted under any circumstance.
2. An email modification must be submitted on Section 00 4116.03, Modification To Bid Form to the email address [steve.oberbroeckling@iowa.gov](mailto:steve.oberbroeckling@iowa.gov). DAS will not accept any email modification received in its offices after the time set for the opening of bids.

### **3.07 COMMENCEMENT AND COMPLETION DATES**

- A. Commencement of the Work of the Contract shall be the day of receipt by the selected Contractor of the fully-executed contract. Final completion of the Work of the contract shall be acknowledged as a part of the Contractor's proposal.

### **3.08 SITE VISIT**

- A. A site visit by the prospective bidder is highly recommended at the time of the Pre-Bid Meeting of this project.

### **3.09 PRE-BID MEETING**

- A. An **optional** Pre-Bid meeting will be held on **Monday, April 8<sup>th</sup>, 2019 at 1:30 pm** at the Iowa Medical Classification Center (IMCC), 2700 Coral Ridge Ave., Coralville, Iowa, 52241. Attendees shall meet at the Administration Building. **This meeting is not mandatory but is highly recommended.**

### **3.010 QUESTIONS**

- A. Questions on this project may be raised and discussed at the time of the Pre-Bid Meeting. Questions should be submitted, in writing, by **2:00 pm, April 11<sup>th</sup>, 2019**, to the Purchasing Agent previously indicated in these Instructions to Bidders.

### **3.011 ADDENDA AND INTERPRETATIONS OF THE CONTRACT DOCUMENTS**

- A. Any person contemplating submitting a proposal for the proposed Contract, who is in doubt as to the true meaning of any part of the Bidding Documents, shall submit a written request for an interpretation thereof. The person submitting a request will be responsible for its prompt delivery. Every request for such interpretation should reference the Bid Number specified in the Bidding Documents, and shall be made in writing (email preferred). Questions shall be submitted to the previously identified Purchasing Agent for the Department of Administrative Services. To be given consideration, requests shall be received by **2:00 pm, April 11<sup>th</sup>, 2019**. Replies, which revise or correct the Bidding Documents, or provide necessary clarifications, will be issued in the form of a written Addendum to the Bidding Documents. Interpretations, corrections or changes of the Bidding Documents made in any other manner will not be binding, and Bidders shall not rely upon such interpretations, corrections, or changes. The Bidder is to include any resultant cost changes in the Bid Sum. Addenda will be posted electronically at the respective bid site where the bid is initially posted. Acknowledgment by the Bidder of each issued Addendum shall be noted on the Bidder's proposal, in the location so indicated on the Bid Form. All Addenda issued shall become part of the Contract Documents.

### **3.012 SUBSTITUTIONS**

- A. Where the Bidding Documents stipulate a specific product be provided by naming one or more manufacturer and model, and include a statement such as "or equal", "equal to", "equivalent to",

or “basis of design”, a substitute product will be considered when written request is received by **2:00 pm, April 11<sup>th</sup>, 2019.**

- B. The written request shall be on the “Request for Substitution” form included in the Project Manual. If no such form is included, the request shall be provided on the letterhead of the company making the request.
- C. **Subsequently, substitutions will be viewed in the context of a Change Order to the Contract, and consideration will only be given in the event a product becomes unavailable or not practical due to no fault of the Contractor, or the substitution is substantially to the Owner’s advantage (equal product for less cost or higher quality product at no change in Contract Sum).**
- D. Document each substitution request with complete data substantiating compliance of the proposed substitution with the Bidding Documents. Each request shall identify the specified product for which the substitution is requested, and shall clearly describe the product for which approval is requested. The burden shall be on the requester to demonstrate the proposed substitute product’s suitability for use in the Work and its equivalency or superiority in function, appearance, quality, and performance with the product named in the Bidding Documents.
- E. A description of any changes to the Bidding Documents that the proposed substitution will require shall be included with the request. The requester shall affirm that dimensions shown on the Drawings will not be affected by the substitute product, and that it will have no adverse affect on other trades, the construction schedule, or specified warranty requirements. The request for use of a substitute product shall be signed by an authorized representative of the firm submitting the request, who shall state that the firm will pay for any changes to the building design, including Design Professional’s design, detailing, and construction cost caused by the requested substitution if the substitution is approved for use in the Work.
- F. All such substitute products approved for use in the Work during the established period of time before receipt of Bids will be identified in a subsequent Addendum to the Bidding Documents.

### **3.013 OBLIGATION OF BIDDER**

- A. It shall be the responsibility of each Bidder contemplating the submission of a Bid for the proposed Contract to fully acquaint himself/herself with conditions at the work site, project requirements, and to become acquainted thoroughly with the work, and all conditions that may be related to it. No considerations or revision in the contract price or scope of the project will be considered by the Owner for any item that could have been revealed by a thorough on-site inspection and examination.
- B. By submission of a Bid, it shall be understood that the Bidder assures that he/she has reviewed and is thoroughly familiar with the project requirements, contract conditions and supplementary conditions, the drawings, specifications, addenda, and that the bidder is aware of the conditions existing at the site that may relate to the work of this project. Failure of any Bidder to examine any form, document, or other instrument shall in no way relieve the Bidder from any obligation in respect to his/her Bid.

### **3.014 PUBLIC RECORDS AND REQUESTS FOR CONFIDENTIAL TREATMENT**

- A. The Agency’s release of public records is governed by Iowa Code chapter 22. Contractors are encouraged to familiarize themselves with Chapter 22 before submitting a Proposal. The Agency will copy and produce public records upon request as required to comply with Chapter 22 and will treat all information submitted by a Contractor as non-confidential records unless Contractor requests specific parts of the Proposal be treated as confidential at the time of the submission as set forth herein AND the information is confidential under Iowa or other applicable law.
- B. A Contractor requesting confidential treatment of specific information must: (1) fully complete Form 22 (Available at <https://das.iowa.gov/sites/default/files/procurement/pdf/Form%2022-ConfidentialityRequest-RFB.pdf>), (2) identify the request in the transmittal letter with the Contractor’s Proposal, (3) conspicuously mark the outside of its Proposal as containing confidential information, (4) mark each page upon which confidential information appears, and (5) submit a “Public Copy” from which the confidential information has been excised.

- C. Form 22 will not be considered fully complete unless, for each confidentiality request, the Contractor: (1) enumerates the specific grounds in Iowa Code chapter 22 or other applicable law that supports treatment of the material as confidential, (2) justifies why the material should be maintained in confidence, (3) explains why disclosure of the material would not be in the best interest of the public, and (4) sets forth the name, address, telephone, and e-mail for the person authorized by Contractor to respond to inquiries by the Agency concerning the confidential status of such material.
- D. The Public Copy from which confidential information has been excised is in addition to the number of copies requested in Section 3 of this RFP. The confidential material must be excised in such a way as to allow the public to determine the general nature of the material removed and to retain as much of the Proposal as possible.
- E. **Failure to request information be treated as confidential as specified herein shall relieve Agency and State personnel from any responsibility for maintaining the information in confidence. Contractors may not request confidential treatment with respect to pricing information and transmittal letters. A contractor's request for confidentiality that does not comply with this section or a contractor's request for confidentiality on information or material that cannot be held in confidence as set forth herein are grounds for rejecting contractor's Proposal as non-responsive. Requests to maintain an entire Proposal as confidential will be rejected as non-responsive.**
- F. If Agency receives a request for information that Contractor has marked as confidential and if a judicial or administrative proceeding is initiated to compel the release of such material, Contractor shall, at its sole expense, appear in such action and defend its request for confidentiality. If Contractor fails to do so, Agency may release the information or material with or without providing advance notice to Contractor and with or without affording Contractor the opportunity to obtain an order restraining its release from a court possessing competent jurisdiction. Additionally, if Contractor fails to comply with the request process set forth herein, if Contractor's request for confidentiality is unreasonable, or if Contractor rescinds its request for confidential treatment, Agency may release such information or material with or without providing advance notice to Contractor and with or without affording Contractor the opportunity to obtain an order restraining its release from a court possessing competent jurisdiction.

### **3.015 WITHDRAWAL OF BID**

- A. A Bid may be modified or withdrawn only before the time and date for receipt of Bids. Said request for modification or withdrawal of formal sealed bid must be made in writing and delivered to the previously designated Purchasing Agent for the Department of Administrative Services in a sealed envelope, properly identifying the bid that is to be modified. A Bid shall remain valid for consideration by the Owner for the following period(s) of time after the date specified for receipt of Bids, or until such time following that period that the apparent low bidder requests in writing that the Bid be withdrawn, after which the Bid may be withdrawn without forfeiture of any required Bid Security. The Base Bid shall be valid for not less than thirty (30) calendar days after the date Bids are specified to be due. With the approval of the Department of Administrative Services, a bid may be withdrawn after opening, but only if the bidder provides prompt written notification that adequately documents the commission of an honest error that may cause undue financial loss.

### **3.016 BID CLOSING**

- A. Bids received prior to the time of opening will be securely kept, unopened. The Purchasing Agent for the Department of Administrative Services designated to receive Bids will determine when the specified time has arrived. No bid received thereafter will be considered.

### **3.017 BASIS OF BIDS**

- A. The Bidder shall include all additional documents or appendices that are requested to be submitted concurrent with the Bid Form; failure to comply may be cause for rejection.

- B. In accordance with Iowa law, Section 8A.311: A bidder, to be considered for an award of a state construction contract, shall disclose to the state agency awarding the contract the names of all subcontractors and suppliers who will work on the project being bid, within forty-eight (48) hours after the published date and time by which bids must be submitted. A bidder shall not replace a subcontractor or supplier disclosed without the approval of the state agency awarding the contract.
  - 1. A bidder, prior to an award or who is awarded a state construction contract, shall disclose all of the following, as applicable:
    - a. If a subcontractor or supplier disclosed (under the preceding) by a bidder is replaced, the reason for replacement and the name of the new subcontractor or supplier;
    - b. If the cost of work to be done by a subcontractor or supplier is changed or if the replacement of a subcontractor or supplier results in a change in the cost, the amount of the change in cost.
    - c. Any reduction in subcontractor or supplier price as a result of the change, if the change is approved by the Owner, shall be deducted from the Trade Contract via a deductive Change Order. Any such changes, if approved by the Owner, which result in an increase in the Trade Contract Price shall be borne by the Trade Contractor.
- C. The Bidder is specifically advised that any person, firm or other party to whom it is proposed to award a subcontract under this contract must:
  - 1. Be registered in the State of Iowa and have an Iowa Contractor's Registration number, and
  - 2. Be acceptable to the Owner.

### **3.018 INFORMALITIES/ REJECTION OF BIDS**

- A. The Iowa Department of Administrative Services reserves the right to waive any irregularities or informalities and to enter into a Contract with a Bidder, or to reject any or all bids as it deems to be in the best interest of the State, without penalty.

### **3.019 CONSIDERATION OF BIDS**

- A. It is the intent of the Department of Administrative Services to award a Contract to the lowest responsible Bidder, provided the Bid has been submitted in accordance with the requirements of the Bidding Documents and is determined to be compliant with all Bidding Requirements, and does not exceed the funds available for construction.
- B. Bidder is to bid on each Alternate Bid requested. Failure to do so may result in disqualification of the bid. The Department of Administrative Services reserves the right to accept any, or no, Alternate Bid. Alternate Bids may be considered in any order or combination, and the low successful Bidder will be determined on the basis of the sum of the Base Bid and the Alternate(s) accepted at the time of the Contract award.
- C. In evaluating Bids, any proposal offered by a Bidder for an alternate design, or for materials other than those shown or specified for the Base Bid or for Alternate Bid construction under the proposed Construction Documents or called for by any issued Addenda to those Construction Documents, will not be considered in determining the low successful Bidder. However, the Department of Administrative Services reserves the right to consider any such Bidder-proposed (Contractor's Alternate) alternate designs or materials with the low successful Bidder, after the low successful Bidder is determined in the manner described above (A and B).
- D. Notice of Intent to Award the Bid(s) will be sent to all Respondents submitting a timely Bid and may be posted at the website shown on the RFB cover sheet. Negotiation and execution of the Contract(s) shall be completed no later than thirty (30) days from the date of the Notice of Intent to Award or such other time as designated by Agency. If the successful Bidder fails to negotiate and deliver an executed Contract by that date, the Agency, in its sole discretion, may cancel the award and award the Contract to the remaining Bidder the Agency believes will provide the best value to the State.

### 3.020 PREFERENCE

- A. By virtue of statutory authority, a preference shall be given to Iowa domestic labor, products produced and provisions grown within the state of Iowa, in accordance with the provisions of Chapter 73, Code of Iowa and any amendments thereto.
- B. Enforcement of reciprocal resident bidder preference and resident labor force preference codified at Iowa Code Section 73A.21.
  - 1. NOTICE: Failure on the part of the bidder to carefully read the following paragraphs and to provide the information requested below may make the bidder's bid materially nonresponsive and therefore ineligible for contract award. Violations of Iowa Code Section 73A.21 may, among other things, result in civil penalties assessed by the Commissioner of the Division of Labor of Iowa Workforce Development. The bidder should seek out the advice of an attorney if he or she has questions about Iowa Code Section 73A.21.  
As a part of the competitive procurement of contracts for Public Improvements that must be awarded to the low bidder (if the bid is responsive and the bidder is deemed responsible), Public Bodies shall allow a preference to Resident Bidders if a Nonresident Bidder places a bid for the contract for the Public Improvement and that Nonresident Bidder's state or foreign country gives resident bidders of that state or foreign country a preference (including a labor force preference or any type of preferential treatment). The preference allowed, or reciprocally applied, shall be equal to the preference given or required by the state or foreign country in which the Nonresident Bidder is a resident bidder.  
"Public Body" means the State of Iowa (and its agencies) and any of its political subdivisions, including school districts, public utilities, and the state board of regents.  
"Public Improvement" means a building or other construction work to be paid for in whole or in part by the use of funds of the State of Iowa, its agencies, and any of its political subdivisions and includes road construction, reconstruction, and maintenance projects.  
"Resident Bidder" means a person or entity authorized to transact business in of the State of Iowa and having a place of business for transacting business within the State of Iowa at which it is conducting and has conducted business for at least three years prior to the date of the first advertisement for the public improvement. Note, however, that if a nonresident bidder's state or foreign country has a more stringent definition of a resident bidder, the more stringent definition is applicable as to bidders from that state or foreign country.  
"Nonresident Bidder" means a person or entity who does not meet the definition of a resident bidder.
- C. Nonresident bidders shall be required to certify on the Bid Form, where so indicated, the state or foreign country in which the firm is a resident, and if that state or foreign country uses a percentage for in-state bidders and the amount of the preference.
- D. If it is determined that this may cause denial of federal funds which would otherwise be available, or would otherwise be inconsistent with requirements of federal law, this section shall be suspended, but only to the extent necessary to prevent denial of the funds or to eliminate the inconsistency with federal requirements.

### 3.021 QUALIFICATIONS

- A. In accordance with Iowa Code 26.9(2) and 26.16, no potential bidder shall be required to provide confidential or proprietary information or meet any class requirements as a precondition to submitting a responsive bid. However, as noted in Iowa Code 26.9(2), the lowest responsive bidder may be required to provide additional information to verify responsibility prior to and as a condition of obtaining final award of the contract. Any qualification requirements contained in any bid document indicates only preferred qualifications, not a precondition to bid, and the lowest responsive bidder's qualifications will be evaluated individually based on all information provided.
- B. The Owner may make such investigations as he or she deems necessary to determine the ability of the awarded Bidder to perform the required work, and the awarded Bidder shall furnish to the Owner all such information and data for this purpose. The Owner reserves the right to rescind any awarded Bid if the evidence submitted by, or in investigation of, such Bidder fails to satisfy

the Owner that the Bidder is properly qualified to carry-out the obligations of the Contract and to complete the Work contemplated therein.

- C. Bidders shall be registered as a Construction Contractor with the Labor Commissioner, Iowa Workforce Development Department, as required by Chapter 91C of the Code of Iowa. Bidder's Iowa Contractor Registration Number shall be included in the location provided in the Bid Form.
- D. Non-resident corporations submitting bids must be in compliance with Section 490.1501 of the Code of Iowa and legally authorized thereby to carry-on such business in the State of Iowa as is required by the Contract Documents.
- E. An out-of-state Bidder, if awarded a contract, will be required to submit evidence of authorization to do business in the State of Iowa.

### **3.022 INSURANCE**

- A. Insurance Requirements
  - 1. The Contractor shall maintain in effect, with insurance companies of recognized responsibility, at its expense, insurance covering its work of the type and in amounts required by this Contract. The Contractor's insurance shall, among other things, insure against any loss or damage resulting from the Contractor's performance of this Contract. All such insurance policies shall remain in full force and effect for the entire life of this Contract and shall not be canceled or changed except after thirty (30) days written notice to the Owner.
  - 2. **Amounts of Insurance Required – Refer to ConsensusDOCS 802 (see template in Project Manual)**
- B. Certificates of Coverage
  - 1. Certificates of the insurance described above shall be submitted to the Owner before starting any construction activities and shall be subject to approval by the Owner. The Contractor shall provide certificates for the insurance required. The insurer shall state in the certificate that no cancellation of the insurance will be made without at least thirty (30) days prior written notice to the Contractor. Upon receipt of any notice of cancellation or alteration, Contractor shall within ten (10) days procure other policies of insurance, similar in all respects to the policy or policies, about to be canceled or altered, and, if the Contractor fails to provide, procure, and deliver acceptable policies of insurance, or satisfactory evidence thereof, in accordance with the terms hereof then, at the Owner's option, Owner may obtain such insurance at the cost and expense of Contractor, without the need of any notice to Contractor.
- C. No Limitation of Liability
  - 1. Acceptance of the insurance certificates by the Owner shall not act to relieve the Contractor of any obligation under this Contract. All insurance policies and certificates shall be issued only by companies authorized to transact business in the State of Iowa. It shall be the responsibility of the Contractor to keep the respective insurance policies and coverage's current and in force during the life of this agreement.
  - 2. A Sample Certificate of Insurance is attached for reference following this Section.

### **3.023 FORM OF AGREEMENT BETWEEN OWNER AND CONTRACTOR**

- A. The Agreement for the Work will be written on ConsensusDOCS 802 Form of Agreement between Owner and Contractor (sample of the document with modifications incorporated is bound in this Project Manual).

### **3.024 EXECUTION OF CONTRACT**

- A. Contract documents shall mean and include the following:
  - 1. Contract: ConsensusDOCS 802



2. Performance and Payment Bonds
3. Project Manual
4. Drawings
5. Numbered Addenda issued after initial publication of Bid Documents
6. Numbered Modifications (Change Orders) issued after Contract is signed

### **3.025 LAWS AND REGULATIONS**

- A. The Bidder's attention is directed to the fact that all applicable laws and regulations of Federal and State agencies having jurisdiction over the construction of this project shall apply to any contract resulting from this proposal, and it shall be deemed that those rules and regulations are made a part of such contract the same as if set forth in their entirety therein. By submitting a Bid, the Bidder confirms that he/she is familiar with and understands the Contractor's responsibility under all Federal and State of Iowa laws and regulations with respect to the Work described by the proposed Contract Documents.

### **3.026 CONTRACT DOCUMENTS AND ORDER OF PRECEDENCE**

- A. Where an irreconcilable conflict exists among Applicable Legal Requirements, this Contract, the specifications in the Materials and the Drawings, the earliest item mentioned in this sentence involving a conflict shall control over any later mentioned item or items subject to such conflict unless doing so would result in reducing the Bidder's duty of care or obligations under this Contract, in which case the terms resulting in the highest requirements for Bidder performance shall control.

### **3.027 CONDITIONS OF THE WORK**

- A. Each bidder must fully inform him/herself of the conditions under which the work is to be performed at the site of the work, the obstacles which may be encountered, and all other relevant matters concerning the work to be performed. Failure to do so will not relieve a successful bidder of the obligation to furnish all material and labor necessary to carry out the provisions of the contract. When a site visit is required by provisions located elsewhere in these Instructions to Bidders, as a site tour in conjunction with a mandatory Pre-Bid Meeting, it shall be the Bidder's responsibility to fulfill this obligation as a condition of bidding the Work described in the Bidding Documents.
- B. No allowance will be made for any additional compensation by reason of any matter or condition with which the bidder might have fully informed him/herself, but failed to do so prior to bidding. Insofar as possible, the Contractor and all subcontractors shall employ such methods or means in carrying out the work so as not to cause any interruption of, or interference with, the work of any other subcontractor or trade.

### **3.028 SUBCONTRACTS**

- A. The Prime Contractor shall be responsible for notifying all subcontractors and suppliers and informing them that they are bound in each case by all applicable provisions of the bidding information and those of the proposed Form of Agreements as defined in the Contract Documents.

### **3.029 PROJECT MANUAL/ DRAWINGS**

- A. This Project Manual is intended to supplement the Project Drawings prepared by Shive-Hattery dated 3/13/19.

**END OF SECTION**



# SAMPLE

## CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)  
**xx/xx/xxxx**

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

**IMPORTANT:** If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER <b>Agent's Name</b> <b>Agent's Address</b>	CONTACT NAME: <b>Agent's Information</b>	
	PHONE (A/C, No, Ext):	FAX (A/C, No):
INSURED <b>Trade Contractor's Name</b> <b>Trade Contractor's Mailing Address</b>	E-MAIL ADDRESS:	
	INSURER(S) AFFORDING COVERAGE	
	INSURER A:	NAIC #
	INSURER B:	Carriers
	INSURER C:	
	INSURER D:	
	INSURER E:	
INSURER F:		

## COVERAGES

CERTIFICATE NUMBER:

REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	Minimum
* A	COMMERCIAL GENERAL LIABILITY	X	X	#TBD- CGL	3/1/17	3/1/18	EACH OCCURRENCE	\$ 1,000,000
	CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR		DAMAGE TO RENTED PREMISES (Ea occurrence)				\$	
			MED EXP (Any one person)				\$	
			PERSONAL & ADV INJURY				\$ 1,000,000	
			GENERAL AGGREGATE				\$ 2,000,000	
	GEN'L AGGREGATE LIMIT APPLIES PER:						PRODUCTS - COMP/OP AGG	\$ 1,000,000
	POLICY <input checked="" type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC							\$
	OTHER:							\$
B	AUTOMOBILE LIABILITY	X	X	#TBD-AL	3/1/17	3/1/18	COMBINED SINGLE LIMIT (Ea accident)	\$ 1,000,000
	<input checked="" type="checkbox"/> ANY AUTO		BODILY INJURY (Per person)				\$	
	ALL OWNED AUTOS	SCHEDULED AUTOS	BODILY INJURY (Per accident)				\$	
	HIRED AUTOS	NON-OWNED AUTOS	PROPERTY DAMAGE (Per accident)				\$	
							\$	
C	UMBRELLA LIAB <input checked="" type="checkbox"/> EXCESS LIAB	X	X	#TBD-UMB	3/1/17	3/1/18	EACH OCCURRENCE	\$ 10,000,000
		CLAIMS-MADE					AGGREGATE	\$
	DED	RETENTION \$						\$
D	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY			#TBD-WC	3/1/17	3/1/18	<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTH-ER	
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH)	Y/N <input type="checkbox"/> N/A					E.L. EACH ACCIDENT	\$ 500,000
	If yes, describe under DESCRIPTION OF OPERATIONS below						E.L. DISEASE - EA EMPLOYEE	\$ 500,000
							E.L. DISEASE - POLICY LIMIT	\$ 500,000
* E	Owners Contrators Protective Liability			#TBD-OCF	3/1/17	3/1/18	*Limits equal to CGL (or) as required by owner (Note- Would be either CGL or OCF, not both)	

amount varies based on paragraph 10.2.2 of the ConsensusDocs 802 contract

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

Additional Insured on a Primary & Non-Contributory basis (CGL;AL;UMB/Excess) in favor of : (Owner) Iowa Department of Administrative Services (DAS), Officers, Directors, Members, Consultants, Agents, and Employees.

Waiver of Subrogation (CGL;AL;WC/EL;UMB/Excess) in favor of: (Owner) Iowa Department of Administrative Services (DAS), Officers, Directors, Members, Consultants, Agents, and Employees.

## CERTIFICATE HOLDER

## CANCELLATION

Iowa Department of Administrative Services (DAS)  
109 SE 13th Street  
Des Moines, IA 50319

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Signature

**SECTION 00 3113**

**PRELIMINARY SCHEDULE**

**PART 1 - GENERAL**

**1.01 SECTION INCLUDES**

- A. Preliminary Construction Schedule
- B. Schedule Durations

**1.02 PRELIMINARY SCHEDULE**

- A. A preliminary schedule has been identified by the Owner for the implementation of the Project. Refer to the schedule following this Section for references to anticipated milestones and construction duration.
- B. Each step of the Preliminary Schedule is subject to receipt of acceptable bids, Owner's decision process and date of commencement.
- C. A proposed construction schedule shall be submitted by all Trade Contractors to the Construction Manager no later than 48 hours prior to the pre-construction meeting. A revised Construction Schedule will be submitted by the Construction Manager once all preliminary schedules are reviewed and approved by the Owner.
- D. The final construction schedule will be established post award of bids with the cooperation of all contractors.

**1.03 SCHEDULE DURATIONS**

- A. Anticipated Notice of Intent to Award – 04/25/19
- B. Anticipated Date of Commencement – 05/10/19
- C. Substantial Completion by – 11/01/19

**PART 2 - PRODUCTS – NOT USED**

**PART 3 - EXECUTION – NOT USED**

**END OF SECTION**

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**SECTION 00 3143**

**PERMIT APPLICATION**

**PART 1 - GENERAL**

**1.01 SECTION INCLUDES**

- A. Permit Application Information
- B. Licenses, Permits, and Related Inspections

**1.02 PERMIT APPLICATION INFORMATION**

- A. State Building Code Plan Review: The plan review and inspections for this project have been applied for by the Architect. Please contact your inspector prior to construction and occupancy.
- B. Electrical Permit and Inspections: Trade Contractor is responsible for permits and inspections.
- C. Other Applicable inspections: Trade Contractor is responsible for any other applicable project specific permits and inspections.

**1.03 LICENSES, PERMITS, AND RELATED INSPECTIONS**

- A. The Bidder shall comply with all codes, laws, ordinances, rules and regulations of any public authority having jurisdiction that bears on the performance of its work. All construction, materials and methods shall comply with the State Building Codes, except where plans and specifications establish a higher standard.

**PART 2 - PRODUCTS – NOT USED**

**PART 3 - EXECUTION – NOT USED**

**END OF SECTION**

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**SECTION 00 4116**

**BID FORM**

RFB #0919335107

BID FORM for CONSTRUCTION CONTRACT  
for  
Iowa Medical and Classification Center  
2700 Coral Ridge Ave. Coralville, Iowa 52241  
Project 9064.00

Iowa Department of Administrative Services  
GSE-Central Procurement Bureau  
Hoover State Office Building, Level 3  
1305 East Walnut Street  
Des Moines, Iowa 50319-0105

The following documents are to be completed and submitted with your bid.

1. Bid Proposal Form (Required)
2. Non Discrimination Clause Form
3. Contractor Targeted Small Business Enterprise Pre-Bid Contract Information Form
4. Bid Security – 5% of total Bid amount (Is to be submit in separate envelope) (Required)

**Authorized Representative:**

The undersigned Bidder, in response to your Request for Bid for construction of the above project, having examined the Drawings, Specifications, and other Bidding Documents dated March 13<sup>th</sup>, 2019, and Addenda issued and acknowledged below as received and being familiar with all the conditions surrounding the construction of the proposed project including the availability of materials and labor, hereby proposes to furnish all labor, materials, equipment and supplies to perform all work to construct the project in strict accordance with the proposed Contract Documents, within the time and at the prices stated below. Prices are to cover all expenses incurred in performing the work required under the proposed Contract Documents, of which this bid is a part.

Bidder acknowledges receipt of the following Addenda which are a part of the Bidding Documents and for which any effect on cost of the Work is included in the bid amounts indicated:

Number \_\_\_\_\_

Dated \_\_\_\_\_

Note that the State of Iowa is exempt from State and Local sales and use taxes (including local option and school option) for this project. Taxes on construction materials shall NOT be included in the bid amounts.

Amounts shall be indicated in both words and figures. In case of discrepancy, the amount indicated in words shall govern.

BID PACKAGES:

BP 01

Description: IMCC Door Replacement

Bidder proposes and agrees to perform all work as described in the Construction Documents for the sum of:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ Dollars

(\$\_\_\_\_\_).

BP 02

Description: IMCC Stoop and Paving at Door 30

Bidder proposes and agrees to perform all work as described in the Construction Documents for the sum of:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ Dollars

(\$\_\_\_\_\_).

BP 03

Description: IMCC Door Replacement Project (In its entirety)

Bidder proposes and agrees to perform all work as described in the Construction Documents for the sum of:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ Dollars

(\$\_\_\_\_\_).



Amounts shall be indicated in both words and figures. In case of discrepancy, the amount indicated in words shall govern.

ALTERNATES:

ALT 01

Description: Replace Door Panel at Door 13

Bidder proposes and agrees to perform all work as described in the Construction Documents for the sum of:

\_\_\_\_\_  
\_\_\_\_\_  
Dollars

(\$ \_\_\_\_\_).

ALT 02

Description: Replace Door and Frame of Door 24

Bidder proposes and agrees to perform all work as described in the Construction Documents for the sum of:

\_\_\_\_\_  
\_\_\_\_\_  
Dollars

(\$ \_\_\_\_\_).

Bidder hereby certifies that:

1. This bid is genuine and is not made in the interest of or on behalf of any undisclosed person, firm or corporation;
2. Bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid; Bidder has not solicited or induced any person, firm or corporation to refrain from bidding; and Bidder has not sought by collusion to obtain any advantage over any other bidder or over the Owner.
3. Bidder hereby certifies that the Bidder is registered with the Iowa Labor Commissioner as a Contractor as required by Chapter 91C, Code of Iowa.
4. Bidder agrees to comply with all Federal and State Affirmative Action/Equal Employment Opportunity requirements concerning fair employment and will not discriminate between or among them by reason of race, color, religion, sex, national origin or physical handicap.
5. All construction under this Contract shall conform to the requirements of the *Iowa State Building Code*.
6. Bidder agrees that this bid shall remain valid and shall not be withdrawn for a period of thirty (30) calendar days after the date for receipt of bids.
7. Bidder agrees that if written notice of acceptance of this bid is mailed, emailed, or delivered to the undersigned within thirty (30) days after the date in which bids are due, or at any time thereafter before it is withdrawn, the undersigned will sign and return the Contract Agreement, prepared in

accord with the Bidding Documents and this bid as accepted; and will also provide proof of insurance coverage and required surety bonds.

8. Bidder understands that the Owner reserves the right to reject any and all bids, and to waive irregularities or informalities and enter into a contract for the work, as the Owner deems to be in the best interest of the State.
9. Bidder understands that the Owner reserves the right to accept any, or no, Alternate Bid, if requested, and that the Alternate Bids may be considered in any order or combination, and the low Bidder shall be determined on the basis of the sum of the base bid and any Alternate(s) accepted.

**Subcontractors:**

The Trade Contractor must identify all Subcontractors and Suppliers within 48 hours of the published date and time for which bids must be submitted, in accordance with Iowa Code Section 8A311, as amended by House File 646 in 2011. Subcontractors and suppliers may not be changed without the approval of the Owner. Requests for changing a Subcontractor or supplier must identify the reason for the proposed change, the name of the new Subcontractor or supplier, and the change in the subcontractor or supplier price as a result of the change. Any reduction in subcontractor or supplier price as a result of the change, if the change is approved by the Owner, shall be deducted from the Trade Contract Price via a deductive Change Order. Any such changes, if approved by the Owner, which result in an increase in the Trade Contract Price shall be borne by the Trade Contractor.

**Enforcement of Reciprocal Resident Bidder Preference, per Iowa Code 73A.21.**

All bidders shall either check the box next to "Resident Bidder" or check the box next to "Nonresident Bidder" and by doing so and signing thereafter certifies and attests to the same. All information requested must be provided. Seek out the advice of an attorney if you have questions.

"Resident Bidder" means a person or entity authorized to transact business in of the State of Iowa and having a place of business for transacting business within the State of Iowa at which it is conducting and has conducted business for at least three years prior to the date of the first advertisement for the public improvement. Note, however, that if a nonresident bidder's state or foreign country has a more stringent definition of a resident bidder, the more stringent definition is applicable as to bidders from that state or foreign country.

Resident Bidder

☐

Name of Resident Bidder: \_\_\_\_\_

By: \_\_\_\_\_  
Authorized Agent and Signatory of Resident Bidder

**OR:**

Nonresident Bidder

☐

Name of Nonresident Bidder: \_\_\_\_\_

Name of State or Foreign Country of Nonresident Bidder: \_\_\_\_\_

Particularly identify and describe any preference, labor preference, or any other type of preferential treatment, in effect in the nonresident bidder's state or foreign country at the time of this bid:

\_\_\_\_\_

NOTICE: Nonresident Bidders domiciled in a state or country with a resident labor force preference shall make and keep, for a period of not less than three years, accurate records of all workers employed on the public improvement. The records shall include each worker's name, address, telephone number when available, social security number, trade classification, and the starting ending time of employment.

By: \_\_\_\_\_  
Authorized Agent and Signatory of Nonresident Bidder

Bid Form shall be signed by an officer of the company with authority to bind in a contract.  
Notice of acceptance of this bid, or request for additional information by the Department of Administrative Services, may be addressed to the undersigned at the address set forth below:

Legal Name of Firm: \_\_\_\_\_

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

Signature of Bidder: \_\_\_\_\_

Title: \_\_\_\_\_

Typed Name of Signatory: \_\_\_\_\_

Email: \_\_\_\_\_

Business Address:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Telephone Number: \_\_\_\_\_ Fax Number: \_\_\_\_\_

Federal Tax Identification Number: \_\_\_\_\_

Iowa Contractor Registration Number: \_\_\_\_\_

Bidder Safety Manager Name: \_\_\_\_\_

For an out-of-state Bidder, Bidder certifies that the Resident Preference given by the State or

Foreign Country of Bidder's residence, \_\_\_\_\_, is \_\_\_\_\_ %.

**END OF SECTION**

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**SECTION 00 4116.01**

**NON-DISCRIMINATION CLAUSE FORM**

**PART 1 - GENERAL**

All contractors, subcontractors, vendors and suppliers of goods and services doing business with the State of Iowa and value of said business equals or exceeds \$10,000 annually, agree as stated below.

**1.01 NONDISCRIMINATION CLAUSE**

- A. The contractor, subcontractor, vendor and supplier of goods and services will not discriminate against an employee or applicant for employment because of race, creed, color, sex, national origin, ancestry, religion, economic status, age, disability, political opinion, or affiliations of an applicant or employee based upon the nature of the job occupation. The contractor, subcontractor, vendor and supplier will develop an Affirmative Action Program to insure that applicants are employed and that employees are treated during employment without regard to their race, creed, color, sex, national origin, ancestry, religion, economic status, age, disability, political opinions or affiliations. Such action shall include, but not be limited to the following:
  - 1. Employment.
  - 2. Upgrading.
  - 3. Demotion or transfer.
  - 4. Recruitment and advertising.
  - 5. Layoff or termination.
  - 6. Rates of pay or other forms of compensation.
  - 7. Selection for training, including apprenticeship.
- B. The contractor, subcontractor, vendor and supplier of goods and services will, in all solicitations or advertisements for employees, state that all qualified applicants will receive consideration for employment without regard to race, creed, color, sex, national origin, ancestry, religion, economic status, age, disability, political opinion or affiliations.
- C. The contractor, subcontractor, vendor and supplier or their collective bargaining representative will send to each labor union or representative or workers with which they have a collective bargaining agreement or other contract or understanding, a notice advising the said labor union or workers' representative of the contractor's commitments under this section.
- D. The contractor, subcontractor, vendor and supplier of goods and services will comply with all published rules, regulations, directives and orders of the State of Iowa Affirmative Action Program Contract Compliance Provisions.
- E. The contractor, subcontractor, vendor and supplier of goods and services will furnish and file compliance reports within such time and upon such forms as provided by the Equal Employment Opportunity Officer, said forms may elicit information as to the policies, procedures, patterns, and practices of each subcontractor as state as the contractor themselves and said contractor, subcontractor, vendor and supplier will permit access to their employment books, records and accounts to the State's Equal Employment Opportunity Officer, for the purpose of investigation to ascertain compliance with this Contract and with rules regulations of the State's Affirmative Action Program.
- F. In the event of the contractor's noncompliance with the nondiscrimination clauses of this Contract or with any of such rules, regulations and orders; this Contract may be canceled, terminated or suspended in whole or in part and the Contractor may be declared ineligible for further contracts in accordance with procedures authorized by the State of Iowa.
- G. The contractor, subcontractor, vendor and supplier of goods and services will include, or incorporate by reference, the provisions of the nondiscrimination clause in every contract, subcontract or purchase order unless exempted by the rules, regulations or orders of the State's Affirmative Action Program, and will provide in every subcontract or purchase order that said provisions will be binding upon each contractor, subcontractor or seller.

- H. The parties agree to comply with "Compliance with the Law; Nondiscrimination in Employment" of the current Terms and Conditions at the award of this contract. Current Terms and Conditions may be found on the following web site and are, by this reference, made a part of this Agreement. <https://das.iowa.gov/procurement/terms-and-conditions>
- I. We, the undersigned, recognize that we are morally and legally committed to nondiscrimination in employment. Any person who applies for employment with our company will not be discriminated against because of race, creed, color, sex, national origin, ancestry, religion, economic status, age or disabilities, unless disabilities are based upon the nature of the job occupation.

**1.02 SIGNATURE**

- A. \_\_\_\_\_  
Signature of Appropriate Official  
  
\_\_\_\_\_  
Title  
  
\_\_\_\_\_  
Date

**PART 2 - PRODUCTS – NOT USED**

**PART 3 - EXECUTION – NOT USED**

**END OF SECTION**

**SECTION 00 4116.02**

**TARGETED SMALL BUSINESS FORM**

**PART 1 - GENERAL**

**1.01 TARGETED SMALL BUSINESS FORM**

- A. A Subcontractor Targeted Small Business Enterprise Pre-Bid Contact Information form, included in this section, is to accompany the Bid. Bidders shall comply with all affirmative action/equal opportunity provisions of State and Federal laws. The Owner seeks to provide opportunities for Targeted Small Businesses in accordance with the provisions of Chapter 73 of the Code of Iowa.

**PART 2 - PRODUCTS – NOT USED**

**PART 3 - EXECUTION – NOT USED**

**END OF SECTION**

CONTRACTOR		BID NO.	PAGE #

You are requested to provide the information on this form showing your targeted Small Business enterprises contacts made prior to your bid submission. This information is subject to verification and confirmation. NOTE: The Department of General Services will not regard your acceptance or use of a low quote or bid from a non-targeted Small Business Enterprise on any subcontract item as evidence itself of any lack of good faith effort to solicit targeted Small Business Enterprise subcontractors on this project. However, every effort shall be made to solicit quotes or bids on as many subcontractable items as necessary to evidence affirmative action in contracting.

[illegible]

00 4116.02 - 2



**SECTION 00 4116.03**

**MODIFICATION  
TO BID FORM**

RFB #0919335107

MODIFICATION TO BID FORM for CONSTRUCTION CONTRACT  
For  
Iowa Medical and Classification Center  
2700 Coral Ridge Ave, Coralville, IA, 52241  
Project 9064.00

Iowa Department of Administrative Services  
GSE-Central Procurement Bureau  
Hoover State Office Building, Level 3  
1305 East Walnut Street  
Des Moines, Iowa 50319-0105

Please make the following modifications to our bid on the referenced project. This modification is per the Instructions to Bidders Section 00 2113 Item #3.06C included in the original bid documents and modifies our sealed bid.

**Authorized Representative:**

The undersigned Bidder, in response to your Request for Bid for construction of the above project, having examined the Drawings, Specifications, and other Bidding Documents dated March 13<sup>th</sup>, 2019, and Addenda issued and acknowledged below as received and being familiar with all the conditions surrounding the construction of the proposed project including the availability of materials and labor, hereby proposes to furnish all labor, materials, equipment and supplies to perform all work to construct the project in strict accordance with the proposed Contract Documents, within the time and at the prices stated below. Prices are to cover all expenses incurred in performing the work required under the proposed Contract Documents, of which this bid is a part.

Bidder acknowledges receipt of the following Addenda which are a part of the Bidding Documents and for which any effect on cost of the Work is included in the bid amounts indicated:

Number      \_\_\_\_\_

Dated        \_\_\_\_\_

Note that the State of Iowa is exempt from State and Local sales and use taxes (including local option and school option) for this project. Taxes on construction materials shall NOT be included in the bid amounts.

Amounts shall be indicated in both words and figures. In case of discrepancy, the amount indicated in words shall govern. ***Please circle the appropriate Add/Deduct.***

BID PACKAGES:

MODIFICATION TO BP 01

Description: IMCC Door Replacement

Bidder proposes and agrees to perform all work as described in the Construction Documents for the ADD / DEDUCT of:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ Dollars

(\$\_\_\_\_\_).

MODIFICATION TO BP 02

Description: IMCC Stoop and Paving at Door 30

Bidder proposes and agrees to perform all work as described in the Construction Documents for the ADD / DEDUCT of:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ Dollars

(\$\_\_\_\_\_).

MODIFICATION TO BP 03

Description: IMCC Door Replacement Project (In its entirety)

Bidder proposes and agrees to perform all work as described in the Construction Documents for the ADD / DEDUCT of:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ Dollars

(\$\_\_\_\_\_).

Amounts shall be indicated in both words and figures. In case of discrepancy, the amount indicated in words shall govern. ***Please circle the appropriate Add/Deduct.***

ALTERNATES:

MODIFICATION TO ALT 01

Description: Replace Door Panel at Door 13

Bidder proposes and agrees to perform all work as described in the Construction Documents for the ADD / DEDUCT of:

\_\_\_\_\_  
\_\_\_\_\_  
Dollars

(\$ \_\_\_\_\_).

MODIFICATION TO ALT 02

Description: Replace Door and Frame of Door 24

Bidder proposes and agrees to perform all work as described in the Construction Documents for the ADD / DEDUCT of:

\_\_\_\_\_  
\_\_\_\_\_  
Dollars

(\$ \_\_\_\_\_).

Bidder hereby certifies that:

1. This bid is genuine and is not made in the interest of or on behalf of any undisclosed person, firm or corporation;
2. Bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid; Bidder has not solicited or induced any person, firm or corporation to refrain from bidding; and Bidder has not sought by collusion to obtain any advantage over any other bidder or over the Owner.
3. Bidder hereby certifies that the Bidder is registered with the Iowa Labor Commissioner as a Contractor as required by Chapter 91C, Code of Iowa.
4. Bidder agrees to comply with all Federal and State Affirmative Action/Equal Employment Opportunity requirements concerning fair employment and will not discriminate between or among them by reason of race, color, religion, sex, national origin or physical handicap.
5. All construction under this Contract shall conform to the requirements of the *Iowa State Building Code*.
6. Bidder agrees that this bid shall remain valid and shall not be withdrawn for a period of thirty (30) calendar days after the date for receipt of bids.
7. Bidder agrees that if written notice of acceptance of this bid is mailed, emailed, or delivered to the undersigned within thirty (30) days after the date in which bids are due, or at any time thereafter before it is withdrawn, the undersigned will sign and return the Contract Agreement, prepared in

accord with the Bidding Documents and this bid as accepted; and will also provide proof of insurance coverage and required surety bonds.

8. Bidder understands that the Owner reserves the right to reject any and all bids, and to waive irregularities or informalities and enter into a contract for the work, as the Owner deems to be in the best interest of the State.
9. Bidder understands that the Owner reserves the right to accept any, or no, Alternate Bid, if requested, and that the Alternate Bids may be considered in any order or combination, and the low Bidder shall be determined on the basis of the sum of the base bid and any Alternate(s) accepted.

**Subcontractors:**

The Trade Contractor must identify all Subcontractors and Suppliers within 48 hours of the published date and time for which bids must be submitted, in accordance with Iowa Code Section 8A311, as amended by House File 646 in 2011. Subcontractors and suppliers may not be changed without the approval of the Owner. Requests for changing a Subcontractor or supplier must identify the reason for the proposed change, the name of the new Subcontractor or supplier, and the change in the subcontractor or supplier price as a result of the change. Any reduction in subcontractor or supplier price as a result of the change, if the change is approved by the Owner, shall be deducted from the Trade Contract Price via a deductive Change Order. Any such changes, if approved by the Owner, which result in an increase in the Trade Contract Price shall be borne by the Trade Contractor.

**Enforcement of Reciprocal Resident Bidder Preference, per Iowa Code 73A.21.**

All bidders shall either check the box next to "Resident Bidder" or check the box next to "Nonresident Bidder" and by doing so and signing thereafter certifies and attests to the same. All information requested must be provided. Seek out the advice of an attorney if you have questions.

"Resident Bidder" means a person or entity authorized to transact business in of the State of Iowa and having a place of business for transacting business within the State of Iowa at which it is conducting and has conducted business for at least three years prior to the date of the first advertisement for the public improvement. Note, however, that if a nonresident bidder's state or foreign country has a more stringent definition of a resident bidder, the more stringent definition is applicable as to bidders from that state or foreign country.

Resident Bidder

☐

Name of Resident Bidder: \_\_\_\_\_

By: \_\_\_\_\_  
Authorized Agent and Signatory of Resident Bidder

**OR:**

Nonresident Bidder

☐

Name of Nonresident Bidder: \_\_\_\_\_

Name of State or Foreign Country of Nonresident Bidder: \_\_\_\_\_

Particularly identify and describe any preference, labor preference, or any other type of preferential treatment, in effect in the nonresident bidder's state or foreign country at the time of this bid:

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NOTICE: Nonresident Bidders domiciled in a state or country with a resident labor force preference shall make and keep, for a period of not less than three years, accurate records of all workers employed on the public improvement. The records shall include each worker's name, address, telephone number when available, social security number, trade classification, and the starting ending time of employment.

By: \_\_\_\_\_  
Authorized Agent and Signatory of Nonresident Bidder

Bid Form shall be signed by an officer of the company with authority to bind in a contract.  
Notice of acceptance of this bid, or request for additional information by the Department of Administrative Services, may be addressed to the undersigned at the address set forth below:

Legal Name of Firm: \_\_\_\_\_

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

Signature of Bidder: \_\_\_\_\_

Title: \_\_\_\_\_

Typed Name of Signatory: \_\_\_\_\_

Email: \_\_\_\_\_

Business Address:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Telephone Number: \_\_\_\_\_ Fax Number: \_\_\_\_\_

Federal Tax Identification Number: \_\_\_\_\_

Iowa Contractor Registration Number: \_\_\_\_\_

Bidder Safety Manager Name: \_\_\_\_\_

For an out-of-state Bidder, Bidder certifies that the Resident Preference given by the State or

Foreign Country of Bidder's residence, \_\_\_\_\_, is \_\_\_\_\_ %.

**END OF SECTION**

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**SECTION 00 4313**

**BID SECURITY FORMS**

**PART 1 - GENERAL**

**1.01 BID SECURITY FORMS**

- A. A Bid Bond form will be required on this project. An amended ConsensusDocs 262 is attached for reference following this page. ConsensusDocs bid bond form is not required (other standard forms are acceptable to the State of Iowa).

**PART 2 - PRODUCTS – NOT USED**

**PART 3 - EXECUTION – NOT USED**

**END OF SECTION**



## **CONSENSUSDOCS 262** **BID BOND** **(AMENDED BY STATE OF IOWA)**

This document was developed through a collaborative effort of organizations representing a wide cross-section of the design and construction industry. The organizations endorsing this document believe it represents a fair allocation of risk and responsibilities for all project participants.

Endorsing organizations recognize that this document must be reviewed and adapted to meet specific needs and applicable laws. This document has important legal and insurance consequences. You are encouraged to consult legal, insurance and surety advisors before completing or modifying this document. The software includes a notes section indicating where information is to be inserted to complete this document. Further information and endorsing organizations' perspectives are available at [www.consensusdocs.org/guidebook](http://www.consensusdocs.org/guidebook).

For Use with ConsensusDOCS 200, Standard Form of Agreement and General Conditions Between Owner and Constructor (Where the Contract Price is a Lump Sum) and ConsensusDOCS 500, Standard Agreement and General Conditions Between Owner and Construction Manager.

The Trade Contractor, \_\_\_\_\_ (the "Trade Contractor") has submitted a Bid to the Owner, \_\_\_\_\_, (the "Owner") for the \_\_\_\_\_ (the "Project") in accordance with the Bidding Documents, including Drawings and Specifications prepared by \_\_\_\_\_ (the "Design Professional").



By virtue of this Bid Bond (the "Bond"), the Constructor as Principal and \_\_\_\_\_ as Surety ("Surety"), are bound to the Owner as Obligee in the maximum amount \_\_\_\_\_, Dollars (\$\_\_\_\_\_) (the "Bond Sum"). The Constructor and Surety hereby bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, as provided herein.

1. If the Obligee shall accept the bid of the Constructor, the Constructor shall enter into an Agreement with the Obligee in accordance with the terms of such Bid.
2. Constructor shall procure such bond or bonds as are specified in the Contract Documents for the faithful performance of the Work and for the prompt payment of labor and materials furnished in the performance of the Work.
3. If the Constructor fails to enter such Agreement and give such bonds, the Constructor shall pay to the Obligee the difference between the amount of Constructor's bid and the amount of such agreement the Obligee in good faith executes with another Party to perform the Work covered by Constructor's Bid, not to exceed the Bond Sum stated above.
4. If the Constructor shall fulfill its obligation under Articles 1 through 3, then this obligation shall be null and void; otherwise it shall remain in full force and effect.

This Bond is entered into as of \_\_\_\_\_ (date)

SURETY: \_\_\_\_\_ (seal)

BY: .....

Print Name: \_\_\_\_\_

Print Title: \_\_\_\_\_ (Attach Power of Attorney)

Witness: .....

(Additional signatures, if any, appear on attached page)

Constructor: \_\_\_\_\_ (seal)

BY: .....

Print Name: \_\_\_\_\_

Print Title: \_\_\_\_\_

Witness: .....

(Additional signatures, if any, appear on attached page)

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**SECTION 00 4393**

**BID SUBMITTAL CHECKLIST**

**PART 1 - GENERAL**

**1.01 BID SUBMITTAL CHECKLIST**

- A. The Bid Form shall be completed in full and signed by an officer of the bidder with authority to bind in a contract.
- B. The Bid shall be submitted in a sealed envelope and shall be clearly identified on the outside by the Sealed Bid Number, Due Date, Time and Project Description.
- C. The Bidder is responsible to see that the bid is received in the State of Iowa, Department of Administrative Services, Central Procurement Bureau, Hoover State Office Building, Level 3, Des Moines, Iowa 50319-0105, on or before the due date and time specified. Late bids shall not be accepted. Late bids shall be returned unopened to the bidder.
- D. If a Bid Bond is called for, it shall accompany the Bid Form in a separate sealed envelope. Otherwise the bid will be ruled non-compliant with the specifications.
- E. If a Non-discrimination Clause form is called for, it shall accompany the Bid Form.
- F. If a Targeted Small Business Pre-bid Contact form is called for, it shall accompany the Bid Form.
- G. If a Certificate of Site Visit form is called for, it shall accompany the Bid Form.
- H. In all cases, no verbal communications by any party will override written communications from the issuing office.
- I. Bids cannot be changed after the bid opening. Changes prior to bid opening shall be in writing.
- J. Bids shall be typewritten or in ink. All information requested shall accompany the bid. All blocks shall be completed. Errors shall be lined out and initialed.
- K. The right is reserved to reject any or all bids. The State may waive minor deficiencies or informalities in the best interest of the State of Iowa.
- L. A properly prepared and submitted bid document is the bidder's responsibility.

**PART 2 - PRODUCTS – NOT USED**

**PART 3 - EXECUTION – NOT USED**

**END OF SECTION**

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**SECTION 00 5200**

**AGREEMENT FORM**

**PART 1 - GENERAL**

**1.01 AGREEMENT FORM**

- A. The Form of Agreement to be used on this project is a modified ConsensusDocs 802. A sample is attached following this page.

**PART 2 - PRODUCTS – NOT USED**

**PART 3 - EXECUTION – NOT USED**

# ConsensusDocs 802

## STANDARD FORM OF AGREEMENT BETWEEN OWNER AND TRADE CONTRACTOR

(Where the Construction Manager Is the Owner's Agent)



### TABLE OF ARTICLES

1. AGREEMENT
2. GENERAL PROVISIONS
3. TRADE CONTRACTOR'S OBLIGATIONS
4. OWNER'S RESPONSIBILITIES
5. SUBCONTRACTS
6. TRADE CONTRACT TIME
7. TRADE CONTRACT PRICE
8. CHANGES
9. PAYMENT
10. INDEMNITY, INSURANCE, WAIVERS AND BONDS
11. SUSPENSION, NOTICE TO CURE AND TERMINATION OF AGREEMENT
12. DISPUTE MITIGATION AND RESOLUTION
13. MISCELLANEOUS PROVISIONS
14. TRADE CONTRACT DOCUMENTS

This Agreement has important legal and insurance consequences. Consultations with an attorney and with insurance and surety consultants are encouraged with respect to its completion or modification. Notes indicate where information is to be inserted to complete this Agreement.



## ARTICLE 1 AGREEMENT

This Trade Contractor Agreement is made effective as of the XX day of Month, Year , by and between the

### OWNER

State of Iowa - DAS, Department of Administrative Services ("DAS"). DAS's principal office is located: 109 SE 13th Street, Des Moines, IA 50319-0120.

and the

### TRADE CONTRACTOR

*Contractor Name*

*Address*

*City, State, Zip*

for work in connection with the following

### PROJECT

*XXXX.XX - Project Name*

The CONSTRUCTION MANAGER is

*Construction Manager Name*

*Address*

*City, State, Zip*

The DESIGN PROFESSIONAL for the Project is

*Designer Name*

*Address*

*City, State, Zip*

Notice to the Parties shall be given at the above addresses.

## ARTICLE 2 GENERAL PROVISIONS

2.1 RELATIONSHIP OF PARTIES The Owner and the Trade Contractor agree to proceed with this Agreement on the basis of mutual trust, good faith and fair dealing and shall cooperate with each other and with the Construction Manager and Design Professional in furthering the Owner's interests. The Trade Contractor shall use its diligent efforts to perform the work in an expeditious manner consistent with the Trade Contract Documents. The Owner and the Trade Contractor will endeavor to promote harmony and cooperation among all Project participants.

2.1.1 The Owner and the Trade Contractor shall perform their obligations with integrity, ensuring at a minimum that

2.1.1.1 conflicts of interest shall be avoided or disclosed promptly to the other Party; and

2.1.1.2 the Trade Contractor and the Owner warrant that they have not and shall not pay nor receive any contingent fees or gratuities to or from the other Party, including its agents, officers and employees, Subcontractors or others for whom they may be liable, to secure preferential



treatment.

**2.2 PROJECT ORGANIZATION** This Agreement is for the performance of work described herein in connection with the construction of the Project. The Owner also may enter into separate agreements with other trade contractors for other portions of the Project. The Owner has entered or will enter into a Construction Management Agreement with the Construction Manager, and a design agreement with the Design Professional.

**2.3 INDEPENDENT CONTRACTOR** The Trade Contractor represents that it is an independent contractor and that its performance of the Trade Contract Work it shall act as an independent contractor. Neither Trade Contractor nor any of its agents or employees shall act on behalf of the Owner except as provided in this Agreement or unless authorized in writing by the Owner.

**2.4 CONSTRUCTION MANAGER IS OWNER'S AGENT** The Construction Manager will represent the Owner as its agent in the administration and management of this Agreement. Any instructions, reviews, approvals, orders or directions given to the Trade Contractor by the Construction Manager will be given on behalf of and as agent for the Owner. The Trade Contractor shall be obligated to respond or perform as if the same were given directly by the Owner. The Trade Contractor shall communicate and provide all requests and concerns regarding the Trade Contract Work to the Construction Manager. The Trade Contractor shall provide copies to the Construction Manager of all notices to the Owner required by and regarding this Agreement.

**2.5 CONSTRUCTION MANAGER NOT IN PRIVITY WITH TRADE CONTRACTOR** This Agreement shall not give the Trade Contractor any claim or right of action against the Construction Manager. The Trade Contractor and its subcontractors shall not be beneficiaries of any obligations of the Construction Manager. This Agreement shall not create a contractual relationship between any parties except the Owner and the Trade Contractor.

**2.5A NO THIRD-PARTY BENEFICIARY** There are no third-party beneficiaries of this Agreement.

**2.6 DESIGN PROFESSIONAL** The Owner, through its Design Professional, shall provide all architectural and engineering design services necessary for the completion of the Work, except the following:

No exceptions

The Trade Contractor shall not be required to provide professional services which constitute the practice of architecture or engineering except as otherwise provided in section 3.15.

**2.6.1** The Owner shall obtain from the Design Professional either a license for Trade Contractor and Subcontractors to use the design documents prepared by the Design Professional or ownership of the copyrights for such design documents, and shall defend, indemnify and hold harmless the Trade Contractor against any suits or claims of infringement of any copyrights or licenses arising out of the use of the design documents. To the extent portions of this paragraph are in conflict with SF 396 (codified at Iowa Code Section 537A.5) said portions are void and unenforceable.

**2.7 EXTENT OF AGREEMENT** This Agreement is solely for the benefit of the Parties, represents the entire integrated agreement between the Parties, and supersedes all prior negotiations, representations and agreements, either written or oral. This Agreement and each and every provision is for the exclusive benefit of the Owner and the Trade Contractor and not for the benefit of any third party except to the extent expressly provided in this Agreement. In the event of conflict between this Agreement and any of the Exhibits or any other documents incorporated into this Agreement, the terms and provisions of this Agreement shall control.

**2.8 DEFINITIONS**





2.8.1 Agreement means this ConsensusDocs 802 Standard Form of Agreement Between Owner and Trade Contractor (Where the Construction Manager is the Owner's Agent), as modified by the Parties, and Exhibits and Attachments made part of this Agreement upon its execution.

2.8.2 Design Professional means the Architect, Design Professional or Engineer identified in ARTICLE 1 and its consultants, retained by Owner to perform design services for the Project, and licensed in the State in which the Project is located. The use of the term Design Professional in this Agreement is for convenience and is not intended to imply or infer that the individual or entity named in ARTICLE 1 will provide design professional services in a discipline in which it is not licensed.

2.8.3 Construction Manager means the Construction Manager identified in ARTICLE 1 and its authorized representative.

2.8.4 The Construction Schedule is the document initially prepared by and updated by the Construction Manager and approved by the Owner that indicates proposed activity sequences, durations, or milestone dates for such activities as receipt and approval of pertinent information, issuance of the Construction Documents, the preparation and processing of shop drawings and samples, delivery of materials or equipment requiring long-lead-time procurement, Owner's occupancy requirements and estimated dates of Substantial Completion and Final Completion of the Project.

2.8.5 The term Day shall mean calendar day unless otherwise specifically defined.

2.8.6 Final Completion occurs on the date when the Trade Contractor's obligations under this Agreement are complete and accepted by the Owner and final payment becomes due and payable, as established in ARTICLE 6. This date shall be confirmed by a Certificate of Final Completion signed by the Owner and the Trade Contractor.

2.8.7 A Hazardous Material is any substance or material identified now or in the future as toxic or hazardous under any federal, state or local law or regulation, or any other substance or material which may be considered hazardous or otherwise subject to statutory or regulatory requirements governing handling, disposal or clean-up.

2.8.8 A Material Supplier is a person or entity retained by the Trade Contractor to provide material or equipment for the Trade Contract Work. This definition is not intended to, and shall not be interpreted to, expand or modify the definition(s) of materials or material suppliers contained in Iowa Code Chapter 573.

2.8.9 Others means other contractors, material suppliers, and persons at the Worksite who are not employed by the Trade Contractor or Subcontractors.

2.8.10 The term Overhead shall mean a) payroll costs and other compensation of Trade Contractor employees in the Trade Contractor's principal and branch offices; b) general and administrative expenses of the Trade Contractor's principal and branch offices including deductibles paid on any insurance policy and c) the Trade Contractor's capital expenses, including interest on capital used for the Work.

2.8.11 Owner is the person or entity identified in ARTICLE 1 as Owner, and includes the Owner's representative.

2.8.12 The Project, as identified in ARTICLE 1, is the building, facility or other improvements for which the Trade Contractor is to perform the Trade Contract Work.

2.8.13 A Subcontractor is a person or entity retained by the Trade Contractor as an independent contractor to provide the labor, materials, equipment or services necessary to complete a specific



portion of the Work. This definition is not intended to, and shall not be interpreted to, expand or modify the definition(s) of materials or material suppliers contained in Iowa Code Chapter 573.

2.8.14 Per Iowa Code Section 26.13, "substantially completed" means the first date on which any of the following occurs: (1) Completion of the Project (or Trade Contract Work, in the case of the multiple Trade Contractors) or when the Project (or Trade Contract Work in the case of multiple Trade Contractors) has been substantially completed in general accordance with the terms and provisions of the contract. (2) The work on the Project (or Trade Contract Work in the case of multiple Trade Contractors) or on the designated portion is substantially completed in general accordance with the terms of the contract so that the State of Iowa can occupy or utilize the Project or designated portion of the Project for its intended purpose. (3) The Project (or Trade Contract Work in the case of multiple Trade Contractors) is certified as having been substantially completed by either of the following: (a) the architect or engineer authorized to make such certification (which is defined in this Agreement as the Design Professional). (b) The authorized contract representative (which is defined in this Agreement as the Owner's Representative). (4) The State of Iowa is occupying or utilizing the Project (or Trade Contract Work in the case of multiple Trade Contractors) for its intended purpose. This subparagraph shall not apply to highway, bridge, or culvert projects.

2.8.15 Terrorism means a violent act, or an act that is dangerous to human life, property or infrastructure, that is committed by an individual or individuals and that appears to be part of an effort to coerce a civilian population or to influence the policy or affect the conduct of any government by coercion. Terrorism includes, but is not limited to, any act certified by the United States government as an act of terrorism pursuant to the Terrorism Risk Insurance Act, as amended.

2.8.16 A Trade Contract Change Order is a written order signed by the Owner and the Trade Contractor after execution of this Agreement, indicating changes in the scope of the Trade Contract Work, the Trade Contract Price or Trade Contract Time, including substitutions proposed by the Trade Contractor and accepted by the Owner. Trade Contract Change Orders shall be executed using the ConsensusDOCS 813 Trade Contract Change Order (CM as Owner's Agent) form document with exhibits attached as necessary.

2.8.17 The Trade Contract Documents consist of this Agreement (as modified), the drawings, specifications, addenda issued prior to execution of this Agreement, approved submittals, information furnished by the Owner under subsection 4.1.3, the bid documents, other documents listed in this Agreement and any modifications issued after execution.

2.8.18 The Trade Contract Price is the amount indicated in section 7.1 of this Agreement.

2.8.19 The Trade Contract Time is the period between the Date of Commencement and Final Completion.

2.8.20 Trade Contract Work means the construction and services provided by the Trade Contractor.

2.8.20.1 Changed Work means work that is different from the original scope of Trade Contract Work; or work that changes the Trade Contract Price or Trade Contract Time.

2.8.20.2 Defective Work is any portion of the Trade Contract Work that is not in conformance with the Trade Contract Documents.

2.8.21 The Trade Contractor is the person or entity identified in ARTICLE 1 and includes the Trade Contractor's Representative.

2.8.22 The term Work means the construction and services necessary or incidental to fulfill the Trade



Contractors' obligations for the Project. The Work may refer to the whole Project or only a part of the Project.

2.8.23 Worksite means the geographical area at the location of the Project as identified in ARTICLE 1 where the Trade Contract Work is to be performed.

### ARTICLE 3 TRADE CONTRACTOR'S OBLIGATIONS

#### 3.1 GENERAL RESPONSIBILITIES

3.1.1 RESPONSIBILITIES The Trade Contractor shall provide all of the labor, materials, equipment and services necessary to complete the Trade Contract Work, all of which shall be provided in full accord with or as reasonably inferable from the Trade Contract Documents as being necessary to produce the indicated results.

3.1.2 The Trade Contractor shall be responsible for the supervision and coordination of the Trade Contract Work, including the construction means, methods, techniques, sequences and procedures utilized, unless the Trade Contract Documents give other specific instructions. In such case, the Trade Contractor shall not be liable to the Owner for damages resulting from compliance with such instructions unless the Trade Contractor recognized and failed to timely report to the Owner any error, inconsistency, omission or unsafe practice that it discovered in the specified construction means, methods, techniques, safety, sequences or procedures.

3.1.3 The Trade Contractor shall perform Trade Contract Work only within locations allowed by the Trade Contract Documents, applicable permits and applicable local law.

#### 3.2 COOPERATION WITH WORK OF OWNER AND OTHERS

3.2.1 The Owner may perform work at the Worksite directly or by Others. Any agreements with Others to perform construction or operations related to the Project shall include provisions pertaining to insurance, indemnification, waiver of subrogation, coordination, interference, clean up and safety which are substantively the same as the corresponding provisions of this Agreement.

3.2.2 In the event that the Owner elects to perform work at the Worksite directly or by Others, the Trade Contractor and the Owner shall, with the assistance of the Construction Manager, coordinate the activities of all forces at the Worksite and agree upon fair and reasonable schedules and operational procedures for Worksite activities. The Owner shall require each separate contractor to cooperate with the Trade Contractor and assist with the coordination of activities and the review of construction schedules and operations. The Trade Contract Price and Trade Contract Time shall be equitably adjusted, as mutually agreed by the Parties, for subsequent changes made necessary by the coordination of construction activities, and the Trade Contractor's construction schedule and the Construction Schedule shall be revised accordingly. The Trade Contractor, Owner and Others shall adhere to the revised Construction Schedule until it may subsequently be revised.

3.2.3 With regard to the work of the Owner and Others, the Trade Contractor shall (a) proceed with the Trade Contract Work in a manner which does not hinder, delay or interfere with the work of the Owner or Others or cause the work of the Owner or Others to become defective, (b) afford the Owner or Others reasonable access for introduction and storage of their materials and equipment and performance of their activities, and (c) coordinate the Trade Contractor's construction and operations with theirs as required by this section.

3.2.4 Before proceeding with any portion of the Trade Contract Work affected by the construction or operations of the Owner or Others, the Trade Contractor shall give the Owner and Construction





Manager prompt written notification of any defects the Trade Contractor discovers in their work which will prevent the proper execution of the Trade Contract Work. The Trade Contractor's obligations in this section do not create a responsibility for the work of the Owner or Others, but are for the purpose of facilitating the Trade Contract Work. If the Trade Contractor does not notify the Owner and Construction Manager of patent defects interfering with the performance of the Trade Contract Work, the Trade Contractor acknowledges that the work of the Owner or Others is not defective and is acceptable for the proper execution of the Trade Contract Work. Following receipt of written notice from the Trade Contractor of defects, the Owner, through the Construction Manager, shall promptly inform the Trade Contractor what action, if any, the Trade Contractor shall take with regard to the defects.

### 3.3 RESPONSIBILITY FOR PERFORMANCE

3.3.1 In order to facilitate its responsibilities for completion of the Work in accordance with and as reasonably inferable from the Trade Contract Documents, prior to commencing the Work the Trade Contractor shall examine and compare the drawings and specifications with information furnished by the Owner pursuant to subsection 4.1.3, relevant field measurements made by the Trade Contractor and any visible conditions at the Worksite affecting the Trade Contract Work.

3.3.2 If in the course of the performance of the obligations in subsection 3.3.1 the Trade Contractor discovers any errors, omissions or inconsistencies in the Contract Documents, the Trade Contractor shall promptly report them to the Owner and Construction Manager. It is recognized, however, that the Trade Contractor is not acting in the capacity of a licensed design professional, and that the Trade Contractor's examination is to facilitate construction and does not create an affirmative responsibility to detect errors, omissions or inconsistencies or to ascertain compliance with applicable laws, building codes or regulations. Following receipt of written notice from the Trade Contractor of defects, the Owner shall promptly inform the Trade Contractor what action, if any, the Trade Contractor shall take with regard to the defects.

3.3.3 The Trade Contractor shall have no liability for errors, omissions or inconsistencies discovered under subsections 3.3.1 and 3.3.2 unless the Trade Contractor fails to report a recognized problem to the Owner and Construction Manager.

3.3.4 The Trade Contractor may be entitled to additional costs or time if there are changes in the scope of the Trade Contract Work that increase the cost of the Work or increase the number of days required to perform the Work, respectively, because of clarifications or instructions arising out of the Trade Contractor's reports described in the three preceding Subsections.

### 3.4 CONSTRUCTION PERSONNEL AND SUPERVISION

3.4.1 The Trade Contractor shall provide competent supervision for the performance of the Trade Contract Work. Before commencing the Trade Contract Work, Trade Contractor shall notify Owner and Construction Manager in writing of the name and qualifications of its proposed superintendent(s) and project manager so Owner and Construction Manager may review the individual's qualifications. If, for reasonable cause, the Owner or Construction Manager refuses to approve the individual, or withdraws its approval after once giving it, Trade Contractor shall name a different superintendent or project manager for Owner's and Construction Manager's review. Any disapproved superintendent shall not perform in that capacity thereafter at the Worksite.

3.4.2 The Trade Contractor shall be responsible to the Owner for acts or omissions of parties or entities performing portions of the Trade Contract Work for or on behalf of the Trade Contractor or any of its Subcontractors.

3.4.3 The Trade Contractor shall permit only qualified persons to perform the Trade Contract Work. The



Trade Contractor shall enforce safety procedures, strict discipline and good order among persons performing the Trade Contract Work. If the Owner or Construction Manager determines that a particular person does not follow safety procedures, or is unfit or unskilled for the assigned work, the Trade Contractor shall immediately reassign the person on receipt of the Owner's or Construction Manager's written notice to do so.

**3.4.4 TRADE CONTRACTOR'S REPRESENTATIVE** The Trade Contractor's authorized representative is . The Trade Contractor's representative shall possess full authority to receive instructions from the Owner and to act on those instructions. The Trade Contractor shall notify the Owner and the Construction Manager in writing of a change in the designation of the Trade Contractor's representative. The Trade Contractor's representative is also authorized to bind the Trade Contractor in all matters relating to this Agreement including, without limitation, all matters requiring the Trade Contractor's approval, authorization, or written notice. The Trade Contractor's representative is also authorized to resolve disputes in accordance with Section 12.2 of this Agreement.

### 3.5 MATERIALS FURNISHED BY THE OWNER OR OTHERS

**3.5.1** In the event the Trade Contract Work includes installation of materials or equipment furnished by the Owner or Others, it shall be the responsibility of the Trade Contractor to examine the items so provided and thereupon handle, store and install the items, unless otherwise provided in the Trade Contract Documents, with such skill and care as to provide a satisfactory and proper installation. Loss or damage due to acts or omissions of the Trade Contractor shall be the responsibility of the Trade Contractor and may be deducted from any amounts due or to become due the Trade Contractor. Any defects discovered in such materials or equipment shall be reported at once to the Owner and Construction Manager. Following receipt of written notice from the Trade Contractor of defects, the Owner shall promptly inform the Trade Contractor what action, if any, the Trade Contractor shall take with regard to the defects.

### 3.6 TESTS AND INSPECTIONS

**3.6.1** The Trade Contractor shall schedule all required tests, approvals and inspections of the Trade Contract Work or portions thereof at appropriate times so as not to delay the progress of the Trade Contract Work or other work related to the Project. The Trade Contractor shall give proper notice to the Construction Manager and to all required parties of such tests, approvals and inspections. If feasible, the Owner and Others may timely observe the tests at the normal place of testing. Except as provided in subsection 3.6.3, the Owner shall bear all expenses associated with tests, inspections and approvals required by the Trade Contract Documents, which, unless otherwise agreed to, shall be conducted by an independent testing laboratory or entity retained by the Owner. Unless otherwise required by the Trade Contract Documents, required certificates of testing, approval or inspection shall be secured by the Trade Contractor and promptly delivered to the Owner and Construction Manager.

**3.6.2** If the Owner, Construction Manager or appropriate authorities determine that tests, inspections or approvals in addition to those required by the Trade Contract Documents will be necessary, the Trade Contractor shall arrange for the procedures and give timely notice to the Owner, Construction Manager and Others who may observe the procedures. Costs of the additional tests, inspections or approvals are at the Owner's expense except as provided in subsection 3.6.3.

**3.6.3** If the procedures described in subsections 3.6.1 and 3.6.2 indicate that portions of the Trade Contract Work fail to comply with the Trade Contract Documents, the Trade Contractor shall be responsible for costs of correction and retesting.

### 3.7 WARRANTY





3.7.1 The Trade Contract Work shall be executed in accordance with the Trade Contract Documents in a workmanlike manner. The Trade Contractor warrants that all materials and equipment shall be furnished in sufficient quantities to facilitate the proper and expeditious execution of the Trade Contract Work and shall be new unless otherwise specified, of good quality, in conformance with the Trade Contract Documents, and free from defective workmanship and materials. At the Owner's or Construction Manager's request, the Trade Contractor shall furnish satisfactory evidence of the quality and type of materials and equipment furnished. The Trade Contractor further warrants that the Trade Contract Work shall be free from material defects not intrinsic in the design or materials required in the Trade Contract Documents. The Trade Contractor's warranty does not include remedies for defects or damages caused by normal wear and tear during normal usage, use for a purpose for which the Project was not intended, improper or insufficient maintenance, modifications performed by the Owner or Others, or abuse. The Trade Contractor's warranty pursuant to this section shall commence on the Date of Substantial Completion.

3.7.2 The Trade Contractor shall obtain from its Subcontractors and material suppliers any special or extended warranties required by the Trade Contract Documents. All such warranties shall be listed in an attached Exhibit to this Agreement.

### 3.8 CORRECTION OF TRADE CONTRACT WORK WITHIN ONE YEAR

3.8.1 If, prior to Substantial Completion and within one year after the date of Substantial Completion of the Trade Contract Work, any Defective Work is found, the Owner shall promptly notify the Trade Contractor in writing. Unless the Owner provides written acceptance of the condition, the Trade Contractor shall promptly correct the Defective Work at its own cost and time and bear the expense of additional services required for correction of any Defective Work for which it is responsible. If within the one-year correction period the Owner discovers and does not promptly notify the Trade Contractor or give the Trade Contractor an opportunity to test or correct Defective Work as reasonably requested by the Trade Contractor, the Owner waives the Trade Contractor's obligation to correct that Defective Work as well as the Owner's right to claim a breach of the warranty with respect to that Defective Work.

3.8.2 With respect to any portion of Trade Contract Work first performed after Substantial Completion, the one-year correction period shall be extended by the period of time between Substantial Completion and the actual performance of the later Trade Contract Work. Correction periods shall not be extended by corrective work performed by the Trade Contractor.

3.8.3 If the Trade Contractor fails to correct Defective Work within a reasonable time after receipt of written notice from the Owner prior to final payment, the Owner may correct it in accordance with the Owner's right to carry out the Trade Contract Work in section 11.2. In such case, an appropriate Trade Contract Change Order shall be issued deducting the cost of correcting such deficiencies from payments then or thereafter due the Trade Contractor. If payments then or thereafter due Trade Contractor are not sufficient to cover such amounts, the Trade Contractor shall pay the difference to the Owner.

3.8.4 If after the one-year correction period but before the applicable limitation period the Owner discovers any Defective Work, the Owner shall, unless the Defective Work requires emergency correction, promptly notify the Trade Contractor. If the Trade Contractor elects to correct the Defective Work, it shall provide written notice of such intent within fourteen (14) Days of its receipt of notice from the Owner. The Trade Contractor shall complete the correction of Defective Work within a time frame mutually agreed upon by the Trade Contractor and the Owner. If the Trade Contractor does not elect to correct the Defective Work, the Owner may have the Defective Work corrected by itself or Others and charge the Trade Contractor for the reasonable cost of the correction and other directly related



expenses. Owner shall provide Trade Contractor with an accounting of correction costs it incurs.

3.8.5 If the Trade Contractor's correction or removal of Defective Work causes damage to or destroys other completed or partially completed Work or existing buildings, the Trade Contractor shall be responsible for the cost of correcting the destroyed or damaged property.

3.8.6 The one-year period for correction of Defective Work does not constitute a limitation period with respect to the enforcement of the Trade Contractor's other obligations under the Trade Contract Documents.

3.8.7 Prior to final payment, at the Owner's option and with the Trade Contractor's agreement, the Owner may elect to accept Defective Work rather than require its removal and correction. In such case the Contract Price shall be equitably adjusted for any diminution in the value of the Project caused by such Defective Work. Before the Owner accepts any such change it must be documented in writing with a Change Order signed by both the Trade Contractor and Owner.

### 3.9 CORRECTION OF COVERED TRADE CONTRACT WORK

3.9.1 On request of the Owner or Construction Manager, Trade Contract Work that has been covered without a requirement that it be inspected prior to being covered may be uncovered for the Owner's or Construction Manager's inspection. The Owner shall pay for the costs of uncovering and replacement if the Work proves to be in conformance with the Trade Contract Documents, or if the defective condition was caused by the Owner or Others. If the uncovered Trade Contract Work proves to be defective, the Trade Contractor shall pay the costs of uncovering and replacement.

3.9.2 If contrary to specific requirements in the Trade Contract Documents or contrary to a specific request from the Owner or Construction Manager, a portion of the Trade Contract Work is covered, the Owner or Construction Manager, by written request, may require the Trade Contractor to uncover the Trade Contract Work for the Owner's or Construction Manager's observation. In this circumstance the Trade Contract Work shall be uncovered and recovered at the Trade Contractor's expense and with no adjustment to the Trade Contract Time. Costs incurred by the Owner as a direct result of the above shall be deducted from the Trade Contract Price.

### 3.10 SAFETY OF PERSONS AND PROPERTY

3.10.1 SAFETY PRECAUTIONS AND PROGRAMS The Trade Contractor shall have overall responsibility for safety precautions and programs in the performance of the Trade Contract Work. While this section establishes the responsibility for safety between the Owner and Trade Contractor, it does not relieve Subcontractors of their responsibility for the safety of persons or property in the performance of their work, nor for compliance with the provisions of applicable laws and regulations.

3.10.2 The Trade Contractor shall seek to avoid injury, loss or damage to persons or property by taking reasonable steps to protect:

3.10.2.1 its employees and other persons at the Worksite;

3.10.2.2 materials and equipment stored at on-site or off-site locations for use in the Trade Contract Work; and

3.10.2.3 property located at the site and adjacent to Trade Contract Work areas, whether or not the property is part of the Trade Contract Work.

3.10.3 TRADE CONTRACTOR'S SAFETY REPRESENTATIVE The Trade Contractor's Worksite Safety Representative is who shall act as the Trade Contractor's authorized safety representative with a duty



to prevent accidents in accordance with subsection 3.10.2 If no individual is identified in this section, the authorized safety representative shall be the Trade Contractor's Representative. The Trade Contractor shall report immediately in writing to the Owner and Construction Manager all recordable accidents and injuries occurring at the Worksite. When the Trade Contractor is required to file an accident report with a public authority, the Trade Contractor shall furnish a copy of the report to the Owner and Construction Manager.

3.10.4 The Trade Contractor shall provide the Owner and Construction Manager with copies of all notices required of the Trade Contractor by law or regulation. The Trade Contractor's safety program shall comply with the requirements of governmental and quasi-governmental authorities having jurisdiction.

3.10.5 Damage or loss not insured under property insurance which may arise from the Trade Contract Work, to the extent caused by the negligent acts or omissions of the Trade Contractor, or anyone for whose acts the Trade Contractor may be liable, shall be promptly remedied by the Trade Contractor.

3.10.6 If the Owner or Construction Manager deems any part of the Trade Contract Work or Worksite unsafe, the Owner or Construction Manager, without assuming responsibility for the Trade Contractor's safety program, may require the Trade Contractor to stop performance of the Trade Contract Work or take corrective measures satisfactory to the Owner, or both. If the Trade Contractor does not adopt corrective measures, the Owner may perform them and deduct their cost from the Trade Contract Price. The Trade Contractor agrees to make no claim for damages, for an increase in the Trade Contract Price or for a change in the Trade Contract Time based on the Trade Contractor's compliance with the Owner's or Construction Manager's reasonable request.

### 3.11 EMERGENCIES

3.11.1 In an emergency, the Trade Contractor shall act in a reasonable manner to prevent personal injury or property damage. Any change in the Trade Contract Price or Trade Contract Time resulting from the actions of the Trade Contractor in an emergency situation shall be determined as provided in ARTICLE 8.

### 3.12 HAZARDOUS MATERIALS

3.12.1 The Trade Contractor shall not be obligated to commence or continue Trade Contract Work until any Hazardous Material discovered at the Worksite has been removed, rendered or determined to be harmless by the Owner as certified by an independent testing laboratory and approved by the appropriate government agency.

3.12.2 If after the commencement of the Trade Contract Work a Hazardous Material is discovered at the Worksite, the Trade Contractor shall be entitled to immediately stop Trade Contract Work in the affected area. The Trade Contractor shall report the condition to the Owner, the Construction Manager, and, if required, the government agency with jurisdiction.

3.12.3 The Trade Contractor shall not be required to perform any Trade Contract Work relating to or in the area of Hazardous Material without written mutual agreement.

3.12.4 The Owner shall be responsible for retaining an independent testing laboratory to determine the nature of the Hazardous Material encountered and whether the material requires corrective measures or remedial action. Such measures shall be the sole responsibility of the Owner, and shall be performed in a manner minimizing any adverse effects upon the Trade Contract Work. The Trade Contractor shall resume Trade Contract Work in the area affected by any Hazardous Material only upon written agreement between the Parties after the Hazardous Material has been removed or rendered harmless





and only after approval, if necessary, of the governmental agency with jurisdiction.

3.12.5 If the Trade Contractor incurs additional costs or is delayed due to the presence or remediation of Hazardous Material, the Trade Contractor shall be entitled to an equitable adjustment in the Trade Contract Price or the Trade Contract Time.

3.12.6 To the extent not caused by the negligent acts or omissions of the Trade Contractor, its Subcontractors and Sub-subcontractors, and the agents, officers, directors and employees of each of them, the Owner shall defend, indemnify and hold harmless the Trade Contractor, its Subcontractors and Sub-subcontractors, and the agents, officers, directors and employees of each of them, from and against any and all direct claims, damages, losses, costs and expenses, including but not limited to attorney's fees, costs and expenses incurred in connection with any dispute resolution process, to the extent permitted pursuant to section 6.6, arising out of or relating to the performance of the Trade Contract Work in any area affected by Hazardous Material. To the extent portions of this paragraph are in conflict with SF 396 (codified at Iowa Code Section 537A.5) said portions are void and unenforceable.

### 3.12.7 MATERIALS BROUGHT TO THE WORKSITE

3.12.7.1 Material Safety Data (MSD) sheets as required by law and pertaining to materials or substances used or consumed in the performance of the Trade Contract Work, whether obtained by the Trade Contractor, Subcontractors, the Owner or Others, shall be maintained at the Worksite by the Trade Contractor and made available to the Owner, Construction Manager, Subcontractors and Others.

3.12.7.2 The Trade Contractor shall be responsible for the proper delivery, handling, application, storage, removal and disposal of all materials and substances brought to the Worksite by the Trade Contractor in accordance with the Trade Contract Documents and used or consumed in the performance of the Trade Contract Work.

3.12.7.3 The Trade Contractor shall indemnify and hold harmless the Owner, Construction Manager, their agents, officers, directors and employees, from and against any and all claims, damages, losses, costs and expenses, including but not limited to attorney's fees, costs and expenses incurred in connection with any dispute resolution procedure, arising out of or relating to the delivery, handling, application, storage, removal and disposal of all materials and substances brought to the Worksite by the Trade Contractor in accordance or not in accordance with the Trade Contract Documents. To the extent portions of this paragraph are in conflict with SF 396 (codified at Iowa Code Section 537A.5) said portions are void and unenforceable.

3.12.8 The terms of this section shall survive the completion of the Trade Work or any termination of this Agreement.

### 3.13 SUBMITTALS

3.13.1 The Trade Contractor shall submit to the Construction Manager, and the Design Professional, for review and approval all shop drawings, samples, product data and similar submittals required by the Trade Contract Documents. Submittals may be submitted in electronic form if required in accordance with ConsensusDocs 200.2 and subsection 4.4.1. The Trade Contractor shall be responsible to the Owner for the accuracy and conformity of its submittals to the Trade Contract Documents. The Trade Contractor shall prepare and deliver its submittals in a manner consistent with the Construction Schedule and in such time and sequence so as not to delay the performance of the Trade Contract Work or the work of the Owner and Others. When the Trade Contractor delivers its submittals the Trade Contractor shall identify in writing for each submittal all changes, deviations or substitutions from the requirements of the Trade Contract Documents. The review and approval of any Trade Contractor



submittal shall not be deemed to authorize changes, deviations or substitutions from the requirements of the Trade Contract Documents unless express written approval is obtained from the Owner specifically authorizing such deviation, substitution or change. To the extent a change, deviation or substitution causes an impact to the Contract Price or Contract Time, such approval shall be promptly memorialized in a Change Order. Further, the Construction Manager and Design Professional shall not make any change, deviation or substitution through the submittal process without specifically identifying and authorizing such deviation to the Trade Contractor. In the event that the Trade Contract Documents do not contain submittal requirements pertaining to the Trade Contract Work, the Trade Contractor agrees upon request to submit in a timely fashion to the Construction Manager and the Design Professional for review and approval any shop drawings, samples, product data, manufacturers' literature or similar submittals as may reasonably be required by the Owner, Construction Manager, or Design Professional.

3.13.2 The Owner shall be responsible for review and approval of submittals with reasonable promptness to avoid causing delay.

3.13.3 The Trade Contractor shall perform all Trade Contract Work strictly in accordance with approved submittals. Approval of shop drawings is not authorization to Trade Contractor to perform Changed Work, unless the procedures of ARTICLE 8 are followed. Approval does not relieve the Trade Contractor from responsibility for Defective Work resulting from errors or omissions of any kind on the approved Shop Drawings.

3.13.4 Record copies of the following, incorporating field changes and selections made during construction, shall be maintained by the Trade Contractor at the Project site and available to the Owner upon request: drawings, specifications, addenda, Trade Contract Change Order and other modifications, and required submittals including product data, samples and shop drawings.

3.13.5 No substitutions shall be made in the Trade Contract Work unless permitted in the Trade Contract Documents and then only after the Trade Contractor obtains approvals required under the Trade Contract Documents for substitutions. All such substitutions shall be promptly memorialized in a Change Order no later than seven (7) Days following approval by the Owner and, if applicable, provide for an adjustment in the Contract Price or Contract Time.

3.13.6 The Trade Contractor shall prepare and submit to the Construction Manager for submission to the Owner

(Check one only)

- ☒ final marked up as-built drawings
- ☐ updated electronic data, in accordance with ConsensusDocs 200.2 and section 4.4.1
- ☐ such documentation as defined by the Parties by attachment to this Agreement,

in general documenting how the various elements of the Trade Contract Work were actually constructed or installed.

### 3.14 PROFESSIONAL SERVICES

3.14.1 The Trade Contractor may be required to procure professional services in order to carry out its responsibilities for construction means, methods, techniques, sequences and procedures for such services specifically called for by the Contract Documents. The Trade Contractor shall obtain these professional services and any design certifications required from State of Iowa licensed design professionals. All drawings, specifications, calculations, certifications and submittals prepared by such



design professionals shall bear the signature and seal of such design professionals and the Owner and the Design Professional shall be entitled to rely upon the adequacy, accuracy and completeness of such design services. If professional services are specifically required by the Contract Documents, the Owner shall indicate all required performance and design criteria. The Trade Contractor shall not be responsible for the adequacy of such performance and design criteria. The Trade Contractor shall not be required to provide such services in violation of existing laws, rules and regulations in the jurisdiction where the Project is located.

### 3.15 WORKSITE CONDITIONS

3.15.1 WORKSITE VISIT The Trade Contractor acknowledges that it has visited, or has had the opportunity to visit, the Worksite to visually inspect the general and local conditions which could affect the Trade Contract Work.

3.15.2 CONCEALED OR UNKNOWN SITE CONDITIONS If the conditions at the Worksite are (a) subsurface or other concealed physical conditions which are materially different from those indicated in the Trade Contract Documents, or (b) unusual and unknown physical conditions which are materially different from conditions ordinarily encountered and generally recognized as inherent in Trade Contract Work provided for in the Trade Contract Documents, the Trade Contractor shall stop Trade Contract Work and give immediate written notice of the condition to the Owner, Construction Manager and the Design Professional. The Trade Contractor shall not be required to perform any work relating to the unknown condition without the written mutual agreement of the Parties. Any change in the Contract Price or the Contract Time as a result of the unknown condition shall be determined as provided in this article. The Trade Contractor shall provide the Owner and the Construction Manager with written notice of any claim as a result of unknown conditions within the time period set forth in section 8.4.

### 3.16 PERMITS AND TAXES

3.16.1 Trade Contractor shall give public authorities all notices required by law and, except for permits and fees which are the responsibility of the Owner pursuant to section 4.2, shall obtain and pay for all necessary permits, licenses and renewals pertaining to the Trade Contract Work. Trade Contractor shall provide to Owner copies of all notices, permits, licenses and renewals required under this Agreement.

3.16.2 Trade Contractor shall pay all applicable taxes legally enacted when bids are received or negotiations concluded for the Trade Contract Work provided by the Trade Contractor.

3.16.3 The Contract Price or Contract Time shall be equitably adjusted by Trade Contract Change Order for additional costs resulting from any changes in laws, ordinances, rules and regulations enacted after the date of this Agreement, including increased taxes.

3.16.3 (Deleted)

### 3.17 CUTTING, FITTING AND PATCHING

3.17.1 The Trade Contractor shall perform cutting, fitting and patching necessary to coordinate the various parts of the Trade Contract Work and to prepare its Trade Contract Work for the work of the Owner or Others.

3.17.2 Cutting, patching or altering the work of the Owner or Others shall be done with the prior written approval of the Owner. Such approval shall not be unreasonably withheld.

### 3.18 CLEANING UP

3.18.1 The Trade Contractor shall regularly remove debris and waste materials at the Worksite resulting





from the Trade Contract Work. Prior to discontinuing Trade Contract Work in an area, the Trade Contractor shall clean the area and remove all rubbish and its construction equipment, tools, machinery, waste and surplus materials. The Trade Contractor shall minimize and confine dust and debris resulting from construction activities. At the completion of the Trade Contract Work, the Trade Contractor shall remove from the Worksite all construction equipment, tools, surplus materials, waste materials and debris.

3.18.2 If the Trade Contractor fails to commence compliance with cleanup duties within two (2) business Days after written notification from the Owner or the Construction Manager of noncompliance, the Owner may implement appropriate cleanup measures without further notice and the cost shall be deducted from any amounts due or to become due the Trade Contractor in the next payment period.

3.19 ACCESS TO TRADE CONTRACT WORK The Trade Contractor shall facilitate the access of the Owner, Construction Manager, Design Professional and Others to Trade Contract Work in progress.

3.20 COST MONITORING The Trade Contractor shall provide the Construction Manager with cost monitoring information appropriate for the manner of Trade Contractor's compensation, to enable the Construction Manager to develop and track construction and project budgets, including amounts for work in progress, uncompleted work and proposed changes.

3.21 ROYALTIES, PATENTS AND COPYRIGHTS The Trade Contractor shall pay all royalties and license fees which may be due on the inclusion of any patented or copyrighted materials, methods or systems selected by the Trade Contractor and incorporated in the Trade Contract Work. The Trade Contractor shall defend, indemnify and hold the Owner harmless from all suits or claims for infringement of any patent rights or copyrights arising out of such selection. The Owner agrees to indemnify and hold the Trade Contractor harmless from any suits or claims of infringement of any patent rights or copyrights arising out of any patented or copyrighted materials, methods or systems specified by the Owner, Construction Manager and Design Professional. To the extent portions of this paragraph are in conflict with SF 396 (codified at Iowa Code Section 537A.5) said portions are void and unenforceable.

3.22 CONFIDENTIALITY The Owner shall treat as confidential information all of the Trade Contractor's estimating systems and historical and parameter cost data that may be disclosed to the Owner in connection with the performance of this Agreement if they are specified and marked as confidential and shall mark them. If a document is not marked as "Confidential" it will not be treated as such. Nothing contained herein, however, shall be interpreted in a manner that modifies or is in conflict with the purpose and application of the open records laws contained in the Code of Iowa.

## ARTICLE 4 OWNER'S RESPONSIBILITIES

### 4.1 INFORMATION SERVICES

4.1.1 FULL INFORMATION Any information or services to be provided by the Owner shall be provided in a timely manner so as not to delay the Trade Contract Work.

4.1.2 FINANCIAL INFORMATION Upon the written request of the Trade Contractor, the Owner shall provide the Trade Contractor with evidence of Project financing. If requested in writing, evidence of such financing shall be a condition precedent to the Trade Contractor's commencing or continuing the Trade Contract Work. The Trade Contractor shall be notified by the Owner prior to any material change in Project financing.

4.1.3 WORKSITE INFORMATION Except to the extent that the Trade Contractor knows of any inaccuracy, the Trade Contractor is entitled to rely on Worksite information furnished by the Owner pursuant to this subsection. To the extent the Owner has obtained, or is required elsewhere in the



Trade Contract Documents to obtain, the following Worksite information, the Owner shall provide at the Owner's expense and with reasonable promptness:

4.1.3.1 information describing the physical characteristics of the site, including surveys, site evaluations, legal descriptions, data or drawings depicting existing conditions, subsurface conditions and environmental studies, reports and investigations;

4.1.3.2 tests, inspections and other reports dealing with environmental matters, Hazardous Material and other existing conditions, including structural, mechanical and chemical tests, required by the Trade Contract Documents or by law; and

4.1.3.3 any other information or services requested in writing by the Trade Contractor which are relevant to the Trade Contractor's performance of the Trade Contract Work and under the Owner's control. The information required by subsection 4.1.3 shall be provided in reasonable detail. Legal descriptions shall include easements, title restrictions, boundaries, and zoning restrictions. Worksite descriptions shall include existing buildings and other construction and all other pertinent site conditions. Adjacent property descriptions shall include structures, streets, sidewalks, alleys, and other features relevant to the Trade Contract Work. Utility details shall include available services, lines at the Worksite and adjacent and connection points. The information shall include public and private information, subsurface information, grades, contours, and elevations, drainage data, exact locations and dimensions, and benchmarks that can be used by the Trade Contractor in laying out the Trade Contract Work. The Trade Contractor shall in writing request from the Owner any information identified in Paragraph 4.1.3 that the Trade Contractor believes the Owner has obtained but has not provided to the Trade Contractor.

4.1.3.4 OWNER'S REPRESENTATIVE The Owner's representative is test. The Owner's representative shall have authority to bind the Owner in all matters relating to this Agreement including, without limitation, all matters requiring the Owner's approval, authorization or written notice. If the Owner changes its representative as listed above, the Owner shall notify the Trade Contractor in advance in writing. The Owner's Representative is also authorized to resolve disputes in accordance with Section 12.2 of this Agreement. The Construction Manager, while unauthorized to modify the Agreement or settle a dispute without the Owner's approval, however, does have the requisite authority to act as the Owner's agent throughout the construction of the Project in accordance with the contract between the Owner and the Construction Manager (ConsensusDOCS 801 as modified by the State of Iowa).

4.2 BUILDING PERMIT, FEES AND APPROVALS Except for those permits and fees related to the Trade Contract Work which are the responsibility of the Trade Contractor pursuant to subsection 3.16.1, the Owner shall secure and pay for all other permits, approvals, easements, assessments and fees required for the development, construction, use or occupancy of permanent structures or for permanent changes in existing facilities, including the building permit.

4.3 Deleted

4.4 TRADE CONTRACT DOCUMENTS Unless otherwise specified, Owner shall provide One (1) copies of the Trade Contract Documents to the Trade Contractor without cost. Additional copies will be provided to the Trade Contractor at cost. This paragraph is not intended to be in conflict with Iowa Code Section 26.3 requirement that a sufficient number of copies of the contract documents be made available to bidders without charge (but a deposit not to exceed \$250 per set may be required). If the Trade Contractor was required to make a deposit for a set of Trade Contract Documents for purposes of bidding then the Trade Contractor may elect to have the deposit returned instead of being provided with an additional copy.





4.4.1 DIGITIZED DOCUMENTS If the Owner requires that the Owner, Design Professional, Construction Manager and Trade Contractor exchange documents and data in electronic or digital form, prior to any such exchange, the Owner, Design Professional, Construction Manager and Trade Contractor shall agree on a written protocol governing all exchanges in ConsensusDocs 200.2 or a separate Agreement, which, at a minimum, shall specify: (a) the definition of documents and data to be accepted in electronic or digital form or to be transmitted electronically or digitally; (b) management and coordination responsibilities; (c) necessary equipment, software and services; (d) acceptable formats, transmission methods and verification procedures; (e) methods for maintaining version control; (f) privacy and security requirements; and (g) storage and retrieval requirements. Except as otherwise agreed to by the Parties in writing, the Parties shall each bear their own costs as identified in the protocol. In the absence of a written protocol, use of documents and data in electronic or digital form shall be at the sole risk of the recipient.

4.5 OWNER'S CUTTING AND PATCHING Cutting, patching or altering the Trade Contract Work by the Owner or Others shall be done with the prior written approval of the Trade Contractor, which approval shall not be unreasonably withheld.

4.6 OWNER'S RIGHT TO CLEAN UP In case of a dispute between the Trade Contractor and Others with regard to respective responsibilities for cleaning up at the Worksite, the Owner may implement appropriate cleanup measures after two (2) business Days' notice and allocate the cost among those responsible during the following pay period.

4.7 COST OF CORRECTING DAMAGED OR DESTROYED WORK With regard to damage or loss attributable to the acts or omissions of the Owner or Others and not to the Trade Contractor, the Owner may either (a) promptly remedy the damage or loss or (b) accept the damage or loss. If the Trade Contractor incurs additional costs or is delayed due to such loss or damage, the Trade Contractor shall be entitled to an equitable adjustment in the Trade Contract Price or Trade Contract Time.

## ARTICLE 5 SUBCONTRACTS

5.1 SUBCONTRACTORS The Trade Contract Work not performed by the Trade Contractor with its own forces shall be performed by Subcontractors.

### 5.2 AWARD OF SUBCONTRACTS AND OTHER CONTRACTS FOR PORTIONS OF THE TRADE CONTRACT WORK

5.2.0 The Trade Contractor must identify all Subcontractors and suppliers within 48 hours of the published date and time for which bids must be submitted, in accordance with Iowa Code Section 8A.311, as amended by House File 646 in 2011. Subcontractors and suppliers may not be changed without the approval of the Owner. Requests for changing a Subcontractor or supplier must identify the reason for the proposed change, the name of the new Subcontractor or supplier, and the change in the subcontractor or supplier price as a result of the change. Any reduction in subcontractor or supplier price as a result of the change, if the change is approved by the Owner, shall be deducted from the Trade Contract Price via a deductive Change Order. Any such changes, if approved by the Owner, which result in an increase in the Trade Contract Price shall be borne by the Trade Contractor.

5.2.1 If the Owner has a reasonable objection to any proposed subcontractor or material supplier, the Owner shall notify the Trade Contractor in writing.

5.2.2 If the Owner has reasonably and promptly objected as provided in subsection 5.2.1, the Trade Contractor shall not contract with the proposed subcontractor or material supplier, and the Trade Contractor shall propose another Subcontractor acceptable to the Owner. To the extent the substitution results in an increase or decrease in the Trade Contract Price or Trade Contract Time, an appropriate



Trade Contract Change Order shall be issued as provided in ARTICLE 8.

**5.3 BINDING OF SUBCONTRACTORS** The Trade Contractor agrees to bind every Subcontractor (and require every Subcontractor to so bind its subcontractors) to all the provisions of this Agreement and the Trade Contract Documents as they apply to the Subcontractor's portion of the Trade Contract Work.

**5.4 Deleted**

#### **5.5 CONTINGENT ASSIGNMENT OF SUBCONTRACTS**

**5.5.1** If this Agreement is terminated, each subcontract agreement shall be assigned by the Trade Contractor to the Owner, subject to the prior rights of any surety, provided that:

**5.5.1.1** this Agreement is terminated by the Owner pursuant to sections 11.3 or 11.4; and

**5.5.1.2** the Owner accepts such assignment after termination by notifying the Subcontractor and Trade Contractor in writing, and assumes all rights and obligations of the Contractor pursuant to each subcontract agreement.

**5.5.2** If the Owner accepts such an assignment, and the Work has been suspended for more than thirty (30) consecutive Days, following termination, if appropriate, the Subcontractor's compensation shall be equitably adjusted as a result of the suspension.

### **ARTICLE 6 TRADE CONTRACT TIME**

#### **6.1 PERFORMANCE OF THE TRADE CONTRACT WORK**

**6.1.1 DATE OF COMMENCEMENT** The Date of Commencement is the date of Owner's written notice to proceed unless otherwise set forth below:

**6.1.2 TIME** Substantial Completion of the Trade Contract Work shall be achieved in xxx (xx) Days from the Date of Commencement. Unless otherwise specified in the Certificate of Substantial Completion, the Trade Contractor shall achieve Final Completion within 30 Days after the date of Substantial Completion, subject to adjustments as provided for in the Trade Contract Documents.

**6.1.3** Time limits stated above are of the essence of this Agreement.

**6.1.4** Unless instructed by the Owner in writing, the Trade Contractor shall not knowingly commence the Trade Contract Work before the effective date of insurance to be provided by the Trade Contractor and Owner as required by the Trade Contract Documents.

**6.2 CONSTRUCTION SCHEDULE** Prior to the commencement of the construction of the Trade Contract Work, the Trade Contractor shall submit a copy of its critical path method (CPM) construction schedule showing the completion of the Trade Contract Work within the allowable number of days identified above. The Trade Contractor shall regularly update its CPM construction schedule for the Trade Contract Work and promptly furnish the Construction Manager on an ongoing basis scheduling information requested by the Construction Manager for the Trade Contract Work. In consultation with the Trade Contractor, the Construction Manager shall incorporate the Trade Contract Work and work of other trade contractors into an overall Construction Schedule for the entire Project. The Trade Contractor shall be bound by the Construction. Nothing in this Trade Contractor Agreement shall relieve the Trade Contractor of any liability for any unexcused failure to comply with its original schedule, the Construction Schedule, or any completion dates. The Construction Manager shall have the right to coordinate the Trade Contractors, including the right, if necessary, to change the time, order and priority in which the various portions of the Trade Contract Work and the other work associated with the Project shall be performed.



## 6.3 DELAYS AND EXTENSIONS OF TIME

6.3.1 If the Trade Contractor is delayed at any time in the commencement or progress of the Work by any cause beyond the control of the Trade Contractor, the Trade Contractor shall be entitled to an equitable extension of the Trade Contract Time if the Trade Contractor is able to show that the critical path of the Trade Contract Work was delayed by causes beyond the control of the Trade Contractor. Examples of causes beyond the control of the Trade Contractor include, but are not limited to, the following: acts or omissions of the Owner, the Design Professional, Construction Manager or Others; changes in the Work or the sequencing of the Work ordered by the Owner, or arising from decisions of the Owner that impact the time of performance of the Work; transportation delays not reasonably foreseeable; labor disputes not involving the Trade Contractor; general labor disputes impacting the Project but not specifically related to the Worksite; fire; terrorism, epidemics, adverse governmental actions, unavoidable accidents or circumstances; adverse weather conditions not reasonably anticipated; encountering Hazardous Materials; concealed or unknown conditions; delay authorized by the Owner pending dispute resolution; and suspension by the Owner under section 11.1. The Trade Contractor shall submit any requests for equitable extensions of Contract Time in accordance with the provisions of ARTICLE 8.

6.3.2 In addition, if the Trade Contractor is able to show that it incurred additional costs because the critical path of the Trade Contract Work was delayed by acts or omissions of the Owner, the Design Professional, Construction Manager or Others, changes in the Work or the sequencing of the Work ordered by the Owner, or arising from decisions of the Owner that impact the time of performance of the Work, encountering Hazardous Materials, or concealed or unknown conditions, delay authorized by the Owner pending dispute resolution or suspension by the Owner under section 11.1, then the Trade Contractor shall be entitled to an equitable adjustment in the Trade Contract Price subject to section 6.6.

6.3.3 NOTICE OF DELAYS In the event delays to the Trade Contract Work are encountered for any reason, the Trade Contractor shall provide prompt written notice to the Owner and the Construction Manager of the cause of such delays after Trade Contractor first recognizes the delay. The Owner and Trade Contractor agree to undertake reasonable steps to mitigate the effect of such delays.

6.4 NOTICE OF DELAY CLAIMS If the Trade Contractor believes it is due an equitable extension of Trade Contract Time or an equitable adjustment in Trade Contract Price as a result of a delay described in subsection 6.3.1, the Trade Contractor shall give the Owner and the Construction Manager written notice of the claim in accordance with section 8.4. If the Trade Contractor causes delay in the completion of the Trade Contract Work, the Owner shall be entitled to recover its additional costs subject to subsection 6.6. The Owner shall process any such claim against the Trade Contractor in accordance with ARTICLE 8.

## 6.5 LIQUIDATED DAMAGES

6.5.1 SUBSTANTIAL COMPLETION The Owner and the Trade Contractor agree that this Agreement ☐ shall / ☒ shall not (indicate one) provide for the imposition of liquidated damages based on the Date of Substantial Completion.

6.5.1.1 The Trade Contractor understands that if the Date of Substantial Completion established by this Agreement, as may be amended by subsequent Trade Change Order, is not attained, the Owner will suffer damages which are difficult to determine and accurately specify. The Trade Contractor agrees that if the Date of Substantial Completion is not attained the Trade Contractor shall pay the Owner Zero Dollars and No Cents (\$0.00) as liquidated damages and not as a penalty for each day that Substantial Completion extends beyond the Date of Substantial Completion. The liquidated damages provided herein shall be in lieu of all liability for any and all





extra costs, losses, expenses, claims, penalties and any other damages of whatsoever nature incurred by the Owner which are occasioned by any delay in achieving the Date of Substantial Completion.

6.5.2 FINAL COMPLETION The Owner and the Trade Contractor agree that this Agreement ☐ shall / ☒ shall not (indicate one) provide for the imposition of liquidated damages based on the Date of Final Completion.

6.5.2.1 The Trade Contractor understands that if the Date of Final Completion established by this Agreement, as may be amended by subsequent Trade Change Order is not attained, the Owner will suffer damages which are difficult to determine and accurately specify. The Trade Contractor agrees that if the Date of Final Completion is not attained the Trade Contractor shall pay the Owner Zero Dollars and No Cents (\$0.00) as liquidated damages and not as a penalty for each day that Final Completion extends beyond the Date of Final Completion. The liquidated damages provided herein shall be in lieu of all liability for any and all extra costs, losses, expenses, claims, penalties and any other damages of whatsoever nature incurred by the Owner which are occasioned by any delay in achieving the Date of Final Completion.

6.5.3 OTHER LIQUIDATED DAMAGES The Owner and the Trade Contractor may agree upon the imposition of liquidated damages based on other project milestones or performance requirements. Such agreement shall be included as an exhibit to this Agreement.

6.6 LIMITED MUTUAL WAIVER OF CONSEQUENTIAL DAMAGES Except for damages mutually agreed upon by the Parties as liquidated damages in Section 6.5 and excluding losses covered by insurance required by the Trade Contract Documents, the Owner and the Trade Contractor agree to waive all claims against each other for any consequential damages that may arise out of or relate to this Agreement, except for those specific items of damages excluded from this waiver as mutually agreed upon by the Parties and identified below. The Owner agrees to waive damages including but not limited to the Owner's loss of use of the Project, any rental expenses incurred, loss of income, profit or financing related to the Project, as well as the loss of business, loss of financing, principal office overhead and expenses, loss of profits not related to this Project, loss of reputation, or insolvency. The Trade Contractor agrees to waive damages including but not limited to loss of business, loss of financing, principal office overhead and expenses, loss of profits not related to this Project, loss of bonding capacity, loss of reputation, or insolvency. The provisions of this section shall also apply to the termination of this Agreement and shall survive such termination.

6.6.1 The following items of damages are excluded from this mutual waiver: The provisions of this section shall also apply to the termination of this Agreement and shall survive such termination. The Owner and the Trade Contractor shall require similar waivers in contracts with Subcontractors and Others retained for the Project.

## ARTICLE 7 TRADE CONTRACT PRICE

7.1 LUMP SUM As full compensation for performance by the Trade Contractor of the Work in conformance with the Contract Documents, the Owner shall pay the Trade Contractor the lump sum price of: XX dollars and XX cents (\$XX.XX). The lump sum price is hereinafter referred to as the Trade Contract Price, which shall be subject to increase or decrease as provided in article 8.

Lump Sum Price includes Base Bid of \$X.XX and Alternate #XX for {alternate description} for \$X.XX for a total Lump Sum Price of \$X.XX.

### 7.2 ALLOWANCES

7.2.1 All allowances stated in the Trade Contract Documents shall be included in the Trade Contract Price. The Owner shall select allowance items in a timely manner so as not to delay the Trade Contract



Work.

7.2.2 Allowances shall include the costs of materials, supplies and equipment delivered to the Worksite, less applicable trade discounts and including requisite taxes, unloading and handling at the Worksite, and labor and installation, unless specifically stated otherwise. The Trade Contractor's Overhead and profit for the allowances shall be included in the Trade Contract Price, but not in the allowances. The Trade Contract Price shall be adjusted by Trade Contract Change Order to reflect the actual costs when they are greater than or less than the allowances.

## ARTICLE 8 CHANGES

Changes in the Trade Contract Work that are within the general scope of this Agreement shall be accomplished, without invalidating this Agreement, by Trade Contract Change Order, and Trade Contract Interim Directed Change.

### 8.1 TRADE CHANGE ORDER

8.1.1 The Owner may order or the Trade Contractor may request changes in the Trade Contract Work or the timing or sequencing of the Trade Contract Work that impacts the Trade Contract Price or the Trade Contract Time. All such changes in the Trade Contract Work that affect Trade Contract Time or Trade Contract Price shall in the form of a Trade Contract Change Order. Any such requests for a change in the Trade Contract Price or the Trade Contract Time shall be processed in accordance with this article 8. Trade Contract Change Orders shall be executed on the ConsensusDOCS 813 - Trade Contract Change Order (CM as Owner's Agent) with attachments as necessary.

8.1.2 The Owner, with the assistance of the Construction Manager, and the Trade Contractor shall negotiate in good faith an appropriate adjustment to the Trade Contract Price or the Trade Contract Time and shall conclude these negotiations as expeditiously as possible. Acceptance of the Trade Contract Change Order and any adjustment in the Trade Contract Price or Trade Contract Time shall not be unreasonably withheld.

### 8.2 TRADE CONTRACT INTERIM DIRECTED CHANGE

8.2.1 The Construction Manager may issue a written Trade Contract Interim Directed Change signed by the Owner directing a change in the Trade Contract Work prior to reaching agreement with the Trade Contractor on the adjustment, if any, in the Trade Contract Price or the Trade Contract Time.

8.2.2 The Owner, with the assistance of the Construction Manager, and the Trade Contractor shall negotiate expeditiously and in good faith for appropriate adjustments, as applicable, to the Trade Contract Price or the Trade Contract Time arising out of a Trade Contract Interim Directed Change. As the Trade Contract Changed Work is performed, the Trade Contractor shall submit its costs for such work with its application for payment beginning with the next application for payment within thirty (30) Days of the issuance of the Trade Contract Interim Directed Change. If there is a dispute as to the cost to the Owner, the Trade Contractor shall continue to perform the Trade Contract Changed Work set forth in the Trade Contract Interim Directed Change and the Owner shall pay the requirements Trade Contractor the Cost of the Work, defined in 8.3.1.3 below upon receipt of an application for payment and the Owner's (and the Architect's and construction manger's) determination that the work has been completed. The Parties reserve their rights as to the disputed amount, subject to the requirements ARTICLE 12.

8.2.3 When the Owner and the Trade Contractor agree upon the adjustment in the Trade Contract Price or the Trade Contract Time, for a change in the Trade Contract Work directed by a Trade Contract Interim Directed Change, such agreement shall be the subject of a Trade Contract Change Order. The



Trade Contract Change Order shall include all outstanding Trade Contract Interim Directed Changes on which the Owner and Trade Contractor have reached agreement on Contract Price or Contract Time issued since the last Trade Contract Change Order.

### 8.3 DETERMINATION OF COST

8.3.1 An increase or decrease in the Trade Contract Price or the Trade Contract Time resulting from a change in the Trade Contract Work shall be determined by one or more of the following methods:

8.3.1.1 unit prices set forth in this Agreement or as subsequently agreed;

8.3.1.2 a mutually accepted, itemized lump sum;

8.3.1.3 COST OF THE WORK Cost of the Work as defined by this subsection plus 10.0 % for Overhead and 5.0 % for profit. "Cost of the Work" shall include the following costs reasonably incurred to perform a change in the Work

8.3.1.3.1 wages paid for labor in the direct employ of the Constructor in the performance of the Work;

8.3.1.3.2 salaries of the Trade Contractor's employees when stationed at the field office to the extent necessary to complete the applicable Work, employees engaged on the road expediting the production or transportation of material and equipment, and supervisory employees from the principal or branch office performing the functions listed below;

8.3.1.3.3 cost of applicable employee benefits and taxes, including but not limited to, workers' compensation, unemployment compensation, social security, health, welfare, retirement and other fringe benefits as required by law, labor agreements, or paid under the Trade Contractor's standard personnel policy, insofar as such costs are paid to employees of the Trade Contractor who are included in the Cost of the Work in subsections .1 and .2 immediately above;

8.3.1.3.4 reasonable transportation, travel, and hotel expenses of the Trade Contractor's personnel incurred in connection with the Work;

8.3.1.3.5 cost of all materials, supplies, and equipment incorporated in the Work, including costs of inspection and testing if not provided by the Owner, transportation, storage, and handling;

8.3.1.3.6 payments made by the Trade Contractor to Subcontractors for Work performed under this Agreement;

8.3.1.3.7 cost, including transportation and maintenance of all materials, supplies, equipment, temporary facilities, and hand tools not owned by the workers that are used or consumed in the performance of the Work, less salvage value or residual value; and cost less salvage value of such items used, but not consumed that remain the property of the Trade Contractor;

8.3.1.3.8 rental charges of all necessary machinery and equipment, exclusive of hand tools owned by workers, used at the Worksite, whether rented from the Trade Contractor or Others, including installation, repair and replacement, dismantling, removal, maintenance, transportation, and delivery costs. Rental from unrelated third parties shall be reimbursed at actual cost. Rentals from the Trade Contractor or its affiliates, subsidiaries, or related parties shall be reimbursed at the prevailing rates in the locality of the Worksite up to eighty-five percent (85%) of the value of the piece of equipment;

8.3.1.3.9 cost of the premiums for all insurance and surety bonds which the Trade Contractor is





required to procure or deems necessary, and approved by the Owner including any additional premium incurred as a result of any increase in the cost of the Work;

8.3.1.3.10 sales, use, gross receipts or other taxes, tariffs, or duties related to the Work for which the Trade Contractor is liable;

8.3.1.3.11 permits, fees, licenses, tests, and royalties;

8.3.1.3.12 reproduction costs, photographs, facsimile transmissions, long-distance telephone calls, data processing costs and services, postage, express delivery charges, data transmission, telephone service, and computer-related costs at the Worksite to the extent such items are used and consumed in the performance of the Work or are not capable of use after completion of the Work;

8.3.1.3.13 all water, power, and fuel costs necessary for the Work;

8.3.1.3.14 cost of removal of all nonhazardous substances, debris, and waste materials;

8.3.1.3.15 all costs directly incurred to perform a change in the Work which are reasonably inferable from the Contract Documents for the Changed Work;

8.3.1.3.16 DISCOUNTS All discounts for prompt payment shall accrue to the Owner to the extent such payments are made directly by the Owner. To the extent payments are made with funds of the Constructor, all cash discounts shall accrue to the Constructor. All trade discounts, rebates and refunds, and all returns from sale of surplus materials and equipment, shall be credited to the Cost of the Work;

8.3.1.3.17 COST REPORTING The Trade Contractor shall maintain in conformance with generally accepted accounting principles a complete and current set of records that are prepared or used by the Trade Contractor to calculate the Cost of Work. The Owner and Construction Manager shall be afforded access to the Trade Contractor's records, books, correspondence, instructions, drawings, receipts, vouchers, memoranda and similar data relating to requested payment for Cost of the Work. The Trade Contractor shall preserve all such records for a period of three years after the final payment or longer where required by law;

8.3.1.3.18 COST AND SCHEDULE ESTIMATES The Trade Contractor shall use reasonable skill and judgment in the preparation of a cost estimate or schedule for a change to the Work, but does not warrant or guarantee their accuracy

8.3.1.4 If an increase or decrease cannot be agreed to as set forth in Clauses .1 through .3 above, and the Owner or the Construction Manager issues a Trade Contract Interim Directed Change, the cost of the change in the Trade Contract Work shall be determined by the reasonable actual expense and savings of the performance of the Work resulting from the change. If there is a net increase in the Trade Contract Price, the Trade Contractor's Fee shall be adjusted accordingly. In case of a net decrease in the Trade Contract Price, the Trade Contractor's Fee shall not be adjusted unless ten percent (10%) or more of the Project is deleted. The Trade Contractor shall maintain a documented, itemized accounting evidencing the expenses and savings.

8.3.2 If unit prices are set forth in the Trade Contract Documents or are subsequently agreed to by the Parties, but the character or quantity of such unit items as originally contemplated is so different in a proposed Trade Change Order that the original unit prices will cause substantial inequity to the Owner or the Trade Contractor, such unit prices shall be equitably adjusted.

8.4 CLAIMS FOR ADDITIONAL COST OR TIME Except as provided in subsection 6.3.2 and section 6.4 for



any claim for an increase in the Trade Contract Price or the Trade Contract Time, the Trade Contractor shall give the Owner and the Construction Manager written notice of the claim within fourteen (14) Days after the occurrence giving rise to the claim or within fourteen (14) Days after the Trade Contractor first recognizes (or should have recognized) the condition giving rise to the claim, whichever is later. Except in an emergency, notice shall be given before proceeding with the Trade Contract Work. Thereafter, the Trade Contractor shall submit written documentation of its claim, including appropriate supporting documentation, within twenty-one (21) Days after giving notice, unless the Parties mutually agree upon a period of time. The Owner or Construction Manager shall respond in writing denying or approving the Trade Contractor's claim no later than fourteen (14) Days after receipt of the Trade Contractor's claim. Any change in the Trade Contract Price or the Trade Contract Time resulting from such claim shall be authorized by Trade Contract Change Order.

## ARTICLE 9 PAYMENT

9.1 GENERAL PROVISIONS Within fourteen (14) calendar Days from the date of execution of this Agreement, the Trade Contractor shall prepare and submit to the Construction Manager for approval a Schedule of Values apportioned to the various divisions or phases of the Trade Contract Work. Each line item contained in the Schedule of Values shall be assigned a monetary price such that the total of all such items shall equal the Trade Contract Price. The Schedule of Values shall be prepared in such detail and be supported by such documents and proof as may be required by the Construction Manager.

### 9.2 PROGRESS PAYMENTS

9.2.1 APPLICATIONS The Trade Contractor shall submit to the Construction Manager monthly notarized applications for payment. Trade Contractor's applications for payment shall be itemized and supported by the Trade Contractor's Schedule of Values and any other substantiating data as required by this Trade Contractor Agreement or requested by the Construction Manager or Design Professional. Payment applications may include payment requests on account of properly authorized Trade Contract Change Orders and Interim Directed Changes. The progress payment application shall include Trade Contract Work performed through the preceding calendar month. The Construction Manager will review the application and recommend to the Design professional and the Owner amounts payable by the Owner to the Trade Contractor. The Owner, in accordance with the determination of the Design Professional, shall pay the amount otherwise due on any payment application, less any amounts as set forth below, no later than thirty (30) calendar Days after the payment application, or portion thereof, is approved the Design Professional. The Owner may deduct, from any progress payment, such amounts as may be retained pursuant to subsection 9.2.4 below.

9.2.2 STORED MATERIALS AND EQUIPMENT Unless otherwise provided in the contract documents, applications for payment may include materials and equipment not yet incorporated into the Work but delivered to and suitably stored onsite or offsite including applicable insurance, storage and costs incurred transporting the materials to an offsite storage facility. Approval of payment applications for stored materials and equipment stored offsite shall be conditioned on submission by the Trade Contractor of bills of sale and proof of required insurance, or such other procedures satisfactory to the Owner to establish the proper valuation of the stored materials and equipment, the Owner's title to such materials and equipment, and to otherwise protect the Owner's interests therein, including transportation to the site.

### 9.2.3 CLAIM WAIVERS

9.2.3.1 PARTIAL CLAIMWAIVERS AND AFFIDAVITS As a prerequisite for payment, the Trade Contractor shall provide, in a form satisfactory to the Owner and the Construction Manager, partial claim waivers in the amount of the application for payment and affidavits from the Trade Contractor, and its Subcontractors, Material Suppliers for the completed Trade Contract Work.



Such waivers shall be effective upon payment. In no event shall the Trade Contractor be required to sign an unconditional waiver of claim, either partial or final, prior to receiving payment or in an amount in excess of what it has been paid.

9.2.4 RETAINAGE From each progress payment made to the Trade Contractor has the Owner shall retain FIVE (5) percent of the amount otherwise due after deduction of any amounts as provided in section 9.3 and in no event shall such percentage exceed any applicable statutory requirements of this Agreement. Retainage shall be withheld and administered in accordance with Iowa Code Chapter 572:

9.3 ADJUSTMENT OF TRADE CONTRACTOR'S PAYMENT APPLICATION The Owner or the Construction Manager, upon notification of the Design Professional, may reject or adjust a Trade Contractor payment application or nullify a previously approved Trade Contractor payment application, in whole or in part, as may reasonably be necessary to protect the Owner from loss or damage based upon the following, to the extent that the Trade Contractor is responsible therefor under this Trade Contractor Agreement:

9.3.1 the Trade Contractor's repeated failure to perform the Trade Contract Work as required by the Trade Contractor Agreement;

9.3.2 loss or damage arising out of or relating to the Trade Contractor Agreement and caused by the Trade Contractor to the Owner, or to the Construction Manager or others to whom the Owner may be liable;

9.3.3 the Trade Contractor's failure to properly pay for labor, materials, equipment or supplies furnished in connection with the Trade Contract Work;

9.3.4 nonconforming or defective Trade Contract Work which has not been corrected in a timely fashion;

9.3.5 reasonable evidence of delay in performance of the Trade Contract Work such that the work will not be completed within the Trade Contract Time, and that the unpaid balance of the Trade Contract Price is not sufficient to offset any liquidated damages or actual damages that may be sustained by the Owner as a result of the anticipated delay caused by the Trade Contractor;

9.3.6 reasonable evidence demonstrating that the unpaid balance of the Trade Contract Price is insufficient to cover the cost to complete the Trade Contract Work; and

9.3.7 third-party claims involving the Trade Contractor or reasonable evidence demonstrating that third-party claims are likely to be filed unless and until the Trade Contractor furnishes the Owner with adequate security in the form of a surety bond, letter of credit or other collateral or commitment which are sufficient to discharge such claims if established. No later than thirty (30) Days after receipt of an application for payment, the Owner or Construction Manager shall give written notice to the Trade Contractor, disapproving or nullifying it or a portion thereof, specifying the reasons for the disapproval or nullification. When the above reasons for disapproving or nullifying an application for payment are removed, payment will be made for amounts previously withheld.

9.4 PAYMENT NOT ACCEPTANCE Payment to the Trade Contractor does not constitute or imply acceptance of any portion of the Trade Contract Work.

9.5 PAYMENT DELAY If for any reason not the fault of the Trade Contractor, the Trade Contractor does not receive a progress payment from the Owner sixty (60) calendar Days after the time such payment is due, as defined in Subparagraph 9.2.1, then the Trade Contractor, upon giving within seven (7) calendar Days after written notice to the Owner, and without prejudice to and in addition to any other legal remedies, may stop its Trade Contract Work until payment of the full amount owing to the Trade Contractor has been received. The





Trade Contract Price and Trade Contract Time shall be equitably adjusted by a Trade Contract Change Order to reflect reasonable cost and delay resulting from shutdown, delay and start-up.

## 9.6 SUBSTANTIAL COMPLETION

9.6.1 The Trade Contractor shall notify the Owner, the Construction Manager and the Design Professional when it considers Substantial Completion of the Trade Contract Work or a designated portion to have been achieved. The Construction Manager and the Design Professional shall promptly conduct an inspection to determine whether the Trade Contract Work or designated portion can be occupied or utilized for its intended use by the Owner without excessive interference in completing any remaining unfinished Trade Contract Work by the Trade Contractor. If the Construction Manager and the Design Professional determine that the Trade Contract Work or designated portion has not reached Substantial Completion, the Design Professional, and the Construction Manager, shall promptly compile a list of items to be completed or corrected so the Owner may occupy or utilize the Trade Contract Work or designated portion for its intended use. The Trade Contractor shall promptly complete all items on the list.

9.6.2 When Substantial Completion of the Trade Contract Work or a designated portion is achieved, the Construction Manager and the Design Professional shall prepare a Certificate of Substantial Completion that shall establish the date of Substantial Completion, and the respective responsibilities of the Owner and Trade Contractor for interim items such as security, maintenance, utilities, insurance and damage to the Trade Contract Work. The Owner shall assume all responsibilities for items such as security, maintenance, utilities, and insurance, and damage to the Work. The certificate shall also list the items to be completed or corrected, and establish the time for their completion or correction. The Certificate of Substantial Completion shall be submitted to the Trade Contractor for written acceptance of responsibilities assigned in the Certificate.

9.6.3 Unless otherwise provided in the Certificate of Substantial Completion, warranties required by the Trade Contract Documents shall commence on the date of Substantial Completion of the Trade Contract Work or a designated portion.

9.6.4 Uncompleted items shall be completed by the Trade Contractor by the Final Completion date set forth in the Agreement and/or Construction Schedule. The Trade Contractor may request early release of retainage in accordance with Iowa Code Section 26.13. Payment for completed work and retainage shall be made in accordance with Iowa Code Chapters 26 and 573.

9.7 PARTIAL OCCUPANCY OR USE The Owner may occupy or use completed or partially completed portions of the Trade Contract Work when (a) the portion of the Trade Contract Work is designated in a Certificate of Substantial Completion, (b) appropriate insurer(s) consent to the occupancy or use, and (c) appropriate public authorities authorize the occupancy or use. Such partial occupancy or use shall constitute Substantial Completion of that portion of the Trade Contract Work.

## 9.8 FINAL PAYMENT

9.8.1 APPLICATION Upon acceptance of the Trade Contract Work by the Construction Manager, and approval by the Design Professional, and upon the Trade Contractor furnishing evidence of fulfillment of the Trade Contractor's obligations in accordance with the Trade Contract Documents, the Trade Contractor shall submit its application for final payment. The Construction Manager will review the Trade Contractor's final payment application and recommend to the Design Professional and the Owner an amount payable by the Owner to the Trade Contractor. The Design Professional shall then recommend an amount to be paid by the Owner. Final payment shall be made in accordance with Iowa Code Chapters 26 and 573.



9.8.2 REQUIREMENTS Along with its application for final payment, the Trade Contractor shall furnish to the Construction Manager:

9.8.2.1 an affidavit that all payrolls, bills for materials and equipment, and other indebtedness connected with the Trade Contract Work for which the Owner or its property or the Construction Manager or the Owner's surety might in any way be liable, have been paid or otherwise satisfied;

9.8.2.2 consent of the Trade Contractor's surety to final payment;

9.8.2.3 satisfaction of closeout procedures as may be required by the Trade Contractor Agreement;

9.8.2.4 certification (or other writing indicating) that insurance required by the Trade Contractor Agreement is and will remain in effect beyond final payment pursuant to this Trade Contractor Agreement and

9.8.2.5 other data if required by the Owner or Construction Manager, such as receipts, releases, and waivers of liens effective upon payment to the extent and in such form as may be designated by the Owner or Construction Manager. Acceptance of final payment by the Trade Contractor shall constitute a waiver of all claims by the Trade Contractor except those previously made in writing and identified by the Trade Contractor as unsettled at the time of final application for payment.

9.8.3 TIME OF PAYMENT Final payment of the balance of the Trade Contract Price, less any amount retained pursuant to subsection 9.2.4 of this Agreement, and as required by Iowa Code Chapters 26 and 573, which among other things requires that twice the amount of an Iowa Code Chapter 573 subcontractor claim be withheld from final payment, shall be made to the Trade contractor within sixty (60) Days after the Trade Contractor has submitted a complete and accurate application for final payment.

9.8.4 LATE PAYMENT INTEREST Progress payments or final payment due and unpaid under this Trade Contractor Agreement shall bear interest from the date payment is due at the statutory rate prevailing at the place of the Project.

9.9 PAYMENT USE AND VERIFICATION The Trade Contractor is required to pay for all labor, materials and equipment used in the performance of the Trade Contract Work through the most current period applicable to progress payments received. Reasonable evidence, satisfactory to the Construction Manager, may be required to show that all obligations relating to the Trade Contract Work are current before releasing any payment due on the Trade Contract Work. If required by the Construction Manager, before final payment is made for the Trade Contract Work, the Trade Contractor shall submit evidence satisfactory to the Construction Manager that all payrolls, bills for materials and equipment, and all known indebtedness connected with the Trade Contract Work, have been paid or otherwise satisfied as set forth in subsection 9.8.2.

## ARTICLE 10 INDEMNITY, INSURANCE, WAIVERS AND BONDS

### 10.1 INDEMNITY

10.1A To the extent portions of this Article are in conflict with SF 396 (codified at Iowa Code Section 573A.5) said portions are void and unenforceable.

10.1.1 TRADE CONTRACTOR'S INDEMNITY To the fullest extent permitted by law, the Trade Contractor shall indemnify and hold harmless the Owner, the Owner's officers, directors, members,





consultants, agents and employees, from all claims for bodily injury and property damage, other than to the Work itself and other property insured under subsection 10.3.1, including reasonable attorneys' fees, costs and expenses, that may arise from the performance of the Work, but only to the extent caused by the negligent acts or omissions of the Trade Contractor, Subcontractors or anyone employed directly or indirectly by any of them or by anyone for whose acts any of them may be liable. The Trade Contractor shall be entitled to reimbursement of any defense costs paid above the Trade Contractor's percentage of liability for the underlying claim to the extent provided for under subsection 10.1.2.

**10.1.2 OWNER'S INDEMNITY** To the fullest extent permitted by law, the Owner shall indemnify and hold harmless the Trade Contractor, its officers, directors, members, consultants, agents, and employees, from all claims for bodily injury and property damage, other than property insured under subsection 10.3.1, including reasonable attorneys' fees, costs and expenses, that may arise from the performance of work by Owner, Design Professional or Others, but only to the extent caused by the negligent acts or omissions of the Owner, Design Professional or Others. The Owner shall be entitled to reimbursement of any defense costs paid above Owner's percentage of liability for the underlying claim to the extent provided for under subsection 10.1.1.

**10.1.3 CONSTRUCTION MANAGER AND DESIGN PROFESSIONAL INDEMNITY** The Owner shall cause the Construction Manager and the Design Professional to agree to indemnify and hold harmless the Owner from all claims for bodily injury and property damage, other than to the Work itself and other property insured under section 10.3, that may arise from the Construction Manager's or the Design Professional's services, but only to the extent that such claims result from the negligent acts or omissions of the Construction Manager or the Design Professional, respectively, or anyone for whose acts or omissions the Construction Manager or Design Professional, respectively, is liable. Such provisions shall be in a form no less protective of the Parties than the Construction Manager's Indemnity provided in ConsensusDocs 801 (2011) or the Design Professional's indemnity provided in ConsensusDocs 803 (2011) respectively, and shall be reasonably satisfactory to the Owner and the Trade Contractor.

**10.1.4 ADJACENT PROPERTY INDEMNIFICATION** To the extent of the limits of Trade Contractor's Commercial General Liability Insurance specified in subsection 10.2.1 or Zero Dollars and No Cents (\$0.00) whichever is more, the Trade Contractor shall indemnify and hold harmless the Owner against any and all liability, claims, demands, damages, losses and expenses, including attorney's fees, in connection with or arising out of any damage or alleged damage to any of Owner's existing adjacent property that may arise from the performance of the Trade Contract Work, but only to the extent of the negligent acts or omissions of the Trade Contractor, Subcontractor or anyone employed directly or indirectly by any of them or by anyone for whose acts any of them may be liable.

**10.1.5 NO LIMITATION ON LIABILITY** In any and all claims against the Indemnitees by any employee of the Trade Contractor, anyone directly or indirectly employed by the Trade Contractor or anyone for whose acts the Trade Contractor may be liable, the indemnification obligation shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for the Trade Contractor under Workers' Compensation acts, disability benefit acts or other employment benefit acts.

## 10.2 TRADE CONTRACTOR'S INSURANCE

**10.2.1** Prior to the start of the Work, the Trade Contractor shall procure and maintain in force Workers Compensation/Employers' Liability Insurance, Business Automobile Liability Insurance, and Commercial General Liability Insurance (CGL). The CGL policy shall include coverage for liability arising from premises, operations, independent contractors, products-completed operations, personal injury and



advertising injury, contractual liability, and broad form property damage. The Trade Contractor's liability policies, as required in this Subparagraph 10.2.1, shall be written on an occurrence basis with at least the following limits of liability:

10.2.1.1 Workers' Compensation- amount required by the laws of Iowa

10.2.1.2 Employers' Liability Insurance - \$500,000 or an amount required by Iowa law, whichever is greater.

10.2.1.3 Business Automobile Liability Insurance

a. \$1,000,000 Each Accident

10.2.1.4 Commercial General Liability Insurance

a. \$1,000,000 Each Occurrence b. \$2,000,000 General Aggregate c. \$1,000,000

Products/Completed Operations Aggregate d. \$1,000,000 Personal and Advertising Injury Limit

10.2.2 The Trade Contractor Must also carry and maintain Excess or Umbrella Liability coverage for the policies in subsection 10.2.1 in the amounts as listed below:

Trade Contractor Contract Amount: <\$1,000,000 - \$2 Million Umbrella or more \$1,000,000 - \$5,000,000 - \$5 Million Umbrella or more >\$5,000,000 - \$10 Million Umbrella or more

10.2.3 The Trade Contractor shall maintain in effect all insurance coverage required under subsection 10.2.1 with insurance companies lawfully authorized to do business in Iowa. Such insurance companies shall have a minimum A.M. Best Rating of A-VI (Consult instructions and insurance advisor). If the Trade Contractor fails to obtain or maintain any insurance coverage required under this Agreement, the Owner may purchase such coverage and charge the expense to the Trade Contractor, or terminate this Agreement.

10.2.4 To the extent commercially available, the policies of insurance required under Subparagraph 10.2.1 shall contain a provision that the insurance company or its designee must give the Owner written notice transmitted in paper or electronic format: (a) 30 days before coverage is nonrenewed by the insurance company and (b) with 10 business days after cancelation of coverage by the insurance company. The Trade Contractor shall maintain completed operations liability insurance for one year after acceptance of the Contract Documents, whichever is longer. Prior to commencement of services, the Trade Contractor shall furnish the Owner with certificates evidencing the required coverages. In addition, if any insurance policy required under subsection 10.2.1 is not to be immediately replaced without a lapse in coverage when it expires, exhausts its limits, or is to be, cancelled, the Trade Contractor shall give Owner prompt written notice upon actual or constructive knowledge of such condition.

#### 10.2.5 ADDITIONAL LIABILITY COVERAGE

10.2.5.1 The Owner ☒ shall / ☐ shall not (indicate one) require the Trade Contractor to purchase and maintain liability coverage, primary to the Owner's coverage under subsection 10.3.1.

10.2.5.2 If required by subsection 10.2.5.1, the additional liability coverage required of the Trade Contractor shall be:

1. Additional Insured Owner shall be named as an additional insured on Trade Contractor's Commercial General Liability Insurance specified for operations and completed operations,



but only with respect to liability for bodily injury, property damage or personal and advertising injury to the extent caused by the negligent acts or omissions of Trade Contractor, or those acting on Trade Contractor's behalf, in the performance of Trade Contractor's Work for.

2. OCP Trade Contractor shall provide an Owners' and Contractors' Protective Liability Insurance ("OCP") policy with limits equal to the limits on Commercial General Liability Insurance specified or limits as otherwise required by Owner.

Any documented additional cost in the form of a surcharge associated with procuring the additional liability coverage in accordance with this subsection shall be paid by the Owner directly or the costs may be reimbursed by the Owner to the Trade Contractor by increasing the Trade Contract Price to correspond to the actual cost required to purchase and maintain the additional liability coverage. Prior to commencement of the Work, the Trade Contractor shall obtain and furnish to the Owner a certificate evidencing that the additional liability coverages have been procured.

10.2.6 PROFESSIONAL LIABILITY INSURANCE To the extent the Trade Contractor is required to procure design services under this Agreement, in accordance with section 3.14, the Trade Contractor shall require the designers to obtain professional liability insurance for claims arising from the negligent performance of professional services under this Agreement, with a company reasonably satisfactory to the Owner, including coverage for all professional liability caused by any of the Designer's(s') consultants, written for not less than \$1,000,000 per claim and in the aggregate with the deductible not to exceed \$2,000,000. The deductible shall be paid by the Designer.

### 10.3 OWNER'S INSURANCE

10.3.1 Deleted.

10.3.2 Deleted.

### 10.4 PROPERTY INSURANCE

10.4.1 Before the start of Trade Contract Work, the Owner shall obtain and maintain Builder's Risk Policy insurance with minimum coverage limits equal to the full cost of replacement of the Project at the time of loss. This insurance shall also name the Trade Contractor, Subcontractors, Material Suppliers, Construction Manager and Design Professional as insureds. This insurance shall be written as a Builder's Risk Policy or equivalent form to cover all risks of physical loss except those specifically excluded by the policy, and shall insure at least against the perils of fire, lightning, explosion, windstorm, hail, smoke, aircraft and vehicles, riot and civil commotion, theft, vandalism, malicious mischief, debris removal, flood (subject to sublimits), earthquake (subject to sublimits), earth movement, water damage, wind damage, testing if applicable, collapse however caused, and shall include coverage for, material, or equipment stored offsite, onsite or in transit. This policy shall provide for a waiver of subrogation in favor of the Trade Contractor, Subcontractors, Material Suppliers, Construction Manager and Design Professional. This insurance shall remain in effect until the Substantial Completion of the Work, final payment has been made or until no person or entity other than the Owner has an insurable interest in the property to be covered by this insurance, whichever is sooner. Partial occupancy or use of the Work shall not commence until the Owner has secured the consent of the insurance company or companies providing the coverage required in this Subparagraph 10.4.1.

10.4.2 If the Owner does not intend to purchase the property insurance required by this Agreement, including all of the coverages and deductibles described herein, the Owner shall give written notice to the Trade Contractor, the Design Professional and the Construction Manager before the Trade Contract





Work is commenced. The Trade Contractor may then provide insurance to protect its interests and the interests of the Subcontractors, including the coverage of deductibles. The cost of this insurance shall be charged to the Owner in a Change Order. The Owner shall be responsible for all of Trade Contractor's costs reasonably attributed to the Owner's failure or neglect in purchasing or maintaining the coverage described above.

10.4.2.1 The Owner will not obtain insurance to cover the risk of physical loss resulting from Terrorism. The Construction Manager is not required to purchase this type of insurance but may purchase this type of insurance if it chooses. If purchased, the cost of this insurance shall be borne by the Construction manager.

10.4.3 POLICIES The Owner shall provide the Trade Contractor with a copy of all policies including all endorsements upon request.

## 10.5 PROPERTY INSURANCE LOSS ADJUSTMENT

10.5.1 LOSS ADJUSTMENT Any insured loss shall be adjusted with the Owner and the Trade Contractor and made payable to the Owner as trustee for the insureds, as their interests may appear.

10.5.2 DISTRIBUTION OF PROCEEDS Following the occurrence of an insured loss, monies received will be deposited in a separate account and the trustee shall make distribution in accordance with the agreement of the Parties in interest.

## 10.6 WAIVERS

10.6.1 PROPERTY DAMAGE The Owner and Trade Contractor waive all claims and other rights they may have against each other for loss of or damage to (a) the Project, (b) all materials, machinery, equipment and other items used in accomplishing the Trade Contract Work or services or to be incorporated into the Project, while the same are in transit, at the Project Site, during erection and otherwise, and (c) all property owned by or in the custody of Owner and its affiliates, however such loss or damage shall occur, to the extent such damage is covered by property insurance. The proceeds of such insurance shall be held by the Owner as trustee.

10.6.2 WAIVER OF SUBROGATION The Owner shall have its insurers waive all rights of subrogation they may have against the Construction Manager, Design Professional, Trade Contractors, and their Subcontractors and Material Suppliers on all policies carried by the Owner on the Project and adjacent properties, including, after final payment, those policies to be provided on the completed Project not intended to insure the Project during construction.

10.6.3 ENDORSEMENT If the policies of insurance referred to in this section require an endorsement to provide for continued coverage where there is a waiver of subrogation, the Owner will cause them to be so endorsed.

10.7 RISK OF LOSS Except to the extent a loss is covered by property insurance carried by the owner, risk of loss or damage to the Work shall be upon the Trade Contractor until the Date of Final Completion, unless otherwise agreed to by the Parties.

## 10.8 BONDS Performance and Payment Bonds

☒ are

☐ are not

required of the Trade Contractor that meet the requirements of Iowa Code Chapter 573. A deposit in lieu of a



bond may be acceptable if it meets the requirements of Iowa Code Section 573.4. Such bonds shall be issued by a surety admitted in the State in which the Project is located and must be acceptable to the Owner. The Owner's acceptance shall not be withheld without reasonable cause. The penal sum of the Payment Bond and of the Performance Bond shall each be one hundred percent (100%) of the original Contract Price. Any increase in the Contract Price that exceeds ten percent (10%) in the aggregate shall require a rider to the Bonds increasing penal sums accordingly. Up to such ten percent (10%) amount, the penal sum of the Bond shall remain equal to one hundred percent (100%) of the Contract Price. The Trade Contractor shall endeavor to keep its surety advised of changes potentially impacting the Contract Time and Contract Price, though the Trade Contractor shall require that its surety waives any requirement to be notified of any alteration or extension of time. The Trade Contractor's Payment Bond for the Project, if any, shall be made available by the Owner for review and copying by the Subcontractor. Iowa Code Chapter 573 shall control and take precedence over any conflicting term or condition in this Agreement

## **ARTICLE 11 SUSPENSION, NOTICE TO CURE AND TERMINATION OF AGREEMENT**

### **11.1 SUSPENSION BY OWNER FOR CONVENIENCE**

11.1.1 OWNER SUSPENSION Should the Owner order the Trade Contractor in writing to suspend, delay, or interrupt the performance of the Trade Contract Work for such period of time as may be determined to be appropriate for the convenience of the Owner and not due to any act or omission of the Trade Contractor or any person or entity for whose acts or omissions the Trade Contractor may be liable, then the Trade Contractor shall immediately suspend, delay or interrupt that portion of the Trade Contract Work as ordered by the Owner. The Trade Contract Price and the Trade Contract Time shall be equitably adjusted by Trade Contract Change Order for the cost and delay resulting from any such suspension.

11.1.2 Any action taken by the Owner that is permitted by any other provision of the Trade Contract Documents and that results in a suspension of part or all of the Trade Contract Work does not constitute a suspension of Trade Contract Work under this section.

11.2 NOTICE TO CURE A DEFAULT If the Trade Contractor persistently refuses or fails to supply enough properly skilled workers, proper materials, or equipment to maintain the approved Construction Schedule in accordance with ARTICLE 6, or fails to make prompt payment to its workers, Subcontractors or Material Suppliers; disregards laws, ordinances, rules, regulations or orders of any public authority having jurisdiction; or is otherwise guilty of a material breach of a provision of this Agreement, the Trade Contractor may be deemed in default. If the Trade Contractor fails within seven (7) business Days after receipt of written notification to commence and continue satisfactory correction of such default with diligence and promptness, then the Owner shall give the Trade Contractor a second notice to correct the default within a three (3) Day period. If the Trade Contractor fails to promptly commence and continue satisfactory correction of the default following receipt of such second notice, the Owner without prejudice to any other rights or remedies may:

11.2.1 supply workers and materials, equipment and other facilities as the Owner or Construction Manager deems necessary for the satisfactory correction of the default, and charge the cost to the Trade Contractor, who shall be liable for the payment of same including reasonable Overhead, profit and attorneys' fees;

11.2.2 contract with Others to perform such part of the Trade Contract Work as the Owner or Construction Manager determines shall provide the most expeditious correction of the default, and charge the cost to the Trade Contractor;

11.2.3 withhold payment due the Trade Contractor in accordance with section 9.3; and

11.2.4 in the event of an emergency affecting the safety of persons or property, immediately commence



and continue satisfactory correction of such default as provided in subsections 11.2.1 and 11.2.2 without first giving written notice to the Trade Contractor, but shall give prompt written notice of such action to the Trade Contractor following commencement of the action.

### 11.3 OWNER'S RIGHT TO TERMINATE FOR DEFAULT

11.3.1 **TERMINATION BY OWNER FOR DEFAULT** If, within seven (7) Days of receipt of a notice to cure pursuant to section 11.2, the Trade Contractor fails to commence and satisfactorily continue correction of the default set forth in the notice to cure, the Owner may notify the Trade Contractor that it intends to terminate this Agreement for default absent appropriate corrective action within fourteen additional Days. After the expiration of the additional fourteen (14) Day period, the Owner may terminate this Agreement by written notice absent appropriate corrective action. Termination for default is in addition to any other remedies available to Owner under section 11.2. If the Owner's cost arising out of the Trade Contractor's failure to cure, including the cost of completing the Trade Contract Work and reasonable attorneys' fees, exceeds the unpaid Trade Contract Price, the Trade Contractor shall be liable to the Owner for such excess costs. If the Owner's costs are less than the unpaid Trade Contract Price, the Owner shall pay the difference to the Trade Contractor. In the event the Owner exercises its rights under this section, upon the request of the Trade Contractor the Owner shall furnish to the Trade Contractor a detailed accounting of the cost incurred by the Owner.

11.3.2 **USE OF TRADE CONTRACTOR'S MATERIALS, SUPPLIES AND EQUIPMENT** If the Owner or Others perform work under this section, the Owner shall have the right to take and use any materials, supplies and equipment belonging to the Trade Contractor and located at the Worksite for the purpose of completing any remaining Trade Contract Work. Immediately upon completion of the Work, any remaining materials, supplies or equipment not consumed or incorporated in the Trade Contract Work shall be returned to the Trade Contractor in substantially the same condition as when they were taken, reasonable wear and tear excepted.

11.3.3 If the Trade Contractor files a petition under the Bankruptcy Code, this Agreement may be terminated for cause at the may be terminated for cause at the Owner.

11.3.3 If the Trade Contractor files a petition under the Bankruptcy Code, this Agreement may be terminated for cause at the may be terminated for cause at the Owner.

11.3.4 The Owner shall make reasonable efforts to mitigate damages arising from Trade Contractor default, and shall promptly invoice the Trade Contractor for all amounts due pursuant to sections 11.2 and 11.3.

### 11.4 TERMINATION BY OWNER FOR CONVENIENCE

11.4.1 Upon written notice to the Trade Contractor, the Owner may, without cause, terminate this Agreement. The Trade Contractor shall immediately stop the Work, follow the Owner's or Construction Manager's instructions regarding shutdown and termination procedures, and strive to minimize any further costs.

11.4.2 If the Owner terminates this Agreement pursuant to this section, the Trade Contractor shall be paid:

11.4.2.1 for the Work performed to date including Overhead and profit; and

11.4.2.2 for all demobilization costs and costs incurred as a result of the termination but not including Overhead or profit on work not performed;

11.4.2A Upon written notice to the Trade Contractor the Owner has the right to terminate this





Agreement without penalty as a result of the following: 1) the legislature or governor fail to appropriate funds sufficient to allow the Owner to operate as required and fulfill its obligations under this Agreement, 2) funds are de-appropriated or not allocated, 3) the Owner's authorization to operate is withdrawn or there is a material alteration in the programs administered by the owner, or 4) the Owner's duties are substantially modified. If such a termination results then the Trade Contractor shall be paid in the manner set forth in subparagraph 11.4.2. If, however, an appropriation to cover the cost of this Agreement becomes available within sixty (60) days subsequent to termination under this paragraph then the Owner agrees to re-enter into a modified version of this Agreement that accounts for the termination and reinstatement.

11.4.3 If the Owner terminates this Agreement pursuant to sections 11.3 or 11.4, the Trade Contractor shall:

11.4.3 If the Owner terminates this Agreement pursuant to sections 11.3 or 11.4, the Trade Contractor shall:

11.4.3.1 execute and deliver to the Owner all papers and take all action required to assign, transfer and vest in the Owner the rights of the Trade Contractor to all materials, supplies and equipment for which payment has or will be made in accordance with the Trade Contract Documents and all subcontracts, orders and commitments which have been made in accordance with the Trade Contract Documents;

11.4.3.2 exert reasonable effort to reduce to a minimum the Owner's liability for subcontracts, orders and commitments that have not been fulfilled at the time of the termination;

11.4.3.3 cancel any subcontracts, orders and commitments as the Owner or Construction Manager directs; and

11.4.3.4 sell at prices approved by the Owner or Construction Manager any materials, supplies and equipment as the Owner or Construction Manager directs, with all proceeds paid or credited to the Owner.

## 11.5 TRADE CONTRACTOR'S RIGHT TO TERMINATE

11.5.1 Upon seven (7) Days' written notice to the Owner and Construction Manager, the Trade Contractor may terminate this Agreement if the Trade Contract Work has been stopped for a thirty (30) Day period through no fault of the Trade Contractor for any of the following reasons:

11.5.1.1 under court order or order of other governmental authorities having jurisdiction;

11.5.1.2 as a result of the declaration of a national emergency or other governmental act during which, through no act or fault of the Trade Contractor, materials are not available; or

11.5.1.3 suspension by the Owner for convenience pursuant to section 11.1

11.5.2 In addition, upon seven (7) Days' written notice to the Owner and Construction Manager, the Trade Contractor may terminate the Agreement if the Owner:

11.5.2.1 fails to furnish reasonable evidence pursuant to section 4.1.2 that sufficient funds are available and committed for Project financing, or

11.5.2.2 assigns this Agreement over the Trade Contractor's reasonable objection, or

11.5.2.3 fails to pay the Trade Contractor in accordance with this Agreement and the Trade Contractor has complied with the notice provisions of section 9.5, or



11.5.2.4 otherwise materially breaches this Agreement.

11.5.3 Upon termination by the Trade Contractor in accordance with this section, the Trade Contractor shall be entitled to recover from the Owner payment for all Trade Contract Work executed and for any proven loss, cost or expense in connection with the Trade Contract Work, including all demobilization costs plus reasonable Overhead and profit on work not performed.

11.6 OBLIGATIONS ARISING BEFORE TERMINATION Even after termination pursuant to ARTICLE 11, the provisions of this Agreement still apply to any Trade Contract Work performed, payments made, events occurring, costs charged or incurred or obligations arising before the termination date.

## ARTICLE 12 DISPUTE MITIGATION AND RESOLUTION

12.1 WORK CONTINUANCE AND PAYMENT Unless otherwise agreed in writing, the Trade Contractor shall continue the Trade Contract Work and maintain the Construction Schedule during any dispute mitigation or resolution proceedings. If the Trade Contractor continues to perform, the Owner shall continue to make payments in accordance with this Agreement.

12.2 DIRECT DISCUSSIONS If the Parties cannot reach resolution on a matter relating to or arising out of the Agreement, the Parties shall endeavor to reach resolution through good faith direct discussions between the Parties' representatives, who shall possess the necessary authority to resolve such matter and who shall record the date of first discussions. The authorized representative for the Trade Contractor is identified in Paragraph 3.4 of the Agreement. The authorized representative for the Owner is identified in Paragraph 4.2 of the Agreement. The parties' authorized representative are, among other things, authorized to resolve matters of disagreement and disputes between the Parties. If the dispute remains unresolved after fifteen (15) Days from the date of first discussion, the Parties shall submit such matter to the dispute mitigation and dispute resolution procedures selected herein.

12.3 MITIGATION The Parties agree that dispute mitigation procedures provided in this Project. Disputes remaining unresolved after direct discussions shall be directed to the selected mitigation procedure immediately below. The dispute mitigation procedure shall result in nonbinding finding on the matter. This may be introduced as evidence at a subsequent binding adjudication of the matter, as designee on Paragraph 12.5. The Parties agree that the dispute mitigation procedure shall be

(Designate only one.)

☒ Project Neutral

☐ Dispute Review Board

12.3.1 MITIGATION PROCEDURES The Project Neutral/Dispute Review Board shall be mutually selected and appointed by the Parties and shall execute a retainer agreement with the Parties establishing the scope of the Project Neutral/Dispute Review Board's responsibilities. The costs and expenses of the Project Neutral/Dispute Review Board shall be shared equally by the Parties. The Project Neutral/Dispute Review Board shall be available to either Party, upon request, throughout the course of the Project, and shall make regular visits to the Project so as to maintain an up-to-date understanding of the Project progress and issues and to enable the Project Neutral/Dispute Review Board to address matters in dispute between the Parties promptly and knowledgeably. The Project Neutral/Dispute Review Board shall issue nonbinding findings within five (5) business Days of referral of the matter to the Project Neutral, unless good cause is shown.

12.3.2 If the matter remains unresolved following the issuance of the nonbinding finding by the mitigation procedure or if the Project Neutral/Dispute Review Board fails to issue nonbinding findings





within five (5) Days of the referral, the Parties shall submit the matter to the binding dispute resolution procedure designated in section 12.5.

12.4 **MEDIATION** If direct discussions pursuant to section 12.2 do not result in resolution of the matter and no dispute mitigation procedure is selected under section 12.3, the Parties shall endeavor to resolve the matter by mediation through the current Construction Industry Mediation Rules of the American Arbitration Association, or the Parties may mutually agree to select another set of mediation rules. The administration of the mediation shall be as mutually agreed by the Parties. The mediation shall be convened within thirty (30) business Days of the matter first being discussed and shall conclude within forty-five (45) business Days of the matter first being discussed. Either Party may terminate the mediation at any time after the first session, but the decision to terminate shall be delivered in person by the terminating Party to the non-terminating Party and to the mediator. The costs of the mediation shall be shared equally by the Parties.

12.5 **BINDING DISPUTE RESOLUTION** If the matter is unresolved after submission of the matter to a mitigation procedure or to mediation, the Parties shall submit the matter to the binding dispute resolution procedure designated herein.

(Designate only one.)

☐ Arbitration using the current Construction Industry Arbitration Rules of the American Arbitration Association

☒ Litigation in either the state or federal court having jurisdiction of the matter in the location of the Project.

12.5.1 The costs of any binding dispute resolution procedures shall be borne by the non-prevailing Party, as determined by the adjudicator of the dispute. However, the costs of binding dispute resolution does not include attorney fees. The Parties are each responsible for paying for their own attorney fees.

12.5.2 **VENUE** The venue of any binding dispute resolution procedure shall be Des Moines, Iowa.

12.6 **MULTIPARTY PROCEEDING** All parties necessary to resolve a claim shall be parties to the same dispute resolution proceeding. Appropriate provisions shall be included in all other contracts relating to the Work to provide for the joinder or consolidation of such dispute resolution procedures.

12.7 **LIEN RIGHTS** The Trade Contractor acknowledges that it has no mechanic's lien rights on this Project because it is a public improvement project.

### **ARTICLE 13 MISCELLANEOUS PROVISIONS**

13.1 **ASSIGNMENT** Neither the Owner nor the Trade Contractor shall assign their interest in this Agreement without the written consent of the other except as to the assignment of proceeds. The terms and conditions of this Agreement shall be binding upon both Parties, their partners, successors, assigns and legal representatives. Neither Party to this Agreement shall assign the Agreement as a whole without written consent of the other. If either Party attempts to make such an assignment, that Party shall nevertheless remain legally responsible for all obligations under this Agreement, unless otherwise agreed by the other Party.

13.2 **GOVERNING LAW** This Agreement and all disputes arising there from shall be governed by the Iowa law.

13.3 **SEVERABILITY** The partial or complete invalidity of any one or more provisions of this Agreement shall not affect the validity or continuing force and effect of any other provision.



**13.4 NO WAIVER OF PERFORMANCE** The failure of either Party to insist, in any one or more instances, on the performance of any of the terms, covenants or conditions of this Agreement, or to exercise any of its rights, shall not be construed as a waiver or relinquishment of such term, covenant, condition or right with respect to further performance or any other term, covenant, condition or right.

**13.5 TITLES AND GROUPINGS** The titles given to the articles of this Agreement are for ease of reference only and shall not be relied upon or cited for any other purpose. The grouping of the articles in this Agreement and of the Owner's specifications under the various headings is solely for the purpose of convenient organization and in no event shall the grouping of provisions, the use of sections or the use of headings be construed to limit or alter the meaning of any provisions.

**13.6 ASSISTANCE OF COUNSEL AND INTERPRETATION** The Parties agree that they had the opportunity to obtain the assistance of counsel in reviewing the Agreement terms prior to execution. This Agreement shall be construed neither against nor in favor of either Party, but shall be construed in a neutral manner.

**13.7 RIGHTS AND REMEDIES** The Parties' rights, liabilities, responsibilities and remedies with respect to this Agreement, whether in contract, tort, negligence or otherwise, shall be exclusively those expressly set forth in this Agreement.

**13.8 ADDITIONAL PROVISIONS** (Insert here other provisions, if any, that pertain to this Agreement See Below.)

**13.9 COMPLIANCE WITH LAW AND REGULATIONS** The Trade Contractor shall comply with all applicable federal, state, and local laws, rules, ordinances, regulations and orders when performing services and/or performing work under this Agreement, including without limitation, all laws applicable to the prevention of discrimination in employment and the use of targeted small businesses as subcontractors or suppliers. The Trade Contractor declares that it has complied with all federal, state and local laws regarding business permits and licenses that may be required to provide the services and work required by this Agreement. The Trade Contractor further acknowledges that if this Project is a recipient of Federal financial assistance that it may be subject to requirements of Federal Acts and Executive Orders as mandated by Federal agencies having authority and jurisdiction to enforce and ensure compliance with such laws and regulations including, but not necessarily limited to, the Davis Bacon Act and other Federal Acts and Executive Orders.

**13.10 EMPLOYMENT PRACTICES:** It is the intent of the Iowa Department of Administrative Services to assure equal employment opportunity in all contract work as required by law. Vendors, are required to take affirmative action to ensure that applicants employed or seeking employment with them are treated equally as required by law. Vendors shall not illegally discriminate against any employee. During the course of the Project, the Vendor may be required to show compliance with the EEO and Affirmative Action requirements. Noncompliance with the provisions set forth at the time of contract award may result in termination or suspension of the Agreement in whole or in part. All vendors and service providers working under the terms of this Agreement are prohibited from engaging in discriminatory employment practices forbidden by Iowa law. Vendors shall complete and submit the Nondiscrimination Clause form for the Owner's approval.

**13.11 RECIPROCAL BIDDER PREFERENCE** In accordance with Iowa Code Section 73A.21, as amended in 2011 by HF 648, if the Trade Contractor is not a resident bidder of Iowa, as defined by law, then the Trade Contractor must specifically identify in writing with its bid any and all preferences or preferential treatment (including preferences related to labor) enforced by the state or foreign country in which the Trade Contractor is a resident. If the low bid Trade Contractor is not a resident bidder of Iowa and the Trade Contractor's foreign State of residence enforces such a preference then the Owner shall reciprocally enforce the preference in favor of a resident bidder of Iowa. Failure on the part of the Trade Contractor to completely and accurately abide by this legal requirement may, among other things, result in civil penalties and void this Agreement. The Trade Contractor should contact its attorney regarding this legal requirement if the Trade



Contractor has questions regarding its meaning or application.

13.12 LABOR RELATIONS The Trade Contractor shall comply with all Iowa and Federal labor laws. In accordance with Executive Order Number 69, issued by the Governor of Iowa on or about January 14, 2011, no project labor agreement (also known as a PLA), or similar, will be used on this Project. Iowa is a right to work state. No consultant, contractor, or employee shall be obligated to contract with or join any labor organization as a condition of performing work on this Project.

#### ARTICLE 14 TRADE CONTRACT DOCUMENTS

14.1 The Trade Contract Documents in existence at the time of execution of this Agreement are as follows:

RFBXXXXXXXXX Bid Package X

#### 14.2 INTERPRETATION OF TRADE CONTRACT DOCUMENTS

14.2.1 The drawings and specifications are complementary. If Trade Contract Work is shown only on one but not on the other, the Trade Contractor shall perform the Trade Contract Work as though fully described on both consistent with the Trade Contract Documents and reasonably inferable from them as being necessary to produce the indicated results.

14.2.2 In case of conflicts between the drawings and specifications, the specifications shall govern. In any case of omissions or errors in figures, drawings or specifications, the Trade Contractor shall immediately submit the matter to the Owner for clarification. The Owner's clarifications are final and binding on all Parties, subject to an equitable adjustment in Trade Contract Time or Price pursuant to ARTICLE 6 and ARTICLE 7 or dispute resolution in accordance with ARTICLE 12.

14.2.3 Where figures are given, they shall be preferred to scaled dimensions.

14.2.4 Any terms that have well-known technical or trade meanings, unless otherwise specifically defined in this Agreement, shall be interpreted in accordance with their well-known meanings. This Agreement entered into as of the date entered in ARTICLE 1.

14.2.5 PRECEDENCE In case of any inconsistency, conflict or ambiguity among the Trade Contract Documents, the documents shall govern in the following order: (a) Trade Contract Change Orders and written amendments to this Agreement; (b) this Agreement; (c) subject to subsection 14.2.2 the drawings, specifications and addenda issued prior to the execution of this Agreement; (d) approved submittals; (e) information furnished by the Owner pursuant to subsection 4.1.3; (f) other documents listed in this Agreement. Among all the Trade Contract Documents, the term or provision that is most specific or includes the latest date shall control. Information identified in one Trade Contract Document and not identified in another shall not be considered to be a conflict or inconsistency.

This Agreement entered into as of the date entered in ARTICLE 1.

OWNER State of Iowa, Department of Administrative Services



Trade Contractor: *Contractor Name*

By: \_\_\_\_\_

(Authorized Representative)

Name:

Title:

Date:

Owner: State of Iowa - DAS

By: \_\_\_\_\_

(Authorized Representative)

Name:

Title:

Date:

END OF DOCUMENT.





**SECTION 00 6000**

**PERFORMANCE AND PAYMENT BOND**

**PART 1 - GENERAL**

**1.01 PERFORMANCE AND PAYMENT BOND**

- A. Performance and payment bonds to be used on this project, ConsensusDocs 260 and 261 are attached for reference following this page. ConsensusDocs performance and payment bonds are not required (other standard forms are acceptable to the State of Iowa).

**PART 2 - PRODUCTS – NOT USED**

**PART 3 - EXECUTION – NOT USED**

**END OF SECTION**



# **CONSENSUSDOCS 260** **PERFORMANCE BOND**

This document was developed through a collaborative effort of organizations representing a wide cross-section of the design and construction industry. The organizations endorsing this document believe it represents a fair allocation of risk and responsibilities for all project participants.

Endorsing organizations recognize that this document must be reviewed and adapted to meet specific needs and applicable laws. This document has important legal and insurance consequences. You are encouraged to consult legal, insurance and surety advisors before completing or modifying this document. The software includes a notes section indicating where information is to be inserted to complete this document. Further information and endorsing organizations' perspectives are available at [www.consensusdocs.org/guidebook](http://www.consensusdocs.org/guidebook).

For Use with ConsensusDOCS 200, Standard Form of Agreement and General Conditions Between Owner and Constructor (Where the Contract Price is a Lump Sum) and ConsensusDOCS 500, Standard Agreement and General Conditions Between Owner and Construction Manager.

The Owner, \_\_\_\_\_, (the "Owner") and the Constructor, \_\_\_\_\_, (the "Constructor") have entered into a Contract (the "Contract") dated \_\_\_\_\_ for \_\_\_\_\_ (the "Project"). The Contract is incorporated by reference into this Performance Bond (the "Bond").

By virtue of this Bond, the Constructor as Principal and \_\_\_\_\_ as Surety ("Surety"), are bound to the Owner as Obligee in the maximum amount of \_\_\_\_\_ Dollars (\$ \_\_\_\_\_) (the "Bond Sum"). The Constructor and Surety hereby bind themselves, their heirs, executors,

---

**IMPORTANT:** A vertical line in the margin indicates a change has been made to the original text. Prior to signing, recipients may wish to request from the party producing the document a "redlined" version indicating changes to the original text. Consultation with legal and insurance counsel and careful review of the entire document are strongly encouraged.

ConsensusDOCS 260 • PERFORMANCE BOND Copyright © 2007, Revised 2009 and 2011, ConsensusDOCS LLC. AN INDIVIDUAL PURCHASE OF THIS DOCUMENT PERMITS THE USER TO PRINT ONE CONTRACT FOR ONE PROJECT ONLY. YOU MAY ONLY MAKE COPIES OF A COMPLETED DOCUMENT FOR DISTRIBUTION TO PARTIES IN DIRECT CONNECTION WITH THE SPECIFIC CONSTRUCTION PROJECT. ANY OTHER USES, INCLUDING COPYING THE DOCUMENT, ARE STRICTLY PROHIBITED.

administrators, successors and assigns, jointly and severally, as provided herein.

1. **GENERAL CONDITIONS** It is the condition of this Bond that if the Constructor performs its Contract obligations (the "Work"), the Surety's obligations under this Bond are null and void. Otherwise the Surety's obligations shall remain in full force and effect. The Surety waives any requirement to be notified of alterations or extensions of time made by the Owner in the Contract. The Owner may not invoke the provisions of this Bond unless the Owner has performed its obligations pursuant to the Contract. Upon making demand on this Bond, the Owner shall make the Contract Balance (the total amount payable by the Owner to the Constructor pursuant to the Contract less amounts properly paid by the Owner to the Constructor) available to the Surety for completion of the Work.

2. **SURETY OBLIGATIONS** If the Constructor is in default pursuant to the Contract and the Owner has declared the Constructor in default, the Surety promptly may remedy the default or shall:

- a. Complete the Work, with the consent of the Owner, through the Constructor or otherwise;
- b. Arrange for the completion of the Work by a Constructor acceptable to the Owner and secured by performance and payment bonds equivalent to those for the Contract issued by a qualified surety. The Surety shall make available as the Work progresses sufficient funds to pay the cost of completion of the Work less the Contract Balance up to the Bond Sum; or
- c. Waive its right to complete the Work and reimburse the Owner the amount of its reasonable costs, not to exceed the Bond Sum, to complete the Work less the Contract Balance.

3. **DISPUTE RESOLUTION** All disputes pursuant to this Bond shall be instituted in any court of competent jurisdiction in the location in which the Project is located and shall be commenced within two years after default of the Constructor or Substantial Completion of the Work, whichever occurs first. If this provision is prohibited by law, the minimum period of limitation available to sureties in the jurisdiction shall be applicable.

This Bond is entered into as of \_\_\_\_\_.

SURETY \_\_\_\_\_ (seal)

By: .....

Print Name: \_\_\_\_\_

Print Title: \_\_\_\_\_

(Attach Power of Attorney)

Witness: .....

CONSTRUCTOR \_\_\_\_\_ (seal)

By: .....

Print Name: \_\_\_\_\_

Print Title: \_\_\_\_\_

Witness: .....

(Additional signatures, if any, appear on attached page)



# **CONSENSUSDOCS 261** **PAYMENT BOND**

This document was developed through a collaborative effort of organizations representing a wide cross-section of the design and construction industry. The organizations endorsing this document believe it represents a fair allocation of risk and responsibilities for all project participants.

Endorsing organizations recognize that this document must be reviewed and adapted to meet specific needs and applicable laws. This document has important legal and insurance consequences. You are encouraged to consult legal, insurance and surety advisors before completing or modifying this document. The software includes a notes section indicating where information is to be inserted to complete this document. Further information and endorsing organizations' perspectives are available at [www.consensusdocs.org/guidebook](http://www.consensusdocs.org/guidebook).

For Use with ConsensusDOCS 200, Standard Form of Agreement and General Conditions Between Owner and Constructor (Where the Contract Price is a Lump Sum) and ConsensusDOCS 500, Standard Agreement and General Conditions Between Owner and Construction Manager.

The Owner, \_\_\_\_\_, (the "Owner ")  
 and the Constructor, \_\_\_\_\_,  
 (the "Constructor") have entered into a Contract (the "Contract") dated \_\_\_\_\_ for  
 \_\_\_\_\_ (the "Project"). The Contract is  
 incorporated by reference into this Payment Bond (the "Bond").

By virtue of this Bond, the Constructor as Principal and \_\_\_\_\_ as  
 Surety ("Surety"), are bound to the Owner as Obligee in the maximum amount of  
 \_\_\_\_\_ Dollars (\$ \_\_\_\_\_) (the  
 "Bond Sum"). The Constructor and Surety hereby bind themselves, their heirs, executors,

**IMPORTANT:** A vertical line in the margin indicates a change has been made to the original text. Prior to signing, recipients may wish to request from the party producing the document a "redlined" version indicating changes to the original text. Consultation with legal and insurance counsel and careful review of the entire document are strongly encouraged.

ConsensusDOCS 261 • PAYMENT BOND Copyright © 2007, Revised 2009 and 2011, ConsensusDOCS LLC. AN INDIVIDUAL PURCHASE OF THIS DOCUMENT PERMITS THE USER TO PRINT ONE CONTRACT FOR ONE PROJECT ONLY. YOU MAY ONLY MAKE COPIES OF A COMPLETED DOCUMENT FOR DISTRIBUTION TO PARTIES IN DIRECT CONNECTION WITH THE SPECIFIC CONSTRUCTION PROJECT. ANY OTHER USES, INCLUDING COPYING THE DOCUMENT, ARE STRICTLY PROHIBITED.



administrators, successors and assigns, jointly and severally, as provided herein.

1. **GENERAL CONDITIONS** It is the condition of this Bond that if the Constructor promptly makes payment of all sums for all labor, materials, and equipment furnished for use in the performance of the work required by the Contract, the Surety's obligations pursuant to this Bond are null and void. Otherwise the Surety's obligations shall remain in full force and effect. The Surety waives any requirement to be notified of alterations or extensions of time made by the Owner in the Contract.

2. **SURETY OBLIGATION** Every Claimant who has not been paid in full before the expiration of a period of ninety (90) Days after such Claimant provided or performed the last of the work or labor, or furnished the last of the materials for which said claim is made, may have a right of action on this Bond. The Surety's obligation to the Claimant(s) shall not exceed the Bond Sum.

3. **LIMITATION OF ACTION** No suit or action shall be commenced on this Bond by any Claimant:

a. Unless Claimant, other than one having a direct Contract with the Constructor, shall have given written notice to the Constructor, the Owner and the Surety within ninety (90) Days after the Claimant provided or performed the last of the work or labor, or furnished the last of the materials for which the claim is made, stating with substantial accuracy the amount claimed and the name of the Party to whom the materials were furnished, or for whom the work or labor was provided or performed. Such notice shall be served by any means which provides written third party verification of delivery to the Constructor at any place it maintains an office or conducts business, or served in any manner in which legal process may be served in the state in which the Project is located.

b. After the expiration of one (1) year from the date on which the Claimant last performed labor or furnished materials or equipment on the Project. If this provision is prohibited by law, the minimum period of limitation available to sureties in the jurisdiction shall be applicable.

c. Other than in any court of competent jurisdiction in the location in which the Project is located.

4. **CLAIMANT** A Claimant is defined as an individual or entity having a direct contract with the Constructor or having a contract with a subcontractor having a direct contract with the Constructor to furnish labor, materials or equipment for use in the performance of the Contract.

This Bond is entered into as of \_\_\_\_\_.

SURETY \_\_\_\_\_ (seal)

By: .....

Print Name: \_\_\_\_\_

Print Title: \_\_\_\_\_

(Attach Power of Attorney)

Witness: .....

CONSTRUCTOR \_\_\_\_\_ (seal)

By: .....

Print Name: \_\_\_\_\_

Print Title: \_\_\_\_\_

Witness: .....

(Additional signatures, if any, appear on attached page)

**SECTION 01 1200**

**CONTRACT SUMMARY**

**PART 1 - GENERAL**

**1.01 SECTION INCLUDES**

- A. Project Information
- B. Project Summary
- C. Bid Scope Summary
- D. Work Hour Restrictions
- E. Access to Site
- F. Coordination with Occupants
- G. Rules for Construction Workers
- H. Bid Package Instructions

**1.02 PROJECT INFORMATION**

- A. Facility Name/Location: Iowa Medical and Classification Center (IMCC), 2700 Coral Ridge Ave, Coralville, IA, 52241
- B. DAS Project #: 9064.00
- C. Owner: State of Iowa, Department of Administrative Services, Hoover State Office Building, Level 3, 1305 East Walnut Street, Des Moines, IA 50319
- D. Owner's Representative: Jennifer Kleene, Iowa Department of Administrative Services, 109 SE 13th Street, Des Moines, IA 50319
- E. Construction Manager: Jerry Dehnke, The Samuels Group, 317 6<sup>th</sup> Ave suite 720, Des Moines, IA 50309

**1.03 PROJECT SUMMARY**

- A. The project includes the replacement of approximately 24 security doors, frames, and misc. door hardware items. The project also includes the addition of concrete stoop footing and removal/replacement of 5" PCC paving.
- B. Target date to provide substantial completion is November, 1st, 2019.

**1.04 BID SCOPE SUMMARY**

- A. Scope Applicable to All Bid Packages:
  - 1. The Contractor's Work includes all labor, supervision, materials, equipment, services, supplies, tools, facilities, transportation, hoisting, storage, receiving, licenses, inspections, certifications, overhead, profit, or other items required or reasonably inferable to properly and timely perform and complete all work and services to be performed by the Contractor pursuant to this Agreement. Unless specifically stated otherwise, incidental work required to accomplish the work of this Bid Package shall be included the bid. This would include, but not be limited to, temporary facilities, protection of the work, security of equipment, materials, and work in progress, etc. Contractor's Work shall be performed in accordance with the Drawings, Specification Divisions 00 and 01, and Specification sections applicable to each Contractor's scope.
  - 2. Contractor is responsible for all labor and equipment to unload, account for all material delivered, stock, and delivery for this scope of work. Storage and delivery of materials and equipment at the Site shall be permitted only to the extent approved in advance by the Construction Manager, and if anything so stored obstructs the progress of any portion of the work, it shall be promptly removed or relocated by the Contractor without reimbursement.

3. On site supervision by Prime Contractor at all times work by that contractor or their subcontractors/suppliers is taking place.
4. Provide all temporary facilities required for this scope of work including trailer, trailer power, telephone, secured storage, temporary power for work, temporary and task lighting for work, etc. as determined necessary by Contractor. Coordinate location of trailers, material storage and utility lines with Construction Manager. Limited space is available, and permission to bring any such facility or excess materials on to the site shall be approved by the Construction Manager.
5. Contractor shall provide all equipment and tools for Contractor's own cleanup. Clean up shall be done at end of every shift or more frequently if required for the Contractor to perform their work, for other Contractors to perform their work, as required by the Owner's operations, and at the discretion of the Construction Manager.
6. All turf, landscaping, and subgrade disturbances caused by equipment traffic or other activities related to the Contractor's scope shall be repaired or restored to proper conditions by the Contractor.
7. Protect adjacent existing building elements from damage from Scope of work. Repair existing building elements damaged during Contractor's Scope of work.
8. Coordinate staging of materials with owner.
9. All tools shall be required to be placed under tool control with the facility as they enter and exit the facility. Tool control includes the recording of all tools entering and leaving the facility and the recording of all tools at the end of the day. ANY TOOLS OR ITEMS FOUND MISSING DURING TOOL CONTROL SHALL REQUIRE ALL PERSONNEL TO REMAIN ON SITE UNTIL SUCH LISTED ITEM IS RECOVERED.
10. Contractor personnel shall immediately report lost or missing tools.
11. The owner has limited resources for escorting individuals in and out of the facility. The contractor shall conduct construction activities to minimize the amount of travel in and out of the facility during the construction work day.

#### **1.05 WORK HOUR RESTRICTIONS**

- A. Work hours are from 7:00 AM to 3:30 PM, Monday through Friday unless arrangements are made in advance. No work shall be allowed on days recognized by the State of Iowa as holidays.

#### **1.06 CONTRACTOR USE OF SITE AND PREMISES**

- A. Construction Operations: Limited to areas noted on Drawings.
- B. Provide access to and from site as required by law and Owner:
  1. Emergency Building Exits During Construction: Keep all exits required by code open during construction period; provide temporary exit signs if exit routes are temporarily altered.
  2. Do not obstruct roadways, sidewalks, or other public ways without permission of Owner and permit if required.
- C. Facility will be occupied at all times during duration of work. Contractor personnel shall conduct themselves in an agreeable manner at all times. Failure to do so may result in removal from the work site.

#### **1.07 OWNER OCCUPANCY**

- A. Owner intends to occupy the Project upon Substantial Completion.
- B. Cooperate with Owner to minimize conflict and to facilitate Owner's operations.
- C. Schedule the Work to accommodate Owner occupancy.

#### **1.08 RULES FOR CONSTRUCTION WORKERS**

- A. The staff of the State of Iowa has a responsibility to protect the public by providing a secure environment. All work site rules must be followed to the letter, at all times.
- B. All construction workers must have a background check completed prior to entering the campus to perform work.
- C. Hot Work Permit Processes and Fire Watch, when necessary, will be adhered to for this project.
- D. All State properties are tobacco free. No smoking will be permitted or tolerated on campus unless in designated areas.
- E. You are permitted access only to the work site and no other area of the institution.
- F. No drugs, alcohol, or firearms are allowed on the work site.
- G. Do not leave money, drugs, alcohol, or firearms in your personal vehicle.
- H. Company and personal vehicles are to be parked and locked in designated or authorized area of the work.
- I. Secure all tools at the end of the day.
- J. Maintain control of all tools, supplies, and debris at all times during the work.
- K. Never leave keys in any vehicle. If a security officer finds keys in a vehicle, they are under orders to turn them in to a security supervisor.
- L. Do not give anything to residents or take anything from residents; if they offer, inform your supervisor.
- M. Secure all tools at the end of each day. Never leave tools unattended. All tools shall be checked in at the beginning of the day and checked out at the end of the day. If security officers find loose tools, they are under orders to turn them in to their supervisor.
- N. All delivery vehicles must go directly to the job site. Extra time should be anticipated for all deliveries. Provide 24-hour notice to the facility of deliveries.
- O. During an emergency, follow the instructions of the security staff.
- P. Contractor shall wear clothing of a different color, pattern, fashion, etc. as to distinguish themselves from inmates.
- Q. Contractors shall conduct all construction work under OSHA compliance.

#### **1.09 BID PACKAGE INSTRUCTIONS**

- A. **Bid Package #01 – IMCC Door Replacement:** Trade Contractor shall include all of the following, but not limited to, as part of the contract:
  - 1. IMCC Door Replacement
  - 2. Drawing A101, A102, A600, and A601
  - 3. Includes specification Divisions: 02 as applies
  - 4. Includes specification Divisions: 07, 08, 09, 26, and 28
- B. **Bid Package #02 – IMCC Stoop and Paving at Door 30:** Trade Contractor shall include all of the following, but not limited to, as part of the contract:
  - 1. Stoop and Paving replacement at Door 30
  - 2. All work associated to Drawing A103.
  - 3. Includes specification: 02 4113 as applies
- C. **Bid Package #03 – IMCC Door Replacement Project:** Trade Contractor shall include all of the following, but not limited to, as part of the contract:
  - 1. IMCC Door Replacement Project.
  - 2. All work associated to the IMCC Door Replacement Project in its entirety.
  - 3. Includes specification divisions: 02, 07, 08, 09, 26, and 28.
- D. **Alternate #01 – Replace Door Panel at Door 13:** Trade Contractor shall include all of the following, but not limited to, as part of the contract:
  - 1. Replacement of door panel at Door 13.
  - 2. Section 08 3463 and drawing numbers A102 and A600 including replace panel of door 13 with new detention door in existing frame. Reuse all existing hardware.

3. 09 9600 as applies.
  4. Stenciling as described by General Note 9 on sheet A101.
  5. Coordination: Revise or adjust affected adjacent work as necessary to completely integrate work of the alternate into Project.
  6. Include as part of each alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not indicated as part of alternate.
  7. Execute accepted alternates under the same conditions as other work of the Contract.
- E. **Alternate #02** – Replace Door and Frame of Door 24: Trade Contractor shall include all of the following, but not limited to, as part of the contract:
1. Replacement of door and frame of Door 24.
  2. Sections 08 3463, 08 7163, and 08 8853 and Drawing number A101, A102, A600, and A601 including replace door and frame. Provide new hardware except reused existing electric lock.
  3. Omit base bid work associated with Door 24 – Repair of frame, replacement of door and certain hardware.
  4. Coordination: Revise or adjust affected adjacent work as necessary to completely integrate work of the alternate into Project.
  5. Include as part of each alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not indicated as part of alternate.
  6. Execute accepted alternates under the same conditions as other work of the Contract.
- F. **Work Performed by Owner:** The IMCC facility will perform the following work items:
1. Relocate all moveable furniture, fixtures and equipment (FF&E), including window treatments; and personal materials from each sequenced work area prior to demolition and construction activities and after new construction is completed.
  2. Owner shall disconnect lock controls in the security office prior to the contractor beginning work on a door. Contractor shall coordinate disconnection of door controls with the owner.
- G. **Owner Furnished Products:** The IMCC facility will provide the following materials for installation by the contractor:
1. None noted

**PART 2 - PRODUCTS – NOT USED**

**PART 3 - EXECUTION – NOT USED**

**END OF SECTION**



## **SUBSTITUTION PROCEDURES**

### **PART 1 - GENERAL**

#### **1.01 SECTION INCLUDES**

- A. Substitution Procedures
- B. Request for Substitution form

### **PART 2 - PRODUCTS – NOT USED**

### **PART 3 - EXECUTION**

#### **3.01 SUBSTITUTION PROCEDURES**

- A. Where the Bidding Documents stipulate a specific product be provided by naming one or more manufacturer and model, and include a statement such as “or equal”, “equal to”, “equivalent to”, or “basis of design”, a substitute product will be considered when written request is received by the date and time identified in Section 00 2113 INSTRUCTIONS TO BIDDERS.
- B. The written request shall be on the “Request for Substitution” form included in the Project Manual. If no such form is included, the request shall be provided on the letterhead of the company making the request.
- C. Subsequently, substitutions will be viewed in the context of a Change Order to the Contract, and consideration will only be given in the event a product becomes unavailable or not practical due to no fault of the Contractor, or the substitution is substantially to the Owner’s advantage (equal product for less cost or higher quality product at no change in Contract Sum).
- D. Document each substitution request with complete data substantiating compliance of the proposed substitution with the Bidding Documents. Each request shall identify the specified product for which the substitution is requested, and shall clearly describe the product for which approval is requested. The burden shall be on the requester to demonstrate the proposed substitute product’s suitability for use in the Work and its equivalency or superiority in function, appearance, quality, and performance with the product named in the Bidding Documents.
- E. A description of any changes to the Bidding Documents that the proposed substitution will require shall be included with the request. The requester shall affirm that dimensions shown on the Drawings will not be affected by the substitute product, and that it will have no adverse effect on other trades, the construction schedule, or specified warranty requirements. The request for use of a substitute product shall be signed by an authorized representative of the firm submitting the request, who shall state that the firm will pay for any changes to the building design, including Design Professional’s design, detailing, and construction cost caused by the requested substitution if the substitution is approved for use in the Work.
- F. All such substitute products approved for use in the Work during the established period of time before receipt of Bids will be identified in a subsequent Addendum to the Bidding Documents.

#### **3.02 REQUEST FOR SUBSTITUTION FORM**

- A. A Request for Substitution Form is attached following this page.

**END OF SECTION**

## SUBSTITUTION REQUEST FORM

Project: \_\_\_\_\_ Substitution Request Number: \_\_\_\_\_  
\_\_\_\_\_  
From: \_\_\_\_\_  
To: \_\_\_\_\_ Date: \_\_\_\_\_  
\_\_\_\_\_  
A/E Project Number: \_\_\_\_\_  
Re: \_\_\_\_\_

Specification Title: \_\_\_\_\_ Description: \_\_\_\_\_  
Section: \_\_\_\_\_ Page: \_\_\_\_\_ Article/Paragraph: \_\_\_\_\_

Proposed Substitution: \_\_\_\_\_  
Manufacturer: \_\_\_\_\_ Address: \_\_\_\_\_ Phone: \_\_\_\_\_  
Trade Name: \_\_\_\_\_ Model No.: \_\_\_\_\_  
\_\_\_\_\_

History: ☐ New product ☐ 2-5 years old ☐ 5-10 yrs old ☐ More than 10 years old

Differences between proposed substitution and specified product: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

☐ Point-by-point comparative data prepared by contractor and attached - REQUIRED BY A/E

Reason for not providing specified item: \_\_\_\_\_  
\_\_\_\_\_

### Similar Installation:

Project: \_\_\_\_\_ Architect: \_\_\_\_\_  
Address: \_\_\_\_\_ Owner: \_\_\_\_\_  
\_\_\_\_\_ Date Installed: \_\_\_\_\_

Proposed substitution affects other parts of Work: ☐ No ☐ Yes; explain \_\_\_\_\_  
\_\_\_\_\_

Supporting Data Attached: ☐ Drawings ☐ Product Data ☐ Samples ☐ Tests ☐ Reports ☐ \_\_\_\_\_

## SUBSTITUTION REQUEST FORM

(Continued)

The Undersigned certifies:

- Proposed substitution has been fully investigated and determined to be equal or superior in all respects to specified product.
- Same warranty will be furnished for proposed substitution as for specified product.
- Same maintenance service and source of replacement parts, as applicable, is available.
- Proposed substitution will have no adverse effect on other trades and will not affect or delay progress schedule.
- Cost data as stated above is complete. Claims for additional costs related to accepted substitution which may subsequently become apparent are to be waived.
- Proposed substitution does not affect dimensions and functional clearances.
- Payment will be made for changes to building design, including A/E design, detailing, and construction costs caused by the substitution.
- Coordination, installation, and changes in the Work as necessary for accepted substitution will be complete in all respects.

Submitted by: \_\_\_\_\_

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

Firm: \_\_\_\_\_

Address: \_\_\_\_\_

Telephone: \_\_\_\_\_

Attachments: \_\_\_\_\_

### A/E's REVIEW AND ACTION

- ☐ Substitution approved - Make submittals in accordance with Specification Section 01 3300.
- ☐ Substitution approved as noted - Make submittals in accordance with Specification Section 01 3300.
- ☐ Substitution rejected - Use specified materials.
- ☐ Substitution Request received too late - Use specified materials.

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

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

Additional Comments: ☐ Contractor ☐ Subcontractor ☐ Supplier ☐ Manufacturer ☐ A/E ☐ \_\_\_\_\_

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**SECTION 01 2600**

**CONTRACT MODIFICATION PROCEDURES**

**PART 1 - GENERAL**

**1.01 SECTION INCLUDES**

- A. Change procedures

**1.02 CHANGE PROCEDURES**

- A. The Design Professional will advise of minor changes in the work not involving an adjustment to Contract Sum/Price or contract time as authorized.
- B. The Construction Manager may issue a Proposal Request that includes a detailed description of a proposed change with supplementary or revised drawings and specifications and a change in contract time for executing the change as provided by the Design Professional. The Trade Contractor will prepare and submit an estimate within 7 calendar days. Estimates shall be provided for the project at no cost, regardless of acceptance or rejection of proposal.
- C. The Trade Contractor may propose changes by submitting a Request for Information to the Construction Manager, describing the proposed change and its full effect on the work. Include a statement describing the reason for the change, and the effect on the Contract Sum/Price and contract time with full documentation and a statement describing the effect on work by separate or other contractors. Document any requested substitutions in accordance with the specifications. Construction Manager will forward the Request for Information on to the Design Professional for their official response.
- D. Stipulated Sum/Price Change Order: Based on executed Change Order and contractor's fixed price quotation.
- E. Unit Price Change Order: The change order will be executed on a fixed unit price basis for pre-determined unit prices and quantities. Changes in contract price or contract time will be computed as specified for time and material change orders.
- F. Time and Material Change Order: The change order will be executed on a not to exceed basis. Design professional and Construction Manager will determine the not to exceed estimated cost based on contractor's proposal for hourly rates and material costs. Maintain detailed records of work done on time and material basis. Time and Material tickets must be submitted daily to the Construction Manager for verification. Provide full information required for evaluation of proposed changes, and to substantiate costs for changes in the work. Submit itemized account and supporting data after completion of change. A final deductive change order will be issued to reconcile final cost to the initial change order.
- G. Change Order Forms: CONSENSUSDOC Forms provided by Owner.
- H. Execution of Change Orders: The Construction Manager will issue change orders for signature of parties as provided in the Conditions of the Contract.
- I. With respect to pricing change orders, the percentage mark-up for overhead and profit is subject to the following limits:
  - 1. Fifteen (15) percent maximum for work directly performed by employees of the Constructor, Subcontractor or Sub-subcontractor.
  - 2. Five (5) percent maximum for work performed or passed through by a Subcontractor and passed through to the Owner by the Constructor.
  - 3. Five (5) percent maximum Subcontractor's mark-up for Work performed by a Sub-Subcontractor and passed through to the Owner by the Subcontractor and Constructor.
  - 4. The maximum allowable mark-up shall be twenty-five (25) percent passed through to the Owner by the Constructor under any circumstances. Overhead and profit shall be shown separately for the Constructor and each Subcontractor of any tier performing the Change Order Work.



- J. Contractor and subcontractor agree to provide and require all suppliers to provide, a detailed breakdown of labor, labor burden, materials, installation, rental, and fuel costs.
- K. **Please refer to Article 8 of CONSENSUDOCS 802- STANDARD FORM OR AGREEMENT BETWEEN OWNER AND TRADE CONTRACTOR for additional Change Procedures.**

**PART 2 - PRODUCTS – NOT USED**

**PART 3 - EXECUTION – NOT USED**

**END OF SECTION**

## **SECTION 01 2900**

### **PAYMENT PROCEDURES**

#### **PART 1 - GENERAL**

##### **1.01 SECTION INCLUDES**

- A. Schedule of values
- B. Application for payment

##### **1.02 SCHEDULE OF VALUES**

- A. Coordination: Trade Contractor will coordinate preparation of the Schedule of Values with preparation of the Construction Manager's Construction Schedule.
  - 1. Correlate line items in the Schedule of Values with other required administrative forms and schedules, including Application for Payment forms with Continuation Sheets, Submittals Schedule, and Construction Manager's Construction Schedule.
  - 2. Submit original Schedule of Values in EADOC within 14 days after date of Owner-Trade Contractor Agreement. Schedule of Values must be approved by Owner prior to submission for first application for payment.
- B. Format: Utilize the Table of Contents of this project manual. Identify each line item with number and title of the major specification section. Each major specification section should be further itemized by materials cost and labor cost. Identify site mobilization, bonds and insurance.
  - 1. Identification: Include the following Project identification on the Schedule of Values:
    - a. Project name and location.
    - b. Name and address of Owner, Trade Contractor, Construction Manager and Design Team.
    - c. DAS Project Number.
    - d. Date of Submittal.
  - 2. Revise the Schedule of Values to list approved Change Orders with each Application for Payment.

##### **1.03 APPLICATIONS FOR PAYMENT**

- A. Each Application for Payment shall be consistent with previous applications for payments as certified by the Design Professional and paid for by Owner.
  - 1. Application for Payment at time of Substantial Completion and final Application for Payment involve additional requirements.
- B. Payment Application Times: The date for each progress payment is indicated in the Agreement between Owner and Contractor. The period of construction work covered by each Application for Payment is the period indicated in the Agreement. Progress payments shall be submitted to the Construction Manager. Any request for payment for work completed prior to June 30<sup>th</sup> of any year needs to be submitted by July 15<sup>th</sup> of the same calendar year.
- C. Payment Application Forms: Use AIA form G702 and G703 as the form for the Application for Payment or an equivalent approved by the owner.
- D. Include lien waiver forms required by the owner when applicable.
- E. Application Preparation: Complete every entry on form. Notarize and execute by a person authorized to sign legal documents on behalf of the Trade Contractor. Construction Manager will return incomplete applications without action.
  - 1. Include amounts of Change Orders issued before last day of construction period covered by application.
- F. Waivers of Mechanic's Lien: If requested by Owner with each Application for Payment, submit waivers of mechanic's lien from every entity who is lawfully entitled to file a mechanic's lien arising out of the Contract and related to the Work covered by the payment when applicable.

1. Owner reserves the right to designate which entities involved in the Work must submit waivers.
2. Submit waivers of lien on forms, executed in a manner acceptable to Owner.
- G. Initial Application for Payment: Administrative actions and submittals that must precede submittal of first Application for Payment include the following:
  1. Schedule of Values
  2. Certificates of insurance and insurance policies.
  3. Lists of vendors and any subcontractors.
- H. Application for Payment at Substantial Completion: After issuing the Certificate of Substantial Completion, submit an Application for Payment showing 100 percent completion for the portion of the Work claimed as substantially complete.
  1. Include documentation supporting the claim that the Work is substantially complete and a statement showing an accounting of changes to the Contract Sum.
  2. This application shall reflect Certificates of Partial Substantial Completion issued previously for Owner occupancy of designated portions of the Work.
- I. Final Payment Application: Submit final Application for Payment with releases and supporting documentation not previously submitted and accepted, including, but not limited, to the following:
  1. Evidence of completion of Project closeout requirements.
  2. Insurance certificates for products and completed operations where required and proof that taxes, fees, and similar obligations were paid.
  3. Updated final statement, accounting for final changes to the Contract Sum.
  4. AIA Document G706, "Contractor's Affidavit of Payment of Debts and Claims."
  5. AIA Document G706A, "Contractor's Affidavit of Release of Liens."
  6. AIA Document G707, "Consent of Surety to Final Payment."
  7. Letter of Notification to all sub-contractors and suppliers of application for release of retainage.
  8. Evidence that claims have been settled.
- J. Payments will be made to the extent of the value of the work performed in the previous month less a retainage amount of 5% of the value of the work performed. Upon substantial completion for the entire work, a sum sufficient to decrease the total retained to 5% of the contract sum, plus such other retainage as the engineer shall determine for all incomplete work and unsettled claims will be authorized.

**PART 2 - PRODUCTS – NOT USED**

**PART 3 - EXECUTION – NOT USED**

**END OF SECTION**

**SECTION 01 3100**

**PROJECT MANAGEMENT AND COORDINATION**

**PART 1 - GENERAL**

**1.01 SECTION INCLUDES**

- A. Coordination
- B. Pre-construction meeting
- C. Progress meetings
- D. Coordination Meetings
- E. Requests for Interpretation (RFIs)
- F. Background Checks
- G. Utility Locates/Ground Penetrations

**1.02 COORDINATION**

- A. Coordinate scheduling, submittals, and work of the various sections of the project manual to ensure efficient and orderly sequence of installation of interdependent construction elements.
  - 1. Schedule construction operations in sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
  - 2. Coordinate installation of different components with other contractors to ensure maximum accessibility for required maintenance, service, and repair.
  - 3. Make adequate provisions to accommodate items scheduled for later installation.
- B. Administrative procedures: The Trade Contractor will coordinate scheduling and timing of required administrative procedures with other construction activities to avoid conflicts and ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:
  - 1. Preparation of Trade Contractor's Construction Schedule.
  - 2. Provide updated information for Construction Manager's Construction Schedule.
  - 3. Preparation of Schedule of Values.
  - 4. Delivery and processing of submittals.
  - 5. Progress meetings.
  - 6. Pre-installation conferences.
  - 7. Project closeout activities
- C. Verify utility requirements and characteristics of operating equipment are compatible with building utilities. Coordinate work of various sections having interdependent responsibilities for installing, connecting to, and placing in service, such equipment.
- D. Coordinate space requirements, supports, and installation of mechanical and electrical work, which are indicated diagrammatically on drawings. Follow routing shown for pipes, ducts, and conduit, as closely as practicable; place runs parallel with lines of building. Utilize spaces efficiently to maximize accessibility for other installations, for maintenance, and for repairs.
- E. In finished areas except as otherwise indicated conceal pipes and wiring within the construction. Coordinate locations of piping with finish elements.
- F. Coordinate completion and cleanup of work of separate sections in preparation for Substantial Completion.
- G. After owner occupancy of premises, coordinate access to site for correction of defective work and work not in accordance with Contract Documents, to minimize disruption of owner's activities.
- H. During construction coordinate use of site and facilities through Construction Manager.
- I. Comply with Construction Manager and Owner's procedures for intra-project communications; submittals, reports and records, schedules, coordination drawings, and recommendations; and resolution of ambiguities and conflicts.

- J. Make the following types of submittal to Architect through the Construction Manager via EADOCs:
1. Request for Information/Interpretation.
  2. Request for substitution.
  3. Shop drawings, product data, and samples.
  4. Test and inspection reports.
  5. Design data.
  6. Manufacturer's instructions and field reports.
  7. Applications for payment and change order requests.
  8. Progress schedules.
  9. Coordination drawings.
  10. Correction punch list and final correction punch list for substantial completion
  11. Closeout submittals

## **PART 2 - PRODUCTS – NOT USED**

## **PART 3 - EXECUTION**

### **3.01 PRE-CONSTRUCTION MEETING**

- A. The Construction Manager and Owner will schedule a meeting after Notice of Award.
- B. Required: Design Professional, Owner, Construction Manager, Trade Contractor and any Sub Contractors.
- C. Agenda:
1. Execution of Owner-Contractor Agreement.
  2. Submission of executed bonds and insurance certificates.
  3. Distribution of Contract Documents.
  4. Submission of list of subcontractors, list of products, schedule of values, and progress schedule.
  5. Designation of personnel representing the parties in Contract.
  6. Procedures and processing of field decisions, submittals, substitutions, applications for payments, proposal request, change orders, RFIs and contract closeout procedures
  7. Tentative construction schedule.
  8. Critical work sequencing and long-lead items.
  9. Procedures for testing and inspecting.
  10. Preparation of Record Documents.
  11. Safety Procedures.
  12. Owner's requirements.
  13. Security and housekeeping procedures.
  14. Background Checks.
  15. Responsibility for temporary facilities and controls.
  16. Construction waste management.
  17. Logistics (use of premise, parking, work restrictions, maintain egress, etc.)
- D. The Construction Manager is to record minutes and distribute copies within two days after meeting to participants, with one copy to owner, participants, and those affected by decisions made.

### **3.02 PROGRESS MEETINGS**

- A. The Construction Manager shall schedule and administer meetings throughout progress of the work at bi-weekly intervals.
- B. The Construction Manager is to make arrangements for meetings, prepare agenda with copies for participants, and preside at meetings, record minutes and distribute copies within two days to those affected by decisions made.

- C. Attendees may include: Project superintendent, major subcontractors and suppliers, Owner, Construction Manager, Architect/Engineer, as appropriate to agenda topics for each meeting. All participants at the conference call shall be familiar with the Project and authorized to conclude matters relating to the Work.
- D. Agenda:
  - 1. Review minutes of previous meetings.
  - 2. Review the Construction Manager's Construction Schedule.
  - 3. Field observations, problems, and decisions.
  - 4. Identification of problems that impede planned progress.
  - 5. Review of submittals schedule and status of submittals.
  - 6. Review of RFI's.
  - 7. Review of off-site fabrication and delivery schedules.
  - 8. Corrective measures to regain projected schedules.
  - 9. Planned progress during succeeding work period.
  - 10. Coordination of projected progress.
  - 11. Maintenance of quality and work standards.
  - 12. Effect of proposed changes on progress schedule and coordination.
  - 13. Other business relating to work.
  - 14. Access, temporary facilities and controls, housekeeping and progress cleaning.
  - 15. Safety.
  - 16. Status of proposal requests, pending changes, official Change Orders.
- E. Minutes:
  - 1. Following the meeting, the meeting minutes will be published in EADOC by the Construction Manager for all parties.

### **3.03 COORDINATION MEETINGS**

- A. Coordination meetings will be held at the discretion of the construction manager.

### **3.04 REQUESTS FOR INTERPRETATION (RFIs)**

- A. Procedure: Immediately on discovery of the need for interpretation of the Contract Documents, prepare and submit an RFI in EADOC.
  - 1. RFIs shall originate with Trade Contractor. RFIs submitted by entities other than Contractor will be returned with no response.
  - 2. Coordinate and submit RFIs in a prompt manner so as to avoid delays in the Work.
- B. Content of the RFI: Include a detailed, legible description of item needing interpretation and the following:
  - 1. Specification Section number and title and related paragraphs, as appropriate.
  - 2. Drawing number and detail references, as appropriate.
  - 3. Field dimensions and conditions, as appropriate.
  - 4. Trade Contractor's suggested solution(s). If Trade Contractor's solution(s) impact the Contract Time or the Contract Sum, Trade Contractor shall state impact in the RFI.
  - 5. Attachments: Include drawings, descriptions, measurements, photos, Product Data, Shop Drawings, and other information necessary to fully describe items needing interpretation.
- C. Design Professional's Action: Design Professional will review each RFI, determine action required, and return it. Allow seven (7) working days for Design Professional's response for each RFI. RFIs received after 1:00 p.m. will be considered as received the following working day. The following RFIs will be returned without action:
  - 1. Requests for approval of submittals.
  - 2. Requests for approval of substitutions.
  - 3. Requests for coordination information already indicated in the Contract Documents.
  - 4. Requests for adjustments in the Contract Time or the Contract Sum.
  - 5. Requests for interpretation of Design Professional's actions on submittals.



6. Incomplete RFIs or RFIs with numerous errors.
  7. Design Professional's action may include a request for additional information, in which case Design Professional's time for response will start again.
- D. Design Professional's action on RFIs that may result in a change to the Contract Time or the Contract Sum/Price.
1. If Trade Contractor believes the RFI response warrants change in the Contract Time or the Contract Sum, notify Construction Manager in writing within ten (10) days of receipt of the RFI response.
- E. On receipt of Design Professional's response in EADOC, review the response and notify Design Professional within seven (7) days if Trade Contractor disagrees with response.

### **3.05 BACKGROUND CHECKS**

- A. Background checks must be performed on all on site employees, including sub-contractors.
- B. The Contractor hereby explicitly authorized the Iowa DAS to conduct criminal history and/or other background investigation(s) of the Contractor, its officers, supervisory personnel, employees, and other staff retained by the Contractor or their sub-contractors for the performance of the contract.
- C. A state of Iowa record check request form will be provided at the pre-construction meeting. Information required may include:
1. Last Name
  2. First Name
  3. Middle Name
  4. Date of Birth
  5. State Driver's License or State ID #
  6. Social Security #

### **3.06 UTILITY LOCATES/GROUND PENETRATIONS**

- A. Call Iowa One Call at 800-292-8989 to request a locate
1. Requests must be least five (5) working days prior to ground penetration.

**END OF SECTION**

## SECTION 01 3100.01

### WEB BASED CONSTRUCTION MANAGEMENT

#### PART 1 - GENERAL

##### 1.01 DESCRIPTION

- A. The Owner and Contractor shall utilize **Bentley Systems, Inc. EADOC** system for electronic submittal of all data and documents (unless specified otherwise by the owner's representative) throughout the duration of the Contract. **EADOC** is a web-based electronic media site that is hosted by **Bentley Systems, Inc.**, utilizing their **EADOC** web solution. **EADOC** will be made available to all contractors' project personnel, subcontractor personnel, suppliers, consultants and the Designer of Record. The joint use of this system is to facilitate; electronic exchange of information, automation of key processes, and overall management of the contract. **EADOC** shall be the primary means of project information submission and management. When required by the Owners representative, paper documents will also be provided. In the event of discrepancy between the electronic version and paper documents, the paper documents will govern. **EADOC** is a registered trademark of **Bentley Systems, Inc.**

##### 1.02 USER ACCESS LIMITATIONS

- A. The Owner's Representative/Construction Manager will control the Contractor's access to **EADOC** by allowing access and assigning user profiles to accepted Contractor personnel. User profiles will define levels of access into the system, determine assigned function-based authorizations (determines what can be seen) and user privileges (determines what they can do). Sub-contractors and suppliers will be given access to **EADOC** through the Contractor. Entry of information exchanged and transferred between the Contractor and its sub-contractors and suppliers on **EADOC** shall be the responsibility of the Contractor.
1. Joint Ownership of Data: Data entered in a collaborative mode (entered with the intent to share as determined by permissions and workflows within the **EADOC** system) by the Owner's Representative and the Contractor will be jointly owned.

##### 1.03 AUTOMATED SYSTEM NOTIFICATION AND AUDIT LOG TRACKING

- A. Review comments made (or lack thereof) by the Owner on Contractor submitted documentation shall not relieve the Contractor from compliance with requirements of the Contract Documents. The Contractor is responsible for managing, tracking, and documenting the Work to comply with the requirements of the Contract Documents. Owner's acceptance via automated system notifications or audit logs extends only to the face value of the submitted documentation and does not constitute validation of the Contractor's submitted information.

##### 1.04 SUBMITTALS

- A. See Section 01 3300 SUBMITTAL PROCEDURES:
- B. Preconstruction Submittals
1. List of Contractor's key **EADOC** personnel. Include descriptions of key personnel's roles and responsibilities for this project. Contractor should also identify their organization's administrator on the list.

##### 1.05 COMPUTER REQUIREMENTS

- A. The Contractor shall use computer hardware and software that meets the requirements of the **EADOC** system as recommended by **Bentley Systems, Inc.** to access and utilize **EADOC** . As recommendations are modified by **EADOC**, the Contractor will upgrade their system(s) to meet

the recommendations or better. Upgrading of the Contractor's computer systems will not be justification for a cost or time modification to the Contract. The contractor will ensure that connectivity to the **EADOC** system (whether at the home office or job site) is accomplished through DSL, cable, T-1 or wireless communications systems. The minimum bandwidth requirement for using the system is 128kb/s. It is recommended a faster connection be used when uploading pictures and files into the system. **EADOC** supports the current and prior two major versions of Chrome, Firefox, Internet Explorer, and Safari.

- B. The Contractor shall be responsible for the validity of their information placed in EADOC and for the abilities of their personnel. Accepted users shall be knowledgeable in the use of computers, including Internet Browsers, email programs, cad drawing applications, and Adobe Portable Document Format (PDF) document distribution program. The Contractor shall utilize the existing forms in **EADOC** to the maximum extent possible. If a form does not exist in **EADOC** the Contractor must include a form of their own or provided by the Owner representative as an attachment to a submittal. Adobe PDF documents will be created through electronic conversion rather than optically scanned whenever possible. The Contractor is responsible for the training of their personnel in the use of **EADOC** (outside what is provided by the owner) and the other programs indicated above as needed.
- C. User Access Administration: Provide a list of Contractor's key **EADOC** personnel for the Owner's Representative acceptance. Contractor is responsible for adding and removing users from the system. The Owners Representative reserves the right to perform a security check on all potential users. The Contractor will be allowed to add additional personnel and sub-contractors to **EADOC**.

#### 1.06 CONNECTIVITY PROBLEMS

- A. **EADOC** is a web-based environment and therefore subject to the inherent speed and connectivity problems of the Internet. The Contractor is responsible for its own connectivity to the Internet. **EADOC** response time is dependent on the Contractor's equipment, including processor speed, Internet access speed, etc. and current traffic on the Internet. The Owner will not be liable for any delays associated from the usage of **EADOC** including, but not limited to: slow response time, down time periods, connectivity problems, or loss of information. The contractor will ensure that connectivity to the **EADOC** system (whether at the home office or job site) is accomplished through DSL, cable, T-1 or wireless communications systems. The minimum bandwidth requirement for using the system is 128kb/s. It is recommended a faster connection be used when uploading pictures and files into the system. Under no circumstances shall the usage of the **EADOC** be grounds for a time extension or cost adjustment to the contract.

#### 1.07 TRAINING

- A. The Construction Manager shall provide the necessary training to the Prime Contractor.

### PART 2 - PRODUCTS

#### 2.01 DESCRIPTION

- A. EADOC project management application (no equal) Provided by Bentley Systems, Inc. [www.EADOCsoftware.com](http://www.EADOCsoftware.com)

### PART 3 - EXECUTION

#### 3.01 EADOC UTILIZATION

- A. **EADOC** shall be utilized in connection with submittal preparation and information management

required by Sections:

1. PROJECT MANAGEMENT AND COORDINATION
2. CONSTRUCTION PROGRESS DOCUMENTATION
3. SUBMITTAL PROCEDURES
4. QUALITY REQUIREMENTS
5. Other Division One sections.
6. Requirements of this section are in addition to requirements of all other sections of the specifications.

B. Design Document Submittals

1. All design drawings and specifications shall be submitted as cad .dwg files or PDF attachments to the **EADOC** submittal work flow process and form.

C. Shop Drawings

1. Shop drawing and design data documents shall be submitted as cad .dwg files or PDF attachments to the **EADOC** submittal work flow process and form. Examples of shop drawings include, but are not limited to:
2. Standard manufacturer installation drawings.
3. Drawings prepared to illustrate portions of the work designed or developed by the Contractor.
4. Steel fabrication, piece, and erection drawings.

D. Product Data

1. Product catalog data and manufacturer's instructions shall be submitted as
2. PDF attachments to the EADOC submittal work flow process and form. Examples of product data include, but are not limited to:
3. Manufacturer's printed literature.
4. Preprinted product specification data and installation instructions.

E. Samples

1. Sample submittals shall be physically submitted as specified in Section 01 3300 SUBMITTAL PROCEDURES. Contractor shall enter submittal data information into EADOC with a copy of the submittal form(s) attached to the sample. Examples of samples include, but are not limited to:
2. Product finishes and color selection samples.
3. Product finishes and color verification samples.
4. Finish/color boards.
5. Physical samples of materials.

F. Administrative Submittals

1. All correspondence and pre-construction submittals shall be submitted using EADOC. Examples of administrative submittals include, but are not limited to:
2. Digging permits and notices for excavation.
3. List of product substitutions
4. List of contact personnel.
5. Notices for roadway interruption, work outside regular hours, and utility cut overs.
6. Requests for Information (RFI).
7. Construction progress Schedules and associated reports and updates.
  - a. Each schedule submittal specified in CONSTRUCTION PROGRESS DOCUMENTATION shall be submitted as a native backed-up file (.PRX or .STX) of the scheduling program being used. The schedule will also be posted as a PDF file in the format.
8. Plans for safety, demolition, environmental protection, and similar activities.
9. Quality Control Plan(s), Testing Plan and Log, Quality Control Reports, Production Reports, Quality Control Specialist Reports, Preparatory Phase Checklist, Initial Phase Checklist, Field Test reports, Summary reports, Rework Items List, etc.

10. Meeting minutes for quality control meetings, progress meetings, pre-installation meetings, etc.
11. Any general correspondence submitted.

G. Compliance Submittals

1. Test reports, certificates, and manufacture field report submittals shall be submitted on **EADOC** as PDF attachments. Examples of compliance submittals include, but are not limited to:
  - a. Field test reports.
  - b. Quality Control certifications.
  - c. Manufacturer's documentation and certifications for quality of products and materials provided.

H. Record and Closeout Submittals

1. Operation and maintenance data and closeout submittals shall be submitted on EADOC as PDF documents during the approval and review stage as specified, with actual set of documents submitted for final. Examples of record submittals include, but are not limited to:
  - a. Operation and Maintenance Manuals: Final documents shall be submitted as specified.
  - b. As-built Drawings: Final documents shall be submitted as specified.
  - c. Extra Materials, Spare Stock, etc.: Submittal forms shall indicate when actual materials are submitted.

I. Financial Submittals

1. Schedule of Value, Pay Applications and Change Request Proposals shall be submitted on **EADOC**. Supporting material for Pay Applications and Change Requests shall be submitted on **EADOC** as PDF attachments. Examples of compliance submittals include, but are not limited to:
  - a. Contractors Schedule of Values
  - b. Contractors Monthly Progress Payment Requests
  - c. Contract Change proposals requested by the project owner

**END OF SECTION**

## **SECTION 01 3200**

### **CONSTRUCTION PROGRESS DOCUMENTATION**

#### **PART 1 - GENERAL**

##### **1.01 SECTION INCLUDES**

- A. Construction Progress Schedule
- B. Construction Manager's Construction Schedule
- C. Submittal Schedule
- D. Daily Construction Reports
- E. Progress Photographs

#### **PART 2 - PRODUCTS – NOT USED**

#### **PART 3 - EXECUTION**

##### **3.01 CONSTRUCTION MANAGER'S MASTER CONSTRUCTION SCHEDULE**

- A. Upon award of package, Contractor agrees to accept and meet or improve upon the schedule proposed in section **00 3113 PRELIMINARY SCHEDULE** with intermediate handoffs. Each package contractor will be required to participate in schedule coordination meetings with the Construction Manager.
- B. If the bid package contractor does not meet the handoff milestones in the master construction schedule, the bid package contractor shall take measures to increase work forces, increase work hours, initiate revisions to means and methods of construction, and/or other similar measures as required to make up lost time and complete the work in accordance with the construction schedule and remain consistent with project progress and overall construction schedule. Such measures shall be at no additional cost to the Owner. The Construction Manager shall have sole discretion on decisions to accelerate work.
- C. Updating the master construction schedule – Contractors are required to attend and participate in schedule coordination update meetings with the Construction Manager. This will be an opportunity for contractors to further define their scheduled scope of work in conjunction with other trades on site.
- D. Acceptance of revised master construction schedule – After an updated master construction schedule has been issued via EADOC, Contractors will have 48 hours to dispute the new schedule. All contractors will be held to the last fully accepted master construction schedule.

##### **3.02 CONSTRUCTION PROGRESS SCHEDULE**

- A. Submit preliminary outline to the Construction Manager no later than 48 hours prior to the pre-construction meeting for coordination with Owner's requirements.
- B. Submit revised progress schedule with each application for payment.
- C. Schedules will be electronically submitted through "EADOCs".
- D. Distribute copies of reviewed schedules to project site file, subcontractors, suppliers, and other concerned parties.
- E. Instruct recipients to promptly report, in writing, problems anticipated by projections indicated in schedules.
- F. Submit computer generated horizontal bar chart with separate line for each major portion of work or operation, identifying the first day of each week.
- G. Show complete sequence of construction activity, identifying work of separate stages and other logically grouped activities. Indicate early and late start, early and late finish, float dates, and duration.
- H. Indicate estimated percentage of completion for each item of work at each submission.



- I. Participate in joint review and evaluation of schedule with Construction Manager.
- J. Revisions to schedules:
  - 1. Indicate progress of each activity to date of submittal and projected completion date of each activity.
  - 2. Identify activities modified since previous submittal, major changes in scope, and other identifiable changes.
  - 3. Prepare narrative report to define problem areas, anticipate delays, and impact on schedule. Report corrective action taken, or proposed, and its effect including effect of changes on schedules of separate contractors.

### **3.03 SUBMITTAL SCHEDULE**

- A. Submit a schedule of submittals, arranged in chronological order by dates required by construction schedule. Include time required for review, re-submittal, ordering, manufacturing, fabrications, and delivery when establishing dates.
  - 1. Coordinate submittal schedule with list of subcontractors, the schedule of values, and construction schedule.
  - 2. Submit concurrently with first complete submittal of contractor's construction schedule.

### **3.04 DAILY CONSTRUCTION REPORTS**

- A. Daily Construction Reports: Submitted at weekly intervals.
  - 1. Daily Construction Reports will be submitted to Construction Manager.
- B. Prepare a daily construction report recording the following information concerning events at project site:
  - 1. Count of personnel at Project site
  - 2. Equipment at Project site
  - 3. Material Deliveries
  - 4. High and low temperatures and general weather conditions, including presence of rain or snow
  - 5. Accidents
  - 6. Meetings and significant decisions
  - 7. Unusual events
  - 8. Stoppages, delays, shortages, and losses
  - 9. Meter readings and similar recordings
  - 10. Emergency procedures
  - 11. Orders and requests of authorities having jurisdiction
  - 12. Change orders received and implemented
  - 13. Services connected and disconnected
  - 14. Equipment or system tests and startups
  - 15. Partial completions and occupancies
  - 16. Substantial completions authorized

### **3.05 PROGRESS PHOTOGRAPHS**

- A. Progress photographs will be electronically submitted through "EADOCS".
- B. Preconstruction Photographs: Before starting construction, take photographs of project site and surrounding properties, including existing items to remain during construction, from different vantage points, as directed by Construction manager.
  - 1. Take additional photographs as required to record existing damage to site, structure, equipment, or finishes.
- C. Periodic Construction Photographs: Take photographs at regular intervals. Select vantage points to show status of construction and progress since last photographs were taken.
- D. Field Completion Construction Photographs: Take photographs after date of Substantial Completion for submission as project record documents. Construction manager will inform of

desired vantage points.

**END OF SECTION**

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## **SECTION 01 3300**

### **SUBMITTAL PROCEDURES**

#### **PART 1 - GENERAL**

##### **1.01 SECTION INCLUDES**

- A. Submittals for Review
- B. Submittals for Information
- C. Submittal Procedures
- D. Samples

#### **PART 2 - PRODUCTS – NOT USED**

#### **PART 3 - EXECUTION**

##### **3.01 SUBMITTALS FOR REVIEW**

- A. When the following are specified in individual sections, submit them for review:
  - 1. Product Data
  - 2. Shop Drawings
  - 3. Samples for Selection
  - 4. Samples for Verification
- B. Submit to Construction Manager to forward to Architect for review for the limited purpose of checking for conformance with information given and the design concept expressed in the contract documents.
- C. Samples will be reviewed only for aesthetic, color, or finish selection.
- D. After review, provide copies and distribute in accordance with SUBMITTAL PROCEDURES article below and for record document purposes.

##### **3.02 SUBMITTALS FOR INFORMATION**

- A. When the following are specified in individual sections, submit them for information:
  - 1. Design data.
  - 2. Certificates.
  - 3. Test reports.
  - 4. Inspection reports.
  - 5. Manufacturer's instructions.
  - 6. Manufacturer's field reports.
  - 7. Other types indicated.
- B. Submit for Construction Manager, Architect, and Owner's knowledge. No action will be taken.

##### **3.03 SUBMITTAL PROCEDURES**

- A. Submittals will be electronically submitted through "EADOCS". Contractor will be invited to join web based program after issue of Notice of Intent to award.
- B. Shop Drawing Procedures:
  - 1. Prepare accurate, drawn-to-scale, original shop drawing documentation by interpreting the Contract Documents and coordinating related Work.
  - 2. Do not reproduce the Contract Documents to create shop drawings.
  - 3. Generic, non-project specific information submitted as shop drawings do not meet the requirements for shop drawings.
- C. Transmit each submittal with a copy of approved submittal form.

- D. Sequentially number the submittal form. Revise submittals with original number and a sequential numeric suffix.
- E. Identify Project, Contractor, Subcontractor or supplier; pertinent drawing and detail number, and specification section number, as appropriate on each copy.
- F. Apply Contractor's stamp, signed or initialed certifying that review, approval, verification of Products required, field dimensions, adjacent construction work, and coordination of information is in accordance with the requirements of the work and Contract Documents.
- G. Schedule submittals to expedite the project and coordinate submission of related items.
- H. For each submittal review, allow 15 days excluding delivery time to and from the contractor.
- I. Identify variations from the Contract Documents and product or system limitations that may be detrimental to successful performance of the completed work.
- J. When revised for resubmission, identify all changes made since previous submission.
- K. Distribute reviewed submittals as appropriate. Instruct parties to promptly report any inability to comply with requirements.
- L. Submittals not requested will not be recognized or processed.

### **3.04 SAMPLES**

- A. Submit to Construction Manager to forward to Architect/Engineer for review for limited purpose for checking conformance with information given and design concept expressed in the Contract Documents.
- B. Samples for selection as specified in product sections:
  - 1. Submit to Construction Manager to forward to Architect/Engineer for aesthetic, color, or finish selections.
  - 2. Submit samples of finishes from full range of manufacturer's standard colors, textures, and patterns to Construction Manager to forward to Architect/Engineer for selection.
- C. Submit samples to illustrate functional and aesthetic characteristics of products, with integral parts and attachment devices. Coordinate sample submittals for interfacing work.
- D. Include identification on each sample, with full project information.
- E. Submit number of samples specified in individual specification sections.
- F. Photograph of submitted samples, along with transmittal sheet, shall be uploaded as a submittal in EADOC.

### **END OF SECTION**

**SECTION 01 4000**  
**QUALITY REQUIREMENTS**

**PART 1 - GENERAL**

**1.01 SECTION INCLUDES**

- A. References
- B. Quality assurance and control of installation
- C. Tolerances
- D. Defect Assessment
- E. Inspection and testing laboratory services
- F. Manufacturer's field services and reports

**1.02 REFERENCES**

- A. Conform to reference standard in effect at date of contract.
- B. When required by contract documents, obtain copies of standards.
- C. Should specified reference standards conflict with contract documents request clarification from engineer before proceeding.
- D. The contractual relationship of the parties to the contract shall not be altered from the contract documents by mention or inference otherwise in any reference document.

**PART 2 - PRODUCTS – NOT USED**

**PART 3 - EXECUTION**

**3.01 QUALITY ASSURANCE/CONTROL OF INSTALLATION**

- A. Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship to produce work of specified quality.
- B. Comply fully with manufacturer's instructions, including each step in sequence.
- C. Should manufacturer's instructions conflict with contract documents, request clarification from the engineer prior to proceeding.
- D. Comply with specified standards as a minimum quality for the work except when more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
- E. Perform work by persons qualified to produce workmanship of specified quality
- F. Verify that field measurements are as indicated on shop drawings or as instructed by the manufacturer.
- G. Secure products in place with positive anchorage devices designed and sized to withstand stress, vibration, physical distortion, or disfiguration.

**3.02 TOLERANCES**

- A. Monitor fabrication and installation tolerance control of products to produce acceptable work. Do not permit tolerances to accumulate.
- B. Comply with manufacturers' tolerances. Should manufacturers' tolerances conflict with contract documents, request clarification from Architect before proceeding.
- C. Adjust products to appropriate dimensions; position before securing products in place.

**3.03 DEFECT ASSESSMENT**



- A. Replace work or portions of work not conforming to specified requirements.
- B. If, in the option of the Owner, it is not practical to remove and replace the work, Architect will direct an appropriate remedy or recommend adjusted payment.

### **3.04 INSPECTION AND TESTING**

- A. Owner shall include and pay for all required special inspections and testing required by IBC Section 1705, if applicable. This does not include inspections and testing required by other specification sections in this Project Manual. Copies of all testing and inspection reports shall be submitted to the Construction Manager and Design Professional by the testing and inspection agency.
- B. Testing Agency Duties:
  - 1. Provide qualified personnel at site. Cooperate with Architect, Construction Manager, and contractor in performance of services.
  - 2. Perform specified sampling and testing of products in accordance with specified standards.
  - 3. Ascertain compliance of materials and mixes with requirements of contract documents.
  - 4. Immediately notify the Construction Manager and contractor of observed irregularities or non-conformance of work or products.
  - 5. Perform additional testing and inspections required by the Owner
- C. Limits on Testing Agency/Inspection Agency Authority:
  - 1. Agency may not release, revoke, alter, or enlarge on requirement of contract documents.
  - 2. Agency may not approve or accept any portion of the work.
  - 3. Agency may not assume any duties of the contractor.
  - 4. Agency has no authority to stop the work.
- D. Contractor responsibilities:
  - 1. Deliver to agency at designated location, adequate samples of materials proposed to be used that require testing, along with proposed mix designs.
  - 2. Cooperate with laboratory personnel, and provide access to the work and to manufacturer's facilities.
  - 3. Provide incidental labor and facilities:
    - a. To provide access to work to be tested/inspected.
    - b. To obtain and handle samples at the site or at source of products to be tested/inspected.
    - c. To facilitate test/inspections.
    - d. To provide storage and curing of test samples.
  - 4. Notify Construction Manager and laboratory 24 hours prior to expected time for operations requiring testing/inspection.
- E. Re-testing required because of non-conformance to specified requirements shall be performed by the same testing agency on instruction by Architect/Construction Manager.
- F. Re-testing required because of non-conformance to specified requirements shall be paid for by the Contractor.

### **3.05 MANUFACTURER'S FIELD SERVICES AND REPORTS**

- A. When specified in individual specification sections, require material or product suppliers or manufacturers to provide qualified staff personnel to observe site conditions, conditions of surfaces and installation, quality of workmanship, start up of equipment, test, adjust and balance of equipment as applicable and to initiate instructions when necessary.
- B. Individuals are to report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to the manufacturers' written instructions.
- C. Submit report in duplicate within 30 days of observation to Construction Manager for review.

### **END OF SECTION**

**SECTION 01 5000**

**TEMPORARY FACILITIES AND CONTROLS**

**PART 1 - GENERAL**

**1.01 SECTION INCLUDES**

- A. Temporary utilities
- B. Temporary sanitary facilities
- C. Telephone Service
- D. Removal of Utilities, Facilities, and Controls
- E. Temporary Facilities
- F. Equipment
- G. Vehicular Access and Parking
- H. Traffic Regulation
- I. Barriers
- J. Enclosures and Fencing
- K. Waste Removal

**1.02 TEMPORARY UTILITIES**

- A. Owner will provide the following:
  - 1. Electrical Power, consisting of connection to existing facilities.
  - 2. Water Supply, consisting of connection to existing facilities.
- B. The Contractor shall pay for installation, maintenance, and removal of temporary utilities. Temporary utilities shall not disrupt the Facility's need for continuous service.

**1.03 TEMPORARY SANITARY FACILITIES**

- A. Provide and maintain required facilities and enclosures. Provide at time of project mobilization.
- B. Maintain daily in clean and sanitary condition.
- C. The contractor shall be responsible for temporary sanitary facilities.

**1.04 TELEPHONE SERVICE**

- A. Provide, maintain, and pay for telephone service to field or use a cellular telephone.

**1.05 REMOVAL OF UTILITIES, FACILITIES AND CONTROLS**

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

**PART 2 - PRODUCTS**

**2.01 TEMPORARY FACILITIES**

- A. Field Offices: Coordinate with Construction Manager and Owner if applicable.
- B. Temporary Storage: Coordinate with Construction Manager and Owner if applicable.

**2.02 EQUIPMENT**

- A. Fire Extinguishers: Portable, UL rated, with class and extinguishing agent as required by locations and classes of fire exposures.
- B. Provide all PPE to protect employees.

## **PART 3 - EXECUTION**

### **3.01 VEHICULAR ACCESS AND PARKING**

- A. Use designated existing on-site roads for construction traffic.
- B. Parking is as directed by Owner.
- C. When site space is not adequate, provide additional off-site parking.
- D. Use of designated existing on-site streets and driveways used for construction traffic is permitted. Track vehicles not allowed on paved areas.
- E. Use of designated areas of existing parking facilities used by construction personnel as permitted.
- F. Do not allow heavy vehicles or construction equipment in parking areas.
- G. Provide and maintain access to fire hydrants, free of obstructions.
- H. Provide means of removing mud from vehicle wheels before entering streets.

### **3.02 TRAFFIC REGULATION**

- A. Flag Persons: Provide trained and equipped flag persons to regulate traffic when construction operations or traffic encroach on public traffic lanes.
- B. Flares and lights: Use flares and lights during hours of low visibility to delineate traffic lanes and to guide traffic.
- C. Haul Routes:
  - 1. Consult with authority having jurisdiction, establish public thoroughfares to be used for haul routes and site access.
- D. Removal:
  - 1. Remove equipment and devices when no longer required.
  - 2. Repair damage caused by demolition.

### **3.03 BARRIERS**

- A. Provide barriers to prevent unauthorized entry to construction areas, to prevent access to areas that could be hazardous to workers or the public, to allow for Owner's use of site and to protect existing facilities and adjacent properties from damage during construction operations.
- B. Provide barricades and covered walkways required by governing authorities for public rights-of-way.
- C. Protect non-owned vehicular traffic, stored materials, site, and structures from damage.

### **3.04 ENCLOSURES AND FENCING**

- A. Provide temporary enclosure and fences as necessary to protect the public and secure the site.
- B. Provide enclosures and barriers as noted on the contract drawings.
- C. Provide security and facilities to protect work, existing facilities, and Owner's operations from unauthorized entry, vandalism, or theft.

### **3.05 WASTE REMOVAL**

- A. Except for items or materials to be salvaged, recycled or otherwise reused, remove waste materials from project site and legally dispose of them in a landfill or incinerator acceptable to authorities having jurisdiction.
  - 1. Except as otherwise specified, do not allow waste materials that are to be disposed of accumulate on-site.
  - 2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
- B. Burning: Do not burn waste materials.

- C. Waste Disposal Facilities: Provide waste collection containers in sizes adequate to handle waste from construction operations. Comply with requirements of authorities having jurisdiction.

**END OF SECTION**

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## **SECTION 01 6000**

### **PRODUCT REQUIREMENTS**

#### **PART 1 - GENERAL**

##### **1.01 SECTION INCLUDES**

- A. General product requirements
- B. Product options
- C. Maintenance materials
- D. Transportation and handling
- E. Storage and protections

#### **PART 2 - PRODUCTS**

##### **2.01 GENERAL PRODUCT REQUIREMENTS**

- A. Provide new products unless specifically required or permitted by the contract documents.
- B. Do not use products having any of the following characteristics:
  - 1. Made using or containing CFC's or HCFC's
  - 2. Made of wood from newly cut old growth timber.
- C. Where all other criteria are met, contractor shall give preference to products that:
  - 1. If used on interior, have lower emissions
  - 2. If wet-applied, have lower VOC content
  - 3. Are extracted, harvested, and/or manufactured closer to the location of the project
  - 4. Have longer documented life span under normal used
  - 5. Result in less construction waste
  - 6. Are made of vegetable materials that are rapidly renewable

##### **2.02 PRODUCT OPTIONS**

- 1. Products specified by reference standards or by description only: Use of any product meeting those standards or description.
- 2. Products specified by naming one or more manufacturers: Use a product of one of the manufacturers named and meeting specifications, no options or substitutions allowed.
- 3. Products specified by naming one or more manufacturers with a provision for substitutions: Submit a request for substitution for any manufacturer not named by the date specified in this project manual.

##### **2.03 MAINTENANCE MATERIALS**

- 1. Furnish extra materials, spare parts, tools, and software of types and in quantities specified in individual specification sections.
- 2. Deliver to project site; obtain receipt prior to final payment.

#### **PART 3 - EXECUTION**

##### **3.01 TRANSPORTATION AND HANDLING**

- A. Package products for shipment in manner to prevent damage; for equipment, package to avoid loss of factory calibration.
- B. If special precautions are required, attach instructions prominently and legibly on outside of packaging.

- C. Coordinate schedule of product delivery to designated prepared areas in order to minimize site storage time and potential damage to stored materials.
- D. Transport and handle products in accordance with manufacturer's instructions.
- E. Transport materials in covered trucks to prevent contamination of product and littering of surrounding areas.
- F. Promptly inspect shipments to ensure that products comply with requirements, quantities are correct, and products are undamaged.
- G. Provide equipment and personnel to handle products by methods to prevent soiling, disfigurement, or damage, and to minimize handling.
- H. Arrange for the return of packing materials, such as wood pallets, where economically feasible.

### **3.02 STORAGE AND PROTECTIONS**

- A. Designate receiving/storage areas for incoming products so that they are delivered according to installation schedule and placed convenient to work area in order to minimize waste due to excessive materials handling and misapplication.
- B. Store and protect products in accordance with manufacturers' instructions.
- C. Store with seals and labels intact and legible.
- D. Store sensitive products in weather tight, climate controlled, enclosures in an environment favorable to the product.
- E. For exterior storage of fabricated products, place on slopped supports above ground.
- F. Protect products from damage or deterioration due to construction operations, weather, precipitation, humidity, temperature, sunlight and ultraviolet light, dirt, dust, and other contaminants.
- G. Comply with manufacturers' warranty conditions, if any.
- H. Cover product subject to deterioration with impervious sheet covering. Provide ventilation to prevent condensation and degradation of products.
- I. Prevent contact with material that may cause corrosion, discoloration, or staining.
- J. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement, or damage.
- K. Arrange storage of products to permit access for inspection. Periodically inspect to verify products are undamaged and are maintained in acceptable condition.

**END OF SECTION**



## **SECTION 01 7300**

### **EXECUTION**

#### **PART 1 - GENERAL**

##### **1.01 SECTION INCLUDES**

- A. Examination, preparation, and general installation procedures
- B. Alteration project procedures
- C. Cutting and patching
- D. Cleaning and protection
- E. Adjusting

#### **PART 2 - PRODUCTS – NOT USED**

#### **PART 3 - EXECUTION**

##### **3.01 EXAMINATION, PREPARATION, AND GENERAL INSTALLATION PROCEDURES**

- A. Verify that existing site conditions and substrate surfaces are acceptable for subsequent work. Start of work means acceptance of existing conditions.
- B. Verify that existing substrate is capable of structural support or attachment of new work being applied or attached.
- C. Examine and verify specific conditions described in individual specification sections.
- D. Take field measurements before confirming product orders or beginning fabrication, to minimize waste due to over-ordering or misproduction.
- E. Verify that utility services are available, of the correct characteristics, and in the correct locations.
- F. Prior to cutting: Examine existing conditions prior to commencing work; include elements subject to damage or movement during cutting and patching. After uncovering existing work, assess conditions affecting performance of work. Beginning of cutting or patching means acceptance of existing conditions.
- G. Clean substrate surfaces prior to applying next material or substance.
- H. Seal cracks or openings of substrate prior to applying next material or substance.
- I. Apply manufacturer required or recommended substrate primer, sealer, or conditioner prior to applying any new material or substance in contact or bond.
- J. Install products as specified in individual sections, in accordance with manufacturer's instructions and recommendations, and so as to avoid waste due to necessity for replacement.
- K. Make vertical elements plumb and horizontal elements level, unless otherwise indicated.
- L. Install equipment and fittings plumb and level, neatly aligned with adjacent vertical and horizontal lines, unless otherwise indicated.
- M. Make consistent texture on surfaces, with seamless transitions, unless otherwise indicated.
- N. Make neat transitions between different surfaces, maintaining texture and appearance.

##### **3.02 ALTERATION PROJECT PROCEDURES**

- A. Materials: As specified in product sections match existing products and work for patching and extending work.
- B. Employ skilled and experienced installer to perform alteration work.
- C. Close openings in exterior surfaces to protect existing work from weather and extremes of temperature and humidity.
- D. Remove unsuitable material not marked for salvage, including rotted wood, corroded metals, and deteriorated masonry and concrete. Replace materials as specified for finished work.

- E. Remove, cut and patch work in a manner to minimize damage and to provide a means of restoring products and finished to original condition.
- F. Remove debris and abandoned items from area and from concealed spaces.
- G. Refinish visible existing surfaces to remain in renovated rooms and spaces to specified condition for each material with a neat transition to adjacent finishes.
- H. Where new work abuts or aligns with existing, perform a smooth and even transition. Patched work to match existing adjacent work in texture and appearance.
- I. When finished surfaces are cut so that a smooth transition with new work is not possible, terminate existing surface along a straight line of division and make recommendation to the Construction Manager. Prior to cutting get the Owner's approval.
- J. Where change of plane of ¼ inch or more occurs, submit recommendation for providing smooth transition to the Construction Manager for review.

### **3.03 CUTTING AND PATCHING**

- A. Employ skilled and experienced installer to perform cutting and patching.
- B. Submit written request in advance of cutting or altering elements which affect:
  - 1. Structural integrity of element.
  - 2. Integrity of weather-exposed or moisture-resistant elements.
  - 3. Efficiency, maintenance, or safety of element.
  - 4. Visual qualities of sight exposed elements.
  - 5. Work of owner or separate contractor.
- C. Execute cutting, fitting, and patching to complete work, and to:
  - 1. Fit the several parts together, to integrate with other work.
  - 2. Uncover work to install or correct ill-timed work.
  - 3. Remove and replace defective and non-conforming work.
  - 4. Remove samples of installed work for testing.
  - 5. Provide openings in elements of work for penetrations of mechanical and electrical work.
- D. Execute work by methods to avoid damage to other work and which will provide proper surfaces to receive patching and finishing.
- E. Cut rigid materials using masonry saw or core drill.
- F. Cut masonry and concrete materials using masonry saw or core drill.
- G. Restore work with new products in accordance with requirements of Contract Documents.
- H. Fit work tight to pipes, sleeves, ducts, conduit and other penetrations through surfaces.
- I. Maintain integrity of wall, ceiling or floor construction; completely seal voids.
- J. Refinish surfaces to match adjacent finishes. Refinish to nearest intersection for continuous surfaces. Refinish entire unit for continuous surfaces for an assembly.
- K. Identify hazardous substances or conditions exposed during the work to the engineer for decision or remedy.

### **3.04 CLEANING AND PROTECTION**

- A. Progress cleaning
  - 1. Maintain areas free of waste materials, debris, and rubbish. Maintain site in a clean and orderly condition.
  - 2. Collect and remove waste materials, debris, and trash/rubbish from site periodically and dispose off-site; do not burn or bury.
- B. Protection of installed work
  - 1. Protect installed work from damage by construction operations.
  - 2. Provide special protection where specified in individual specification sections.
  - 3. Provide temporary and removable protection for installed products. Control activity in immediate work area to prevent damage.
  - 4. Remove protective coverings when no longer needed; reuse or recycle plastic coverings if possible.
  - 5. Prohibit traffic from landscaped areas.

**3.05 ADJUSTING**

- A. Adjust operating products and equipment to ensure smooth and unhindered operation.

**END OF SECTION**

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## **SECTION 01 7700**

### **CLOSEOUT PROCEDURES**

#### **PART 1 - GENERAL**

##### **1.01 SECTION INCLUDES**

- A. Inspections
- B. Substantial Completion
- C. Project Record Documents
- D. Warranties
- E. Operations and Maintenance Manuals
- F. Operations and Maintenance Data for Materials and Finishes
- G. Operations and Maintenance Data for Equipment and Systems
- H. Training
- I. Final Completion
- J. Maintenance

#### **PART 2 - PRODUCTS – NOT USED**

#### **PART 3 - EXECUTION**

##### **3.01 INSPECTIONS**

- A. Ensure all state inspections have been completed by the authority having jurisdiction.
- B. Upload documentation of all test/inspections to EADOC.
- C. Submit a written request for inspection of Substantial Completion. On receipt of request, The Design Professional will either proceed with inspection or notify contractor of unfulfilled requirements. The Design Professional will prepare the Certificate of Substantial Completion after inspection or will notify contractor of items, either on contractor's list or additional items identified by architect that must be completed or corrected before certificate will be issued.
  - 1. Re-inspection: Request re inspection when the work identified in previous inspections as incomplete is completed or corrected.
  - 2. Results of completed inspection will form the basis of requirements for Final Completion.

##### **3.02 SUBSTANTIAL COMPLETION**

- A. A substantial completion checklist is attached for reference following this specification section.
- B. Make submittals that are required by governing or other authorities.
  - 1. Provide copies to the Construction Manager through upload to EADOC.
- C. Before requesting inspection for determining date of Substantial Completion, complete the following. List items below that are incomplete in request.
  - 1. Submit written certification that contract documents have been reviewed, work has been inspected, and that work is completed in accordance with contract documents and ready for review
  - 2. Prepare a list of items to be completed and corrected (punch list), the value of items on the list, and reasons why the work has not been completed.
  - 3. Submit specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
  - 4. Make final changeover of permanent locks and deliver key to the owner. Advise owner's personnel of changeover in security provisions.
  - 5. Complete startup testing of systems.
  - 6. Submit test/adjust, balance records.

7. Terminate and remove temporary facilities from project site, along with mockups, construction tools, and similar elements.
8. Advise owner of changeover in heat and other utilities.
9. Submit changeover information related to owner's occupancy, use, operation, and maintenance.
10. Complete final cleaning requirements, including touch up painting.
11. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.

### **3.03 PROJECT RECORD DOCUMENTS**

- A. Maintain on site one set of the following record documents; record actual revisions to the work:
  1. Drawings
  2. Specifications
  3. Addenda
  4. Change orders and other modifications to the contract
  5. Reviewed shop drawings, product data, and samples
- B. Ensure entries are complete and accurate, enabling future reference by Owner.
- C. Store record documents separate from documents used for construction.
- D. Record information concurrent with construction progress, not less than weekly.
- E. Specifications: Legibly mark and record at each product section description of actual products installed, including the following:
  1. Manufacturer's name and product model and number.
  2. Product substitutions or alterations utilized.
  3. Changes made by Addenda and modifications.
- F. Record Drawings:
  1. Measured depths of foundations in relation to finish first floor datum.
  2. Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
  3. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of the work.
  4. Field changes of dimension and detail.
  5. Details not on original contract drawings.
- G. Record Drawings shall be uploaded to EADOC in pdf format.

### **3.04 WARRANTIES**

- A. Submit written warranties for designated portions of the work where commencement of warranties other than date of Substantial Completion is indicated.
- B. Submit properly executed warranties in EADOC prior to Final Completion.
- C. Verify that documents are in proper form, contain full information, and are notarized.
- D. Organize warranty documents into an orderly sequence based on the table of contents of the Project Manual.
- E. Include warranties in operation and maintenance manuals.
- F. Items of work delayed beyond date of Substantial Completion, provide updated submittal after acceptance by Owner, listing date of acceptance as start of warranty period

### **3.05 OPERATIONS AND MAINTENANCE MANUALS**

- A. Format: Submit operations and maintenance manuals in the following format:
  1. Portable Document Format (PDF) electronic file. Assemble each manual into a composite electronically indexed file. Submit on digital media acceptable to Owner and upload to EADOC.

- a. Name each indexed document file in composite electronic index with applicable item name. Include a complete electronically linked operation and maintenance directory.
2. Assemble with data arranged in the same sequence as, and identified by the specification sections. Where systems involve more than one specification section, provide separate index for each system.
3. Include project directory listing title and address of project, names, addresses, and telephone numbers of Architect, Consultants, Contractor and subcontractors, with names of responsible parties.
4. Include Table of Contents listing every item separated by index and specification section.
- B. Source Data: For each product or system, list names, addresses, and telephone numbers of subcontractors and suppliers, including local source of supplies and replacement parts.
- C. Product Data: Mark each sheet to clearly identify specific products and component parts, and data applicable to installation. Delete inapplicable information.
- D. Drawings: Supplement product data to illustrate relations of component parts of equipment and systems, to show control and flow diagrams. Do not use project record documents as maintenance drawings.
- E. Typed Text: As required to supplement product data. Provide logical sequence of instructions for each procedure, incorporating manufacturer's instructions.

### **3.06 OPERATIONS AND MAINTENANCE DATA FOR MATERIALS AND FINISHES**

- A. For each product, applied material, and finish:
  1. Product data, with catalog number, size, composition, and color and texture designations.
  2. Information for re-ordering custom manufactured products.
- B. Instructions for Care and Maintenance: Manufacturer's recommendations for cleaning agents and methods, precautions against detrimental cleaning agents and methods, and recommended schedule for cleaning and maintenance.
- C. Moisture protection and weather-exposed products: Include product data listing applicable reference standards, chemical composition, and details of installation. Provide recommendations for inspections, maintenance, and repair.
- D. Additional information as specified in individual product specification sections.
- E. Where additional instructions are required, beyond the manufacturer's standard printed instructions, have instructions prepared by personnel experienced in the operation and maintenance of the specified products.

### **3.07 OPERATION AND MAINTENANCE DATA FOR EQUIPMENT AND SYSTEMS**

- A. For each item of equipment and each system:
  1. Description of unit or system, and component parts
  2. Identify function, normal operating characteristics, and limiting conditions
  3. Include performance curves, with engineering data and tests
  4. Complete nomenclature and model number of replacement parts.
- B. Where additional instructions are required, beyond the manufacturer's standard printed instructions, have instructions prepared by personnel experienced in the operation and maintenance of the specified products.
- C. Panelboard Circuit Directories: Provide electrical service characteristics, controls, and communications; typed.
- D. Include color coded wiring diagrams as installed.
- E. Operating procedures: Include start-up, break-in, and routine normal operating instructions and sequences. Include regulation, control, stopping, shut-down, and emergency instructions. Include summer, winter, and any special operating instructions.
- F. Maintenance requirements: Include routine procedure and guide for preventative maintenance and troubleshooting; disassembly, repair, and reassembly instructions; and alignment, adjusting, balancing, and checking instructions.



- G. Provide servicing and lubrication schedule and list of lubricants required.
- H. Include manufacturer's printed operation and maintenance instructions.
- I. Include sequence of operation by controls manufacturer.
- J. Provide original manufacturer's parts list, illustrations, assembly drawings, and diagrams required for maintenance.
- K. Provide control diagrams by controls manufacturer as installed.
- L. Provide contractor's coordination drawings, with color coded piping diagrams as installed.
- M. Provide charts of valve tag numbers, with location and function of each valve, keyed to flow and control diagrams.
- N. Provide list of original manufacturer's spare parts, current prices, and recommended quantities to be maintained in storage.
- O. Include test and balancing reports.
- P. Additional requirements: As specified in individual specification sections.

### **3.08 TRAINING**

- A. Demonstrate operations of systems, subsystems, and equipment.
- B. Train in operation and maintenance of systems, subsystems, and equipment
- C. Coordinate instruction schedule with Owner's operations. Adjust schedule as required to minimize disrupting Owner's operations and to ensure availability of Owner's personnel.
- D. Submit written agenda to Construction Manager for approval prior to scheduling training.
- E. Engage qualified instructors to instruct Owner's personnel to adjust, operate, and maintain systems, subsystems, and equipment not part of a system.

### **3.09 FINAL COMPLETION**

- A. A final completion checklist is attached for reference following this specification section.
- B. Before requesting final inspection for determining date of Final Completion, complete the following:
  - 1. Complete punch list items.
  - 2. Prepare and submit project record documents, operation and maintenance manuals, damage or settlement surveys, and similar final record information.
  - 3. Deliver tools, spare parts, extra materials, and similar items to location designated by owner. Label with manufacturer's name and model number where applicable.
  - 4. Instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment, and systems.
  - 5. All trailers, construction signs, unused, broken or demolition materials have been removed from the site and the premises returned to the original condition in the opinion of the Owner and Design Professional.
  - 6. Submit a final Application for Payment (retainage).
- C. Upon receipt of final payment complete final completion certificate in EADOC.

**END OF SECTION**

## Substantial Completion Project Checklist

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

DAS Project Number: \_\_\_\_\_

Project Title: \_\_\_\_\_

Location: \_\_\_\_\_

Contractor: \_\_\_\_\_

In order to process the final (100% pay app/not retainage) payment on a Capital Project, the Department of Administrative Services and State Accounting Enterprise needs the following information. Please complete this form and obtain the necessary documents.

**Have all state inspections been completed and documentation uploaded to EADOC?**  
*(Including but not limited to the following inspections)*

Boiler Inspection	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Water Heater Inspection	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Energy Code Inspection	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Building Code Inspection	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Electrical Inspection	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Elevator Inspection	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Test & Balance Reports	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Other: _____	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A

☐ Occupancy Permit if applicable

☐ Certificate of Substantial Completion completed in EADOC (Consensus Docs 814)

Are there any disputes with the above mentioned vendor which need resolution?

☐ Yes (provide description below) ☐ No

\_\_\_\_\_  
\_\_\_\_\_

Can final (100% pay app/not retainage) payment be released? ☐ Yes ☐ No

## Final Completion Project Checklist

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

DAS Project Number: \_\_\_\_\_

Project Title: \_\_\_\_\_

Location: \_\_\_\_\_

Contractor: \_\_\_\_\_

In order to process the Retainage payment on a Capital Project, the Department of Administrative Services and State Accounting Enterprise needs the following information. Please complete this form and obtain the necessary documents.

**Notification Letter to all Subs and Suppliers of Application for Retainage uploaded into EADOC?** ☐ Yes ☐ No

**Have all Warranties been received?** ☐ Yes ☐ No

**Have you received the Operations and Maintenance Manuals?** ☐ Yes ☐ No

**Who is in possession of the O & M Manuals?** \_\_\_\_\_

**Has all training been completed?** ☐ Yes ☐ No

**Have all as-built drawings been scanned and uploaded into EADOC?** ☐ Yes ☐ No

**Have electronic drawing/specification files been transferred to DAS?** ☐ Yes ☐ No

☐ **AIA Form G706 – Contractor’s Affidavit of Payment of Debts and Claims**

☐ **AIA Form G706A – Contractor’s Affidavit of Release of Liens**

☐ **AIA Form G707 – Consent of Surety Company to Final Payment**

☐ **Certificate of Final Completion completed in EADOC (Consensus Docs 815)**

**Are there any disputes with the above mentioned vendor which need resolution?**

☐ Yes (provide description below) ☐ No

\_\_\_\_\_  
\_\_\_\_\_

**Can retainage payment be released?** ☐ Yes ☐ No

024113 - DEMOLITION

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
  - 1. The work under this section shall consist of providing all work, materials, labor, equipment, and supervision necessary to provide for the demolition, removal and/or salvage of existing facilities as required in these specifications and on the drawings. Included are the following topics:

1.2 SUBMITTALS

- A. For utilities or other services requiring removal or abandonment in-place, submit materials documenting completion of such work.

1.3 SAFETY

- A. Verify that all gas, electrical and water utilities have been abandoned or disconnected and associated hazards mitigated, prior to beginning any demolition.
- B. Take all necessary precautions while dismantling piping containing gas, gasoline, oil or other explosive or toxic fluids or gases. Purge lines and contain materials in accordance with all applicable regulations. Store such piping outdoors until fumes are removed.
- C. Maintain a clean and orderly site. Remove debris at end of each workday.
- D. Burning of debris is not permitted.
- E. If hazardous materials are not anticipated, but encountered, terminate operations and contact the DSF Construction Representative immediately. Follow all applicable local, state and federal regulations pertaining to hazardous materials.

1.4 PERMITS

- A. Unless otherwise noted, Contractor shall be responsible for obtaining and paying for all permits necessary to complete demolition work. This includes but is not limited to local Work in Right of Way permits, transportation and/or material disposal permits.

1.5 DISCONNECTION OF SERVICES

- A. Prior to starting removal and/or demolition operations be responsible and coordinate disconnection of all existing utilities, communication systems, alarm systems and other services scheduled for removal.
- B. Disconnect all services in manner which insures continued operation in facilities not scheduled for demolition.
- C. Disconnect all services in manner which allows for future connection to that service.
- D. Disconnect services to equipment at unions, flanges, valves, or fittings wherever possible.

## 1.6 REMOVAL/SALVAGING OF ITEMS

- A. Where salvaged items are indicated to be turned over to Owner, deliver to location where designated by Owner. For this project all salvaged items shall be turned over to Owner at the project site.
- B. Where indicated to be incorporated into new work, store the salvaged item in secure location until trade responsible for re-installation mobilizes his equipment and storage facilities to the site, or otherwise accepts responsibility for the salvaged item.

## PART 2 PRODUCTS

### 2.1 EQUIPMENT

- A. Use Contractor's normal equipment for demolition purposes and which meets all safety requirements imposed on such equipment.

## PART 3 EXECUTION

### 3.1 PROTECTION OF EXISTING WORK & FACILITIES

- A. Take all measures necessary to safeguard all existing work and facilities which are outside the limits of the work.
- B. Furnish and install fencing or other barriers as shown on the plans or as otherwise necessary to protect existing features.
- C. Verify the locations of, and protect, any buildings, structures, utilities, paved surfaces, signs, streetlights, utilities, landscaping and all other such facilities that are intended to remain or be salvaged.
- D. Make such explorations and probes as necessary to ascertain any required protection measures that shall be used before proceeding with demolition.
- E. Provide and maintain adequate catch platforms, warning lights, barricades, guards, weather protection, dust protection, fences, planking, bracing, shoring, piling, signs, and other items required for proper protection.
- F. Provide protection for workmen, public, adjacent construction and occupants of existing building(s).
- G. Report damage of any facilities or items scheduled for salvaging to the DSF Construction Representative.
- H. Repair or replace any damaged facilities that are not scheduled for demolition.
- I. Explosives shall not be used for demolition.
- J. Keep streets, walks and all other adjacent paved areas clean and swept clear of dirt, mud and debris deposited as a result of this operation.

- K. Protect surrounding area from dust. Control rodents, and other vermin associated with demolition operations.

### 3.2 DEMOLITION

- A. Remove all equipment, fixtures and other materials scheduled for salvage prior to beginning demolition operations.
- B. Demolish and remove all buildings and structures scheduled for demolition as shown on the plans.
- C. Abandon gas, electric, communication, water and sewer utilities in accordance with local utility company requirements, or applicable substantive requirements if considered private.
- D. Carry out vehicle loading as necessary within the project boundaries or as defined or indicated on the drawings, but not in locations that block vehicular traffic on the streets or pedestrian traffic on adjacent public walks.
- E. Dismantle each structure in an orderly manner to provide complete stability of the structure at all times. Provide bracing and shoring where necessary to avoid premature collapse of structure.
- F. Conduct demolition operations and the removal of rubbish and debris in such a way that a minimum of nuisance dust is caused. Constantly sprinkle rubbish and debris with water if necessary to keep nuisance dust to a minimum.
- G. Where necessary to prevent collapse of any construction, install temporary shores, underpinning, struts or bracing. Do not commence demolition work until all temporary construction is complete.
- H. During the execution of the work, provide, operate, and maintain all pumping equipment, suction and discharge lines in a number of capacity as required to keep all excavations and pits free of water from any source whatsoever at all times.

### 3.3 DISPOSAL OF DEMOLITION WASTE

- A. Transport and dispose all demolition waste in accordance with local, state, and federal guidelines.
- B. Whenever possible, or otherwise required by the Contract Documents, recycle demolition waste.
- C. Demolition waste shall be disposed of at a landfill or dumpsite designed and approved to accept the given waste.
- D. Maintain records documenting recycling and disposal of demolition waste. Record description of material, date removed, quantity removed, method of transport and recycling/disposal destination.

END OF SECTION

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**SECTION 07 6200**  
**SHEET METAL FLASHING AND TRIM**

**PART 1 GENERAL**

**1.1 SECTION INCLUDES**

- A. Fabricated sheet metal items, including flashings.

**1.2 REFERENCE STANDARDS**

- A. ASTM A666 - Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar; 2015.

**1.3 SUBMITTALS**

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Shop Drawings: Indicate material profile, jointing pattern, jointing details, fastening methods, flashings, terminations, and installation details.

**1.4 DELIVERY, STORAGE, AND HANDLING**

- A. Stack material to prevent twisting, bending, and abrasion, and to provide ventilation. Slope metal sheets to ensure drainage.
- B. Prevent contact with materials that could cause discoloration or staining.

**PART 2 PRODUCTS**

**2.1 SHEET MATERIALS**

- A. Stainless Steel: ASTM A666, Type 304 alloy, soft temper, 28 gage, (0.0156 inch) (0.40 mm) thick; smooth mill finish.

**2.2 FABRICATION**

- A. Form sections true to shape, accurate in size, square, and free from distortion or defects.
- B. Form pieces in longest possible lengths.
- C. Hem exposed edges on underside 1/2 inch (13 mm); miter and seam corners.
- D. Form material with flat lock seams, except where otherwise indicated; at moving joints, use sealed lapped, bayonet-type or interlocking hooked seams.

**PART 3 EXECUTION**

**3.1 INSTALLATION**

- A. Secure flashings in place using concealed fasteners.
- B. Fit flashings tight in place; make corners square, surfaces true and straight in planes, and lines accurate to profiles.
- C. Seal metal joints watertight.

**END OF SECTION**

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**SECTION 07 9210**  
**JOINT SEALANTS-DETENTION**

**PART 1 GENERAL**

**1.1 SUMMARY**

- A. This Section includes joint sealants for the following applications:
  - 1. Joints in vertical surfaces and horizontal surfaces in detention environments.

**1.2 PERFORMANCE REQUIREMENTS**

- A. Provide elastomeric joint sealants that establish and maintain watertight and airtight continuous joint seals without staining or deteriorating joint substrates.

**1.3 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. Product Certificates: For each type of joint sealant and accessory, signed by product manufacturer.
- D. 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.
- E. Field Test Report Log: For each elastomeric sealant application.
- F. Warranties: Special warranties specified in this Section.

**1.4 QUALITY ASSURANCE**

- A. Source Limitations: Obtain each type of joint sealant through one source from a single manufacturer.
- B. 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 Architect and Construction Manager.
  - 2. Conduct field tests for each application indicated below:
    - a. Each type of elastomeric sealant and joint substrate indicated.
  - 3. Notify Architect and Construction Manager seven days in advance of dates and times when test joints will be erected.
    - a. Test Method: Test joint sealants according to Method A, Field-Applied Sealant Joint Hand Pull Tab, in Appendix X1 in ASTM C 1193.

- b. 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.
4. 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.
5. 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.

#### 1.5 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.

#### 1.6 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: Five (5) 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: Ten (10) 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 SECURITY SEALANTS**

- A. Security Sealant: For sealing of joints around door frames.
  - 1. Composition: Two component, solvent free, moisture-insensitive, high modulus, high strength, pick-proof, elastomeric, polyurethane; complying with ASTM C920-924, and Fed Spec TT-S-00227E, Type II, Class B.
  - 2. Basis-of-Design: Dynaflex by Pecora
  - 3. Available Products:
    - a. Pecora Corporation; Dynaflex.
    - b. Sika Corp., Sikaflex TG.
    - c. Tremco; Vulkem 617
    - d. Approved equivalent product.

### **2.2 JOINT-SEALANT BACKING**

- A. General: Provide sealant backings of material and type that are non-staining; 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.

### **2.3 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: Non-staining, 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.
    - b. Masonry.
  - 3. Remove laitance and form-release agents from concrete.
  - 4. Clean nonporous surfaces with chemical cleaners or other means that do not stain, harm substrates, or leave residues capable of interfering with adhesion of joint sealants. Nonporous joint substrates include the following:
    - a. Metal - painted or primed.
- B. Joint Priming: Prime joint substrates 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.
  - 4. Install sealants without overlapping or starting/stopping points in areas below ceilings in areas where inmates will have access. Provide a continuous strip of sealant to prevent inmates from having opportunity to remove.
- 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.
    - 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. If requested by owner, architect or construction manager perform 1 test for each 1000 feet of joint length thereafter.
  - 2. Test Method: Test joint sealants according to Method B, Exposed Surface Finish Hand Pull Tab or Method D, Water Immersion in Appendix X1 in ASTM C 1193, 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.

## END OF SECTION

**SECTION 08 3100**  
**ACCESS DOORS AND PANELS**

**PART 1 GENERAL**

**1.1 SECTION INCLUDES**

- A. Ceiling access door and frame units.

**1.2 SUBMITTALS**

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide sizes, types, finishes, hardware, scheduled locations, and details of adjoining work.
- C. Shop Drawings: Indicate exact position of each access door and/or panel unit.

**PART 2 PRODUCTS**

**2.1 CEILING-MOUNTED UNITS**

- A. Manufacturers:
  - 1. Activar Construction Products Group - JL Industries; Model TM Series: [www.activarcpg.com/#sle](http://www.activarcpg.com/#sle).
  - 2. Milcor, Inc; M Series: [www.milcorinc.com/#sle](http://www.milcorinc.com/#sle).
  - 3. Nystrom, Inc; Architectural Access Door: [www.nystrom.com/#sle](http://www.nystrom.com/#sle).
  - 4. Approved equivalent product.
  - 5. Substitutions: See Section 01 6000 - Product Requirements.
- B. Ceiling-Mounted Units: Factory fabricated door and frame, fully assembled units with corner joints welded, filled and ground flush; square and without rack or warp; coordinate requirements with type of installation assembly being used for each unit.
  - 1. Flush Access Doors and Frames with Exposed Trim: Fabricated from steel sheet.
    - a. Door: Minimum 0.060-inch- (1.5-mm-) thick sheet metal, set flush with exposed face flange of frame.
    - b. Frame: Minimum 0.060 inch (1.5 mm) thick sheet metal with 1 inch (25 mm) wide, surface-mounted trim.
    - c. Hinges: Spring-loaded, concealed-pin type.
    - d. Primed and Factory Finish: Polyester powder coat; color white.
    - e. Latch: Cam latch operated by screwdriver with interior release.

**2.2 FABRICATION**

- A. General: Provide access door and frame assemblies manufactured as integral units ready for installation.

- B. Metal Surfaces: For metal surfaces exposed to view in the completed Work, provide materials with smooth, flat surfaces without blemishes. Do not use materials with exposed pitting, seam marks, roller marks, rolled trade names, or roughness.
- C. Doors and Frames: Grind exposed welds smooth and flush with adjacent surfaces. Furnish attachment devices and fasteners of type required to secure access panels to types of supports indicated.
- D. Latching Mechanisms: Furnish number required to hold doors in flush, smooth plane when closed.

### **PART 3 EXECUTION**

#### **3.1 EXAMINATION**

- A. Verify that rough openings are correctly sized and located.

#### **3.2 INSTALLATION**

- A. Install units in accordance with manufacturer's instructions.
- B. Install frames plumb and level in openings, and secure units rigidly in place.
- C. Position units to provide convenient access to concealed equipment when necessary.

#### **3.3 ADJUSTING AND CLEANING**

- A. Adjust doors and hardware after installation for proper operation.
- B. Remove and replace doors and frames that are warped, bowed, or otherwise damaged.

### **END OF SECTION**

**SECTION 08 3463**  
**DETENTION DOORS AND FRAMES**

**PART 1 GENERAL**

**1.1 SUMMARY**

- A. Section Includes:
  - 1. Swinging detention doors.
  - 2. Detention frames.
- B. Related Sections:
  - 1. Division 01 Section "Special Project Procedures for Detention Facilities" for additional requirements for detention facilities.
  - 2. Division 08 Section "Detention Door Hardware" for door hardware for detention doors.
  - 3. Division 08 Section "Security Glazing" for glazing in detention doors and frames.
  - 4. Division 09 Section "High-Performance Coatings" for field painting detention doors and frames.

**1.2 DEFINITIONS**

- A. Minimum-Thickness Steel: Indicated as the specified minimum thicknesses for base metal without coatings, according to HMMA 803.

**1.3 PERFORMANCE REQUIREMENTS**

- A. Detention Doors and Frame Assemblies: Provide detention doors and frames that comply with the following, based on testing manufacturer's standard units in assemblies similar to those indicated for this Project:
  - 1. Security Grade: Comply with Grade 1 according to ASTM F 1450.
  - 2. Bullet Resistance: Comply with Level 3 rating when tested according to UL 752.
    - a. Listed and labeled, by a testing agency acceptable to authorities having jurisdiction, as bullet resisting.
  - 3. Tool-Attack Resistance: Comply with small-tool-attack-resistance rating when tested according to UL 437 and UL 1034.
- B. Detention Frames: Provide transom detention frames that comply with ASTM F 1592 and removable stop test according to HMMA 863, based on testing manufacturer's standard units in assemblies similar to those indicated for this Project.

**1.4 SUBMITTALS**

- A. Product Data: For each type of product indicated. Include construction details, material descriptions, core descriptions, label compliance, fire-resistance rating and temperature-rise ratings, and finishes for each type of detention doors and frames specified.
- B. Shop Drawings: In addition to requirements below, provide a schedule using same reference numbers for details and openings as those on Drawings:

1. Elevations of each door design.
  2. Direction of swing or slide.
  3. Details of doors, including vertical and horizontal edge details, and metal thicknesses.
  4. Details of frames, including dimensioned profiles, and metal thicknesses.
  5. Locations of reinforcement and preparations for hardware.
  6. Details of each different wall opening condition.
  7. Details of anchorages, joints, field splices, and connections.
  8. Details of moldings, removable stops, and glazing.
  9. Details of conduit, junction boxes, and preparations for jamb-mounted, electrified door hardware.
- C. Coordination Drawings: Drawings of each detention door and frame, drawn to scale, on which connections and interface with electrified control systems are shown.
- D. Qualification Data: For qualified Installer.
- E. Welding certificates.
- F. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency for detention doors and frames. Indicate metal thickness of each component of tested assembly and describe construction methods.
- G. Field quality-control reports documenting inspections of installed products.
- H. Other Informational Submittals:
1. Examination reports documenting inspection of substrates, areas, and conditions.
  2. Field quality-control certification signed by Contractor and Detention Specialist.

#### 1.5 QUALITY ASSURANCE

- A. Installer Qualifications: Manufacturer's authorized representative who is trained and approved for installation of units required for this Project.
- B. Source Limitations: Obtain detention doors and frames from single source from single manufacturer.
- C. Welding Qualifications: Qualify procedures and personnel according to the following:
1. AWS D1.1/D1.1M, "Structural Welding Code - Steel."
  2. AWS D1.3, "Structural Welding Code - Sheet Steel."
- D. Preinstallation Conference: Conduct conference at Project site.
- E. Coordination Meetings: Conduct coordination meetings at Project site to comply with requirements in Division 01 Section "Special Project Procedures for Detention Facilities."

## 1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver detention doors and frames palletted, wrapped, or crated to provide protection during transit and Project-site storage. Do not use nonvented plastic.
- B. Deliver detention frames with two removable spreader bars across bottom of frames, tack welded to jambs and mullions.
- C. Inspect units, on delivery, for damage. Minor damage may be repaired provided refinished items match new work and are approved by Architect; otherwise, remove and replace damaged items as directed.
- D. Store detention doors and frames under cover at building site. Place units in a vertical position with heads up, spaced by blocking, on minimum 4-inch (102-mm) high wood blocking. Avoid using nonvented plastic or canvas shelters that could create a humidity chamber.

## 1.7 MAINTENANCE TOOLS

- A. Tool Kit: Provide six sets of tools for use with security fasteners, each packaged in a compartmented kit configured for easy handling and storage.

## 1.8 EXTRA MATERIALS

- A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
  - 1. Security Fasteners: Furnish not less than 1 box for each 50 boxes or fraction thereof, of each type and size of security fastener installed.

# PART 2 PRODUCTS

## 2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
  - 1. Trussbilt; an ASSA ABLOY Group Company.
  - 2. American Steel Products Co. .
  - 3. Approved equivalent product.

## 2.2 MATERIALS

- A. Hot-Rolled Steel Sheet: ASTM A 1011/A 1011M, CS (Commercial Steel), Type B; free of scale, pitting, or surface defects; pickled and oiled.
- B. Cold-Rolled Steel Sheet: ASTM A 1008/A 1008M, CS (Commercial Steel), Type B.
- C. Metallic-Coated Steel Sheet: ASTM A 653/A 653M, CS (Commercial Steel), Type B; with G60 (Z180) zinc (galvanized) or A60 (ZF180) zinc-iron-alloy (galvannealed) coating designation.
- D. Steel Plates, Shapes, and Bars: ASTM A 36/A 36M.
- E. Concealed Bolts: ASTM A 307, Grade A unless otherwise indicated.
- F. Welding Rods and Bare Electrodes: Select according to AWS specifications for metal alloy welded.

- G. Glazing: Comply with Division 08 Section "Security Glazing."
- H. Grout: Comply with ASTM C 476, with a slump of not more than **4 inches (102 mm)** as measured according to ASTM C 143/C 143M.
- I. Bituminous Coating: Cold-applied asphalt mastic, SSPC-Paint 12, compounded for 15-mil (0.4-mm) dry film thickness per coat. Provide inert-type noncorrosive compound free of asbestos fibers, sulfur components, and other deleterious impurities.

## 2.3 DETENTION DOORS

- A. General: Provide flush-design detention doors of seamless hollow construction, 2 inches (51 mm) thick unless otherwise indicated. Construct detention doors with smooth, flush surfaces without visible joints or seams on exposed faces or stile edges.
  - 1. For single-acting swinging detention doors, bevel both vertical edges 1/8 inch in 2 inches (3 mm in 51 mm).
- B. Core Construction: Provide the following core construction of same material as detention door face sheets, welded to both detention door faces:
  - 1. Steel-Stiffened Core: 0.042 inch (1.0 mm) thick, steel vertical stiffeners extending full-door height, with vertical webs spaced not more than 4 inches (102 mm) apart, spot welded to face sheets a maximum of 3 inches (76 mm) o.c. Fill spaces between stiffeners with insulation.
  - 2. Truss-Stiffened Core: 0.013 inch (0.3 mm) thick, steel, truncated triangular stiffeners extending between face sheets and for full height and width of door; with stiffeners welded to face sheets not more than 3 inches (76 mm) o.c. vertically and 2-3/4 inches (70 mm) horizontally. Fill spaces between stiffeners with insulation.
- C. Vertical Edge Channels: 0.123 inch (3.1 mm) thick, continuous channel of same material as detention door face sheets, extending full-door height at each vertical edge; welded to top and bottom channels to create a fully welded perimeter channel. Noncontiguous channel is permitted to accommodate lock-edge hardware only if lock reinforcement is welded to and made integral with channel.
- D. Top and Bottom Channels: 0.123 inch (3.1 mm) thick metal channel of same material as detention door face sheets, spot welded, not more than 4 inches (102 mm) o.c., to face sheets.
  - 1. Reinforce top edge of detention door with 0.053 inch (1.3 mm) thick closing channel, inverted and nesting in top channel; welded so channel web is flush with top door edges.
- E. Hardware Reinforcement: Fabricate reinforcing plates from same material as detention door face sheets to comply with the following minimum thicknesses:
  - 1. Full-Mortise Hinges and Pivots: 0.187 inch (4.7 mm) thick.
  - 2. Maximum-Security Surface Hinges: 0.250 inch (6.3 mm) thick.
  - 3. Strike Reinforcements: 0.187 inch (4.7 mm) thick.
  - 4. Slide-Device Hanger Attachments: As recommended by device manufacturer.
  - 5. Lock Fronts, Concealed Holders, and Surface-Mounted Closers: 0.093 inch (2.3 mm) thick.
  - 6. All Other Surface-Mounted Hardware: 0.093 inch (2.3 mm) thick.

- 7. Lock Pockets: 0.123 inch (3.1 mm) thick at non-inmate side, welded to face sheet.
- F. Hardware Enclosures: Provide enclosures and junction boxes for electrically operated detention door hardware of same material as detention door face sheets, interconnected with UL-approved, 1/2 inch (13 mm) diameter conduit and connectors.
  - 1. Where indicated for installation of wiring, provide access plates to junction boxes, fabricated from same material and thickness as face sheet and fastened with at least 4 security fasteners spaced not more than **6 inches (152 mm)** o.c.
- G. Exterior Detention Door Face Sheets: Fabricated from galvanized metallic coated steel sheets.
  - 1. Security Grade 1: 0.093 inch (2.3 mm) minimum thickness steel.
  - 2. 12 gauge minimum-thickness steel.

#### 2.4 DETENTION FRAMES

- A. General: Provide fully welded detention frames with integral stops, of seamless construction without visible joints or seams. Fabricate detention frames with contact edges closed tight and corners mitered, reinforced, and continuously welded full depth and width of detention frame.
- B. Provide two temporary steel spreaders spot welded to bottom of jambs to act as bracing during shipping and storage. Remove prior to installation.
- C. Stop Height: Provide minimum stop height of 0.625 inch (16 mm) for detention door openings and minimum stop height of 1-1/4 inches (32 mm) in security glazing or detention panel openings unless otherwise indicated.
- D. Exterior Detention Frames: Fabricated from galvanized metallic-coated steel sheets.
  - 1. Security Grade 1: 0.093 inch (2.3 mm) minimum thickness steel.
  - 2. 12 gauge minimum-thickness steel.
- E. Drip: Provide a 2.5 inch (64mm) projected drip across the width of the frame above the door. Fabricate the drip from 0.093 inch (2.3 mm) steel with edges eased. Continuously welded to frame and grind smooth. Weld drip to frame before galvanizing.
- F. Hardware Reinforcement: Fabricate reinforcing plates from same material as detention frame to comply with the following minimum thicknesses:
  - 1. Hinges and Pivots: 0.187 inch (4.7 mm) thick by 1-1/2 inches (38 mm) wide by 10 inches (254 mm) long.
  - 2. Strikes and Closers: 0.187 inch (4.7 mm) thick.
  - 3. Surface-Mounted Hardware: 0.093 inch (2.3 mm) thick.
  - 4. Lock Pockets: 0.123 inch (3.1 mm) thick at non-inmate side, welded to face sheet. Provide 0.123 inch (3.1 mm) thick, lock protection plate for attachment to lock pocket with security fasteners.
- G. Hardware Enclosures: Provide enclosures and junction boxes for electrically operated detention door hardware, interconnected with UL-approved, 1/2 inch (13 mm) diameter conduit and connectors.



1. Where indicated for installation of wiring, provide access plates to junction boxes, fabricated from same material and thickness as face sheet and fastened with at least 4 security fasteners spaced not more than 6 inches (152 mm) o.c.
  2. On pairs of doors, provide a custom enclosure on the inactive leaf to receive the detention lock. Provide pathway for wiring through door to power transfer hinge.
- H. Mullions and Transom Bars: Provide closed or tubular mullions and transom bars where indicated. Fasten mullions and transom bars at crossings and to jambs by butt welding. Reinforce joints between detention frame members with concealed clip angles or sleeves of same metal and thickness as detention frame.
- I. Transom Panels: Infill transom openings with 1/4" galvanized steel.
- J. Jamb Anchors: Weld jamb anchors to detention frames near hinges and directly opposite on strike jamb or as required to secure detention frames to adjacent construction.
1. Number of Anchors: Provide two anchors per jamb plus the following:
    - a. Detention Door Frames: One additional anchor for each 18 inches (457 mm), or fraction thereof, above 54 inches (1372 mm) in height.
    - b. Detention Frames with Security Glazing or Detention Panels: One additional anchor for each 18 inches (457 mm), or fraction thereof, above 36 inches (914 mm) in height.
  2. Postinstalled Expansion Anchors: Minimum 1/2-inch- (13-mm-) diameter concealed bolts with expansion shields or inserts. Provide conduit spacer from detention frame to wall, welded to detention frame. Reinforce detention frames at anchor locations.
- K. Grout Guards: Provide factory-installed grout guards of same material as detention frame, welded to detention frame at back of hardware cutouts, silencers, and glazing-stop screw preparations to close off interior of openings and prevent mortar or other materials from obstructing hardware operation or installation.

## 2.5 TRANSOM PANELS

- A. Where indicated on drawings, provide insulated metal transom panels of same materials, thickness, and construction as detention doors, except no perimeter closure is required.

## 2.6 MOLDINGS AND STOPS

- A. Provide fixed moldings on inmate side of glazed openings and removable stops on non-inmate side.
1. Height: As required to provide minimum 1 inch (25-mm) glass engagement, but not less than 1-1/4 inches (32 mm).
  2. Fixed Moldings: Formed from same material as detention door and frame face sheets, but not less than 0.093 inch (2.3 mm) thick, spot welded to face sheets a maximum of 5 inches (127 mm) o.c.
  3. Removable Stops: Formed from 0.123 inch (3.1 mm) thick angle, of same material as detention door face sheets. Secure with button head security fasteners spaced uniformly not more than 9 inches (229 mm) o.c. and not more than 2 inches (51 mm) from each corner, and as necessary to satisfy performance requirements. Form corners with notched or mitered hairline joints.

- B. Coordinate rabbet width between fixed and removable stops with type of glass or panel and type of installation indicated.

## 2.7 SECURITY FASTENERS

- A. Security Fasteners: Operable only by tools produced for use on specific type of fastener by fastener manufacturer or other licensed fabricator.
  - 1. Products: Subject to compliance with requirements, provide one of the following:
    - a. Holo-Krome; a Danaher Corporation.
    - b. Safety Socket Screw Corporation.
    - c. Tamper-Pruf Screws, Inc.
    - d. Textron Fastening Systems; Textron, Inc.
    - e. Approved Equivalent.
- B. Drive-System Type, Head Style, Material, and Protective Coating: Provide as required for assembly, installation, and strength, and as follows:
  - 1. Drive-System Types: Pinned Torx-Plus.
  - 2. Fastener Strength: Grade 8 (Class 10.9).
  - 3. Socket Button Head Fasteners:
    - a. Heat-treated alloy steel, ASTM F 835 (ASTM F 835M).
    - b. Stainless steel, ASTM F 879 (ASTM F 879M), Group 1 CW.
  - 4. Socket Flat Countersunk Head Fasteners:
    - a. Heat-treated alloy steel, ASTM F 835 (ASTM F 835M).
    - b. Stainless steel, ASTM F 879 (ASTM F 879M), Group 1 CW.
  - 5. Socket Head Cap Fasteners:
    - a. Heat-treated alloy steel, ASTM A 574 (ASTM A 574M).
    - b. Stainless steel, ASTM F 837 (ASTM F 837M), Group 1 CW.
  - 6. Protective Coatings for Heat-Treated Alloy Steel:
    - a. Zinc and clear trivalent chromium, for exterior applications and interior applications where indicated.
    - b. Zinc phosphate with oil, ASTM F 1137, Grade I, or black oxide unless otherwise indicated.

## 2.8 FABRICATION

- A. Fabricate detention doors and frames rigid, neat in appearance, and free of defects, warp, or buckle. Accurately form metal to required sizes and profiles, with minimum radius for thickness of metal. Weld exposed joints continuously; grind, fill, dress, and make smooth, flush, and invisible. Where practical, fit and assemble units in manufacturer's plant. To ensure proper

- assembly at Project site, clearly identify work that cannot be permanently factory assembled before shipment.
- B. Tolerances: Fabricate detention doors and frames to comply with manufacturing tolerances indicated in HMMA 863.
  - C. Fabricate multiple-opening detention frames with mullions that have closed tubular shapes and with no visible seams or joints.
  - D. Exterior Detention Doors: Provide weep-hole openings in bottom of detention doors to permit entrapped moisture to escape. Seal joints in top edges of detention doors against water penetration.
  - E. Hardware Preparation: Factory prepare detention doors and frames to receive mortised hardware, including cutouts, reinforcement, mortising, drilling, and tapping, according to final door hardware schedule and templates provided by detention door hardware supplier.
    - 1. Reinforce detention doors and frames to receive surface-mounted door hardware. Drilling and tapping may be done at Project site.
    - 2. Locate door hardware as indicated or, if not indicated, according to HMMA 831.
  - F. Factory cut openings in detention doors.
  - G. Weld components to comply with referenced AWS standard. Weld before finishing components to greatest extent possible. Remove weld spatter and welding oxides from exposed surfaces by descaling or grinding.

## 2.9 GENERAL FINISH REQUIREMENTS

- A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
- B. Finish detention doors and frames after assembly.

## 2.10 METALLIC-COATED STEEL SHEET FINISHES

- A. Surface Preparation: Clean surfaces with nonpetroleum solvent so surfaces are free of oil and other contaminants. After cleaning, apply a conversion coating suited to the organic coating to be applied over it. Clean welds, mechanical connections, and abraded areas and apply galvanizing repair paint, complying with SPPC-Paint 20, to comply with ASTM A 780.
- B. Factory Priming for Field-Painted Finish: Apply shop primer specified below immediately after surface preparation and pretreatment. Apply a smooth coat of even consistency to provide a uniform dry film thickness of not less than 0.7 mils (0.02 mm).
  - 1. Shop Primer: Manufacturer's or fabricator's special, fast-curing, lead- and chromate-free primer complying with ANSI A250.10 acceptance criteria; recommended by primer manufacturer for zinc-coated steel; compatible with substrate and field-applied high-performance coating system indicated; and providing a sound foundation for field-applied topcoats despite prolonged exposure.

## **PART 3 EXECUTION**

### **3.1 EXAMINATION**

- A. Examine substrates, areas, and conditions, with Installer and Detention Specialist present, for compliance with requirements for installation tolerances and other conditions affecting performance of detention doors and frames.
- B. For the record, prepare written report, endorsed by Installer, listing conditions detrimental to performance of detention doors and frames.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

### **3.2 PREPARATION**

- A. Remove welded-in shipping spreaders installed at factory. Repair galvanized coating damaged by installation or removal of spreaders.
- B. Prior to installation and with shipping spreaders removed, adjust detention frames for squareness, alignment, twist, and plumbness to the following tolerances:
  - 1. Squareness: Plus or minus 1/16 inch (1.6 mm), measured at door rabbet on a line 90 degrees from jamb and perpendicular to frame head.
  - 2. Alignment: Plus or minus 1/16 inch (1.6 mm), measured at jambs on a horizontal line parallel to plane of face.
  - 3. Twist: Plus or minus 1/16 inch (1.6 mm), measured at opposite face corners of jambs on parallel lines, and perpendicular to plane of door rabbet.
  - 4. Plumbness: Plus or minus 1/16 inch (1.6 mm), measured at jambs on a perpendicular line from head to floor.

### **3.3 INSTALLATION**

- A. General: Install detention doors and frames plumb, rigid, properly aligned, and securely fastened in place, complying with Drawings, schedules, and manufacturer's written recommendations.
- B. Anchorage: Set detention frame anchorage devices according to details on Shop Drawings and per anchorage device manufacturer's written instructions.
  - 1. Postinstalled Expansion Anchors: Drill holes in existing construction at locations to match bolt locations and install bolt expansion shields or inserts.
- C. Repair galvanized coating damaged by handling or field modification of frames and doors.
- D. Apply bituminous coating to backs of frames prior to filling with grout.
- E. Placing Detention Frames: Install detention frames of sizes and profiles indicated. Set detention frames accurately in position; plumbed, aligned, and braced securely until permanent anchors are set. After wall construction is complete, remove temporary braces and spreaders, leaving surfaces smooth and undamaged.
  - 1. Postinstalled Expansion Anchors: Install bolt. After bolt is tightened, weld bolt head to provide nonremovable condition. Grind, dress, and finish smooth welded bolt head.
  - 2. Install detention frames with removable stops located on non-inmate side of opening.

- F. Grout: Fully grout detention frame jambs and heads. Completely fill space between frames and adjacent substrates. Hand trowel grout and take other precautions, including bracing detention frames, to ensure that frames are not deformed or damaged by grout forces.
- G. Swinging Detention Doors: Fit non-fire-rated detention doors accurately in their frames, with the following clearances:
  - 1. Between Doors and Frames at Jambs and Head: 1/8 inch (3.2 mm).
  - 2. Between Edges of Pairs of Doors: 1/8 inch (3.2 mm).
  - 3. At Door Sills with Threshold: 3/8 inch (9.5 mm).
  - 4. Between Door Bottom and Nominal Surface of Floor Covering: 1/2 inch (12.7 mm).
- H. Glazing: Comply with installation requirements in Division 08 Section "Security Glazing" unless otherwise indicated.

### 3.4 FIELD QUALITY CONTROL

- A. Inspect installed products to verify compliance with requirements. Prepare inspection reports and indicate compliance with and deviations from the Contract Documents.
- B. Remove and replace detention work where inspections indicate that work does not comply with specified requirements.
- C. Perform additional inspections to determine compliance of replaced or additional work. Prepare inspection reports.
- D. Prepare field quality-control certification that states installed products and their installation comply with requirements in the Contract Documents.

### 3.5 ADJUSTING AND CLEANING

- A. Final Adjustments: Check and readjust operating hardware items immediately before final inspection. Leave work in complete and proper operating condition. Remove and replace defective work, including detention doors and frames that are warped, bowed, or otherwise unacceptable.
- B. Clean grout and other bonding material off detention doors and frames immediately after installation.
- C. Prime-Coat Touchup: Immediately after erection, sand smooth rusted or damaged areas of prime coat and apply touchup of compatible air-drying primer.
  - 1. After finishing smooth field welds, apply air-drying primer.
- D. Galvanized Surfaces: Clean field welds, bolted connections, and abraded areas and repair galvanizing to comply with ASTM A 780.

### END OF SECTION

**SECTION 08 7163**  
**DETENTION DOOR HARDWARE**

**PART 1 GENERAL**

**1.1 SUMMARY**

- A. Section Includes:
  - 1. Detention door hardware for the following:
    - a. Swinging detention doors.
- B. Related Sections:
  - 1. Division 01 Section "Special Project Procedures for Detention Facilities" for general requirements for detention work, including responsibilities of a single-source detention specialist.
  - 2. Division 28 Section "Intrusion Detection" for detection devices installed at detention door openings as part of an intrusion detection system.

**1.2 PERFORMANCE REQUIREMENTS**

- A. Swinging Detention Door Assemblies: Provide detention door hardware as part of a detention door assembly that complies with security grade indicated, when tested according to ASTM F 1450, based on testing manufacturer's standard units in assemblies similar to those indicated for this Project.
- B. Detention Door Hardware Functional Performance: Provide detention door hardware with features, functions, and internal equipment required to perform control and monitoring functions indicated in Division 28.

**1.3 SUBMITTALS**

- A. Product Data: For each type of product indicated. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for each type of detention door hardware.
- B. Shop Drawings: For each type of detention door hardware. Include plans, elevations, sections, details, and attachments to other work.
  - 1. Wiring Diagrams: For power, signal, and control wiring; differentiate between manufacturer-installed and field-installed wiring for electrified detention door hardware. Include the following:
    - a. System schematic.
    - b. Point-to-point wiring diagram, including location of connections.
    - c. Riser diagram.
    - d. Elevation of each detention door type.
- C. Other Action Submittals:
  - 1. Door Hardware Schedule: Prepared by or under the supervision of supplier, detailing fabrication and assembly of door hardware, as well as procedures and diagrams.

Coordinate the final Door Hardware Schedule with detention doors, frames, and related work to ensure proper size, thickness, hand, function, and finish of door hardware.

- a. Integrate detention door hardware indicated in "Detention Door Hardware Sets" Article into the Door Hardware Schedule, and indicate complete designations of every item required for each door and opening.
- D. Product Certificates: For each type of electrified detention door hardware, from manufacturer.
1. Certify that detention door hardware approved for use on types and sizes of labeled fire doors complies with listed fire door assemblies.
- E. Product Test Reports: Based on evaluation of comprehensive tests performed by manufacturer and witnessed by a qualified testing agency or performed by a qualified testing agency, for each type of detention lock and latch, security door closer and sliding detention door device.
- F. Maintenance Data: For each type of detention door hardware to include in maintenance manuals.
- G. Operation and Maintenance Data: For electrified detention door hardware to include in emergency, operation, and maintenance manuals. In addition to items specified in Division 01 Section "Operation and Maintenance Data," include the following:
1. Normal remote security operation.
  2. Normal local security operation.
  3. Emergency security operation.
- H. Warranties: Sample of special warranties.
- I. Other Informational Submittals:
1. Examination reports documenting inspections of substrates, areas, and conditions.
  2. Field quality-control reports documenting inspections of installed products.
  3. Field quality-control certification signed by Contractor and Detention Specialist.

#### 1.4 QUALITY ASSURANCE

- A. Installer Qualifications: An employer of workers trained and approved by manufacturer and an authorized representative of detention door hardware manufacturer for installation and maintenance of units required for this Project.
- B. Source Limitations for Detention Door Hardware: Obtain each type of detention door hardware from single source from single manufacturer.
- C. Regulatory Requirements: Comply with provisions of the following:
1. Where indicated to comply with accessibility requirements, comply with the U.S. Architectural & Transportation Barriers Compliance Board's ADA-ABA Accessibility Guidelines and ICC/ANSI A117.1 as follows:
    - a. Handles, Pulls, Latches, Locks, and other Operating Devices: Shape that is easy to grasp with one hand and does not require tight grasping, tight pinching, or twisting of the wrist.

- b. Security Door Closers: Comply with the following maximum opening-force requirements indicated:
  - 1) Interior Hinged Doors: 5 lbf (22 N) applied perpendicular to door.
  - 2) Fire Doors: Minimum opening force allowable by authorities having jurisdiction.
- 2. Electrified Door Hardware: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
- D. Preinstallation Conference: Conduct conference at Project site.
  - 1. Inspect and discuss electrical and control system roughing-in and other preparatory work performed by other trades.
  - 2. Review sequence of operation for each type of electrified detention door hardware.
  - 3. Review and finalize a construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
  - 4. Certifying procedures.

#### 1.5 DELIVERY, STORAGE, AND HANDLING

- A. Inventory detention door hardware on receipt and provide secure lockup for detention door hardware delivered to Project site.
- B. Tag each item or package separately with identification related to the final Door Hardware Schedule, and include basic installation instructions with each item or package.
- C. Deliver keys to Owner by registered mail or overnight package service, address to be given at keying meeting.

#### 1.6 COORDINATION

- A. Templates: Obtain and distribute, to the parties involved, templates for detention doors, frames, and other work specified to be factory prepared for installing detention door hardware.
- B. Electrical System Roughing-in: Coordinate layout and installation of electrified detention door hardware with connections to power supplies and detention monitoring and control system.

#### 1.7 WARRANTY

- A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of detention door hardware that fail in materials or workmanship within specified warranty period.
  - 1. Failures include, but are not limited to, the following:
    - a. Structural failures including excessive deflection, cracking, or breakage.
    - b. Faulty operation of operators and detention door hardware.
    - c. Deterioration of metals, metal finishes, and other materials beyond normal weathering or detention use.
- B. Warranty Period: Three years from date of Substantial Completion.



C. Warranty Period for Continuous-Pin Detention Hinges: 10 years from date of Substantial Completion.

D. Warranty Period for Security Door Closers: 10 years from date of Substantial Completion.

#### 1.8 MAINTENANCE SERVICE

A. Maintenance Tools and Instructions: Furnish a complete set of specialized tools and maintenance instructions as needed for Owner's continued adjustment, maintenance, and removal and replacement of detention door hardware.

### PART 2 - PRODUCTS

#### 2.1 SECURITY FASTENERS

A. General: Operable only by tools produced for use on specific type of fastener by fastener manufacturer or other licensed fabricator. Drive-system type, head style, material, and protective coating as required for assembly, installation, and strength, and as follows:

1. Manufacturers: Subject to compliance with requirements, provide products by the following:
  - a. Mutual Screw & Supply, Rochelle Park NJ
  - b. Tamper-Pruf Screws, Inc. Paramount, CA
  - c. Camcar Division of Textron, Inc. Rockford, IL
  - d. Safety Socket Screw Corporation Chicago, IL
  - e. Bryce Fastener Company, Inc. 2924 Western Avenue Seattle, WA
  - f. Acument Global Technologies, Troy MI
  - g. Approved equivalent product.
  - h. Substitutions: See Section 01 6000 - Product Requirements.
2. Drive-System Types: Pinned Torx-Plus.
3. Fastener Strength: 120,000 psi (827 MPa).

#### 2.2 DETENTION HINGES, GENERAL

- A. Standard for Electric Detention Hinges: UL 634.
- B. Detention Hinge Base Metal: Unless otherwise indicated, provide the following:
  1. Exterior Detention Hinges: Stainless steel, with stainless-steel pin.
- C. Electrified Functions for Detention Hinges: Comply with the following:
  1. Power Transfer: Concealed PTFE-jacketed wires, secured at each leaf and continuous through detention hinge knuckle.
- D. Fastening: Comply with the following:
  1. Security Fasteners: Provide socket flat countersunk head machine screws; finish screw heads to match surface of detention hinges. Install into drilled and tapped holes.

## 2.3 DETENTION HINGES

- A. Continuous-Pin Detention Hinges: Minimum 0.109-inch- (2.78-mm-) thick, stainless-steel hinge leaves with minimum overall width of 4 inches (100 mm); with 1/4-inch- (6-mm-) diameter continuous pin; fabricated to full height of detention door and frame. Finish components after milling and drilling are complete. Fabricate continuous-pin detention hinges to template screw locations.
1. Basis-of-Design Product: Subject to compliance with requirements, provide Markar Architectural Products, Inc., a subsidiary of Adams Rite Manufacturing Co. (MP); Series 3500 or comparable product:
    - a. Approved equivalent product.
    - b. Substitutions: See Section 01 6000 - Product Requirements.
  2. Security Grade: Provide the highest rated security grade for application according to ASTM F 1758.
- B. Detention Butt Hinges for Existing Doors: Heavy weight, plain bearing; fabricated from cast iron or steel; 3/8-inch- (9.5-mm-) diameter, case-hardened, fully welded, steel hinge pin; full surface.
1. Field verify existing hinges and frame. Provide hinges that fit existing frame prep.
  2. Basis-of-Design Product: Subject to compliance with requirements, provide Southern Folger Model No. 204FMSS, or comparable product by one of the following:
    - a. Brink, R. R. Locking Systems, Inc. (RRB); Model No. 4 1/2.
    - b. Approved equivalent product.
    - c. Substitutions: See Section 01 6000 - Product Requirements.
  3. Leaves: Drilled with countersunk holes.
  4. Size: Minimum 4-1/2 inches by 4-1/2 inches by 3/16 inch.
  5. Security Grade: Provide highest rated security grade for application according to ASTM F 1758.
  6. Finish: BHMA 630.
- C. Electric Power Transfer Hinges: Provide power transfer option on continuous hinge where indicated in schedule. Coordinate wire quantity and size with electrified hardware requirements.

## 2.4 DETENTION BOLTS

- A. Manual Head and Foot Bolts: 1-inch diameter bolts with 3/4-inch throw. Bolt operated by "spanner" type key in the edge of the door.
1. Basis-of-Design Product: Southern Steel Company, Div. of Phelps-Tointon Inc. (SS); 10105. Provide basis of design or a comparable product of one of the following:
    - a. Brink, R. R. Locking Systems, Inc. (RRB); 70105HM.
    - b. Approved equivalent product.

c. Substitutions: See Section 01 6000 - Product Requirements.

2. Field verify and coordinate location of foot bolt with existing foot bolt receptacle.

## 2.5 DETENTION LOCKS AND LATCHES, GENERAL

- A. Swinging Detention Door Lock and Latch Performance: Provide detention door locks and latches that comply with security grade indicated, when tested according to ASTM F 1577, based on testing manufacturer's standard units in assemblies similar to those indicated for this Project.
- B. Detention Lock Construction: Fabricate detention lock case and cover plate from steel plate. Fabricate bolts from solid sections; laminated construction unacceptable.
- C. Detention Lock Throw: Comply with testing requirements for length of bolts to comply with labeled fire door requirements, and as follows:
  - 1. Latchbolts: Minimum 1-inch (19-mm) latchbolt throw.

## 2.6 ELECTROMECHANICAL DETENTION LOCKS AND LATCHES

- A. General: Provide electromechanical detention locks and latches with factory-wired plug connector with 6-inch (152-mm) wire pigtail.
  - 1. Provide security ring for installation of electromechanical detention lock in hollow-metal detention frame, welded to frame or access cover, unless otherwise indicated.
  - 2. Equip direct-current solenoid-operated detention locks and latches with diode transient voltage protection at each locking device.
- B. Motor-Driven Deadlatches, Mogul:
  - 1. Function: Remote switch activates electric motor that retracts latchbolt; automatic latching and deadlocking when door is closed (slam locking). Latchbolt can be mechanically retracted by mogul cylinder; keyed two sides.
    - a. Latchback: Latchbolt remains retracted as long as control switch is activated; latchbolt extends when power is discontinued.
    - b. If power fails, latchbolt automatically deadlocks (fail-secure).
    - c. Half Cycle Holdback: Required
  - 2. Latchbolt: 1-1/2-inch high by 3/4-inch- (38-mm high by 19-mm-) thick hardened steel; 1-inch (25-mm) throw.
  - 3. Provide internal deadlock indicator switch.
  - 4. Provide roller-type deadlock actuator.
  - 5. Voltage: 120-V ac.
  - 6. Security Grade: Provide highest rated security grade for application.
  - 7. Basis-of-Design Product: Southern Steel Company, Div. of Phelps-Tointon Inc. (SS); Series 10120AM. Provide basis of design or a comparable product of one of the following:
    - a. Brink, R. R. Locking Systems, Inc. (RRB); Series 5020M.

- b. Approved equivalent product.
- c. Substitutions: See Section 01 6000 - Product Requirements.

## 2.7 CYLINDERS AND KEYING

- A. General: Subject to compliance with requirements, provide cylinders and keying for paracentric and mogul cylinders by the same manufacturer as for detention locks and latches.
- B. Mogul Cylinders: Manufacturer's standard pin-tumbler type, minimum 2-inch (50-mm) diameter; body constructed from brass or bronze, stainless steel, or nickel silver; with stainless-steel tumblers and engaging cylinder balls; complying with the following:
  - 1. Number of Pins: Six.
  - 2. Mortise Type: Threaded cylinders with rings and straight- or clover-type cam.
    - a. High-Security Grade: Listed and labeled as complying with pick- and drill-resistant testing requirements in UL 437 (Suffix A); where indicated.
  - 3. Finish: BHMA 626.
- C. Keying: Key all cylinders to existing facility fire key.
- D. Keys: No new keys are required.

## 2.8 SWITCHES

- A. General: Provide switches configured with type of contacts required for functions indicated, including multiple circuiting where required by functional performance of Division 28 Section "PLC Electronic Detention Monitoring and Control Systems."
- B. Concealed, Mechanical Door Position Switches: Consisting of metal track mortised into head of detention door connected by steel actuator arm to steel actuator mortised into frame; switch fully concealed when door is in closed position; with stainless-steel faceplate; 120-V ac; factory wired with plug connector. Action of door mechanically activates switch. Wire in series with lock monitors. Attach with security fasteners. Seal switch in door head to prevent water intrusion in the door.
  - 1. Basis-of-Design Product: Subject to compliance with requirements, provide Southern Folger Series 240 or comparable product by one of the following:
    - a. Brink, R. R. Locking Systems, Inc. (RRB); Series 201030.
    - b. Approved equivalent product.
    - c. Substitutions: See Section 01 6000 - Product Requirements.

## 2.9 DETENTION OPERATING TRIM

- A. Standard: BHMA A156.6, Grade 1.
- B. Surface-Mounted Door Pulls: 8-3/4-inch (222-mm) overall length and 2-1/4-inch (57-mm) projection; attach to door with two security fasteners.
  - 1. Products: Subject to compliance with requirements, provide one of the following:
    - a. Brink, R. R. Locking Systems, Inc. (RRB); Series 300021.

- b. Southern Folger Detention Equipment Company (SF); Southern Steel Series 212C.
- c. Approved equivalent product.
- d. Substitutions: See Section 01 6000 - Product Requirements.

- 2. Material: Cast stainless steel with BHMA 630 finish.

## 2.10 SECURITY DOOR CLOSERS

- A. Standard: BHMA A156.4, Grade 1.

- 1. Certified Products: Provide security door closers listed in BHMA's "Directory of Certified Products."

- B. Surface-Mounted Security Door Closers:

- 1. Basis-of-Design Product: Subject to compliance with requirements, provide product indicated on Drawings LCN Closers, an Ingersoll-Rand Company (LCN); Series 2210DPS or comparable product by one of the following:
    - a. Norton Door Controls, an ASSA ABLOY Group company (NDC); Series 7570.
    - b. Approved equivalent product.
    - c. Substitutions: See Section 01 6000 - Product Requirements.
  - 2. Construction: Forged-steel arm; fabricated with joints designed to prevent disassembly with ordinary hand tools.
  - 3. Cover Plates: Heavy-duty metal, attached with security fasteners.

- C. Unit Size: Unless otherwise indicated, comply with manufacturer's written recommendations for size of security door closers depending on size of door, exposure to weather, and anticipated frequency of use. Provide factory-sized closers, adjustable to meet field conditions and requirements for opening force.

## 2.11 OVERHEAD STOPS AND HOLDERS

- A. Standard: BHMA A156.8, Grade 1.

- B. Manufacturers:

- 1. Basis of Design: Rixson; an Assa Abloy Group company; 8HD Series.
  - 2. Glynn-Johnson, an Allegion brand; 90 Series: [www.allegion.com/us/#sle](http://www.allegion.com/us/#sle).
  - 3. Hager Companies; 7000 Series.
  - 4. Approved equivalent product.
  - 5. Substitutions: See Section 01 6000 - Product Requirements.

## 2.12 DETENTION DOOR ACCESSORIES

- A. Weather-stripping for Exterior Detention Frames: At exterior detention frames, provide continuous weather-strip seal, in lieu of door silencers. Attached to detention frame per manufacturer's instructions. Available Products:

1. Pemko no. 2891APK.
  2. Reese no. 755A.
  3. Approved equivalent product.
  4. Substitutions: See Section 01 6000 - Product Requirements.
- B. Thresholds / Sill Drip / Sweep / Top Drip for Detention Frames: At detention frames, provide thresholds, sill drip and/or sweeps for the width of the door opening, where indicated. Attached with security fasteners per manufacturer's instructions. Available Products:
1. Threshold:
    - a. Pemko no. 171A.
    - b. Reese no. S205A.
    - c. Approved equivalent product.
    - d. Substitutions: See Section 01 6000 - Product Requirements.
  2. Sill Drip/Sweep:
    - a. Pemko no. 345ANB.
    - b. Reese no. 354A.
    - c. Approved equivalent product.
    - d. Substitutions: See Section 01 6000 - Product Requirements.
  3. Top Drip:
    - a. Pemko no. 346C.
    - b. Reese no. R201C.
    - c. Approved equivalent product.
    - d. Substitutions: See Section 01 6000 - Product Requirements.
- C. Protective Plates: Where protective plates are specified in the Hardware Schedule, furnish 16 gauge (0.050-inch) stainless steel plates (US32D) as follows:
1. Armor Plates:
    - a. Width: 2 inches less than door width.
    - b. Height: 36 inches.

## 2.13 FABRICATION

- A. Manufacturer's Nameplate: Do not provide products that have manufacturer's name or trade name displayed in a visible location (omit removable nameplates) except in conjunction with required fire-rated labels and as otherwise approved by Architect.
- B. Base Metals: Produce detention door hardware units of base metal, fabricated by forming method indicated, using manufacturer's standard metal alloy, composition, temper, and hardness. Furnish metals of a quality equal to or greater than that of specified detention door

hardware units and BHMA A156.18 finishes. Do not furnish manufacturer's standard materials or forming methods if different from specified standard.

- C. Fasteners: Provide flat-head security fasteners with finished heads to match surface of detention door hardware unless otherwise indicated.
1. Security Fasteners: Fabricate detention door hardware using security fasteners with head style appropriate for fabrication requirements, strength, and finish of adjacent materials. Provide stainless-steel security fasteners in stainless-steel materials.
  2. Concealed Fasteners: For detention door hardware units that are exposed when detention door is closed except for units already specified with concealed fasteners. Do not use through bolts for installation where bolt head or nut on opposite face is exposed unless it is the only means of securely attaching detention door hardware. Where through bolts are used on hollow-metal detention door and frame construction, provide sleeves for each through bolt.
  3. Steel Machine Screws: For the following fire-rated applications:
    - a. Mortise detention hinges to detention doors.
    - b. Strike plates to detention frames.
    - c. Security door closers to detention doors and frames.
  4. Steel Through Bolts: For the following fire-rated applications unless door blocking is provided:
    - a. Surface detention hinges to detention doors.
    - b. Security door closers to detention doors and frames.
  5. Spacers or Sex Bolts: For through bolting of hollow-metal detention doors.
  6. Fasteners for Wood Detention Doors: Comply with DHI WDHS.2.

## 2.14 FINISHES

- A. Standard: Comply with BHMA A156.18.
- B. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.
- C. BHMA Designations: Comply with base material and finish requirements indicated by the following:
  1. BHMA 630: Stainless steel, satin, over stainless-steel base metal.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine detention doors and frames, with Installer and Detention Specialist present, for compliance with requirements for installation tolerances, labeled fire door assembly construction, wall and floor construction, and other conditions affecting performance of detention door hardware.
- B. Examine roughing-in for embedded and built-in anchors to verify actual locations of detention door hardware connections before detention door hardware installation.

- C. Prepare written report, endorsed by Installer, listing conditions detrimental to performance of detention door hardware.
- D. Inspect built-in and cast-in anchor installations, before installing detention door hardware, to verify that anchor installations comply with requirements. Prepare inspection reports.
  - 1. Remove and replace anchors where inspections indicate that they do not comply with specified requirements. Re-inspect after repairs or replacements are made.
  - 2. Perform additional inspections to determine compliance of replaced or additional work. Prepare inspection reports.
  - 3. Verify locations of detention door hardware with those indicated on Shop Drawings.
  - 4. Examine roughing-in for electrical power systems to verify actual locations of wiring connections before electrified detention door hardware installation.
  - 5. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 PREPARATION

- A. Steel Detention Doors and Frames: Comply with ANSI/DHI A115 Series.
  - 1. Surface-Applied Detention Door Hardware: Drill and tap detention doors and frames according to ANSI/SDI A250.6.

### 3.3 INSTALLATION

- A. Mounting Heights: Mount detention door hardware units at heights indicated in the following applicable publications unless specifically indicated or required to comply with governing regulations:
  - 1. Steel Detention Doors and Frames: DHI's "Recommended Locations for Builders' Hardware for Custom Steel Doors and Frames."
- B. Install each detention door hardware item to comply with Shop Drawings and manufacturer's written instructions. Where cutting and fitting are required to install detention door hardware onto or into surfaces that are later to be painted or finished in another way, coordinate removal, storage, and reinstallation of surface protective trim units with finishing work specified in Division 09 Sections. Do not install surface-mounted items until finishes have been completed on substrates involved.
  - 1. Set units level, plumb, and true to line and location. Adjust and reinforce attachment substrates as necessary for proper installation and operation.
  - 2. Drill and countersink units that are not factory prepared for anchorage fasteners. Space fasteners and anchors according to industry standards.
- C. Install interconnecting wiring and connectors between detention door hardware devices. Terminate device wiring for detention door hardware installed in swinging doors at a plug-type connector located in lock pocket or door frame junction box and for sliding doors at a junction box in door frame.
- D. Security Fasteners: Install detention door hardware using security fasteners with head style appropriate for installation requirements, strength, and finish of adjacent materials.



### 3.4 FIELD QUALITY CONTROL

- A. Detention Specialist shall inspect installed products to verify compliance with requirements. Prepare inspection reports and indicate compliance with and deviations from the Contract Documents.
- B. Perform the following field tests and inspections and prepare test reports:
  - 1. After installing electrified detention door hardware and after electrical circuitry has been energized, test detention door hardware for compliance with requirements.
    - a. Test: Operate lock of each door and group of doors in normal remote, normal local, and emergency operating modes. Verify that remote controls operate correct door locks and in correct sequence.
  - 2. Verify that lock bolts engage strikes with required bolt projection.
  - 3. Verify that detention door hardware is installed, connected, and adjusted according to the Contract Documents.
  - 4. Verify that electrical wiring installation complies with manufacturer's submittal and written installation requirements.
- C. Remove and replace detention work if inspections indicate that work does not comply with specified requirements. Remove malfunctioning units, replace with new units, and retest as specified above.
- D. Perform additional inspections to determine compliance of replaced or additional work. Prepare inspection reports.
- E. Prepare field quality-control certification endorsed by Detention Specialist that states installed products and their installation comply with requirements in the Contract Documents.

### 3.5 ADJUSTING

- A. Adjust and check each operating item of detention door hardware and each detention door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate as intended. Adjust detention door control devices to compensate for final operation of heating and ventilating equipment and to comply with referenced accessibility requirements.
  - 1. Strikes: Adjust horizontal and vertical alignment of keeper to properly engage lock bolt.
  - 2. Security Door Closers: Adjust sweep period so that, from an open position of 90 degrees, detention door will take at least five seconds to move to a position of 12 degrees.

### 3.6 CLEANING AND PROTECTION

- A. Clean adjacent surfaces soiled by detention door hardware installation.
- B. Clean operating items as necessary to restore proper function and finish.
- C. Provide final protection and maintain conditions that ensure that detention door hardware is without damage or deterioration at time of Substantial Completion.

### 3.7 DEMONSTRATION

- A. If locks other than Southern Folger are provided, train Owner's maintenance personnel to adjust, operate, and maintain detention door hardware. See Division 01 Section "Demonstration and Training."

### 3.8 DETENTION DOOR HARDWARE SETS

- A. The hardware sets represent the design intent and direction of the Owner and Architect. They are a guideline only, and should not be considered to be a detailed hardware schedule. Any discrepancies, conflicts or missing items should be brought to the attention of the Architect, with proposed corrections, prior to bidding. Hardware sets with omitted items, if any, should be scheduled, including the additional hardware required, to provide a complete and functional set, appropriate for the intended application.
- B. Manufacturers' Abbreviations:
  - 1. BM – Burns Manufacturing
  - 2. HAG – Hager Companies
  - 3. LCN – LCN Closers
  - 4. MP – Markar Architectural Products
  - 5. NDC – Norton Door Controls
  - 6. PE – Pemko
  - 7. RRB – R.R. Brink Locking Systems
  - 8. RE – Reese Enterprises
  - 9. RO – Rockwood
  - 10. SF – Southern Folger Detention Equipment Company
  - 11. SS – Sounthern Steel Company
  - 12. TBM – Triangle Brass Manufacturing Company
  - 13. UAC – Unicel Architectural Corporation
- C. General: Provide detention door hardware for each detention door to comply with requirements in this Section and detention door hardware sets indicated in a door and frame schedule and detention door hardware sets indicated below.

D. Detention Door Hardware Set No. 1

1. Provide on Door Openings: 33, 34, 35, and 37.
2. Exterior Detention Movement Doors: Opening Number and Hardware, each to have the following: (Quantity - Item Number)
  - a. 1 each - Continuous Hinge.
  - b. 1 each - Electromechanical Lock.
  - c. 1 each - Closer.
  - d. 1 each - Door Position Switch.
  - e. 2 each - Door Pull.
  - f. 1 each - Armor Plates – 36" High.
  - g. 1 each - Sill Drip/Sweep.
  - h. 1 set - Weather Stripping.
  - i. 1 each - Threshold.

E. Detention Door Hardware Set No. 2

1. Provide on Door Openings: 8X, 14, 15, 16X, 17, 18, 19, 21, 22, 23, 26, 32, R102, and S102.
2. Bid Alternate #2: Add door 24.
3. Exterior Detention Movement Doors: Opening Number and Hardware, each to have the following: (Quantity - Item Number)
  - a. 1 each - Continuous Hinge.
  - b. 1 each - Closer.
  - c. 1 each - Door Position Switch.
  - d. 2 each - Door Pull.
  - e. 1 each - Armor Plates – 36" High.
  - f. 1 set - Weather Stripping.
  - g. 1 each - Threshold.
  - h. Salvage and reinstall existing electromechanical lock.

F. Detention Door Hardware Set No. 3

1. Provide on Door Openings: 20.
2. Exterior Detention Movement Doors: Opening Number and Hardware, each to have the following: (Quantity - Item Number)
  - a. 1 each - Continuous Hinge.
  - b. 1 each - Closer.
  - c. 1 each - Door Position Switch.
  - d. 2 each - Door Pull.
  - e. 1 each - Armor Plates – 36" High.
  - f. 1 set - Weather Stripping.
  - g. 1 each - Threshold.
  - h. Salvage and reinstall existing mechanical lock.

G. Detention Door Hardware Set No. 4

1. Provide on Door Opening: 24 (base bid).
2. Bid Alternate #2: Change door 24 to Hardware Set No. 2.
3. Exterior Detention Movement Doors: Opening Number and Hardware, each to have the following: (Quantity - Item Number)
  - a. 4 each - Detention Butt Hinges.
  - b. 1 each - Closer.
  - c. 2 each - Door Pull.
  - d. 1 each - Armor Plates – 36" High.
  - e. 1 each - Sill Drip/Sweep.
  - f. 1 set - Weather Stripping.
  - g. 1 each - Top Drip.
  - h. 1 each - Threshold.
  - i. Salvage and reinstall existing door position switch.
  - j. Existing electromechanical lock to be reused.

H. Detention Door Hardware Set No. 5

1. Provide on Door Openings: 11
2. Exterior Detention Movement Doors: Opening Number and Hardware, each to have the following: (Quantity - Item Number)
  - a. 2 each - Continuous Hinge.
  - b. 2 each - Flush Bolt.
  - c. 2 each - Overhead Stop/Holder.
  - d. 2 each - Door Position Switch.
  - e. 2 each - Door Pull - install on active leaf.
  - f. 2 each - Armor Plates – 36" High.
  - g. 2 each - Sill Drip/Sweep.
  - h. 1 set - Weather Stripping.
  - i. 1 each - Threshold.
3. Salvage and reinstall existing mechanical lock.

I. Detention Door Hardware Set No. 6

1. Provide on Door Opening: 12
2. Exterior Detention Movement Doors: Opening Number and Hardware, each to have the following: (Quantity - Item Number)
  - a. 1 each - Continuous Hinge.
  - b. 1 each - Continuous Hinge with power transfer.
  - c. 2 each - Flush Bolt.
  - d. 2 each - Overhead Stop/Holder.
  - e. 2 each - Door Position Switch.
  - f. 2 each - Door Pull - install on active leaf.
  - g. 2 each - Armor Plates – 36" High.
  - h. 2 each - Sill Drip/Sweep.
  - i. 1 set - Weather Stripping.
  - j. 1 each - Threshold.
  - k. Salvage and reinstall existing electromechanical lock.

J. Detention Door Hardware Set No. 7

1. Provide on Door Opening: M177.
2. Exterior Detention Movement Doors: Opening Number and Hardware, each to have the following: (Quantity - Item Number)
  - a. 1 each - Top Drip.

**END OF SECTION**

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**SECTION 08 8853**  
**SECURITY GLAZING**

**PART 1 GENERAL**

**1.1 SUMMARY**

- A. This Section includes glazing for the following products and applications and of the following types:
  - 1. Products and applications specified in other sections where glazing requirements are specified by reference to this Section:
    - a. Detention windows.
    - b. Steel detention doors.
    - c. Interior borrowed lites.
  - 2. Security glazing types:
    - a. Symmetrical glass-clad polycarbonate units.

**1.2 DEFINITIONS**

- A. Manufacturer: A firm that produces primary glass or fabricated glass and glazing units as defined in referenced glazing publications.
- B. Deterioration of Glass-Clad Polycarbonate: Defects developed from normal use that are attributed to the manufacturing process and not to causes other than glass breakage and practices for maintaining and cleaning glass-clad polycarbonate contrary to manufacturer's written instructions. Defects include edge separation, delamination materially obstructing vision through either glass or polycarbonate sheets, and blemishes exceeding those allowed by referenced glass-clad polycarbonate standard.
- C. Deterioration of Glazing Plastics: Defects developed from normal use that are attributed to the manufacturing process and not to causes other than breakage and practices for maintaining and cleaning glazing plastics contrary to manufacturer's written instructions. Defects include yellowing and loss of light transmission.

**1.3 PERFORMANCE REQUIREMENTS**

- A. General: Provide security glazing materials capable of complying with performance requirements indicated under the following conditions:
  - 1. Exposure to solar radiation and design wind loads alone without failure attributable to the following: defective manufacture, fabrication, and installation; failure of sealants or gaskets to remain watertight and airtight; deterioration of glazing materials; or other defects in construction.
  - 2. Exposure to other security-related loads and forces without damage to the glazing materials beyond that allowed for each performance requirement.
  - 3. Thicknesses of glazing materials indicated are minimums and are for detailing only. Confirm glazing material thicknesses by analyzing Project loads and in-service conditions. Provide glazing material for various size openings in nominal thicknesses indicated, but not less than thicknesses and in strengths required to meet or exceed performance criteria.



- B. Structural Performance: Provide security glazing products capable of resisting the kinds of lateral design loads indicated based on selecting glass thicknesses complying with ASTM E 1300.
  - 1. Specified Design Wind Loads: As indicated.
  - 2. Probability of Breakage for Vertical Glazing: 8 lites per 1000 for lites set vertically or not more than 15 degrees off vertical and under wind action with a load duration of 60 seconds or less.
  - 3. Maximum Lateral Deflection: For the following types of glazing materials supported on all four edges, provide thickness required that limits center deflection at design wind pressure to 1/50 times the short side length or 1 inch (25 mm), whichever is less.
    - a. For insulating-glass units.
- C. Human Impact Load Resistance: Provide Category II glazing materials based on complying with testing requirements in 16 CFR 1201.
- D. Attack Resistance: Provide glazing materials capable of resisting attack of type and at security-grade levels indicated as determined from testing identical materials according to ASTM F 1915.
- E. Forced-Entry Resistance: Provide glazing materials capable of resisting forced entry at ratings indicated as determined from testing identical materials according to ASTM F 1233.
- F. Thermal Movements: Provide glazing that allows for thermal movements resulting from the following maximum change (range) in ambient and surface temperatures acting on security glazing framing members and glazing components. Base engineering calculation on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.
  - 1. Temperature Change (Range): 120 deg F (67 deg C), ambient; 180 deg F (100 deg C), material surfaces.

#### 1.4 SUBMITTALS

- A. Product Data: For each glazing material indicated.
- B. Samples: For each glazing lite and glazing sealant product, in 12-inch- (300-mm-) square Samples for glass and 12-inch- (300-mm-) long Samples for sealants. Install sealant Samples between two strips of material representative in color of the adjoining framing system.
- C. Glazing Schedule: Use same designations indicated on Drawings for glazed openings in preparing a schedule listing glass types and thicknesses for each size opening and location.
- D. Product Certificates: Signed by manufacturers of glass and glazing products certifying that products furnished comply with requirements.
- E. Qualification Data: For Installer.
- F. Product Test Reports: For each type of security glazing product indicated.

#### 1.5 QUALITY ASSURANCE

- A. Source Limitations for Glass: Obtain the following from a single manufacturer for each glass type: glass-clad polycarbonate.

- B. Source Limitations for Tinted Glass: Obtain tinted, heat-absorbing, and light-reducing float glass from one primary-glass manufacturer for each tint color indicated.
- C. Source Limitations for Laminated-Polycarbonate Units: Obtain laminated-polycarbonate units from one manufacturer using the same type of lites and interlayers for each type of unit indicated.
- D. Source Limitations for Glazing Accessories: Obtain glazing accessories from one source for each product and installation method indicated.
- E. Glazing Sealant Product Testing: Obtain sealant 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.
  - 1. Sealant 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 elastomeric glazing sealants for compliance with requirements specified by reference to ASTM C 920 and, where applicable, to other standard test methods.
- F. Testing will not be required if elastomeric glazing sealant manufacturers submit data based on previous testing of current sealant products for adhesion to, and compatibility with, glazing materials matching those submitted.
- G. Safety Glass: Category II materials complying with testing requirements in 16 CFR 1201.
  - 1. Subject to compliance with requirements, permanently mark safety glass with certification label of Safety Glazing Certification Council or another certification agency acceptable to authorities having jurisdiction.
- H. Glazing Publications: Comply with published recommendations of glazing product manufacturers and organization below, unless more stringent requirements are indicated. Refer to these publications for glazing terms not otherwise defined in this Section or in referenced standards.
  - 1. GANA Publications: GANA'S "Glazing Manual" and "Laminated Glass Design Guide."
  - 2. Fire-Test-Response Characteristics: Provide plastic sheets identical to those tested for the following fire-test-response characteristics per test method indicated below by UL or another testing and inspecting agency acceptable to authorities having jurisdiction. Identify plastic sheets with appropriate markings of applicable testing and inspecting agency.
    - a. Self-Ignition Temperature: 650 deg F (343 deg C) or more when tested per ASTM D 1929 on plastic sheets in thicknesses indicated for the Work.
    - b. Smoke density of 75 or less when tested per ASTM D 2843 on plastic sheets in thicknesses indicated for the Work.
    - c. Relative Burning Characteristics: As follows, when tested per ASTM D 635:
    - d. Burning extent of 1 inch (25 mm) or less when tested on monolithic polycarbonate plastic glazing with a nominal thickness of 0.060 inch (1.52 mm) or thickness indicated for the Work.

## 1.6 DELIVERY, STORAGE, AND HANDLING

- A. Protect glazing materials according to manufacturer's written instructions and as needed to prevent damage to glazing materials from condensation, temperature changes, direct exposure to sun, or other causes.
- B. For insulating-glass units that will be exposed to substantial altitude changes, comply with insulating-glass manufacturer's written recommendations for venting and sealing to avoid hermetic seal ruptures.

## 1.7 PROJECT CONDITIONS

- A. Environmental Limitations: Do not proceed with glazing when ambient and substrate temperature conditions are outside limits permitted by glazing material manufacturers and when glazing channel substrates are wet from rain, frost, condensation, or other causes.
  - 1. Do not install liquid glazing sealants when ambient and substrate temperature conditions are outside limits permitted by glazing sealant manufacturer or below 40 deg F (4.4 deg C).

## 1.8 WARRANTY

- A. Special Warranty: Manufacturer's standard form, made out to Owner and signed by manufacturer, in which manufacturer agrees to furnish replacements for units that deteriorate from normal use by developing defects attributable to the manufacturing process, f.o.b. the nearest shipping point to Project site, within warranty period.
  - 1. Coated Glass:
    - a. Form of Deterioration: Peeling or cracking of metallic coating.
    - b. Warranty Period: 10 years from date of Substantial Completion.

# PART 2 PRODUCTS

## 2.1 MANUFACTURERS

- A. Security Type Glass: Chemically strengthened and laminated compositional sheets.
  - 1. Global Security Glazing, Selma, AL (800) 633-2513
  - 2. Oldcastle Glass, (866) 653-2278
  - 3. SABIC Polymer Shapes, "Insulgard" (866) 437-7427
  - 4. Viracon, (800) 533-2080
  - 5. Approved equivalent product.
  - 6. Substitutions: See Section 01 6000 - Product Requirements.

## 2.2 GENERAL

- A. Security glazing types as schedule. Non-detention glass is specified in Section 08 8000.
- B. For each glass assembly installed, maximum overall warpage allowed is:
  - 1. For length of span up to 36":  $\pm 0.063$ "

2. For length of span 36" to 48":  $\pm 0.093$ "
3. For length of span 48" to 60":  $\pm 0.141$ "
4. For length of span 60" and over:  $\pm 0.187$ "

## 2.3 GLASS PRODUCTS

- A. Annealed Float Glass: ASTM C 1036, Type I (transparent flat glass), Quality q3; class as indicated in other Part 2 articles.
- B. Heat-Treated Float Glass: ASTM C 1048; Type I (transparent flat glass); Quality q3; class, kind, and condition as indicated in other Part 2 articles.
- C. Chemically Strengthened Glass: Annealed float glass complying with ASTM C 1036, Type I (transparent flat glass), Quality q3; class as indicated in other Part 2 articles; chemically strengthened to comply with ASTM C 1422, Surface Compression Level 1 and Case Depth Level A and with requirements specified in other Part 2 articles.
- D. Laminated Glass: ASTM C 1172, kinds of laminated glass as specified in other Part 2 articles.
  1. Interlayers: Type as indicated below and of thickness indicated or required to comply with performance requirements and with a proven record of no tendency to bubble, discolor, or lose physical and mechanical properties after laminating to glass and installation:
    - a. Polyvinyl butyral sheet, clear[ or in colors].
    - b. Cured resin.
    - c. Ionomeric extruded polymer sheet.
    - d. Manufacturer's standard interlayer material, clear[ or in colors].
  2. Fabrication: Laminate glass to interlayers to produce laminated lites free of foreign substances, air, and glass pockets.
- E. Glass-Clad Polycarbonate: ASTM C 1349, kinds and other requirements as specified in other Part 2 articles.

## 2.4 POLYCARBONATE GLAZING PRODUCTS

- A. Polycarbonate Sheet: ASTM C 1349, Appendix X1, type as specified in other Part 2 articles.
- B. Interlayer for Laminated-Polycarbonate Units: Clear polyurethane interlayer with a proven record of no tendency to bubble, discolor, or lose physical and mechanical properties after laminating polycarbonate sheets and installation.
- C. Fabrication: Laminate polycarbonate sheets to interlayer to produce laminated units free of foreign substances, air, and glass pockets.

## 2.5 ELASTOMERIC GLAZING SEALANTS

- A. General: Provide products of type indicated, complying with the following requirements:
  1. Compatibility: Select glazing sealants that are compatible with one another and with other materials they will contact, including glazing lites, seals of insulating-glass and air-gap glazing units, and glazing channel substrates, under conditions of service and application, as demonstrated by sealant manufacturer based on testing and field experience.

2. Suitability: Comply with sealant and glazing unit manufacturers' written instructions for selecting glazing sealants suitable for applications indicated and for conditions existing at time of installation.
  3. Colors of Exposed Glazing Sealants: [Match Architect's samples] [As indicated by manufacturer's designations] [As selected by Architect from manufacturer's full range].
- B. Elastomeric Glazing Sealant Standard: Comply with ASTM C 920 and other requirements indicated for each liquid-applied, chemically curing sealant, including those referencing ASTM C 920 classifications for type, grade, class, and uses.
- C. Nonacid Curing Silicone Glazing Sealant
1. Available Products:
    - a. Dow-Corning, Type No. 781.
    - b. General Electric 1200 Silgaze
    - c. Approved equivalent product.
    - d. Substitutions: See Section 01 6000 - Product Requirements.
  2. Type and Grade: S (single component) and NS (nonsag).
  3. Class: 25.
  4. Use Related to Exposure: NT (nontraffic).
  5. Uses Related to Glazing Substrates: M, G, A, and, as applicable to glazing substrates indicated, O.
  6. Applications: Select glazing sealants that are compatible with one another and with other materials they will contact, including glass product, seals of insulating glass units, and glazing channel substrates, under conditions of service and application, as demonstrated by sealant manufacturer based on testing and field experience.

## 2.6 GLAZING TAPES

- A. Back-Bedding Mastic Glazing Tape: Preformed, butyl-based elastomeric tape with a solids content of 100 percent; nonstaining and nonmigrating in contact with nonporous surfaces; with or without spacer rod as recommended in writing by tape and glazing unit manufacturers for application indicated; packaged on rolls with a release paper backing; and complying with ASTM C 1281 and AAMA 800 for products indicated below:
1. AAMA 806.3 tape, for glazing applications in which tape is subject to continuous pressure.
  2. AAMA 807.3 tape, for glazing applications in which tape is not subject to continuous pressure.
- B. Expanded Cellular Glazing Tape: Closed-cell, PVC foam tape; factory coated with adhesive on both surfaces; packaged on rolls with release liner protecting adhesive; and complying with AAMA 800 for the following types:
1. Type 1, for glazing applications in which tape acts as the primary sealant.
  2. Type 2, for glazing applications in which tape is used in combination with a full bead of liquid sealant.

## 2.7 MISCELLANEOUS GLAZING MATERIALS

- A. General: Provide products of material, size, and shape complying with referenced glazing standard and requirements of manufacturers of glazing materials for application indicated, and with a proven record of compatibility with surfaces contacted in installation.
- B. Cleaners, Primers, and Sealers: Types recommended by sealant or gasket manufacturer.
- C. Setting Blocks: Elastomeric material with a Shore A durometer hardness of 85, plus or minus 5.
- D. Spacers: Elastomeric blocks or continuous extrusions with a Shore A durometer hardness required by glazing unit manufacturer to maintain glazing units in place for installation indicated.
- E. Edge Blocks: Elastomeric material of hardness needed to limit lateral movement (side walking) of glazing units.
- F. Cylindrical Glazing Sealant Backing: ASTM C 1330, Type O (open-cell material), of size and density to control glazing sealant depth and otherwise produce optimum glazing sealant performance.

## 2.8 FABRICATION OF GLAZING UNITS

- A. General: Fabricate glazing units in sizes required to glaze openings indicated for Project, with edge and face clearances, edge and surface conditions, and bite complying with written instructions of product manufacturer and referenced glazing standard, to comply with system performance requirements.

## 2.9 SYMMETRICAL GLASS-CLAD POLYCARBONATE UNITS

- A. Glass-Clad Polycarbonate Units: GCP, SC (Single Core) consisting of outer and inner lites of heat-strengthened float glass with an interior core consisting of one lite of polycarbonate sheet.
  - 1. Overall Unit Thickness: As determined by thicknesses of lites and interlayers.
  - 2. Outer Lite: Class 1 (clear) or Class 2 (tinted) float glass.
    - a. Thickness: As required to comply with performance requirements.
  - 3. Single Core: Type I (standard, UV-stabilized) polycarbonate sheet of the following thickness: As required to comply with performance requirements.
  - 4. Inner Lite: Class 1 (clear) float glass of the following thickness: As required to comply with performance requirements.
  - 5. Interlayer Thickness: As required to comply with performance requirements.

## 2.10 GLASS COMPONENTS

- A. Glass Clad Polycarbonate 60 min attack rating (No Spall and low spall configuration):
  - 1. Provide glass clad laminated polycarbonate unit.
  - 2. Glass sheets: Alternate sheets of clear FS DD-G-451 Type-1, quality q3 glass and clear transparent special high impact resistance (PVB) polyvinyl butyral (for glass to glass laminations) and clear transparent urethane interlayer for glass to polycarbonate lamination.

3. Polycarbonate sheets: Clear transparent cast polycarbonate sheet with additional characteristics and performance as recommended by the manufacturer (laminator) or units, with flexural strength of not less than 13,500 PSI ASTM D790, 180 degrees F. allowable continuous service temperature 80% minimum light transmittance for 1/4" thick sheet, ASTM D1003.
4. Glass Clad Polycarbonate - 60 minute attack rating:
  - a. Provide glass clad laminated polycarbonate unit.
  - b. Glass sheet: Alternate sheets of clear FS DD-G-451 chemically tempered or heat strengthen Type-1, quality q3 glass and clear transparent special high impact resistance (PVB) polyvinyl butyral (for glass to glass laminations) and clear transparent urethane interlayer for glass to polycarbonate lamination.
  - c. Polycarbonate sheets: Clear transparent cast polycarbonate sheet with additional characteristics and performances as recommended by the manufacturer (laminator) of units, with flexural strength of not less than 13,500 PSI ASTM D790, 180 degrees F. allowable continuous service temperature, 80% light transmittance for 1/4" thick sheet, ASTM D1003.
  - d. Fabricate unites to meet specified physical attack retention requirements:
    - 1) ASTM 1915 Grade 2 - 60 minute
  - e. Approved manufacturers:
    - 1) Global Security Glazing
    - 2) Insulgard Corporation
    - 3) Sully North America
    - 4) LTI/Sheffield
    - 5) Approved equivalent product.
    - 6) Substitutions: See Section 01 6000 - Product Requirements.

## 2.11 BALLISTIC AND PHYSICAL ATTACK RETENTION REQUIREMENTS

A. The following requirements shall be fulfilled for security glass products, as specified for each.

1. Physical Attack Retention Requirements (60 minutes):
  - a. Mounting: GLass unit 18 inches by 96 inches shall be mounted in a security frame of approved design. Frame then shall be securely anchored, so as to not absorb any of the testing shock.
  - b. Physical and flame attack personnel: Five men will be allowed to attack the glass unit for 30 continuous minutes. At all times, at least one man will be attacking the unit. These men will be physically fit and between 185-250 lbs. in weight.
  - c. Attack tools, attack sequence and duration: To be in the following order:
    - 1) 2 lb. claw hammer, claw end; 5 minutes
    - 2) Cold chisel/screwdriver; 5 minutes

- 3) 10 lb. sledgehammer; 5 minutes
  - 4) Fire extinguisher dry chemical type for an NBC fire class with 4A-60BC UL rating; 5 minutes.
  - 5) Propane burner of temp. approx. 2,2-- degrees F. with tip of burner 4" from glass surface and with nozzle diameter as required to result in heat source approximately 1" in diameter; 5 minutes.
  - 6) 4 lb. hammer; 5 minutes.
- d. Results: frame failure will not constitute glazing failure. However, if this happens, time will be stopped and glazing will be remounted. Glazing collapse at any time so as to allow edge disengagement will constitute failure. Any opening allowing a 10" cylinder to pass will constitute failure.

### **PART 3 EXECUTION**

#### **3.1 EXAMINATION**

- A. Examine framing for glazing, with Installer present, for compliance with the following:
1. Manufacturing and installation tolerances, including those for size, squareness, and offsets at corners.
  2. Presence and functioning of weep system.
  3. Minimum required face or edge clearances.
  4. Effective sealing between joints of glazing-unit-framing members.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

#### **3.2 PREPARATION**

- A. Clean glazing channels and other framing members receiving glazing units immediately before glazing. Remove coatings not firmly bonded to substrates.

#### **3.3 GLAZING, GENERAL**

- A. Comply with combined written instructions of manufacturers of glazing lites, sealants, gaskets, and other glazing materials, unless more stringent requirements are indicated, including those in referenced glazing publications.
- B. Glazing channel dimensions, as indicated on Drawings or determined by glazing material thicknesses and by other requirements indicated, provide necessary bite on lites, minimum edge and face clearances, and adequate sealant thicknesses, with reasonable tolerances. Adjust as required by Project conditions during installation.
- C. Protect glazing-lite edges from damage during handling and installation. Remove damaged glazing lites from Project site and legally dispose of off Project site. Damaged glazing lites are those with edge damage or other imperfections that, when installed, could weaken glazing lites and impair performance and appearance.
- D. Apply primers to joint surfaces where required for adhesion of sealants, as determined by preconstruction sealant-substrate testing.



- E. Install setting blocks in sill rabbets, sized and located to comply with referenced glazing publications, unless otherwise required by glazing unit manufacturer. Set blocks in thin course of compatible sealant suitable for heel bead.
- F. Do not exceed edge pressures stipulated by glazing unit manufacturers for installing lites.
- G. Provide spacers for glazing lites where the length plus width is larger than 50 inches (1270 mm) as follows:
  - 1. Locate spacers directly opposite each other on both inside and outside faces of glazing lites. Install correct size and spacing to preserve required face clearances unless gaskets and glazing tapes are used that have demonstrated ability to maintain required face clearances and to comply with system performance requirements.
  - 2. Provide 1/8-inch (3-mm) minimum bite of spacers on glazing lites and use thickness equal to sealant width. With glazing tape, use thickness slightly less than final compressed thickness of tape.
- H. Provide edge blocking where indicated or needed to prevent glazing lites from moving sideways in glazing channel, as recommended in writing by glazing unit manufacturer and according to requirements in referenced glazing publications.
- I. Set glass lites in each series with uniform pattern, draw, bow, and similar characteristics.
- J. Where wedge-shaped gaskets are driven into one side of channel to pressurize sealant or gasket on opposite side, provide adequate anchorage so gasket cannot walk out when installation is subjected to movement.
  - 1. Square cut wedge-shaped gaskets at corners and install gaskets in a manner recommended by gasket manufacturer to prevent corners from pulling away; seal corner joints and butt joints with sealant recommended by gasket manufacturer.

### 3.4 TAPE GLAZING

- A. Position tapes on fixed stops so that, when compressed by glazing units, their exposed edges are flush with or protrude slightly above sightline of stops.
- B. Install tapes continuously, but not necessarily in one continuous length. Do not stretch tapes to make them fit opening.
- C. Where framing joints are vertical, cover joints by applying tapes to heads and sills first and then to jambs. Where framing joints are horizontal, cover joints by applying tapes to jambs first and then to heads and sills.
- D. Place joints in tapes at corners of opening with adjoining lengths butted together, not lapped. Seal joints in tapes with compatible sealant approved by tape manufacturer.
- E. Do not remove release paper from tape until just before each glazing unit is installed.
- F. Apply heel bead of elastomeric sealant.
- G. Center glazing units in openings on setting blocks and press firmly against tape by inserting dense compression gaskets formed and installed to lock in place against faces of removable stops. Start gasket applications at corners and work toward centers of openings.
- H. Apply cap bead of elastomeric sealant over exposed edge of tape.

### 3.5 SEALANT GLAZING (WET)

- A. Install continuous spacers, or spacers combined with cylindrical sealant backing, between glazing units and glazing stops to maintain face clearances and to prevent sealant from extruding into glazing channel and blocking weep systems until sealants cure. Secure spacers or spacers and backings in place and in position to control depth of installed sealant relative to edge clearance for optimum sealant performance.
- B. Force sealants into glazing channels to eliminate voids and to ensure complete wetting or bond of sealant to glazing unit and channel surfaces.
- C. Tool exposed surfaces of sealants to provide a substantial wash away from glazing units.

### 3.6 PROTECTION AND CLEANING

- A. Protect exterior glazing units from damage immediately after installation by attaching crossed streamers to framing held away from glazing unit. Do not apply markers to glazing unit surfaces. Remove nonpermanent labels, and clean surfaces.
- B. Protect glazing units from contact with contaminating substances resulting from construction operations, including weld splatter. If, despite such protection, contaminating substances do come into contact with glazing units, remove substances immediately as recommended in writing by glazing unit manufacturer.
- C. Examine glazing unit surfaces adjacent to or below exterior concrete and other masonry surfaces at frequent intervals during construction, but not less than once a month, for build-up of dirt, scum, alkaline deposits, or stains; remove as recommended in writing by glazing unit manufacturer.
- D. Remove and replace glazing units that are broken, chipped, cracked, or abraded or that are damaged from natural causes, accidents, or vandalism during construction period.
- E. Wash glazing units on both exposed surfaces in each area of Project not more than four days before date scheduled for inspections that establish date of Substantial Completion. Wash glazing units as recommended by glazing unit manufacturer.

**END OF SECTION**

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**SECTION 09 9600**  
**HIGH-PERFORMANCE COATINGS**

**PART 1 GENERAL**

**1.1 SECTION INCLUDES**

- A. High performance coatings.
- B. Surface preparation.

**1.2 REFERENCE STANDARDS**

- A. MPI (APSM) - Master Painters Institute Architectural Painting Specification Manual; Current Edition, [www.paintinfo.com](http://www.paintinfo.com).
- B. SSPC-SP 1 - Solvent Cleaning; 2015.
- C. SSPC-SP 2 - Hand Tool Cleaning; 1982 (Ed. 2004).
- D. SSPC-SP 6 - Commercial Blast Cleaning; 2007.
- E. SSPC-SP 7 - Brush-Off Blast Cleaning; 2007.

**1.3 SUBMITTALS**

- A. See Section 01 3000 - Administrative Requirements for submittal procedures.
- B. Product Data: Provide complete list of all products to be used, with the following information for each:
  - 1. Manufacturer's name, product name and/or catalog number, and general product category (e.g. "alkyd enamel").
  - 2. MPI product number (e.g. MPI #47).
  - 3. Cross-reference to specified coating system(s) product is to be used in; include description of each system.
- C. Samples: Submit two samples 8 by 8 inch (203 by 203 mm) in size illustrating colors available for selection.
- D. Manufacturer's Certificate: Certify that products meet or exceed specified requirements.

**1.4 DELIVERY, STORAGE, AND HANDLING**

- A. Deliver products to site in sealed and labeled containers; inspect to verify acceptability.
- B. Container Label: Include manufacturer's name, type of coating, brand name, lot number, brand code, coverage, surface preparation, drying time, cleanup requirements, color designation, and instructions for mixing and reducing.
- C. Coating Materials: Store at minimum ambient temperature of 45 degrees F (7 degrees C) and a maximum of 90 degrees F (32 degrees C), in ventilated area, and as required by manufacturer's instructions.

## 1.5 FIELD CONDITIONS

- A. Follow manufacturer's recommended procedures for producing best results, including testing of substrates, moisture in substrates, and humidity and temperature limitations.
- B. Do not apply exterior coatings during rain or snow, or when relative humidity is outside the humidity ranges required by the coating product manufacturer.
- C. Do not install materials when temperature is below 55 degrees F (13 degrees C) or above 90 degrees F (32 degrees C).
- D. Maintain this temperature range, 24 hours before, during, and 72 hours after installation of coating.
- E. Provide lighting level of 80 ft candles (860 lx) measured mid-height at substrate surface.
- F. Restrict traffic from area where coating is being applied or is curing.

## PART 2 PRODUCTS

### 2.1 MANUFACTURERS

- A. High-Performance Coatings:
  - 1. PPG Paints: [www.ppgpaints.com/#sle](http://www.ppgpaints.com/#sle).
  - 2. Sherwin-Williams Company: [www.protective.sherwin-williams.com/industries/#sle](http://www.protective.sherwin-williams.com/industries/#sle).
  - 3. Tnemec Company, Inc: [www.tnemec.com/#sle](http://www.tnemec.com/#sle).
  - 4. Approved equivalent product.
  - 5. Substitutions: Section 01 6000 - Product Requirements.

### 2.2 HIGH-PERFORMANCE COATINGS

- A. Provide coating systems that meet the following minimum performance criteria, unless more stringent criteria are specified:
  - 1. Abrasion Resistance: No more than 116 mg loss after 1,000 cycles, when tested in accordance with ASTM D 4060, (CS-17 Wheel, 1,000 gram load).
  - 2. Impact Resistance: No cracking or delamination of film after 32 inch-pounds (3.6 J) direct impact, when tested in accordance with ASTM D 2794.
  - 3. Adhesion: Minimum rating 5B, when tested in accordance with ASTM D 3359, (Method B, 5mm Crosshatch).
  - 4. Gloss and Color Retention: No blistering, cracking, chalking or delamination of film. No less than 71% gloss retention, no more than 0.07 DEHunter color change (white) and 26 units gloss loss after 500 MJ UV exposure. (TR6062), when tested in accordance with ASTM D 4141 Method C (EMMAQUA).

### 2.3 TOP COAT MATERIALS

- A. Coatings - General: Provide complete multi-coat systems formulated and recommended by manufacturer for the applications indicated, in the thicknesses indicated; number of coats specified does not include primer or filler coat.

- B. Urethane Coating: Two coats, two-part, aliphatic moisture-curing polyurethane, semi-gloss finish.
  - 1. Product characteristics:
    - a. Percentage of solids by volume: 65 percent, minimum.
    - b. Dry film thickness, per coat: 2.5 mills, minimum.
  - 2. Product: Series 1075 Endura-shield II manufactured by Tnemec or an equivalent product complying with specifications and approved by Architect.
  - 3. Primer for ferrous metal: as recommended by coating manufacturer.
  - 4. Primer for galvanized metal: as recommended by coating manufacturer.
  - 5. Locations: Provide on all exterior metal surfaces indicated to be painted and interior surfaces of exterior door and frame.
- C. Shellac: Pure, white type.

## 2.4 ACCESSORY MATERIALS

- A. Accessory Materials: Provide all primers, sealers, cleaning agents, cleaning cloths, sanding materials, and clean-up materials as required for final completion of coated surfaces.

## PART 3 EXECUTION

### 3.1 EXAMINATION

- A. Verify existing conditions before starting work.
- B. Do not begin application of coatings until substrates have been properly prepared.
- C. Verify that substrate surfaces are ready to receive work as instructed by the coating manufacturer. Obtain and follow manufacturer's instructions for examination and testing of substrates.
- D. Examine surfaces scheduled to be finished prior to commencement of work. Report any condition that may potentially affect proper application.
- E. Test shop-applied primer for compatibility with subsequent cover materials.
- F. Proceed with coating application only after unacceptable conditions have been corrected.
  - 1. Commencing coating application constitutes Contractor's acceptance of substrates and conditions.

### 3.2 PREPARATION

- A. Clean surfaces of loose foreign matter.
- B. Remove substances that would bleed through finished coatings. If unremovable, seal surface with shellac.
- C. Remove finish hardware, fixture covers, and accessories and store.
- D. Galvanized Surfaces:

1. Remove surface contamination and oils and wash with solvent according to SSPC-SP 1.
  2. Prepare surface according to SSPC-SP 2.
- E. Ferrous Metal:
1. Solvent clean according to SSPC-SP 1.
  2. Shop-Primed Surfaces: Sand and scrape to remove loose primer and rust. Feather edges to make touch-up patches inconspicuous. Clean surfaces with solvent. Prime bare steel surfaces.
  3. Remove rust, loose mill scale, and other foreign substances using methods recommended in writing by paint manufacturer and blast cleaning according to SSPC-SP 6 "Commercial Blast Cleaning", and protect from corrosion until coated.
- F. Protect adjacent surfaces and materials not receiving coating from spatter and overspray; mask if necessary to provide adequate protection. Repair damage.

### 3.3 PRIMING

- A. Apply primer to all surfaces, unless specifically not required by coating manufacturer. Apply in accordance with coating manufacturer's instructions.

### 3.4 COATING APPLICATION

- A. Apply coatings in accordance with manufacturer's written instructions, to thicknesses specified.
- B. Apply in uniform thickness coats, without runs, drips, pinholes, brush marks, or variations in color, texture, or finish. Finish edges, crevices, corners, and other changes in dimension with full coating thickness.

### 3.5 CLEANING

- A. Collect waste material that could constitute a fire hazard, place in closed metal containers, and remove daily from site.
- B. Clean surfaces immediately of overspray, splatter, and excess material.
- C. After coating has cured, clean and replace finish hardware, fixtures, and fittings previously removed.

### 3.6 PROTECTION

- A. Protect finished work from damage.

**END OF SECTION**

**SECTION 26 0519**  
**LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES**

**PART 1 GENERAL**

**1.1 SECTION INCLUDES**

- A. Single conductor building wire.
- B. Metal-clad cable.
- C. Wiring connectors.
- D. Electrical tape.
- E. Wire pulling lubricant.
- F. Cable ties.

**1.2 RELATED REQUIREMENTS**

- A. Section 26 0526 - Grounding and Bonding for Electrical Systems: Additional requirements for grounding conductors and grounding connectors.

**1.3 REFERENCE STANDARDS**

- A. ASTM B3 - Standard Specification for Soft or Annealed Copper Wire; 2013.
- B. ASTM B8 - Standard Specification for Concentric-Lay-Stranded Copper Conductors, Hard, Medium-Hard, or Soft; 2011.
- C. ASTM B33 - Standard Specification for Tin-Coated Soft or Annealed Copper Wire for Electrical Purposes; 2010 (Reapproved 2014).
- D. ASTM B787/B787M - Standard Specification for 19 Wire Combination Unilay-Stranded Copper Conductors for Subsequent Insulation; 2004 (Reapproved 2014).
- E. ASTM D3005 - Standard Specification for Low-Temperature Resistant Vinyl Chloride Plastic Pressure-Sensitive Electrical Insulating Tape; 2010.
- F. NECA 1 - Standard for Good Workmanship in Electrical Construction; 2010.
- G. NECA 120 - Standard for Installing Armored Cable (AC) and Metal-Clad Cable (MC); 2012.
- H. NEMA WC 70 - Nonshielded Power Cable 2000 V or Less for the Distribution of Electrical Energy; 2009.
- I. NETA ATS - Acceptance Testing Specifications for Electrical Power Equipment and Systems; 2013.
- J. NFPA 70 - National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
- K. UL 44 - Thermoset-Insulated Wires and Cables; Current Edition, Including All Revisions.
- L. UL 83 - Thermoplastic-Insulated Wires and Cables; Current Edition, Including All Revisions.
- M. UL 486A-486B - Wire Connectors; Current Edition, Including All Revisions.
- N. UL 486C - Splicing Wire Connectors; Current Edition, Including All Revisions.



- O. UL 486D - Sealed Wire Connector Systems; Current Edition, Including All Revisions.
- P. UL 510 - Polyvinyl Chloride, Polyethylene, and Rubber Insulating Tape; Current Edition, Including All Revisions.
- Q. UL 1569 - Metal-Clad Cables; Current Edition, Including All Revisions.

#### 1.4 ADMINISTRATIVE REQUIREMENTS

- A. Coordination:
  - 1. Coordinate sizes of raceways, boxes, and equipment enclosures installed under other sections with the actual conductors to be installed, including adjustments for conductor sizes increased for voltage drop.
  - 2. Coordinate with electrical equipment installed under other sections to provide terminations suitable for use with the conductors to be installed.
  - 3. Notify Architect of any conflicts with or deviations from the contract documents. Obtain direction before proceeding with work.

#### 1.5 SUBMITTALS

- A. None required.

#### 1.6 QUALITY ASSURANCE

- A. Conform to requirements of NFPA 70.
- B. Maintain at the project site a copy of each referenced document that prescribes execution requirements.
- C. Product Listing Organization Qualifications: An organization recognized by OSHA as a Nationally Recognized Testing Laboratory (NRTL) and acceptable to authorities having jurisdiction.

#### 1.7 DELIVERY, STORAGE, AND HANDLING

- A. Receive, inspect, handle, and store conductors and cables in accordance with manufacturer's instructions.

#### 1.8 FIELD CONDITIONS

- A. Do not install or otherwise handle thermoplastic-insulated conductors at temperatures lower than 14 degrees F (-10 degrees C), unless otherwise permitted by manufacturer's instructions. When installation below this temperature is unavoidable, notify Architect and obtain direction before proceeding with work.

### PART 2 PRODUCTS

#### 2.1 CONDUCTOR AND CABLE APPLICATIONS

- A. Do not use conductors and cables for applications other than as permitted by NFPA 70 and product listing.
- B. Provide single conductor building wire installed in suitable raceway unless otherwise indicated, permitted, or required.
- C. Metal-clad cable is permitted only as follows:

1. Where not otherwise restricted, may be used:
  - a. Where concealed in hollow stud walls, above accessible ceilings, and under raised floors for branch circuits up to 20 A.
    - 1) Exception: Provide single conductor building wire in raceway for circuit homerun from first outlet to panelboard.
2. In addition to other applicable restrictions, may not be used:
  - a. Where exposed to damage.
  - b. For damp, wet, or corrosive locations, unless provided with a PVC jacket listed as suitable for those locations.
  - c. For isolated ground circuits, unless provided with an additional isolated/insulated grounding conductor.

## 2.2 CONDUCTOR AND CABLE GENERAL REQUIREMENTS

- A. Provide products that comply with requirements of NFPA 70.
- B. Provide products listed, classified, and labeled as suitable for the purpose intended.
- C. Unless specifically indicated to be excluded, provide all required conduit, boxes, wiring, connectors, etc. as required for a complete operating system.
- D. Comply with NEMA WC 70.
- E. Thermoplastic-Insulated Conductors and Cables: Listed and labeled as complying with UL 83.
- F. Thermoset-Insulated Conductors and Cables: Listed and labeled as complying with UL 44.
- G. Conductors for Grounding and Bonding: Also comply with Section 26 0526.
- H. Conductor Material:
  1. Provide copper conductors only. Aluminum conductors are not acceptable for this project. Conductor sizes indicated are based on copper.
  2. Copper Conductors: Soft drawn annealed, 98 percent conductivity, uncoated copper conductors complying with ASTM B3, ASTM B8, or ASTM B787/B787M unless otherwise indicated.
  3. Tinned Copper Conductors: Comply with ASTM B33.
- I. Minimum Conductor Size: 12 AWG.
  1. Exception: Where smaller gauge wire is acceptable for Class 1, Class 2, or Class 3 power limited circuits.
- J. Where conductor size is not indicated, size to comply with NFPA 70 but not less than applicable minimum size requirements specified.
- K. Conductor Color Coding:
  1. Color code conductors as indicated unless otherwise required by the authority having jurisdiction. Maintain consistent color coding throughout project.

2. Color Coding Method: Integrally colored insulation.
  - a. Conductors size 4 AWG and larger may have black insulation color coded using vinyl color coding electrical tape.
3. Color Code:
  - a. 208Y/120 V, 3 Phase, 4 Wire System:
    - 1) Phase A: Black.
    - 2) Phase B: Red.
    - 3) Phase C: Blue.
    - 4) Neutral/Grounded: White.
  - b. Equipment Ground, All Systems: Green.

## 2.3 SINGLE CONDUCTOR BUILDING WIRE

- A. Manufacturers:
  1. Copper Building Wire:
    - a. General Cable Technologies Corporation: [www.generalcable.com/#sle](http://www.generalcable.com/#sle).
    - b. Southwire Company: [www.southwire.com/#sle](http://www.southwire.com/#sle).
- B. Description: Single conductor insulated wire.
- C. Conductor Stranding:
  1. Feeders and Branch Circuits:
    - a. Size 10 AWG and Smaller: Solid.
    - b. Size 8 AWG and Larger: Stranded.
- D. Insulation Voltage Rating: 600 V.
- E. Insulation:
  1. Copper Building Wire: Type THHN/THWN-2.

## 2.4 METAL-CLAD CABLE

- A. Description: NFPA 70, Type MC cable listed and labeled as complying with UL 1569, and listed for use in classified firestop systems to be used.
- B. Conductor Stranding:
  1. Size 10 AWG and Smaller: Solid.
  2. Size 8 AWG and Larger: Stranded.
- C. Insulation Voltage Rating: 600 V.
- D. Insulation: Type THHN, THHN/THWN, or THHN/THWN-2.

- E. Grounding: Full-size integral equipment grounding conductor.
- F. Armor: Steel, interlocked tape.
- G. Provide PVC jacket applied over cable armor where indicated or required for environment of installed location.

## 2.5 WIRING CONNECTORS

- A. Description: Wiring connectors appropriate for the application, suitable for use with the conductors to be connected, and listed as complying with UL 486A-486B or UL 486C as applicable.
- B. Connectors for Grounding and Bonding: Comply with Section 26 0526.
- C. Wiring Connectors for Splices and Taps:
  - 1. Copper Conductors Size 8 AWG and Smaller: Use twist-on insulated spring connectors.
  - 2. Copper Conductors Size 6 AWG and Larger: Use mechanical connectors or compression connectors.
- D. Wiring Connectors for Terminations:
  - 1. Provide terminal lugs for connecting conductors to equipment furnished with terminations designed for terminal lugs.
  - 2. Provide compression adapters for connecting conductors to equipment furnished with mechanical lugs when only compression connectors are specified.
  - 3. Where over-sized conductors are larger than the equipment terminations can accommodate, provide connectors suitable for reducing to appropriate size, but not less than required for the rating of the overcurrent protective device.
  - 4. Copper Conductors Size 8 AWG and Larger: Use mechanical connectors or compression connectors where connectors are required.
- E. Twist-on Insulated Spring Connectors: Rated 600 V, 221 degrees F (105 degrees C) for standard applications and 302 degrees F (150 degrees C) for high temperature applications; pre-filled with sealant and listed as complying with UL 486D for damp and wet locations.
- F. Mechanical Connectors: Provide bolted type or set-screw type.
- G. Compression Connectors: Provide circumferential type or hex type crimp configuration.
- H. Crimped Terminals: Nylon-insulated, with insulation grip and terminal configuration suitable for connection to be made.

## 2.6 WIRING ACCESSORIES

- A. Electrical Tape:
  - 1. Vinyl Color Coding Electrical Tape: Integrally colored to match color code indicated; listed as complying with UL 510; minimum thickness of 7 mil (0.18 mm); resistant to abrasion, corrosion, and sunlight; suitable for continuous temperature environment up to 221 degrees F (105 degrees C).

2. Vinyl Insulating Electrical Tape: Complying with ASTM D3005 and listed as complying with UL 510; minimum thickness of 7 mil (0.18 mm); resistant to abrasion, corrosion, and sunlight; conformable for application down to 0 degrees F (-18 degrees C) and suitable for continuous temperature environment up to 221 degrees F (105 degrees C).
- B. Wire Pulling Lubricant: Listed; suitable for use with the conductors or cables to be installed and suitable for use at the installation temperature.
- C. Cable Ties: Material and tensile strength rating suitable for application.

## **PART 3 EXECUTION**

### **3.1 EXAMINATION**

- A. Verify that interior of building has been protected from weather.
- B. Verify that work likely to damage wire and cable has been completed.
- C. Verify that raceways, boxes, and equipment enclosures are installed and are properly sized to accommodate conductors and cables in accordance with NFPA 70.
- D. Verify that field measurements are as indicated.
- E. Verify that conditions are satisfactory for installation prior to starting work.

### **3.2 PREPARATION**

- A. Clean raceways thoroughly to remove foreign materials before installing conductors and cables.

### **3.3 INSTALLATION**

- A. Circuiting Requirements:
  1. Unless dimensioned, circuit routing indicated is diagrammatic.
  2. When circuit destination is indicated without specific routing, determine exact routing required.
  3. Include circuit lengths required to install connected devices within 10 ft (3.0 m) of location indicated.
  4. Maintain separation of Class 1, Class 2, and Class 3 remote-control, signaling, and power-limited circuits in accordance with NFPA 70.
  5. Maintain separation of wiring for emergency systems in accordance with NFPA 70.
  6. Circuiting Adjustments: Unless otherwise indicated, when branch circuits are indicated as separate, combining them together in a single raceway is permitted, under the following conditions:
    - a. Provide no more than six current-carrying conductors in a single raceway. Dedicated neutral conductors are considered current-carrying conductors.
    - b. Increase size of conductors as required to account for ampacity derating.
    - c. Size raceways, boxes, etc. to accommodate conductors.

7. Common Neutrals: Unless otherwise indicated, sharing of neutral/grounded conductors among up to three single phase branch circuits of different phases installed in the same raceway is not permitted. Provide dedicated neutral/grounded conductor for each individual branch circuit.
- B. Install products in accordance with manufacturer's instructions.
- C. Perform work in accordance with NECA 1 (general workmanship).
- D. Install metal-clad cable (Type MC) in accordance with NECA 120.
- E. Installation in Raceway:
  1. Tape ends of conductors and cables to prevent infiltration of moisture and other contaminants.
  2. Pull all conductors and cables together into raceway at same time.
  3. Do not damage conductors and cables or exceed manufacturer's recommended maximum pulling tension and sidewall pressure.
  4. Use suitable wire pulling lubricant where necessary, except when lubricant is not recommended by the manufacturer.
- F. Paralleled Conductors: Install conductors of the same length and terminate in the same manner.
- G. Secure and support conductors and cables in accordance with NFPA 70 using suitable supports and methods approved by the authority having jurisdiction. Provide independent support from building structure. Do not provide support from raceways, piping, ductwork, or other systems.
  1. Installation Above Suspended Ceilings: Do not provide support from ceiling support system. Do not provide support from ceiling grid or allow conductors and cables to lay on ceiling tiles.
- H. Terminate cables using suitable fittings.
  1. Metal-Clad Cable (Type MC):
    - a. Use listed fittings.
    - b. Cut cable armor only using specialized tools to prevent damaging conductors or insulation. Do not use hacksaw or wire cutters to cut armor.
- I. Install conductors with a minimum of 12 inches (300 mm) of slack at each outlet.
- J. Neatly train and bundle conductors inside boxes, wireways, panelboards and other equipment enclosures.
- K. Group or otherwise identify neutral/grounded conductors with associated ungrounded conductors inside enclosures in accordance with NFPA 70.
- L. Make wiring connections using specified wiring connectors.
  1. Make splices and taps only in accessible boxes. Do not pull splices into raceways or make splices in conduit bodies or wiring gutters.

2. Remove appropriate amount of conductor insulation for making connections without cutting, nicking or damaging conductors.
  3. Do not remove conductor strands to facilitate insertion into connector.
  4. Clean contact surfaces on conductors and connectors to suitable remove corrosion, oxides, and other contaminants. Do not use wire brush on plated connector surfaces.
  5. Mechanical Connectors: Secure connections according to manufacturer's recommended torque settings.
  6. Compression Connectors: Secure connections using manufacturer's recommended tools and dies.
- M. Insulate splices and taps that are made with uninsulated connectors using methods suitable for the application, with insulation and mechanical strength at least equivalent to unspliced conductors.
- N. Insulate ends of spare conductors using vinyl insulating electrical tape.
- O. Field-Applied Color Coding: Where vinyl color coding electrical tape is used in lieu of integrally colored insulation as permitted in Part 2 under "Color Coding", apply half overlapping turns of tape at each termination and at each location conductors are accessible.
- P. Unless specifically indicated to be excluded, provide final connections to all equipment and devices, including those furnished by others, as required for a complete operating system.

#### 3.4 FIELD QUALITY CONTROL

- A. See Section 01 4000 - Quality Requirements, for additional requirements.
- B. Inspect and test in accordance with NETA ATS, except Section 4.
- C. Perform inspections and tests listed in NETA ATS, Section 7.3.2. The insulation resistance test is required for all conductors. The resistance test for parallel conductors listed as optional is not required.
- D. Correct deficiencies and replace damaged or defective conductors and cables.

#### **END OF SECTION**

**SECTION 26 0526**  
**GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS**

**PART 1 GENERAL**

**1.1 SECTION INCLUDES**

- A. Grounding and bonding requirements.
- B. Conductors for grounding and bonding.
- C. Connectors for grounding and bonding.

**1.2 RELATED REQUIREMENTS**

- A. Section 26 0519 - Low-Voltage Electrical Power Conductors and Cables: Additional requirements for conductors for grounding and bonding, including conductor color coding.
- B. Section 26 0553 - Identification for Electrical Systems: Identification products and requirements.

**1.3 REFERENCE STANDARDS**

- A. IEEE 81 - IEEE Guide for Measuring Earth Resistivity, Ground Impedance, and Earth Surface Potentials of a Grounding System; 2012.
- B. NECA 1 - Standard for Good Workmanship in Electrical Construction; 2010.
- C. NETA ATS - Acceptance Testing Specifications for Electrical Power Equipment and Systems; 2013.
- D. NFPA 70 - National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
- E. UL 467 - Grounding and Bonding Equipment; Current Edition, Including All Revisions.

**1.4 ADMINISTRATIVE REQUIREMENTS**

- A. Coordination:
  - 1. Coordinate the work with other trades to provide steel reinforcement complying with specified requirements for concrete-encased electrode.
  - 2. Notify Architect of any conflicts with or deviations from the contract documents. Obtain direction before proceeding with work.

**1.5 SUBMITTALS**

- A. None required.

**1.6 QUALITY ASSURANCE**

- A. Conform to requirements of NFPA 70.
- B. Maintain at the project site a copy of each referenced document that prescribes execution requirements.



- C. Product Listing Organization Qualifications: An organization recognized by OSHA as a Nationally Recognized Testing Laboratory (NRTL) and acceptable to authorities having jurisdiction.

## 1.7 DELIVERY, STORAGE, AND HANDLING

- A. Receive, inspect, handle, and store products in accordance with manufacturer's instructions.

## PART 2 PRODUCTS

### 2.1 GROUNDING AND BONDING REQUIREMENTS

- A. Do not use products for applications other than as permitted by NFPA 70 and product listing.
- B. Unless specifically indicated to be excluded, provide all required components, conductors, connectors, conduit, boxes, fittings, supports, accessories, etc. as necessary for a complete grounding and bonding system.
- C. Where conductor size is not indicated, size to comply with NFPA 70 but not less than applicable minimum size requirements specified.
- D. Bonding and Equipment Grounding:
  - 1. Provide bonding for equipment grounding conductors, equipment ground busses, metallic equipment enclosures, metallic raceways and boxes, device grounding terminals, and other normally non-current-carrying conductive materials enclosing electrical conductors/equipment or likely to become energized as indicated and in accordance with NFPA 70.
  - 2. Provide insulated equipment grounding conductor in each feeder and branch circuit raceway. Do not use raceways as sole equipment grounding conductor.
  - 3. Where circuit conductor sizes are increased for voltage drop, increase size of equipment grounding conductor proportionally in accordance with NFPA 70.
  - 4. Unless otherwise indicated, connect wiring device grounding terminal to branch circuit equipment grounding conductor and to outlet box with bonding jumper.
  - 5. Terminate branch circuit equipment grounding conductors on solidly bonded equipment ground bus only. Do not terminate on neutral (grounded) or isolated/insulated ground bus.
  - 6. Provide bonding jumper across expansion or expansion/deflection fittings provided to accommodate conduit movement.

### 2.2 GROUNDING AND BONDING COMPONENTS

- A. General Requirements:
  - 1. Provide products listed, classified, and labeled as suitable for the purpose intended.
  - 2. Provide products listed and labeled as complying with UL 467 where applicable.
- B. Conductors for Grounding and Bonding, in Addition to Requirements of Section 26 0526:
  - 1. Use insulated copper conductors unless otherwise indicated.
    - a. Exceptions:

- 1) Use bare copper conductors where installed underground in direct contact with earth.
- 2) Use bare copper conductors where directly encased in concrete (not in raceway).

C. Connectors for Grounding and Bonding:

1. Description: Connectors appropriate for the application and suitable for the conductors and items to be connected; listed and labeled as complying with UL 467.
2. Unless otherwise indicated, use exothermic welded connections or compression connectors for underground, concealed and other inaccessible connections.
  - a. Exceptions:
    - 1) Use mechanical connectors for connections to electrodes at ground access wells.
3. Unless otherwise indicated, use mechanical connectors, compression connectors, or exothermic welded connections for accessible connections.
  - a. Exceptions:
    - 1) Use exothermic welded connections for connections to metal building frame.

## **PART 3 EXECUTION**

### **3.1 EXAMINATION**

- A. Verify that work likely to damage grounding and bonding system components has been completed.
- B. Verify that field measurements are as indicated.
- C. Verify that conditions are satisfactory for installation prior to starting work.

### **3.2 INSTALLATION**

- A. Install products in accordance with manufacturer's instructions.
- B. Perform work in accordance with NECA 1 (general workmanship).
- C. Make grounding and bonding connections using specified connectors.
  1. Remove appropriate amount of conductor insulation for making connections without cutting, nicking or damaging conductors. Do not remove conductor strands to facilitate insertion into connector.
  2. Remove nonconductive paint, enamel, or similar coating at threads, contact points, and contact surfaces.
  3. Mechanical Connectors: Secure connections according to manufacturer's recommended torque settings.
  4. Compression Connectors: Secure connections using manufacturer's recommended tools and dies.

- D. Identify grounding and bonding system components in accordance with Section 26 0553.

**END OF SECTION**

**SECTION 26 0529**  
**HANGERS AND SUPPORTS FOR ELECTRICAL SYSTEMS**

**PART 1 GENERAL**

**1.1 SECTION INCLUDES**

- A. Support and attachment requirements and components for equipment, conduit, cable, boxes, and other electrical work.

**1.2 REFERENCE STANDARDS**

- A. ASTM A123/A123M - Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products; 2015.
- B. ASTM A153/A153M - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware; 2009.
- C. ASTM B633 - Standard Specification for Electrodeposited Coatings of Zinc on Iron and Steel; 2013.
- D. MFMA-4 - Metal Framing Standards Publication; 2004.
- E. NECA 1 - Standard for Good Workmanship in Electrical Construction; 2010.
- F. NFPA 70 - National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
- G. UL 5B - Strut-Type Channel Raceways and Fittings; Current Edition, Including All Revisions.

**1.3 ADMINISTRATIVE REQUIREMENTS**

**A. Coordination:**

- 1. Coordinate sizes and arrangement of supports and bases with the actual equipment and components to be installed.
- 2. Coordinate the work with other trades to provide additional framing and materials required for installation.
- 3. Coordinate compatibility of support and attachment components with mounting surfaces at the installed locations.
- 4. Coordinate the arrangement of supports with ductwork, piping, equipment and other potential conflicts installed under other sections or by others.
- 5. Notify Architect of any conflicts with or deviations from the contract documents. Obtain direction before proceeding with work.

**B. Sequencing:**

- 1. Do not install products on or provide attachment to concrete surfaces until concrete has fully cured in accordance with Section 03 3000.

**1.4 SUBMITTALS**

- A. None required.

## 1.5 QUALITY ASSURANCE

- A. Comply with NFPA 70.
- B. Comply with applicable building code.
- C. Design equipment supports capable of supporting combined operating weight of supported equipment and connected systems and components.
- D. Rated Strength: Adequate in tension, shear, and pullout force to resist maximum loads calculated or imposed for this Project, with a minimum structural safety factor of four times the applied force.
- E. Product Listing Organization Qualifications: An organization recognized by OSHA as a Nationally Recognized Testing Laboratory (NRTL) and acceptable to authorities having jurisdiction.

## 1.6 DELIVERY, STORAGE, AND HANDLING

- A. Receive, inspect, handle, and store products in accordance with manufacturer's instructions.

# PART 2 PRODUCTS

## 2.1 SUPPORT AND ATTACHMENT COMPONENTS

- A. General Requirements:
  - 1. Provide all required hangers, supports, anchors, fasteners, fittings, accessories, and hardware as necessary for the complete installation of electrical work.
  - 2. Provide products listed, classified, and labeled as suitable for the purpose intended, where applicable.
  - 3. Where support and attachment component types and sizes are not indicated, select in accordance with manufacturer's application criteria as required for the load to be supported with a minimum safety factor of 2.5. Include consideration for vibration, equipment operation, and shock loads where applicable.
  - 4. Do not use products for applications other than as permitted by NFPA 70 and product listing.
  - 5. Steel Components: Use corrosion resistant materials suitable for the environment where installed.
    - a. Indoor Dry Locations: Use zinc-plated steel or approved equivalent unless otherwise indicated.
    - b. Outdoor and Damp or Wet Indoor Locations: Use galvanized steel, stainless steel, or approved equivalent unless otherwise indicated.
    - c. Zinc-Plated Steel: Electroplated in accordance with ASTM B633.
    - d. Galvanized Steel: Hot-dip galvanized after fabrication in accordance with ASTM A123/A123M or ASTM A153/A153M.
- B. Conduit and Cable Supports: Straps, clamps, etc. suitable for the conduit or cable to be supported.

1. Conduit Straps: One-hole or two-hole type; steel or malleable iron.
2. Conduit Clamps: Bolted type unless otherwise indicated.
- C. Raceway and Cable Supports: As described in NECA 1 and NECA 101.
- D. Outlet Box Supports: Hangers, brackets, etc. suitable for the boxes to be supported.
- E. Metal Channel (Strut) Framing Systems: Factory-fabricated continuous-slot metal channel (strut) and associated fittings, accessories, and hardware required for field-assembly of supports.
  1. Comply with MFMA-4.
  2. Channel (Strut) Used as Raceway (only where specifically indicated): Listed and labeled as complying with UL 5B.
  3. Minimum Channel Thickness: Steel sheet, 12 gage, 0.1046 inch (2.66 mm).
  4. Minimum Channel Dimensions: 1-5/8 inch (41 mm) width by 13/16 inch (21 mm) height.
- F. Hanger Rods: Threaded zinc-plated steel unless otherwise indicated.
  1. Minimum Size, Unless Otherwise Indicated or Required:
    - a. Equipment Supports: 1/2 inch (13 mm) diameter.
    - b. Single Conduit up to 1 inch (27 mm) trade size: 1/4 inch (6 mm) diameter.
    - c. Single Conduit larger than 1 inch (27 mm) trade size: 3/8 inch (10 mm) diameter.
    - d. Trapeze Support for Multiple Conduits: 3/8 inch (10 mm) diameter.
    - e. Outlet Boxes: 1/4 inch (6 mm) diameter.
- G. Anchors and Fasteners:
  1. Unless otherwise indicated and where not otherwise restricted, use the anchor and fastener types indicated for the specified applications.
  2. Concrete: Use preset concrete inserts, expansion anchors, or screw anchors.
  3. Solid or Grout-Filled Masonry: Use expansion anchors or screw anchors.
  4. Hollow Masonry: Use toggle bolts.
  5. Hollow Stud Walls: Use toggle bolts.
  6. Steel: Use beam clamps, machine bolts, or welded threaded studs.
  7. Sheet Metal: Use sheet metal screws.
  8. Wood: Use wood screws.
  9. Plastic and lead anchors are not permitted.
  10. Powder-actuated fasteners are not permitted.

## **PART 3 EXECUTION**

### **3.1 EXAMINATION**

- A. Verify that field measurements are as indicated.
- B. Verify that mounting surfaces are ready to receive support and attachment components.
- C. Verify that conditions are satisfactory for installation prior to starting work.

### **3.2 INSTALLATION**

- A. Install products in accordance with manufacturer's instructions.
- B. Perform work in accordance with NECA 1 (general workmanship).
- C. Install anchors and fasteners in accordance with ICC Evaluation Services, LLC (ICC-ES) evaluation report conditions of use where applicable.
- D. Provide independent support from building structure. Do not provide support from piping, ductwork, or other systems.
- E. Install support and attachment components for steel conduits in accordance with NECA 101
- F. Unless specifically indicated or approved by Architect, do not provide support from suspended ceiling support system or ceiling grid.
- G. Unless specifically indicated or approved by Architect, do not provide support from roof deck.
- H. Do not penetrate or otherwise notch or cut structural members without approval of Structural Engineer.
- I. Equipment Support and Attachment:
  - 1. Use metal fabricated supports or supports assembled from metal channel (strut) to support equipment as required.
  - 2. Use metal channel (strut) secured to studs to support equipment surface-mounted on hollow stud walls when wall strength is not sufficient to resist pull-out.
  - 3. Use metal channel (strut) to support surface-mounted equipment in wet or damp locations to provide space between equipment and mounting surface.
  - 4. Unless otherwise indicated, mount floor-mounted equipment on properly sized 3 inch (80 mm) high concrete pad constructed in accordance with Section 03 3000.
  - 5. Securely fasten floor-mounted equipment. Do not install equipment such that it relies on its own weight for support.
- J. Secure fasteners according to manufacturer's recommended torque settings.
- K. Remove temporary supports.
- L. Identify independent electrical component support wires above accessible ceilings (only where specifically indicated or permitted) with color distinguishable from ceiling support wires in accordance with NFPA 70.

- M. Mounting and Anchorage of Surface-Mounted Equipment and Components: Anchor and fasten electrical items and their supports to building structural elements by the following methods unless otherwise indicated by code:
1. To Wood: Fasten with lag screws or through bolts.
  2. To New Concrete: Bolt to concrete inserts.
  3. To Masonry: Approved toggle-type bolts on hollow masonry units and expansion anchor fasteners on solid masonry units.
  4. To Existing Concrete: Expansion anchor fasteners.
  5. To Steel: Beam clamps (MSS Type 19, 21, 23, 25, or 27) complying with MSS SP-69.
  6. To Light Steel: Sheet metal screws.
  7. Items Mounted on Hollow Walls and Nonstructural Building Surfaces: Mount cabinets, panelboards, disconnect switches, control enclosures, pull and junction boxes, transformers, and other devices on slotted-channel racks attached to substrate by means that meet anchorage requirements.

### 3.3 FIELD QUALITY CONTROL

- A. See Section 01 4000 - Quality Requirements, for additional requirements.
- B. Inspect support and attachment components for damage and defects.
- C. Repair cuts and abrasions in galvanized finishes using zinc-rich paint recommended by manufacturer. Replace components that exhibit signs of corrosion.
- D. Correct deficiencies and replace damaged or defective support and attachment components.

### **END OF SECTION**



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**SECTION 26 0553**  
**IDENTIFICATION FOR ELECTRICAL SYSTEMS**

**PART 1 GENERAL**

**1.1 SECTION INCLUDES**

- A. Electrical identification requirements.
- B. Wire and cable markers.

**1.2 RELATED REQUIREMENTS**

- A. Section 26 0519 - Low-Voltage Electrical Power Conductors and Cables: Color coding for power conductors and cables 600 V and less; vinyl color coding electrical tape.

**1.3 REFERENCE STANDARDS**

- A. ANSI Z535.2 - American National Standard for Environmental and Facility Safety Signs; 2011.
- B. ANSI Z535.4 - American National Standard for Product Safety Signs and Labels; 2011.
- C. NFPA 70 - National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
- D. NFPA 70E - Standard for Electrical Safety in the Workplace; 2017.
- E. UL 969 - Marking and Labeling Systems; Current Edition, Including All Revisions.

**1.4 ADMINISTRATIVE REQUIREMENTS**

- A. Coordination:
  - 1. Verify final designations for equipment, systems, and components to be identified prior to fabrication of identification products.
- B. Sequencing:
  - 1. Do not conceal items to be identified, in locations such as above suspended ceilings, until identification products have been installed.
  - 2. Do not install identification products until final surface finishes and painting are complete.

**1.5 SUBMITTALS**

- A. None required.

**1.6 QUALITY ASSURANCE**

- A. Conform to requirements of NFPA 70.

**1.7 FIELD CONDITIONS**

- A. Do not install adhesive products when ambient temperature is lower than recommended by manufacturer.

## **PART 2 PRODUCTS**

### **2.1 IDENTIFICATION REQUIREMENTS**

- A. Identification for Conductors and Cables:
  - 1. Color Coding for Power Conductors 600 V and Less: Comply with Section 26 0519.
  - 2. Use wire and cable markers to identify circuit number or other designation indicated for power, control, and instrumentation conductors and cables at the following locations:
    - a. At each source and load connection.
    - b. Within boxes when more than one circuit is present.
    - c. Within equipment enclosures when conductors and cables enter or leave the enclosure.

### **2.2 WIRE AND CABLE MARKERS**

- A. Markers for Conductors and Cables: Use wrap-around self-adhesive vinyl cloth, wrap-around self-adhesive vinyl self-laminating, heat-shrink sleeve, plastic sleeve, plastic clip-on, or vinyl split sleeve type markers suitable for the conductor or cable to be identified.
- B. Markers for Conductor and Cable Bundles: Use plastic marker tags secured by nylon cable ties.
- C. Legend: Power source and circuit number or other designation indicated.
- D. Text: Use factory pre-printed or machine-printed text, all capitalized unless otherwise indicated.
  - 1. Do not use handwritten text.
- E. Minimum Text Height: 1/8 inch (3 mm).
- F. Color: Black text on white background unless otherwise indicated.

## **PART 3 EXECUTION**

### **3.1 PREPARATION**

- A. Clean surfaces to receive adhesive products according to manufacturer's instructions.

### **3.2 INSTALLATION**

- A. Install products in accordance with manufacturer's instructions.
- B. Install identification products to be plainly visible for examination, adjustment, servicing, and maintenance. Unless otherwise indicated, locate products as follows:
  - 1. Surface-Mounted Equipment: Enclosure front.
  - 2. Flush-Mounted Equipment: Inside of equipment door.
  - 3. Free-Standing Equipment: Enclosure front; also enclosure rear for equipment with rear access.
  - 4. Elevated Equipment: Legible from the floor or working platform.

5. Branch Devices: Adjacent to device.
  6. Interior Components: Legible from the point of access.
  7. Conduits: Legible from the floor.
  8. Boxes: Outside face of cover.
  9. Conductors and Cables: Legible from the point of access.
  10. Devices: Outside face of cover.
- C. Install identification products centered, level, and parallel with lines of item being identified.
  - D. Secure nameplates to exterior surfaces of enclosures using stainless steel screws and to interior surfaces using self-adhesive backing or epoxy cement.
  - E. Install self-adhesive labels and markers to achieve maximum adhesion, with no bubbles or wrinkles and edges properly sealed.
  - F. Install underground warning tape above buried lines with one tape per trench at 3 inches (75 mm) below finished grade.
  - G. Secure rigid signs using stainless steel screws.
  - H. Mark all handwritten text, where permitted, to be neat and legible.

### 3.3 FIELD QUALITY CONTROL

- A. See Section 01 4000 - Quality Requirements, for additional requirements.
- B. Replace self-adhesive labels and markers that exhibit bubbles, wrinkles, curling or other signs of improper adhesion.

**END OF SECTION**

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**SECTION 28 0513**  
**CONDUCTORS AND CABLES FOR ELECTRONIC SAFETY AND SECURITY**

**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. UTP cabling.
  - 2. Low-voltage control cabling.
  - 3. Control-circuit conductors.
  - 4. Identification products.

1.3 ACTION SUBMITTALS

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

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Test cables upon receipt at Project site.

1.5 FIELD CONDITIONS

- A. Do not install conductors and cables that are wet, moisture damaged, or mold damaged.
  - 1. Indications that wire and cables are wet or moisture damaged include, but are not limited to, discoloration and sagging of factory packing materials.
- B. Environmental Limitations: Do not deliver or install UTP, optical fiber, and coaxial cables and connecting materials until wet work in spaces is complete and dry, and temporary HVAC system is operating and maintaining ambient temperature and humidity conditions at occupancy levels during the remainder of the construction period.

**PART 2 PRODUCTS**

2.1 PERFORMANCE REQUIREMENTS

- A. Surface-Burning Characteristics: Comply with ASTM E 84; testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.
  - 1. Flame-Spread Index: 25 or less.
  - 2. Smoke-Developed Index: 50 or less.
- B. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

2.2 UTP CABLE

- A. Description: 100-ohm, four-pair UTP, covered with a blue thermoplastic jacket.

1. Comply with ICEA S-90-661 for mechanical properties.
2. Comply with TIA/EIA-568-B.1 for performance specifications.
3. Comply with TIA/EIA-568-B.2, Category 6.
4. Listed and labeled by an NRTL acceptable to authorities having jurisdiction as complying with UL 444 and NFPA 70 for the following types:
  - a. Communications, Plenum Rated: Type CMP, complying with NFPA 262.
  - b. Communications, Riser Rated: Type CMR, complying with UL 1666.

### 2.3 UTP CABLE HARDWARE

- A. UTP Cable Connecting Hardware: IDC type, using modules designed for punch-down caps or tools. Cables shall be terminated with connecting hardware of the same category or higher.

### 2.4 LOW-VOLTAGE CONTROL AND COMMUNICATION CABLE

- A. Cable types and manufacturer are for general reference only. Final cable selections shall be coordinated with the security electronics system provider to meet the functional intent.
- B. Single pair cable for switches and pushbuttons.
  1. West Penn 222: Two conductor, 20 AWG, 7 x 28 stranding, bare copper, thermoplastic insulation with PVC jacket, unshielded, type CMR.
- C. Four conductor cable for motion detectors.
  1. West Penn 242: Four conductor, 20 AWG, 7 x 28 stranding, bare copper, thermoplastic insulation with PVC jacket, unshielded, type CMR.
- D. Single pair cable for digital intercoms.
  1. West Penn 291: Two conductor, 20 AWG, 7 x 30 stranding, bare copper, thermoplastic insulation with PVC jacket, 100% aluminum foil shield with 24 AWG tinned drain wire, type CMR.
- E. Single pair cable for microphones.
  1. West Penn 292: Two conductor, 20 AWG, 7 x 28 stranding, bare copper, thermoplastic insulation with PVC jacket, 100% aluminum foil shield with 24 AWG tinned drain wire, type CMR.
- F. Four conductor cable for analog intercoms.
  1. West Penn 357: Four conductor, 22 AWG, 7 x 30 stranding, bare copper, thermoplastic insulation with PVC jacket, 100% aluminum foil shield with 24 AWG tinned drain wire for two conductors and two unshielded conductors, type CMR.
- G. Six conductor cable for card readers.
  1. West Penn 3021: Six conductor, 18 AWG, 7 x 26 stranding, bare copper, thermoplastic insulation with PVC jacket, 100% aluminum foil shield with 24 AWG tinned drain wire, type CMR.
- H. Four pair cable for cameras.

1. Refer to UTP cable type.

## 2.5 CONTROL-CIRCUIT CONDUCTORS

- A. Class 1 Control Circuits: Stranded copper, Type THHN-THWN, complying with UL 83, in raceway.
- B. Class 2 Control Circuits: Stranded copper, Type THHN-THWN, complying with UL 83, in raceway.
- C. Class 3 Remote-Control and Signal Circuits: Stranded copper, Type TW or TF, complying with UL 83.

## 2.6 IDENTIFICATION PRODUCTS

- A. Comply with requirements in Section 260553 "Identification for Electrical Systems."

## 2.7 SOURCE QUALITY CONTROL

- A. Factory test UTP and optical fiber cables on reels according to TIA/EIA-568-B.1.
- B. Factory test UTP cables according to TIA/EIA-568-B.2.
- C. Cable will be considered defective if it does not pass tests and inspections.

# PART 3 EXECUTION

## 3.1 INSTALLATION OF HANGERS AND SUPPORTS

- A. Comply with requirements in Section 260529 "Hangers and Supports for Electrical Systems" for installation of supports for cables.

## 3.2 WIRING METHOD

- A. Install wiring in metal pathways and wireways.
  1. Minimum conduit size shall be 3/4 inch (21 mm). Control and data transmission wiring shall not share conduit with other building wiring systems.
- B. Install cable, concealed in accessible ceilings, walls, and floors when possible.
- C. Wiring within Enclosures:
  1. Bundle, lace, and train conductors to terminal points with no excess and without exceeding manufacturer's limitations on bending radii.
  2. Install lacing bars and distribution spools.
  3. Separate power-limited and non-power-limited conductors as recommended in writing by manufacturer.
  4. Install conductors parallel with or at right angles to sides and back of enclosure.
  5. Connect conductors that are terminated, spliced, or interrupted in any enclosure associated with intrusion system to terminal blocks.
  6. Mark each terminal according to system's wiring diagrams.



7. Make all connections with approved crimp-on terminal spade lugs, pressure-type terminal blocks, or plug connectors.

### 3.3 INSTALLATION OF CONDUCTORS AND CABLES

- A. Comply with NECA 1.
- B. Conductors: Size according to system manufacturer's written instructions unless otherwise indicated.
- C. General Requirements for Cabling:
  1. Comply with TIA/EIA-568-B.1.
  2. Comply with BICSI ITSIM, Ch. 6, "Cable Termination Practices."
  3. Terminate all conductors; no cable shall contain unterminated elements. Make terminations only at indicated outlets, terminals, and cross-connect and patch panels.
  4. Cables may not be spliced. Secure and support cables at intervals not exceeding 30 inches (760 mm) and not more than 6 inches (150 mm) from cabinets, boxes, fittings, outlets, racks, frames, and terminals.
  5. Bundle, lace, and train conductors to terminal points without exceeding manufacturer's limitations on bending radii, but not less than radii specified in BICSI ITSIM, "Cabling Termination Practices" Chapter. Install lacing bars and distribution spools.
  6. Do not install bruised, kinked, scored, deformed, or abraded cable. Do not splice cable between termination, tap, or junction points. Remove and discard cable if damaged during installation and replace it with new cable.
  7. Pulling Cable: Comply with BICSI ITSIM, Ch. 4, "Pulling Cable." Monitor cable pull tensions.
- D. UTP Cable Installation: Install using techniques, practices, and methods that are consistent with Category 6 rating of components and that ensure Category 6 performance of completed and linked signal paths, end to end.
  1. Comply with TIA/EIA-568-B.2.
  2. Do not untwist UTP cables more than 1/2 inch (12 mm) from the point of termination to maintain cable geometry.
- E. Separation from EMI Sources:
  1. Separation between open communications cables or cables in nonmetallic raceways and unshielded power conductors and electrical equipment shall be as follows:
    - a. Electrical Equipment Rating Less Than 2 kVA: A minimum of 5 inches (127 mm).
    - b. Electrical Equipment Rating between 2 and 5 kVA: A minimum of 12 inches (300 mm).
    - c. Electrical Equipment Rating More Than 5 kVA: A minimum of 24 inches (600 mm).
  2. Separation between communications cables in grounded metallic raceways and unshielded power lines or electrical equipment shall be as follows:

- a. Electrical Equipment Rating Less Than 2 kVA: A minimum of 2-1/2 inches (64 mm).
- b. Electrical Equipment Rating between 2 and 5 kVA: A minimum of 6 inches (150 mm).
- c. Electrical Equipment Rating More Than 5 kVA: A minimum of 12 inches (300 mm).
3. Separation between Cables and Electrical Motors and Transformers, 5 kVA or HP and Larger: A minimum of 48 inches (1200 mm).
4. Separation between Cables and Fluorescent Fixtures: A minimum of 5 inches (127 mm).

### 3.4 POWER AND CONTROL-CIRCUIT CONDUCTORS

- A. 120-V Power Wiring: Install according to Section 260519 "Low-Voltage Electrical Power Conductors and Cables" unless otherwise indicated.

### 3.5 GROUNDING

- A. For low-voltage wiring and cabling, comply with requirements in Section 260526 "Grounding and Bonding for Electrical Systems."

### 3.6 IDENTIFICATION

- A. Identify system components, wiring, and cabling complying with TIA/EIA-606-A. Comply with requirements for identification specified in Section 260553 "Identification for Electrical Systems."

### 3.7 FIELD QUALITY CONTROL

- A. Perform the following tests and inspections:
  1. Visually inspect UTP and optical fiber cable jacket materials for NRTL certification markings. Inspect cabling terminations to confirm color-coding for pin assignments, and inspect cabling connections to confirm compliance with TIA/EIA-568-B.1.
  2. Visually inspect cable placement, cable termination, grounding and bonding, equipment and patch cords, and labeling of all components.
  3. Test UTP cabling for DC loop resistance, shorts, opens, intermittent faults, and polarity between conductors. Test operation of shorting bars in connection blocks. Test cables after termination but not cross connection.
    - a. Test instruments shall meet or exceed applicable requirements in TIA/EIA-568-B.2. Perform tests with a tester that complies with performance requirements in "Test Instruments (Normative)" Annex, complying with measurement accuracy specified in "Measurement Accuracy (Informative)" Annex. Use only test cords and adapters that are qualified by test equipment manufacturer for channel or link test configuration.
- B. Document data for each measurement. Print data for submittals in a summary report that is formatted using Table 10.1 in BICSI TDMM as a guide, or transfer the data from the instrument to the computer, save as text files, print, and submit.
- C. End-to-end cabling will be considered defective if it does not pass tests and inspections.
- D. Prepare test and inspection reports.

### END OF SECTION

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**SECTION 28 0528**  
**PATHWAYS FOR ELECTRONIC SAFETY AND SECURITY**

**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. Metal conduits, tubing, and fittings.
  - 2. Boxes, enclosures, and cabinets.

**1.3 ACTION SUBMITTALS**

- A. None required.

**PART 2 PRODUCTS**

**2.1 METAL CONDUITS, TUBING, AND FITTINGS**

- A. General Requirements for Metal Conduits and Fittings:
  - 1. Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
- B. GRC: Comply with ANSI C80.1 and UL 6.
- C. IMC: Comply with ANSI C80.6 and UL 1242.
- D. EMT: Comply with ANSI C80.3 and UL 797.
- E. Fittings for Metal Conduit: Comply with NEMA FB 1 and UL 514B.
  - 1. Fittings for EMT:
    - a. Material: Steel.
    - b. Type: compression.
  - 2. Expansion Fittings: PVC or steel to match conduit type, complying with UL 467, rated for environmental conditions where installed, and including flexible external bonding jumper.
- F. Joint Compound for IMC, GRC, or ARC: Approved, as defined in NFPA 70, by authorities having jurisdiction for use in conduit assemblies, and compounded for use to lubricate and protect threaded conduit joints from corrosion and to enhance their conductivity.

**2.2 BOXES, ENCLOSURES, AND CABINETS**

- A. Manufacturers: Subject to compliance with requirements, provide products by the following:
- B. General Requirements for Boxes, Enclosures, and Cabinets:
  - 1. Boxes, enclosures and cabinets installed in wet locations shall be listed for use in wet locations.

- C. Sheet-Metal Outlet and Device Boxes: Comply with NEMA OS 1 and UL 514A.
- D. Cast-Metal Outlet and Device Boxes: Comply with NEMA FB 1, ferrous alloy, Type FD, with gasketed cover.
- E. Box extensions used to accommodate new building finishes shall be of same material as recessed box.
- F. Small Sheet Metal Pull and Junction Boxes: NEMA OS 1.
- G. Cast-Metal Access, Pull, and Junction Boxes: Comply with NEMA FB 1 and UL 1773, cast aluminum with gasketed cover.
- H. Device Box Dimensions: 4-inches square by 2-1/8 inches deep (100 mm square by 60 mm deep).
- I. Gangable boxes are prohibited.
- J. Hinged-Cover Enclosures: Comply with UL 50 and NEMA 250, Type 1 with continuous-hinge cover with flush latch unless otherwise indicated.
  - 1. Metal Enclosures: Steel, finished inside and out with manufacturer's standard enamel.
  - 2. Interior Panels: Steel; all sides finished with manufacturer's standard enamel.
- K. Cabinets:
  - 1. NEMA 250, Type 1, galvanized-steel box with removable interior panel and removable front, finished inside and out with manufacturer's standard enamel.
  - 2. Hinged door in front cover with flush latch and concealed hinge.
  - 3. Key latch to match panelboards.
  - 4. Metal barriers to separate wiring of different systems and voltage.
  - 5. Accessory feet where required for freestanding equipment.

## **PART 3 EXECUTION**

### **3.1 PATHWAY APPLICATION**

- A. Indoors: Apply pathway products as specified below unless otherwise indicated:
  - 1. Exposed, Not Subject to Physical Damage: EMT.
  - 2. Exposed, Not Subject to Severe Physical Damage: EMT.
  - 3. Exposed and Subject to Severe Physical Damage: GRC. Pathway locations include the following:
    - a. Loading dock.
    - b. Corridors used for traffic of mechanized carts, forklifts, and pallet-handling units.
  - 4. Concealed in Ceilings and Interior Walls and Partitions: EMT.

5. Connection to Vibrating Equipment (Including Transformers and Hydraulic, Pneumatic, Electric-Solenoid, or Motor-Driven Equipment): FMC, except use LFMC in damp or wet locations.
  6. Damp or Wet Locations: GRC.
  7. Boxes and Enclosures: NEMA 250, Type 1, except use NEMA 250, Type 4 stainless steel in institutional and commercial kitchens and damp or wet locations.
- B. Minimum Pathway Size Indoor: 3/4-inch (21-mm) trade size. Minimum size for optical-fiber cables is 1 inch (27 mm).
- C. Minimum Pathway Size Outdoor: 1-inch (27-mm) trade size. Minimum size for optical-fiber cables is 1 inch (27 mm).
- D. Pathway Fittings: Compatible with pathways and suitable for use and location.
1. Rigid and Intermediate Steel Conduit: Use threaded rigid steel conduit fittings unless otherwise indicated. Comply with NEMA FB 2.10.
  2. EMT: Use setscrew or compression, steel fittings. Comply with NEMA FB 2.10.

### 3.2 INSTALLATION

- A. Comply with NECA 1, NECA 101, and TIA-569-B for installation requirements except where requirements on Drawings or in this article are stricter. Comply with NECA 102 for aluminum pathways. Comply with NFPA 70 limitations for types of pathways allowed in specific occupancies and number of floors.
- B. Keep pathways at least 6 inches (150 mm) away from parallel runs of flues and steam or hot-water pipes. Install horizontal pathway runs above water and steam piping.
- C. Complete pathway installation before starting conductor installation.
- D. Comply with requirements in Section 260529 "Hangers and Supports for Electrical Systems" for hangers and supports.
- E. Arrange stub-ups so curved portions of bends are not visible above finished slab.
- F. Install no more than the equivalent of three 90-degree bends in any conduit run except for communications wiring conduits for which only two 90-degree bends are allowed. Support within 12 inches (300 mm) of changes in direction.
- G. Conceal conduit and EMT within finished walls, ceilings, and floors unless otherwise indicated. Install conduits parallel or perpendicular to building lines.
- H. Support conduit within 12 inches (300 mm) of enclosures to which attached.
- I. Stub-ups to Above Accessible Ceilings:
1. Use EMT, IMC, or RMC for pathways.
  2. Use a conduit bushing or insulated fitting to terminate stub-ups not terminated in hubs or in an enclosure.
- J. Threaded Conduit Joints, Exposed to Wet, Damp, Corrosive, or Outdoor Conditions: Apply listed compound to threads of pathway and fittings before making up joints. Follow compound manufacturer's written instructions.

- K. Terminate threaded conduits into threaded hubs or with locknuts on inside and outside of boxes or cabinets. Install insulated bushings on conduits terminated with locknuts.
- L. Install pathways square to the enclosure and terminate at enclosures with locknuts. Install locknuts hand tight plus 1/4 turn more.
- M. Do not rely on locknuts to penetrate nonconductive coatings on enclosures. Remove coatings in the locknut area prior to conduit assembly to assure a continuous ground path.
- N. Cut conduit perpendicular to the length. For conduits of 2-inch (53-mm) trade size and larger, use roll cutter or a guide to ensure cut is straight and perpendicular to the length.
- O. Install pull wires in empty pathways. Use polypropylene or monofilament plastic line with not less than 200-lb (90-kg) tensile strength. Leave at least 12 inches (300 mm) of slack at each end of pull wire. Cap underground pathways designated as spare above grade alongside pathways in use.
- P. Install pathway sealing fittings at accessible locations according to NFPA 70 and fill them with listed sealing compound. For concealed pathways, install each fitting in a flush steel box with a blank cover plate having a finish similar to that of adjacent plates or surfaces. Install pathway sealing fittings according to NFPA 70.
- Q. Install devices to seal pathway interiors at accessible locations. Locate seals so no fittings or boxes are between the seal and the following changes of environments. Seal the interior of all pathways at the following points:
  - 1. Where an underground service pathway enters a building or structure.
  - 2. Where otherwise required by NFPA 70.
- R. Mount boxes at heights indicated on Drawings. If mounting heights of boxes are not individually indicated, give priority to ADA requirements. Install boxes with height measured to center of box unless otherwise indicated.
- S. Recessed Boxes in Masonry Walls: Saw-cut opening for box in center of cell of masonry block, and install box flush with surface of wall. Prepare block surface to provide a flat surface for a raintight connection between box and cover plate or supported equipment and box.
- T. Horizontally separate boxes mounted on opposite sides of walls so they are not in the same vertical channel.
- U. Support boxes of three gangs or more from more than one side by spanning two framing members or mounting on brackets specifically designed for the purpose.
- V. Fasten junction and pull boxes to or support from building structure. Do not support boxes by conduits.

### 3.3 SLEEVE AND SLEEVE-SEAL INSTALLATION FOR ELECTRONIC SAFETY AND SECURITY PENETRATIONS

- A. Install sleeves and sleeve seals at penetrations of exterior floor and wall assemblies. Comply with requirements in Section 280544 "Sleeves and Sleeve Seals for Electronic Safety and Security Pathways and Cabling."

### 3.4 PROTECTION

- A. Protect coatings, finishes, and cabinets from damage and deterioration.

1. Repair damage to galvanized finishes with zinc-rich paint recommended by manufacturer.

**END OF SECTION**



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## **SECTION 28 0544**

### **SLEEVES AND SLEEVE SEALS FOR ELECTRONIC SAFETY AND SECURITY PATHWAYS AND CABLING**

#### **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. Sleeves for pathway and cable penetration of non-fire-rated construction walls and floors.
  - 2. Grout.

##### **1.3 ACTION SUBMITTALS**

- A. None required.

#### **PART 2 PRODUCTS**

##### **2.1 SLEEVES**

- A. Wall Sleeves:
  - 1. Steel Pipe Sleeves: ASTM A 53/A 53M, Type E, Grade B, Schedule 40, zinc coated, plain ends.
- B. Sleeves for Conduits Penetrating Non-Fire-Rated Gypsum Board Assemblies: Galvanized-steel sheet; 0.0239-inch (0.6-mm) minimum thickness; round tube closed with welded longitudinal joint, with tabs for screw-fastening the sleeve to the board.
- C. Sleeves for Rectangular Openings:
  - 1. Material: Galvanized-steel sheet.
  - 2. Minimum Metal Thickness:
    - a. For sleeve cross-section rectangle perimeter less than 50 inches (1270 mm) and with no side larger than 16 inches (400 mm), thickness shall be 0.052 inch (1.3 mm).
    - b. For sleeve cross-section rectangle perimeter 50 inches (1270 mm) or more and one or more sides larger than 16 inches (400 mm), thickness shall be 0.138 inch (3.5 mm).

##### **2.2 GROUT**

- A. Description: Nonshrink; recommended for interior and exterior sealing openings in non-fire-rated walls or floors.
- B. Standard: ASTM C 1107/C 1107M, Grade B, post-hardening and volume-adjusting, dry, hydraulic-cement grout.
- C. Design Mix: 5000-psi (34.5-MPa), 28-day compressive strength.

- D. Packaging: Premixed and factory packaged.

### **PART 3 EXECUTION**

#### **3.1 SLEEVE INSTALLATION FOR NON-FIRE-RATED ELECTRICAL PENETRATIONS**

- A. Comply with NECA 1.
- B. Sleeves for Conduits Penetrating Above-Grade Non-Fire-Rated Concrete and Masonry-Unit Floors and Walls:
1. Interior Penetrations of Non-Fire-Rated Walls and Floors:
    - a. Seal annular space between sleeve and pathway or cable, using joint sealant appropriate for size, depth, and location of joint. Comply with requirements in Section 079200 "Joint Sealants."
    - b. Seal space outside of sleeves with mortar or grout. Pack sealing material solidly between sleeve and wall so no voids remain. Tool exposed surfaces smooth; protect material while curing.
  2. Use pipe sleeves unless penetration arrangement requires rectangular sleeved opening.
  3. Size pipe sleeves to provide 1/4-inch (6.4-mm) annular clear space between sleeve and pathway or cable unless sleeve seal is to be installed.
  4. Install sleeves for wall penetrations unless core-drilled holes or formed openings are used. Install sleeves during erection of walls. Cut sleeves to length for mounting flush with both surfaces of walls. Deburr after cutting.
  5. Install sleeves for floor penetrations. Extend sleeves installed in floors 2 inches (50 mm) above finished floor level. Install sleeves during erection of floors.
- C. Sleeves for Conduits Penetrating Non-Fire-Rated Gypsum Board Assemblies:
1. Use circular metal sleeves unless penetration arrangement requires rectangular sleeved opening.
  2. Seal space outside of sleeves with approved joint compound for gypsum board assemblies.

**END OF SECTION**

## Appendix

### A. Phasing Information (1 page)

## **PHASING INFORMATION**

### **PHASING:**

Phase 1 – Doors FE 8X, FE 11, and FE 12  
Phase 2 – Doors FE 14, FE18, and R102  
Phase 3 – Doors FE 15, FE 16X, and FE 17  
– Door S102 can be done with FE17 or FE 18  
Phase 4 – Doors FE 19, FE 20, and FE 22  
Phase 5 – Doors FE 24, FE 26, FE 21, FE 33  
Phase 6 – Doors FE 29, FE 34, and FE 35  
Phase 7 – Doors M177, FE 23, FE 32, and FE 37

#### Notes:

- A minimum of three doors will be available for construction purposes at one time.
- Additional doors for each phase may be available but will need to be coordinated with the facility staff.
- Phasing sequence is flexible.
- The contractor shall coordinate with the construction manager and facility to provide a final phasing plan three weeks prior to start of construction.

**END OF SECTION**

END OF DOCUMENT