PROJECT MANUAL

PROJECT NAME:

DOC IMCC Fire Alarm Replacement

PROJECT ADDRESS:
2700 Coral Ridge Ave.
Coralville, Iowa 52241

PROJECT DATE: July 31, 2025

-

OWNER:
Iowa Department of Administrative Services
109 Southeast 13th Street
Des Moines, Iowa 50319

OWNER PROJECT NUMBER: 9445.00

OWNER REQUEST FOR BID NUMBER: RFB 944500-01

-

CONSTRUCTION MANAGER:
Samuels Group
2929 Westown Parkway
West Des Moines, IA 50266

CONSTRUCTION MANAGER PROJECT NUMBER: 7740

-

ARCHITECT:
KCL Engineering
300 4th St
West Des Moines, IA 50265

ARCHITECT PROJECT NUMBER: 25040

-

SECTION 00 0107

SEALS PAGE

I hereby certify that the portion of this technical submission described below was prepared by me or under my direct supervision and responsible charge.

Discipline: Electrical Engineer

Company Name: KCL Engineering

Address: 300 4th Street

Telephone: 515-300-8092

Name: Eric Heynen

License#: P24607

Stamp: LICENSED PROFESSIONAL ENGINEER — ERIC HEYNEN P24706 — IOWA

Responsibility: Div. 07, 26, 27 & 28

I hereby certify that the portion of this technical submission described below was prepared by me or under my direct supervision and responsible charge.

Discipline:_____

Company Name:_____

Address:_____

Telephone:_____

Name:_____

License#:_____

Stamp:

Responsibility:_____

END OF SECTION

SECTION 00 0110

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BID SUBMITTAL CHECKLIST

PART 1 - GENERAL

1.01 BID SUBMITTAL CHECKLIST

A. The Bidder is responsible to see that the bid is submitted online at IMPACS Electronic Procurement System on or before the due date and time specified. Late bids shall not be accepted.
B. 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.
C. 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.
D. A properly prepared and submitted bid document is the bidder's responsibility.
E. Bids cannot be changed after the bid opening.
F. In all cases, no verbal communications by any party will override written communications from the issuing office.
G. The Bid Form shall be completed in full and signed and submitted by an officer of the bidder with authority to bind in a contract.
H. If Bid Bond is called for, it shall accompany the Bid submission.
I. If Non-discrimination Clause information is called for, it shall accompany the Bid submission
J. If Targeted Small Business Pre-bid Contact information is called for, it shall accompany the Bid submission.
K. If Certificate of Site Visit form is called for, it shall accompany the Bid submission.

PART 2 - PRODUCTS – NOT USED

PART 3 - EXECUTION – NOT USED

END OF SECTION

SECTION 00 1113

NOTICE TO BIDDERS

RFB #944500-01

The Iowa Department of Administrative Services will be receiving bids for the replacement of the fire alarm system throughout the Iowa Medical Classification Center (IMCC) facility, located at 2700 Coral Ridge Ave, Coralville, Iowa 52241.

The Iowa Department of Administrative Services anticipates construction to begin on September 25, 2025 and end on April 22, 2026.

Bids must be received no later than **02:00 pm, Thursday, September 4, 2025**. Late bids will not be considered. Bids shall be submitted on IMPACS Electronic Procurement System. The Bid 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.

Bid Opening
The time and place of bid opening will be held at meet.google.com/fxv-aqqa-xaa and teleconference number +1 316-789-6570 Pin: 575149472# at 03:00 pm on September 4, 2025.

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.

Questions must be submitted by 02:00 pm, August 26, 2025, to the Issuing Officer.

Bidding documents may stipulate a specific product. Substitute product will be considered if a written request is received by 02:00 pm, August 26, 2025, prior to bid opening. Substitution requests will be considered for all products per Section 01 2500 Substitution Procedures, even if the specification does not include a statement such as "or equal," "equal to," "equivalent to," or "basis of design," unless otherwise noted.

An **optional** Pre-Bid meeting will be held on **Tuesday, August 19, 2025 at 10:00 am** at IMCC at 2700 Coral Ridge Avenue, Coralville, Iowa 52241. This meeting is not mandatory but is highly recommended.

Bidding Documents, including drawing sheets bearing the project name DOC IMCC Fire Alarm System Replacement, Dated 07/31/2025 and the Project Manual prepared by KCL Engineering dated 07/31/2025, may be obtained from Rapids Reproduction by visiting www.rapidsrepro.com or by calling (515) 251-3222 on **Thursday, August 7, 2025**

For further information regarding this project contact:
Michael Bradbury – Issuing Officer
Phone: (515) 823-9327
E-Mail: construction.procurement@iowa.gov

END OF SECTION

SECTION 00 2113

INSTRUCTIONS TO BIDDERS

RFB #944500-01

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
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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: This project consists of a comprehensive removal and replacement of the existing fire alarm systems across the entire campus. The scope of work includes the complete demolition of outdated fire alarm equipment, followed by the installation of new, code-compliant systems designed to meet current life safety standards. This includes, but is not limited to, all fire alarm control panels, initiating devices, notification appliances, control modules, power supplies, and all associated accessories required for a fully functional system. Additionally, the project will encompass the installation and extension of conduit, cabling, and other pathway infrastructure necessary to support added devices required for code compliance. The work shall ensure full integration with existing building systems and provide reliable campus-wide coverage.

1.03 OWNER

A. State of Iowa, Department of Administrative Services, 109 SE 13th St, Des Moines, IA 50319

1.04 STATE AGENCY REPRESENTATIVES AND CONTACTS

A. PURCHASING AGENT: Michael Bradbury – Issuing Officer**,** State of Iowa, Department of Administrative Services**,** Hoover State Office Building, 3rd floor**,** 1305 East Walnut Street**,** Des Moines, IA 50319-0105, Phone: 515-823-9327; email: construction.procurement@iowa.gov

B. OWNER REPRESENTATIVE: Jennifer Kleene**,** State of Iowa, Department of Administrative Services, 109 SE 13th Street, Des Moines, IA 50319, Phone: 515-822-8197; email: jennifer.kleene@iowa.gov

C. ON-SITE COORDINATOR: Steve Bickford, Facility Manager, 2700 Coral Ridge Ave., Coralville, IA 52241, Phone: 319-480-2851; email: steve.bickford@iowa.gov

D. CONSTRUCTION MANAGER CONTACT: Mac McKeever, Samuels Group, 2929 Westown Parkway, West Des Moines, IA 50266, Phone: 712-898-3654; email: mmckeever@samuelsgroup.net

E. DESIGN PROFESSIONAL CONTACT: Eric Heynen, KCL Engineering**,** 300 4th St., West Des Moines, IA 50265**,** Phone: 515-300-8092; email: eheynen@kclengineering.com

PART 1 - PRODUCTS – NOT USED

PART 2 - EXECUTION

3.01 PROPOSAL FORM AND SUBMISSION

A. A properly prepared and submitted bid is the bidder's responsibility. Bids are to be made in accordance with these Instructions to Bidders and items included on the Bid submission. Failure to comply may be cause for rejection.
B. The Bid is to consist of the required Bid information, together with the other information 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:
        a. An online submission including:
            1) Required Bid Form (To be uploaded online)
            2) Required Non-discrimination Clause Information
            3) Required Targeted Small Business Pre-bid Contact Information
            4) Bid Security (documentation provided by Bidder) (To be uploaded online) (Required)
            5) Certification of Site Visit (To be uploaded online if Pre-Bid is Mandatory)
C. Include the amount for performing all work described in the drawings and specifications for Base Bid and for each Alternate Bid requested.
D. Acknowledge receipt of all Addenda issued, where so indicated on the Bid Form
E. All required information to be submitted, by an officer of the company having authority to bind the company in a contract.
F. Commencement of the work of the contract shall begin with the Contractor's receipt of a fully executed contract (signed by both parties).
G. 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.

H. The company's Federal I.D. Number and the Iowa Contractors Registration Number shall be included in the Bid Form.
I. 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. 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.
J. 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 instructions 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 original scope of work for the respective Base Bid or Alternate Bid.
K. Completed State of Iowa Nondiscrimination Clause information and Subcontractor Targeted Small Business Enterprise Pre-Bid Contact Information, included in these Bidding Documents, are to accompany the Bid submission. 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.
L. All Bid information is to be submitted online. 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 uploaded with the bid submission.

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 AND PROJECT MANUAL

A. Drawings and Project Manual are specified in the Notice to Bidders or any extension thereof made by Addendum.

3.05 BID SECURITY

A. Each Bid shall be accompanied by Bid Security.
B. The Bid Security shall be in the form of a Bid Bond, Certified check, or Cashier's check 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, copies of Certified checks or Cashier's checks must be uploaded and hand delivered, in a sealed envelope, or mailed upon request. 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 prior to execution of the contract. 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 submitted online through IMPACS Electronic Procurement System, no later than the time and date specified in the Notice to Bidder or any extension thereof made by Addendum. Written, emailed, oral or telephonic Bids are invalid, and will not receive consideration. The Bidder shall assume full responsibility for the timely online submission of the Bid. Late bids will not be accepted.

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. Pre-Bid Meeting will be specified in the Notice to Bidders or any extension thereof made by Addendum.

3.010 QUESTIONS

A. Questions on this project may be raised and discussed at the time of the Pre-Bid Meeting or by submitting in writing to the issuing officer as specified in the Notice to Bidders or any extension thereof made by Addendum.

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 as specified in the Notice to Bidders or any extension thereof made by Addendum. 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 in the location so indicated on the Bid. 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, a substitute product will be considered when a written request is received as specified in the Notice to Bidders or any extension thereof made by Addendum prior to bid opening. Substitution requests will be considered for all products per Section 01 2500 Substitution Procedures, even if the specification does not include a statement such as “or equal,” “equal to,” “equivalent to,” or “basis of design,” unless otherwise noted. Substitution requests shall be emailed to the Issuing Officer at the email address provided in Instructions to Bidders Section 1.04.

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 a bid must be completed online through IMPACS Electronic Procurement System. 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 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 OPENING

A. All bids received on or before the due date and time specified in the Notice to Bidder or any extension thereof made by Addendum will be opened and the name of the Bidder and the amount of their Bid will be announced.

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 submission; 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 fifteen (15) 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, including all required documents such as payment and performance bonds and insurance certificate, 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.2l 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 submission, 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.

END OF SECTION

SECTION 00 2113.01

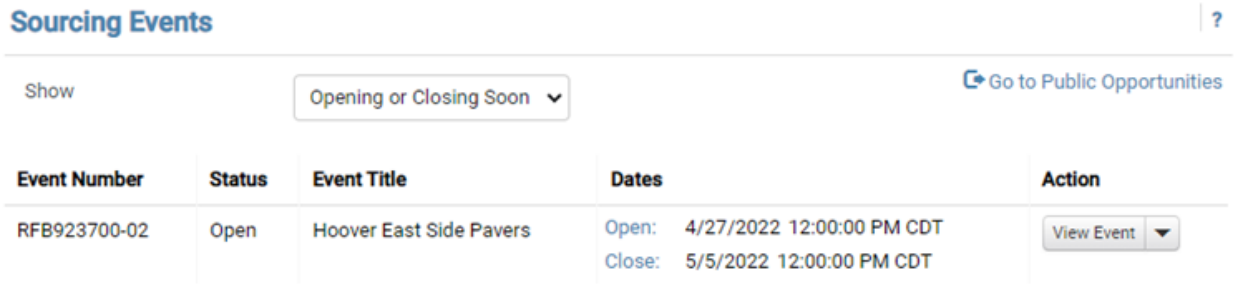
IMPACS Public Construction Bidders User Guide

Public construction bids must be submitted on-line at IMPACS Electronic Procurement System.

Bidders must be registered in IMPACS to submit a Bid.

To create an account, enter your email address and click on "Next" and click "Create Account". Bidder must enter all fields noted with * including legal company name, contact first and last name, phone number, confirm email address, password, re-enter password, select account recovery question including answer, confirm answer, select box accepting websites use terms and conditions and select security check box "I'm not a robot".

On the IMPACS Electronic Procurement System Customer Portal Home page, Bidder selects "View Event" in the Sourcing Events section.



Bidders can view event details including description, prerequisites, buyer attachments, questions and answers.

To submit a Bid, Bidder must select **"Yes, I intend to Bid"**. Bidder must complete the following sections.

Prerequisites - Bidder must complete all prerequisites.

- Bidder must upload a file of the Bid Security/Bond for 5% of total Bid Amount and certify that if they are awarded the construction contract they will enter into the contract at the Bid Amount submitted.

- Bidder must upload the completed and signed Bid Form.
  NOTE: Bids are to be entered on the Bid Form only; not in the IMPACS. As a result, IMPACS will display a bid amount of $0.

Questions - Bidder must complete all questions.

Review & Submit - Bidder must select the certification box certifying that the statements and information in response are true and correct to the best of their knowledge and belief.

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 Agent's Name Agent's Address	CONTACT NAME: Agent's Information PHONE (A/C, No, Ext): FAX (A/C, No): E-MAIL ADDRESS:
INSURED Trade Contractor's Name Trade Contractor's Mailing Address	INSURER(S) AFFORDING COVERAGE / NAIC # INSURER A: Company A (AM Best Rated A/VI or Better) — Admitted Carriers INSURER B: 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 CLAIMS-MADE [X] OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: POLICY [X] PRO-JECT [ ] LOC OTHER:	X	X	#TBD- CGL	3/1/17	3/1/18	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG	$ 1,000,000 $ $ $ 1,000,000 $ 2,000,000 $ 1,000,000
B	AUTOMOBILE LIABILITY [X] ANY AUTO ALL OWNED AUTOS SCHEDULED AUTOS HIRED AUTOS NON-OWNED AUTOS	X	X	#TBD-AL	3/1/17	3/1/18	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)	$ 1,000,000 amount varies based on paragraph 10.2.2 of the ConsensusDocs 602 contract
C	UMBRELLA LIAB [X] OCCUR EXCESS LIAB [ ] CLAIMS-MADE DED RETENTION $	X	X	#TBD-UMB	3/1/17	3/1/18	EACH OCCURRENCE AGGREGATE	$ 10,000,000 $
D	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? Y / N [ ] (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	N / A	X	#TBD-WC	3/1/17	3/1/18	[X] PER STATUTE [ ] OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	$ $ 500,000 $ 500,000 $ 500,000
* E	Owners Contrators Protective Liability			#TBD-OCP	3/1/17	3/1/18	*Limits equal to CGL (or) as required by owner (Note- Would be either CGL or OCP, not both)	

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.

Project XXXX.XX (Number varies by project)

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

ACORD 25 (2014/01) The ACORD name and logo are registered marks of ACORD

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 – 09/05/2025
B. Anticipated Date of Commencement – 10/10/2025
C. Substantial Completion by – 04/22/2026

PART 2 - PRODUCTS – NOT USED

PART 3 - EXECUTION – NOT USED

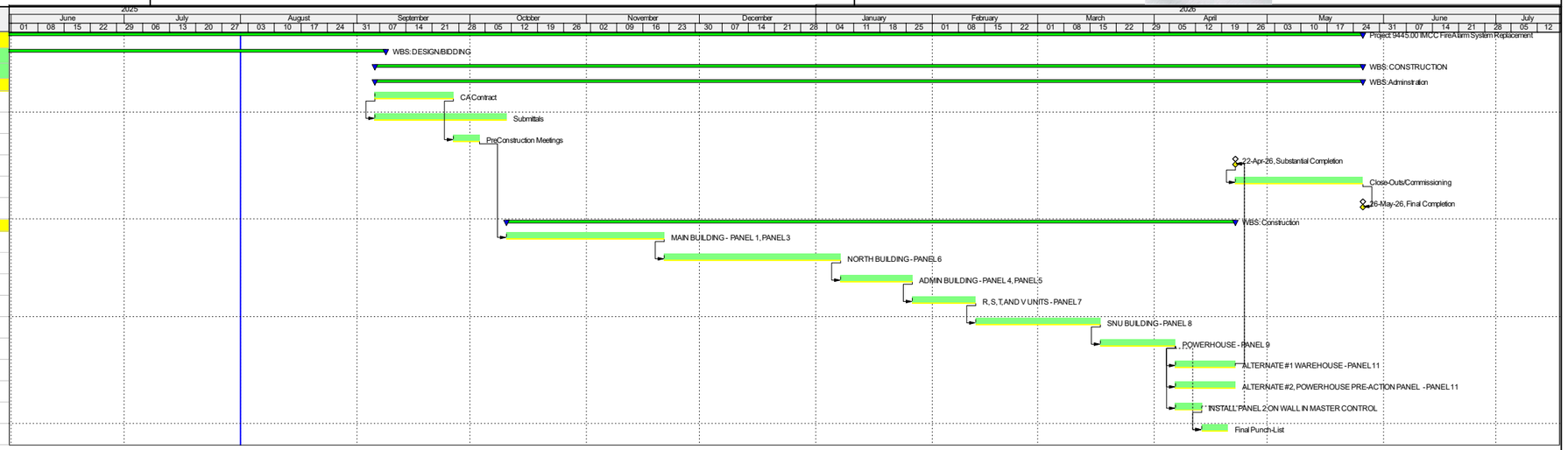
END OF SECTION

IOWA | Department of Administrative Services

IMCC Fire Alarm System Replacement

Samuels Group

#	Activity ID	Activity Name	Predecessors	DUR	Activity % Complete	Start	Finish
1		**Project: 9445.00 IMCC Fire Alarm System Replacement**		333		30-Jan-25 A	26-May-26
2		*WBS: DESIGN/BIDDING*		154		30-Jan-25 A	08-Sep-25
3		*WBS: CONSTRUCTION*		180		05-Sep-25	26-May-26
4		**WBS: Adminstration**		180		05-Sep-25	26-May-26
5	CAA1000	CA Contract	DBPC1180	15	0%	05-Sep-25	26-Sep-25
6	CAA1020	Submittals	CAA1000	25	0%	05-Sep-25	10-Oct-25
7	CAA1030	PreConstruction Meetings	CAA1000	5	0%	26-Sep-25	03-Oct-25
8	CAA1040	Substantial Completion	CAC1032, CAC1012	0	0%		22-Apr-26
9	CAA1050	Close-Outs/Commissioning	CAA1040	23	0%	22-Apr-26	26-May-26
10	CAA1060	Final Completion	CAA1050	0	0%		26-May-26
11		**WBS: Construction**		132		10-Oct-25	22-Apr-26
12	CAC1030	MAIN BUILDING - PANEL 1, PANEL 3	CAA1030	30	0%	10-Oct-25	21-Nov-25
13	CAC1040	NORTH BUILDING - PANEL 6	CAC1030	28	0%	21-Nov-25	07-Jan-26
14	CAC1050	ADMIN BUILDING - PANEL 4, PANEL 5	CAC1040	13	0%	07-Jan-26	26-Jan-26
15	CAC1000	R, S, T AND V UNITS - PANEL 7	CAC1050	13	0%	26-Jan-26	12-Feb-26
16	CAC1035	SNU BUILDING - PANEL 8	CAC1000	23	0%	12-Feb-26	17-Mar-26
17	CAC1002	POWERHOUSE - PANEL 9	CAC1035	13	0%	17-Mar-26	06-Apr-26
18	CAC1012	ALTERNATE #1 WAREHOUSE - PANEL 11	CAC1002	12	0%	06-Apr-26	22-Apr-26
19	CAC1022	ALTERNATE #2, POWERHOUSE PRE-ACTION PANEL - PANEL 11	CAC1002	12	0%	06-Apr-26	22-Apr-26
20	CAC1032	INSTALL PANEL 2 ON WALL IN MASTER CONTROL	CAC1002	5	0%	06-Apr-26	13-Apr-26
21	CAC3000	Final Punch-List	CAC1002, CAC1032	5	0%	13-Apr-26	20-Apr-26



Date	Revision	Checked	Approved
04-Sep-25 00:...	Project Bid Date		
01-Jul-26 00:00	Substantial Completion Date		
01-Aug-25 00:...	Data Date		

DATA DATE 08.01.2025

Primary Baseline
Actual Work
Remaining Work
Critical Remaining Work
Start Constraint
Finish Constraint
Baseline Milestone
Milestone
% Complete

SECTION 00 3126

EXISTING HAZARDOUS MATERIAL INFORMATION

PART 1 - GENERAL

1.01 EXISTING HAZARDOUS MATERIAL INFORMATION

A. This Document with its referenced attachments is part of the Procurement and Contracting Requirements for Project. They provide Owner's information for Bidders' convenience and are intended to supplement rather than serve in lieu of Bidders' own investigations. They are made available for Bidders' convenience and information, but are not a warranty of existing conditions.

B. The existing hazardous materials survey reports related to this Project, were prepared by:

1. Terracon

C. Related Requirements:

1. Section 3.12 “Hazardous Materials” in the ConsensusDocs 802 contract for notification requirements if materials suspected of containing hazardous materials are encountered.

PART 2 - PRODUCTS – NOT USED

PART 3 - EXECUTION – NOT USED

END OF SECTION

Limited Asbestos and Lead Containing Paint Inspection Report

DOC 9445.00 Iowa Medical Classification Center Fire Alarm System Upgrades

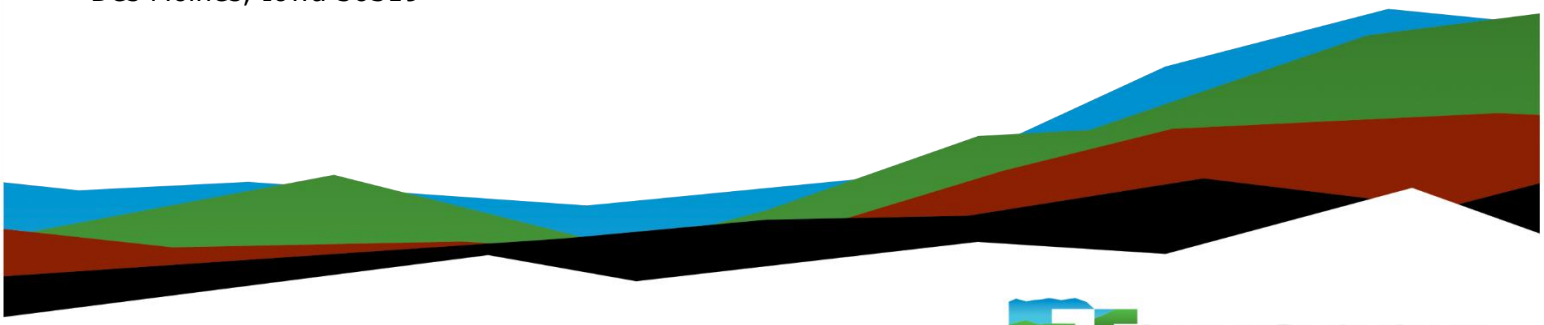
2700 Coral Ridge Avenue

Coralville, Johnson County, Iowa

May 30, 2025 | Terracon Report Number: 06257087

Prepared for:

Iowa Department of Administrative Services
109 SE 13th Street
Des Moines, Iowa 50319



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May 30, 2025

Iowa Department of Administrative Services
109 SE 13th Street
Des Moines, Iowa 50319

Attn: Ms. Jennifer Kleene
P: 515-872-8197
E: jennifer.kleene@iowa.gov

Re: Limited Asbestos and Lead Paint Inspection Report
9445.00 DOC – Iowa Medical Classification Center Fire Alarm Replacement Project
2700 Coral Ridge Avenue
Coralville, Johnson County, Iowa
Terracon Project No. 06257087

Dear Ms. Kleene:

Terracon Consultants, Inc. (Terracon) is pleased to submit this limited asbestos and lead containing paint inspection report to the Iowa Department of Administrative Services (IDAS, or the Client) for the above listed Iowa Medical Classification Center (IMCC) campus fire alarm upgrade project. Terracon's services were performed on May 7-8, 2025, at the above-referenced location. This survey was conducted in general accordance with Terracon Proposal No. P06257087 dated May 7, 2025 and Contract #DO-9445.00.

Asbestos-containing materials were not identified in the samples collected from IMCC buildings included in the scope of services. Additionally, lead paint was not identified. Please refer to the report for additional details.

Terracon appreciates the opportunity to provide these services to IDAS. If you have questions regarding this report, please contact Jordan Smith at (319) 363-8298 or jordan.smith@terracon.com

Sincerely,
Terracon Consultants, Inc.

Prepared by:

Jordan M. Smith
Senior Staff Scientist

Reviewed by:

Eric W. Harris
Regional Services Manager

Table of Contents

Appendices

1.0 PROJECT OVERVIEW

Terracon Consultants, Inc. (Terracon) conducted an asbestos and lead paint inspection at the IMCC campus, located at 2700 Coral Ridge Avenue in Coralville, Iowa. Terracon understands that these services were requested in anticipation of improvements to the emergency lighting system in select portions of the campus. The inspection was conducted by Mr. Jordan Smith, state of Iowa-licensed asbestos inspector on May 7-8, 2025, in accordance with Terracon Proposal No. P06257087 dated May 7, 2025, and Contract #DO-9445.00. A copy of Mr. Smith's license is included in Appendix F.

At the time of the assessment, utilities in the spaces were live. An escort was provided by IMCC staff at all times during the survey. The survey areas generally included the following buildings:

- Powerhouse
- SNU
- Main building
- West building
- East building
- Administrative building
- North addition building
- Buildings R, S, T, and V
- Warehouse

Prior to the survey, the KCL Engineering 95% SD drawings, dated April 23, 2025, were provided to Terracon for our review and use during the survey efforts. Based on our understanding, disturbance of interior finishes generally includes wall and ceiling systems. Preliminary plans include replacement of fire alarm fixtures utilizing existing conduit and potentially utilizing existing alarm boxes. Based on Terracon's conversation with IMCC staff familiar with the upgrade project, Terracon understands that the intent of the project is to utilize as much existing hardware as possible, limiting disturbance of building materials. Based on the overlap in scope of Department of Corrections (DOC) project #9353.00 Emergency Lighting Upgrade, this survey was intended to supplement Terracon Report 06247171 dated March 10, 2025 as included in Appendix D. It should be understood that this survey was not intended to be an exhaustive survey. The intent of the survey was only to document materials in the interiors of the aforementioned building areas that are likely to be impacted by the project. Materials that are not apparently impacted by the project were not included in the sampling efforts. Additional sampling may be required if additional materials are impacted by future renovation activities.

1.1 Project Objective

We understand these services were requested to satisfy requirements of the United States Environmental Protection Agency (USEPA) 40 Code of Federal Regulations (CFR) Part 61, Subpart M, the National Emission Standards for Hazardous Air Pollutants (NESHAP). Terracon also understands that the intent of the assessment is to assist the client with communicating the presence, location, and quantity of asbestos-containing materials (ACMs), and other potentially regulated materials to employees, vendors, and contractors working in the building in order to meet the requirements of the Occupational Safety and Health Administration (OSHA) communication of hazard requirements found at 29 CFR 1926.1101. The purpose of this survey was to sample and identify suspect ACM and provide information regarding the identity, location, condition, and approximate quantities of ACM in the areas surveyed.

The lead-containing paint (LCP) inspection was conducted concurrently with the ACM inspection. Surface coatings on building components were assessed for lead content using a direct-reading x-ray fluorescence (XRF) analyzer. The USEPA has defined lead-based paint (LBP) as containing 1.0 milligram per square centimeter (mg/cm2) or 0.5 percent (%) by weight. However, LBP regulations only apply to child-occupied and residential structures. LCP waste from renovation or partial (there is an exception for whole-building demolition) demolition activities, such as debris, paint chips, dust, and sludges, that exhibit the toxicity characteristic must be managed and disposed as a hazardous waste under the Resource Conservation and Recovery Act (RCRA). For debris generated by renovation activities, a composite, representative sample of the demolition debris must be tested to determine if it is regulated as hazardous waste under 40 CFR 261 Identification and Listing of Hazardous Waste.

Contractors should be notified of the presence of LCP in areas where renovation or demolition activities may result in potential employee exposure to lead so they may comply with OSHA requirements under 29 CFR 1926.62 Lead.

1.2 Reliance

This report is for the exclusive use of the Iowa Department of Administrative Services, the Department of Corrections/the IMCC. Reliance by any other party is prohibited without the written authorization of Terracon and IDAS. Reliance on this report by IDAS and all authorized parties is subject to the terms, conditions, and limitations stated in the Master Services Agreement (MSA) between Terracon and IDAS effective August 26, 2024.

2.0 BUILDING DESCRIPTIONS

The following table provides a general summary of building information and construction information such as structure and finishes used within the buildings. Information was gathered from the 95% SD drawings and field information, as appropriate.

Table A. General Building Information

Building	General Construction	Year Constructed
Powerhouse	Ceilings: Fiberglass insulation and metal ceiling/roof, acoustical ceiling tiles Walls: concrete masonry unit (CMU) block and drywall walls Flooring: concrete	2008
SNU	Ceilings: Preformed concrete, acoustical ceiling tiles Walls: CMU block and drywall walls Flooring: concrete	2007/2008
Main Building	Ceilings: Preformed concrete, acoustical ceiling tiles Walls: CMU block and drywall walls, ceramic block Flooring: concrete	1969
West and East Buildings	Ceilings: Preformed concrete, acoustical ceiling tiles Walls: CMU block and drywall walls, ceramic block Flooring: concrete	1969

Building	General Construction	Year Constructed
Main Building	Ceilings: Preformed concrete, acoustical ceiling tiles Walls: CMU block and drywall walls, ceramic block Flooring: concrete, carpet, terrazzo	1969
North Addition Building	Ceilings: Preformed concrete Walls: CMU block and drywall walls, plaster Flooring: concrete	1990s
Buildings R, S T, and V	Ceilings: Preformed concrete, acoustical ceiling tiles Walls: CMU block and drywall walls Flooring: concrete	1997/1998
Warehouse	Ceilings: Fiberglass batt insulation Walls: Corrugated metal Flooring: concrete	Unknown

3.0 FIELD ACTIVITIES

The inspection services were conducted on May 7-8, 2025 by Jordan Smith. An escort was always provided during survey activities and provided keyed access when needed.

3.1 Asbestos Inspection

The asbestos inspection was conducted in accordance with the sample collection protocols established in USEPA 40 CFR 763.86, Sampling. A summary of Inspection activities is provided below.

3.1.1 Asbestos Visual Inspection

Terracon's asbestos inspection activities were initiated with visual observation of the interior and exterior of the building to identify homogeneous areas of suspect ACM. A homogeneous area (HA) consists of materials that appear similar throughout in terms of color and texture with consideration given to the date of application.

3.1.2 Asbestos Physical Assessment

A physical assessment of each HA of suspect ACM was conducted to assess the friability and condition of the materials. A friable material is defined by the USEPA as a material that can be crumbled, pulverized, or reduced to powder by hand pressure when dry. Friability was assessed by physically touching suspect materials.

3.1.3 Asbestos Sample Collection

Based on the results of the visual observation, bulk samples of suspect ACM were collected in accordance with the sampling protocols outlined in 40 CFR 763.86 – Sampling. Samples of suspect materials were collected from randomly selected locations in each HA. Samples were placed in sealable containers and labeled with unique sample numbers using an indelible marker. The selection of sample locations and frequency of sampling was based on Terracon's observations and the assumption that like materials in the same area are homogenous in content.

Terracon collected an additional three bulk samples from one HA of suspect ACM in the inspection area. A summary of the suspect ACM samples collected is presented in Table 1 in Appendix A. Exhibit 1 in Appendix B depicts the ACM and LCP sample locations.

3.1.4 Asbestos Sample Analysis

Bulk samples were submitted under COC to EMSL Analytical, Inc. (EMSL) in Indianapolis, Indiana for analysis by polarized light microscopy (PLM) with dispersion staining techniques in accordance with USEPA's *Method for the Determination of Asbestos in Bulk Building Materials* (600/R-93-116). The percentage of asbestos, if present, was determined by microscopic visual estimation. EMSL is NVLAP accredited (lab code 200188-0).

3.2 Lead-Containing Paint (LCP) Inspection

The LCP inspection was completed by Mr. Jordan Smith. The purpose of the LCP inspection was to assess for the presence of lead in coatings on materials that may be affected by future renovations, evaluate the potential for airborne exposure to workers involved in renovation activities, and assess for the presence of other lead-containing materials that should be removed and properly disposed. A physical assessment of each homogeneous coating was conducted to assess the condition of the coating, and its potential for creating lead dust.

The intent of the LCP survey was not intended to serve as an exhaustive survey of the building, but to develop preliminary information for the client to use in renovation planning and for informational purposes. As such, the LBP survey was not performed to comply with the United States Department of Housing and Urban development (HUD) Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing standards, since the building does not and will not meet the definition of "target housing." Target housing is a home or residential unit built before 1978. Therefore, the lead testing conducted herein was not intended to comply with regulations for target housing, including the HUD Lead Safe Housing Rule (LSHR) (24 Code of Federal Regulations (CFR) Part 35, subparts B-R), the EPA/HUD Lead Disclosure Rule (the identical 24 CFR 35, subpart A and 40 CFR 745, subpart F, or the EPA Renovation, Repair and Painting (RRP) Rule.

Terracon used a SciAps X-550 handheld XRF lead paint analyzer, which has direct-reading capability, to screen for lead content on interior surface coatings. The XRF is a portable electronic device which emits x-rays at various energy levels. The x-ray energy excites electrons in the outer orbits of lead atoms. The detector in the XRF unit reads this excitation and translates it into a semi-quantitative reading of lead present per surface area. XRF technology allows the detection of lead in a painted surface, even several layers below the surface, without disturbing the painted surface. Using the manufacturer-provided calibration block, Terracon calibrated the XRF unit to approximately 1.0 mg/cm^2 (minimum of three readings) and performed a negative calibration check prior to conducting the screening services. The calibration process was repeated at the end of the sampling process. Using the XRF, Terracon obtained one-hundred five (105) readings of painted surfaces to evaluate for the presence of lead throughout the buildings

4.0 FINDINGS AND RECOMMENDATIONS

4.1 Asbestos Findings and Recommendations

4.1.1 Asbestos Findings

Concentrations of asbestos in were not reported by the analytical laboratory.

A summary of the suspect ACM samples collected is presented in Table 1 in Appendix A. Exhibit 1 in Appendix B depicts the ACM and LCP sample locations. Asbestos Recommendations

If additional but unsampled suspect ACMs are discovered during renovation activities, the material(s) must be assumed to contain asbestos and treated as such unless sampled by an accredited inspector and laboratory analysis determines otherwise.

A summary of applicable asbestos regulations is provided in Appendix E.

4.2 Lead-Containing Paint Findings and Recommendations

4.2.1 LCP Findings

Based on the XRF screening, lead concentrations were not identified.

The LCP survey summary is included in Table 2 in Appendix A.

4.2.2 LCP Recommendations

The limited lead sampling is not to be construed as a comprehensive lead survey and is based upon observations obtained from a limited and targeted assessment. The information contained herein is limited to the specific areas assessed within or close proximity to the locations in the attached exhibits. If plans result in disturbance to painted surfaces not sampled which would potentially generate paint dust, additional assessment may be required to assess potential worker exposure to lead.

5.0 LIMITATIONS/GENERAL COMMENTS

Reasonable efforts to access suspect materials within known areas of restricted access (e.g., above ceiling grids, chases, wall cavities, etc.). Investigation services did not include demolition since renovation plans have not yet been developed and our investigation activities were limited to accessible and visible area/materials in areas could potentially be disturbed during the project.

This survey was conducted in a manner consistent with the level of care and skill ordinarily exercised by members of the profession currently practicing under similar conditions in the same locale. The results, findings, conclusions, and recommendations expressed in this report are based on conditions observed during our survey of the building. The information contained in this report is relevant to the date on which this survey was performed and should not be relied upon to represent conditions at a later date. This report has been prepared on behalf of and exclusively for use by IDAS. This report is not a bidding document. Contractors or consultants reviewing this report must draw their own conclusions regarding further investigation or remediation deemed necessary. Terracon does not warrant the work of regulatory agencies, laboratories, or other third parties supplying information that may have been used in the preparation of this report. No warranty, express or implied is made.

Appendix A: Tables

Table 1 – Asbestos Sample Summary

Sample ID	Building Name	Sample Location	Sample Description	Total Asbestos
26-CN1-76	Buildings S, R, T and V	Unit V Laundry Ceiling	Pre-formed concrete	ND
26-CN1-77		Unit T Laundry Ceiling		ND
26-CN1-78		Unit R east stair well mezzanine		ND

Table 2 – Lead-Containing Paint Survey Summary

Sample #	Floor	Building Name	Room	Substrate	Component	Color	Location	XRF Reading (mg/cm^2)	Notes
104	N/A	N/A	N/A	N/A	N/A	Calibration	N/A	1.07	Cal (Calibration)
105	N/A		N/A	N/A	N/A	Calibration	N/A	1.04	Cal
106	N/A		N/A	N/A	N/A	Calibration	N/A	1.13	Cal
107	N/A		N/A	N/A	N/A	Calibration	N/A	0.00	Cal
108	N/A		N/A	N/A	N/A	Calibration	N/A	0.00	Cal
109	N/A		N/A	N/A	N/A	Calibration	N/A	0.00	Cal
110	1	Powerhouse	61-130	CMU	Wall	White	West wall	0.00	
111	1		61-143	CMU	Wall	White	West wall	0.00	
112	1		61-143	CMU	Wall	White	West wall, north entry	0.00	
113	1		61-134	CMU	Wall	White	Adjoining south interior of overhead door	0.00	
114	1		61-105	CMU	Wall	White	20-feet west of southeast corner	0.00	
115	1		61-130	CMU	Wall	White	5-feet west of east doorway on north wall	0.00	
116	1		61-129	CMU	Wall	White	Adjoining south interior of overhead door	0.00	
117	1		61-118	CMU	Wall	White	Adjoining elevators	0.00	
118	1	SNU	54-170	CMU	Wall	White	Adjoining middle east chase	0.00	
119	1		54-170	CMU	Wall	White	Adjoining south most west chase	0.00	

Sample #	Floor	Building Name	Room	Substrate	Component	Color	Location	XRF Reading (mg/cm²)	Notes
120	1		54-199	CMU	Wall	White	Adjoining doorway	0.00	
121	1		54-121	CMU	Wall	White	Adjoining doorway	0.00	
122	1		54-123	Metal	Ceiling	White	10-feet southeast of northwest corner	0.00	
123	1		54-171	CMU	Wall	White	10-feet east of west corner	0.00	
124	1		54-163	CMU	Wall	White	Adjoining interior doorway	0.00	
125	1		54-116	Concrete	Ceiling	White	Middle of room	0.00	
126	1		54-130	CMU	Wall	White	Adjoining 54-155	0.00	
127	1		53-102	Concrete	Ceiling	White	Middle of room	0.00	
128	1		53-139	Concrete	Ceiling	White	Middle of room	0.00	
129	1		53-117	Concrete	Ceiling	White	South corner	0.00	
130	1		53-192	CMU	Wall	White	Adjoining north of south doorway	0.00	
131	1		53-208	Concrete	Ceiling	White	3-feet east of doorway	0.00	
132	2		56-140	CMU	Wall	White	Adjoining 56-162	0.00	
133	2		56-163	CMU	Wall	White	Adjoining west of doorway	0.00	
134	2		56-144	Concrete	Ceiling	White	5-feet northeast of doorway	0.00	
135	2		56-124	CMU	Wall	White	5-feet east of doorway	0.00	
136	2		ST3-2	Concrete	Ceiling	White	Northeast corner	0.00	
137	2		56-106	Concrete	Ceiling	White	Middle of room	0.00	
138	2		56-171	Concrete	Ceiling	White	3-feet southeast of doorway	0.00	

Sample #	Floor	Building Name	Room	Substrate	Component	Color	Location	XRF Reading (mg/cm²)	Notes
139	2		56-170	CMU	Wall	White	Adjoining 56-187	0.00	
140	2		55-190	CMU	Wall	White	Adjoining 55-191	0.00	
141	2		55-210	Concrete	Ceiling	White	5-feet west of doorway	0.00	
142	2		55-112	Concrete	Ceiling	White	6-feet northwest of doorway	0.00	
143	2		55-154	Concrete	Ceiling	White	2-feet northeast of doorway	0.00	
144	3		58-183	CMU	Wall	White	Adjoining southwest of doorway	0.00	
145	3		58-176	CMU	Wall	White	Adjoining exterior doorway	0.00	
146	3		58-162	Concrete	Ceiling	White	7-feet southeast of doorway	0.00	
147	3		58-118	CMU	Wall	White	3-feet east of northwest corner	0.00	
148	3		ST3-3	CMU	Wall	White	Southeast corner	0.00	
149	3		57-123	Concrete	Ceiling	White	3-feet southeast of doorway	0.00	
150	3		57-133	CMU	Wall	White	3-feet east of southwest corner	0.00	
151	1	East and West	12-24	CMU	Wall	White	Adjoining northwest corner of 12-21	0.00	
152	1		12-17	CMU	Wall	White	Middle of south wall	0.00	
153	1		12-40	Concrete	Ceiling	White	40-feet north of south end of hallway12-47	0.00	
154	1		12-47	CMU	Wall	White	Adjoining east of 12-42	0.00	
155	1		12-73	Concrete	Ceiling	White	Middle of room	0.00	
156	1		12-54	CMU	Wall	White	Adjoining 12-57	0.00	
157	B		Basement Hallway	CMU	CMU	White	Adjoining 6-14	0.00	

Sample #	Floor	Building Name	Room	Substrate	Component	Color	Location	XRF Reading (mg/cm²)	Notes
158	B		7-75	Concrete	Ceiling	White	Middle of room	0.00	
159	1	North Addition	H100	CMU	Wall	White	Middle of south wall	0.00	
160	1		176	CMU	Wall	White	Adjoining 174	0.00	
161	1		122	CMU	Wall	White	Adjoining A101	0.00	
162	1		24	Concrete	Ceiling	White	Adjoining 9	0.00	
163	1		24	CMU	Wall	White	Adjoining 136	0.00	
164	1		25	CMU	Wall	White	Adjoining southwest corner of F107	0.00	
165	2		68	CMU	Wall	White	Adjoining west cell block	0.00	
166	B	Main Building	Main building basement east to west corridor	CMU	Wall	White	Adjoining 5-18	0.00	
167	B		62-269	Concrete	Ceiling	White	Adjoining 6-6	0.00	
168	B		Main building basement east to west corridor	CMU	Wall	White	Adjoining 5-20	0.00	
169	1		7-20	CMU	Wall	White	West wall	0.00	
170	1		7-21	CMU	Wall	White	West wall adjoining 7-22	0.00	
171	1		7-23	Concrete	Ceiling	White	Adjoining east of 7-77	0.00	
172	1		7-59	CMU	Wall	White	Adjoining 7-50	0.00	
173	1		7-40	CMU	Wall	White	Adjoining west of 7-32	0.00	
174	2		10-10	CMU	Wall	White	Adjoining west of 10-8	0.0	

Sample #	Floor	Building Name	Room	Substrate	Component	Color	Location	XRF Reading (mg/cm²)	Notes
175	2		10-18	CMU	Wall	White	Adjoining north of 10-17	0.00	
176	2		458	CMU	Wall	White	Adjoining east of 10-22	0.00	
177	2		9-22	CMU	Wall	White	Adjoining 54	0.00	
178	2		9-45	CMU	Wall	White	Adjoining north of 9-42	0.00	
179	B		2-25	Concrete	Ceiling	White	Middle of room adjoining south of 2-25	0.00	
180	B		30-20	CMU	Wall	White	15-feet north of south end	0.00	
181	B		2-13	Concrete	Ceiling	White	7-feet southeast of north doorway	0.00	
182	1	Admin Building	2-3	CMU	Wall	White	3-feet east of northwest corner	0.00	
183	1		30-20	CMU	Wall	White	West wall across from 2-17	0.00	
184	1		2-19	CMU	Wall	White	20-feet east of southwest corner	0.00	
185	1		2-25	CMU	Wall	White	North wall, 50-feet west of 30-20	0.00	
186	1	Buildings R, S, T and V	50-106	CMU	Wall	White	Adjoining north hallway	0.00	
187	1		49-107	Concrete	Ceiling	White	Adjoining northwest hallway	0.00	
188	1		49-101	CMU	Wall	White	Adjoining east hallway	0.00	
189	2		50-206	CMU	Wall	White	Adjoining north hallway	0.00	
190	2		49-201	CMU	Wall	White	Adjoining east hallway	0.00	
191	1		D116Z	CMU	Wall	White	Adjoining south of D122	0.00	
192	1		D116Z	CMU	Wall	White	Adjoining west of D114	0.00	

Sample #	Floor	Building Name	Room	Substrate	Component	Color	Location	XRF Reading (mg/cm²)	Notes
193	1		D115	CMU	Wall	White	Adjoining north of D108	0.00	
194	1		D135	CMU	Wall	White	Adjoining south of D121	0.00	
195	1		D135	CMU	Wall	White	North wall	0.00	
196	2		D213	CMU	Wall	White	Adjoining east in hallway	0.00	
197	2		D221	CMU	Wall	White	Adjoining west of D222	0.00	
198	2		D228	CMU	Wall	White	Adjoining east of D228	0.00	
199	N/A	N/A	N/A	N/A	N/A	Calibration	N/A	1.09	Cal
200	N/A		N/A	N/A	N/A	Calibration	N/A	1.06	Cal
201	N/A		N/A	N/A	N/A	Calibration	N/A	1.11	Cal
202	N/A		N/A	N/A	N/A	Calibration	N/A	0.00	Cal
203	N/A		N/A	N/A	N/A	Calibration	N/A	0.00	Cal
204	N/A		N/A	N/A	N/A	Calibration	N/A	0.00	Cal
205	2	Powerhouse	62-207	CMU	Wall	White	Adjoining south of 62-203	0.00	
206	2		62-207	CMU	Wall	White	Adjoining north of 62-212	0.00	

Appendix B: Exhibit

DOCUMENT PROGRESS SET
NOT FOR CONSTRUCTION

KCL ENGINEERING
300 4th Street
West Des Moines, Iowa
50265
515.724.7938
info@kclengineering.com

FIRE ALARM GENERAL NOTES

A. ALL DEVICES SHOWN ARE TO BE REPLACED WITH NEW DEVICES ONE FOR ONE. NEW DEVICES WILL REUSE EXISTING CONDUCTORS IN PLACE.

B. COORDINATE LOCATION/INSTALLATION OF WORK WITH CM/OWNER. NO ASPECT OF A SYSTEM INSTALLATION OR ITS ROUGH-IN SHALL COMMENCE UNTIL PROPER AND TIMELY COORDINATION HAS TRANSPIRED.

C. EXISTING CONDUCTORS ARE NOTED TO BE 14/4 FOR THE SPEAKER STROBES AND 18/2 FOR DETECTORS. EXISTING CONDUCTORS CAN BE REUSED IF FEASIBLE WITH NEW SYSTEM AND DEVICES.

D. PROVIDE PENETRATIONS REQUIRED FOR ROUTING RACEWAYS THROUGH THE BUILDING. REVIEW FIRE RATED WALL PENETRATIONS ON OCCUPANCY PLAN AND PROVIDE CONDUIT SLEEVES AND FIRE STOPPING TO MAINTAIN RATINGS.

E. FOLLOW THE CUTOVER PLAN IN ORDER TO ACHIEVE THE OWNER'S REQUIRED UPTIME OF EACH BUILDING. COORDINATE AND SCHEDULE ALL DOWNTIME WITH OWNER AND CM.

F. PROVIDE THE REQUIRED PENETRATIONS WHILE ROUTING CABLING THROUGH THE BUILDING. COORDINATE FIRE RATED PENETRATIONS. PROVIDE CONDUIT SLEEVES AND FIRE STOPPING TO MAINTAIN THAT RATING.

G. ALL FIRE ALARM WIRING IS TO BE RUN IN CONDUIT. FREE AIR WIRING IS NOT ALLOWED.

H. ANY EXISTING WALL MOUNTED DEVICES NOT BEING REPLACED WITH NEW SHALL BE PROVIDED A COVERPLATE. PAINT TO MATCH.

I. EXISTING PULL STATION COVERS TO REMAIN INTACT. REUSE AND REINSTALL IN EXISTING LOCATIONS.

J. ABBREVIATIONS:
- E - EXISTING ITEM TO REMAIN
- ER - NEW LOCATION OF EXISTING ITEM
- N - NEW ITEM IN EXISTING LOCATION
- R - EXISTING ITEM TO BE REMOVED, PATCH AND/OR COVER
- RN - REPLACE EXISTING WITH NEW
- RR - EXISTING ITEM TO BE REMOVED AND RELOCATED

Project No.	06257087
Scale:	AS SHOWN
Client:	IDAS
Date:	May 2025

Terracon
2640 12th St SW
Cedar Rapids, IA 52404-3440

ACM and LCP Sample Location Map

IMCC Fire Alarm Upgrade
Coralville, IA

Exhibit 1

1 BUILDING LAYOUT
NOT TO SCALE

REPLACEMENT

DAS
IMCC FIRE ALARM RE
2700 Coral Ridge Ave
Coralville, Iowa 522241

Project No: 9445.00
Date: 4/23/2025
95% CD

#	Revision	Date

Drawing Name:
FACILITY MAP

Drawing #:
FA001

Plot Date & Time: 4/23/2025 10:09:38 AM

Appendix C: Laboratory Analytical Report and COC

EMSL Analytical, Inc.

6340 CastlePlace Dr. Indianapolis, IN 46250

Tel/Fax: (317) 803-2997 / (317) 803-3047

http://www.EMSL.com / indianapolislab@emsl.com

EMSL Order:	162506739
Customer ID:	ACON77
Customer PO:	
Project ID:	

Attention:	Jordan Smith	**Phone:**	(319) 366-8321
	Terracon Consultants, Inc.	**Fax:**	(319) 366-0032
	2640 12th Street Southwest	**Received Date:**	05/28/2025 10:55 AM
	Cedar Rapids, IA 52404	**Analysis Date:**	05/28/2025
		Collected Date:	
Project:	IMCC Fire Alarm Upgrades		

Test Report: Asbestos Analysis of Bulk Materials via AHERA Method 40CFR 763 Subpart E Appendix E supplemented with EPA 600/R-93/116 using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
26-CN1-76 *162506739-0001*	Unit V Laundry ceiling Units T, V,S Grey pre-formed concrete	Gray Non-Fibrous Homogeneous		20% Quartz 80% Non-fibrous (Other)	None Detected
26-CN1-77 *162506739-0002*	Unit T Laundry ceiling Units T, V,S Grey pre-formed concrete	Gray Non-Fibrous Homogeneous		20% Quartz 80% Non-fibrous (Other)	None Detected
26-CN1-78 *162506739-0003*	Unit R east stair well mezzanine Units T, V,S Grey pre-formed concrete	Gray Non-Fibrous Homogeneous		20% Quartz 80% Non-fibrous (Other)	None Detected

Analyst(s)

Ross Matlock (3)

Asbestos Laboratory Manager
or Other Approved Signatory

Initial report from: 05/28/2025 14:22:30

Terracon
Explore with us

Asbestos Bulk Sample and Chain of Custody

Lab Order ID: 162506739
EMSL

Lab Location: Indianapolis, IN 200188-0

Cedar Rapids: 2640 12th St., SW, Cedar Rapids, IA 52404 (319) 366 8321

Project Name:	IMCC Fire Alarm Upgrades	**Project Number:**	06257087	**Project Manager:**	J. Smith
Project Address:		**City/State / Zip:**	Coralville, Iowa	**Email Results To:**	Jordan.Smith@terracon.com
Site/Building:					

Sample Identification HA – BS Code – Sample #	Sample Location Description	HA General Location	Material Description (Type; Color/Texture)	Quantity (SF, LF, Cubic Ft, Units)	NESHAP Classification[1]	Notes/Physical Condition[2]
26 – CN1 – 76	Unit V laundry ceiling	Units T, V S, and R	Grey pre-formed concrete		F C1 **C2**	**G** D SD
26 – CN1 – 77	Unit T laundry ceiling					
26 – CN1 – 78	Unit R east stair well mezzanine					
– –					F C1 C2	G D SD
– –						
– –						
– –					F C1 C2	G D SD
– –						
– –						
– –					F C1 C2	G D SD
– –						
– –						
– –					F C1 C2	G D SD
– –						
– –						

Sampling Date: 5-8-15 **Collected by (print):** Jordan Smith **Inspector's Signature:**

Relinquished by: **Date/Time:** 5-27-15 **Received by:** **Date/Time:** 5/28/15 1055 BRL

Analysis: PLM EPA 600/R-93/116 ☒ PLM 400 Point Count ☐ TEM ☐ Other _____

Turnaround Time (circle): **6 Hrs** 24 Hrs 2 Days 3 Days 5 Days **Other** _____

Instructions:
Terracon ARMS: ☐ **Stop Positive:** ☐ **Number of samples:** _____

[1] F = Friable; C1 = Category I: packings, gaskets, asphaltic roofing products, resilient flooring; C2 = Category II Non-Friable: any materials other than Cat. I containing >1% asbestos

[2] G = Good (<1%); D = Damaged (<10% distributed or >25% localized); or SD = Significantly Damaged (>10% distributed or >25% localized)

OrderID: 162506739

Page 1 Of 1

Appendix D: Limited Asbestos and Lead Paint Inspection Report (DOC 9353.00 Emergency Lighting Upgrades)

Limited Asbestos and Lead Paint Inspection Report

DOC 9353.00 Iowa Medical Classification Center Emergency Lighting Upgrades

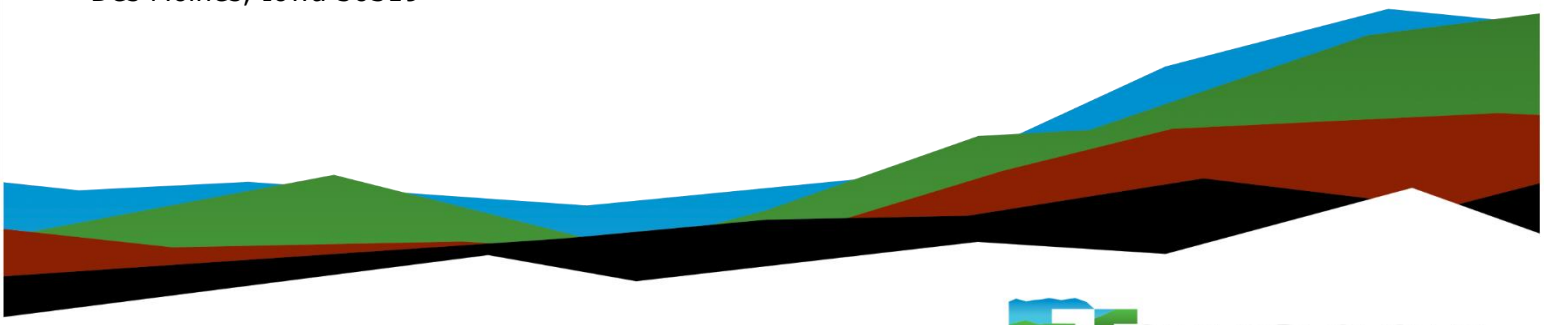
2700 Coral Ridge Avenue

Coralville, Johnson County, Iowa

March 10, 2025 | Terracon Report Number: 06247171

Prepared for:

Iowa Department of Administrative Services
109 SE 13th Street
Des Moines, Iowa 50319



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- Facilities
- Environmental
- Geotechnical
- Materials

2640 12th Street SW
Cedar Rapids, Iowa 52404
P (319) 366-8321
Terracon.com

March 10, 2025

Iowa Department of Administrative Services
109 SE 13th Street
Des Moines, Iowa 50319

Attn: Ms. Jennifer Kleene
P: 515-872-8197
E: jennifer.kleene@iowa.gov

Re: Limited Asbestos and Lead Paint Inspection Report
9353.00 DOC – Iowa Medical Classification Center Emergency Lighting Upgrades
2700 Coral Ridge Avenue
Coralville, Johnson County, Iowa
Terracon Project No. 06247171

Dear Ms. Kleene:

Terracon Consultants, Inc. (Terracon) is pleased to submit the asbestos inspection report to the Iowa Department of Administrative Services (IDAS, or the Client) for the above listed Iowa Medical Classification Center (IMCC) campus emergency lighting upgrade project. Terracon's services were performed on February 3-5, 2025, at the above-referenced location. This survey was conducted in general accordance with Terracon Proposal No. P06247171R2 revised and dated January 19, 2025 and Contract #DO-9353.00.

Asbestos-containing materials were not identified in any of the samples collected from IMCC buildings included in the scope of services. Additionally, lead paint was not identified. Please refer to the report for additional details.

Terracon appreciates the opportunity to provide these services to IDAS. If you have questions regarding this report, please contact Jordan Smith at (319) 363-8298 or jordan.smith@terracon.com

Sincerely,
Terracon Consultants, Inc.

Prepared by:

Jordan M. Smith
Senior Staff Scientist

Reviewed by:

Eric W. Harris
Regional Services Manager

Table of Contents

Appendices

1.0 PROJECT OVERVIEW

Terracon Consultants, Inc. (Terracon) conducted an asbestos and lead paint inspection at the IMCC campus, located at 2700 Coral Ridge Avenue in Coralville, Iowa. Terracon understands that these services were requested in anticipation of improvements to the emergency lighting system in select portions of the campus. The inspection was conducted by Mr. Wyatt Heisterkamp, state of Iowa-licensed asbestos inspector on February 3-5, 2025, in accordance with Terracon Proposal No. P06247171R2 revised and dated January 19, 2025, and Contract #DO-9353.00.

At the time of the assessment, utilities in the spaces were live. An escort was provided by IMCC staff at all times during the survey. The IMCC staff is the IMCC staff electrician, and is familiar with the lighting system and planned emergency lighting upgrades. The survey areas generally included the following buildings:

- Powerhouse
- SNU
- Main building
- West building
- East building
- Administrative building
- North addition building
- Buildings R, S, T, and V

Prior to the survey, the KCL Engineering 90% SD drawings, dated October 18, 2024, were provided to Terracon for our review and use during the survey efforts. Based on our understanding, disturbance of interior finishes generally includes wall and ceiling systems, with limited disturbance of the flooring anticipated. Preliminary plans include rewiring select lights and signage to be connected to the emergency lighting system. Work will include installation of new lights, installing wiring in current electrical conduit or conduit trays, as well as the potential for new conduit to be installed. The work will require penetrations through current building materials. It should be understood that this survey was not intended to be an exhaustive survey. The intent of the survey was only to document materials in the interiors of the aforementioned building areas that are likely to be impacted by the project. Materials that are not apparently impacted by the project were not included in the sampling efforts. Additional sampling may be required if additional materials are impacted by future renovation activities.

1.1 Project Objective

We understand these services were requested to satisfy requirements of the United States Environmental Protection Agency (USEPA) 40 Code of Federal Regulations (CFR) Part 61, Subpart M, the National Emission Standards for Hazardous Air Pollutants (NESHAP). Terracon also understands that the intent of the assessment is to assist the client with communicating the presence, location, and quantity of asbestos-containing materials (ACMs), and other potentially regulated materials to employees, vendors, and contractors working in the building in order to meet the requirements of the Occupational Safety and Health Administration (OSHA) communication of hazard requirements found at 29 CFR 1926.1101. The purpose of this survey was to sample and identify suspect ACM and provide information regarding the identity, location, condition, and approximate quantities of ACM in the areas surveyed.

The lead-containing paint (LCP) inspection was conducted concurrently with the ACM inspection. Surface coatings on building components were assessed for lead content using a direct-reading x-ray fluorescence (XRF) analyzer. The USEPA has defined lead-based paint (LBP) as containing 1.0 milligram per square centimeter (mg/cm2) or 0.5 percent (%) by weight. However, LBP regulations only apply to child-occupied and residential structures. LCP waste from renovation or partial (there is an exception for whole-building demolition) demolition activities, such as debris, paint chips, dust, and sludges, that exhibit the toxicity characteristic must be managed and disposed as a hazardous waste under the Resource Conservation and Recovery Act (RCRA). For debris generated by renovation activities, a composite, representative sample of the demolition debris must be tested to determine if it is regulated as hazardous waste under 40 CFR 261 Identification and Listing of Hazardous Waste.

Contractors should be notified of the presence of LCP in areas where renovation or demolition activities may result in potential employee exposure to lead so they may comply with Occupational Safety and Health Administration (OSHA) requirements under 29 CFR 1926.62 Lead.

1.2 Reliance

This report is for the exclusive use of the Iowa Department of Administrative Services (IDAS), the Department of Corrections/the IMCC Facility. Reliance by any other party is prohibited without the written authorization of Terracon and IDAS. Reliance on this report by IDAS and all authorized parties is subject to the terms, conditions, and limitations stated in the Master Services Agreement (MSA) between Terracon and IDAS effective August 26, 2024.

2.0 BUILDING DESCRIPTIONS

The following table provides a general summary of building information and construction information such as structure and finishes used within the buildings. Information was gathered from the 90% SD drawings and field information, as appropriate.

Table A. General Building Information

Building	General Construction	Year Constructed
Powerhouse	Ceilings: Fiberglass insulation and metal ceiling/roof, acoustical ceiling tiles Walls: concrete masonry unit (CMU) block and drywall walls Flooring: concrete	2008
SNU	Ceilings: Preformed concrete, acoustical ceiling tiles Walls: CMU block and drywall walls Flooring: concrete	2007/2008
Main Building	Ceilings: Preformed concrete, acoustical ceiling tiles Walls: CMU block and drywall walls, ceramic block Flooring: concrete	1969
West and East Buildings	Ceilings: Preformed concrete, acoustical ceiling tiles	1969

Building	General Construction	Year Constructed
	Walls: CMU block and drywall walls, ceramic block Flooring: concrete	
Main Building	Ceilings: Preformed concrete, acoustical ceiling tiles Walls: CMU block and drywall walls, ceramic block Flooring: concrete, carpet, terrazzo	1969
North Addition Building	Ceilings: Preformed concrete Walls: CMU block and drywall walls, plaster Flooring: concrete	1990s
Buildings R, S T, and V	Ceilings: Preformed concrete, acoustical ceiling tiles Walls: CMU block and drywall walls Flooring: concrete	1997/1998

3.0 FIELD ACTIVITIES

The inspection services were conducted on February 3-5, 2025 by Wyatt Heisterkamp. An escort was always provided during survey activities and provided keyed access when needed. The escort was performed with the IMCC staff electrician who has knowledge of the campus lighting system and emergency lighting upgrades.

3.1 Asbestos Inspection

The asbestos inspection was conducted in accordance with the sample collection protocols established in USEPA 40 CFR 763.86, Sampling. A summary of Inspection activities is provided below.

3.1.1 Asbestos Visual Inspection

Terracon's asbestos inspection activities were initiated with visual observation of the interior and exterior of the building to identify homogeneous areas of suspect ACM. A homogeneous area (HA) consists of materials that appear similar throughout in terms of color and texture with consideration given to the date of application.

3.1.2 Asbestos Physical Assessment

A physical assessment of each HA of suspect ACM was conducted to assess the friability and condition of the materials. A friable material is defined by the USEPA as a material that can be crumbled, pulverized, or reduced to powder by hand pressure when dry. Friability was assessed by physically touching suspect materials.

3.1.3 Asbestos Sample Collection

Based on the results of the visual observation, bulk samples of suspect ACM were collected in accordance with the sampling protocols outlined in 40 CFR 763.86 – Sampling. Samples of suspect materials were collected from randomly selected locations in each HA. Samples were placed in sealable containers and labeled with unique sample numbers using an indelible marker. The selection of sample locations and frequency of sampling was based on Terracon's observations and the assumption that like materials in the same area are homogenous in content.

Terracon collected 75 bulk samples from 25 HAs of suspect ACM in the inspection area. A summary of the suspect ACM samples collected is presented in Table 1 in Appendix A. Exhibits 1 in Appendix B depicts the ACM and LCP sample locations. Representative photographs of the buildings are presented in Appendix D.

3.1.4 Asbestos Sample Analysis

Bulk samples were submitted under COC to EMSL Analytical, Inc. (EMSL) in Indianapolis, Indiana for analysis by polarized light microscopy (PLM) with dispersion staining techniques in accordance with USEPA's *Method for the Determination of Asbestos in Bulk Building Materials* (600/R-93-116). The percentage of asbestos, if present, was determined by microscopic visual estimation. EMSL is NVLAP accredited (lab code 200188-0).

As a result of laboratory analysis, EMSL separated multilayered samples into individual layers; consequently, the laboratory analyzed a total of 91 individual layers from samples collected from the project areas.

3.2 Lead-Containing Paint (LCP) Inspection

The LCP inspection was completed by Mr. Jordan Smith. The purpose of the LCP inspection was to assess for the presence of lead in coatings on materials that may be affected by future renovations, evaluate the potential for airborne exposure to workers involved in renovation activities, and assess for the presence of other lead-containing materials that should be removed and properly disposed. A physical assessment of each homogeneous coating was conducted to assess the condition of the coating, and its potential for creating lead dust.

The intent of the LCP survey was not intended to serve as an exhaustive survey of the building, but to develop preliminary information for the client to use in renovation planning and for informational purposes. As such, the LBP survey was not performed to comply with the United States Department of Housing and Urban development (HUD) Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing standards, since the building does not and will not meet the definition of "target housing." Target housing is a home or residential unit built before 1978. Therefore, the lead testing conducted herein was not intended to comply with regulations for target housing, including the HUD Lead Safe Housing Rule (LSHR) (24 Code of Federal Regulations (CFR) Part 35, subparts B-R), the EPA/HUD Lead Disclosure Rule (the identical 24 CFR 35, subpart A and 40 CFR 745, subpart F, or the EPA Renovation, Repair and Painting (RRP) Rule.

Terracon used a SciAps X-550 handheld XRF lead paint analyzer, which has direct-reading capability, to screen for lead content on interior surface coatings. The XRF is a portable electronic device which emits x-rays at various energy levels. The x-ray energy excites electrons in the outer orbits of lead atoms. The detector in the XRF unit reads this excitation and translates it into a semi-quantitative reading of lead present per surface area. XRF technology allows the detection of lead in a painted surface, even several layers below the surface, without disturbing the painted surface. Using the manufacturer-provided calibration block, Terracon calibrated the XRF unit to approximately 1.0 mg/cm^2 (minimum of three readings) and performed a negative calibration check prior to conducting the screening services. The calibration process was repeated at the end of the sampling process. Using the XRF, Terracon obtained one-hundred five (105) readings of painted surfaces to evaluate for the presence of lead throughout the buildings

4.0 FINDINGS AND RECOMMENDATIONS

4.1 Asbestos Findings and Recommendations

4.1.1 Asbestos Findings

Concentrations of asbestos in were not reported by the analytical laboratory.

A summary of the suspect ACM samples collected is presented in Table 1 in Appendix A. Exhibits 1 in Appendix B depicts the ACM and LCP sample locations. Representative photographs of the buildings are presented in Appendix D.

4.1.2 Asbestos Recommendations

If additional but unsampled suspect ACMs are discovered during renovation activities, the material(s) must be assumed to contain asbestos and treated as such unless sampled by an accredited inspector and laboratory analysis determines otherwise.

A summary of applicable asbestos regulations is provided in Appendix E.

4.2 Lead-Containing Paint Findings and Recommendations

4.2.1 LCP Findings

Based on the XRF screening, lead concentrations above USEPA's LBP criterion (1.0 mg/cm^2) **were not identified** in any of the buildings with respect to the limited nature of the survey.

The LCP survey summary is included in Table 2 in Appendix A.

4.2.2 LCP Recommendations

The limited lead sampling is not to be construed as a comprehensive lead survey and is based upon observations obtained from a limited and targeted assessment. The information contained herein is limited to the specific areas assessed within or close proximity to the locations in the attached exhibits. If plans result in disturbance to painted surfaces not sampled which would potentially generate paint dust, additional assessment may be required to assess potential worker exposure to lead.

It should be noted that OSHA does not consider XRF to be an acceptable method of analysis in determining the potential for lead exposure during renovation and demolition activities. Therefore, Terracon recommends conducting paint chip sampling to confirm or deny the presence of detectable concentrations of lead in suspect lead-containing paints that are anticipated to be disturbed during planned renovation activities or using OSHA lead-safe work practices during renovation activities.

5.0 LIMITATIONS/GENERAL COMMENTS

Reasonable efforts to access suspect materials within known areas of restricted access (e.g., above ceiling grids, chases, wall cavities, etc.). Investigation services did not include demolition since renovation plans have not yet been developed and our investigation

activities were limited to accessible and visible area/materials in areas could potentially be disturbed during the project.

This survey was conducted in a manner consistent with the level of care and skill ordinarily exercised by members of the profession currently practicing under similar conditions in the same locale. The results, findings, conclusions, and recommendations expressed in this report are based on conditions observed during our survey of the building. The information contained in this report is relevant to the date on which this survey was performed and should not be relied upon to represent conditions at a later date. This report has been prepared on behalf of and exclusively for use by IDAS. This report is not a bidding document. Contractors or consultants reviewing this report must draw their own conclusions regarding further investigation or remediation deemed necessary. Terracon does not warrant the work of regulatory agencies, laboratories, or other third parties supplying information that may have been used in the preparation of this report. No warranty, express or implied is made.

Appendix A: Tables

Table 1 – Asbestos Sample Summary

Sample ID	Building Name	Sample Location	Sample Description	Total Asbestos
01-WB1-01	Powerhouse	3 feet north of east 61-142 doorway	Joint compound	Non-detect (ND)
01-WB1-02-Drywall		15 feet north of east 61-142 doorway	Gypsum board	ND
01-WB1-02-Joint Compound		15 feet north of east 61-142 doorway	Joint compound	ND
01-WB1-03-Drywall		2nd floor corridor 62-20	Gypsum board	ND
01-WB1-03-Joint Compound		2nd floor corridor 62-20	Joint Compound	ND
02-SC7-04		3 feet north of east 61-142 doorway	Sealant	ND
02-SC7-05-CMU		15 feet north of east 61-142 doorway	CMU	ND
02-SC7-05-Sealant		15 feet north of east 61-142 doorway	Sealant	ND
02-SC7-06		Above the main floor biohazard room door	Sealant	ND
03-CT2-07		Adjoining southeast corner of central office storage	2'x2' semi-rough act	ND
03-CT2-08		Adjoining east of middle of central office storage	2'x2' semi-rough act	ND
03-CT2-09		Adjoining northeast corner of central office storage	2'x2' semi-rough act	ND
04-WB1-10-Gypsum Board	SNU	Third floor hobby/craft room east wall	Gypsum board	ND
04-WB1-10-Joint Compound		Third floor hobby/craft room east wall	Joint compound	ND
04-WB1-10-Tape		Third floor hobby/craft room east wall	Tape	ND
04-WB1-11-Gypsum Board		2nd floor SNU northeast corner of equipment storage	Gypsum board	ND
04-WB1-11-Joint Compound		2nd floor SNU northeast corner of equipment storage	Joint compound	ND
04-WB1-11-Tape		2nd floor SNU northeast corner of equipment storage	Tape	ND
04-WB1-12-Gypsum Board		ICN conference room southeast corner	Gypsum board	ND
04-WB1-12-Joint Compound		ICN conference room southeast corner	Joint compound	ND
04-WB1-12-Tape		ICN conference room southeast corner	Tape	Not Analyzed

Sample ID	Building Name	Sample Location	Sample Description	Total Asbestos
05-CT2-13		Third floor hobby/craft room east wall	2'x2' smooth, pinholed and blotched ACT	ND
05-CT2--14		2nd floor SNU northeast corner of equipment storage	2'x2' smooth, pinholed and blotched ACT	ND
05-CT2--15		ICN conference room southeast corner	2'x2' smooth, pinholed and blotched ACT	ND
06-SC7-16-Concrete		South wall of 51-100	Pre-cast concrete	ND
06-SC7-16-Foam		South wall of 51-100	Foam	ND
06-SC7-17		South wall of staging 51-118	Pre-cast concrete	ND
06-SC7-18		Northeast corner of 61-125	Pre-cast concrete	ND
07-FP1-19-Firestop		Above east man-door	Gray spray on fire-proofing	ND
07-FP1-19-Insulation		Above east man-door	Spray applied insulation	ND
07-FP1-20-Firestop		5-feet east of north main-door	Gray spray on fire-proofing	ND
07-FP1-20-Insulation		5-feet east of north main-door	Spray applied insulation	ND
07-FP11-21-Firestop		10-feet west of the north main-door	Gray spray on fire-proofing	ND
07-FP11-21-Insulation		10-feet west of the north main-door	Spray applied insulation	ND
08-CM1-22-CMU	Main East/West	Main east/west 1st floor southeast corner corridor 12-20	Gray CMU	ND
08-CM1-22-Mortar		Main east/west 1st floor southeast corner corridor 12-20	Gray mortar	ND
08-CM1-23-CMU		Main east/west first floor adjoining north of room 12-51	Gray CMU	ND
08-CM1-23-Mortar		Main east/west first floor adjoining north of room 12-51	Gray mortar	ND
08-CM1-24-CMU		Main admin basement in corridor 30-20 south wall	Gray CMU	ND
08-CM1-24-Mortar		Main admin basement in corridor 30-20 south wall	Gray mortar	ND
09-CN1-25		Main east/west 1st floor southeast corner corridor 12-20	Precast concrete	ND
09-CN1-26		Main east/west first floor adjoining north of room 12-51	Precast concrete	ND

Sample ID	Building Name	Sample Location	Sample Description	Total Asbestos
09-CN1-27	Administration and Main Building	Main admin basement in corridor 30-20 south wall	Precast concrete	ND
10[1]-CT2-28		Main east/west 1st floor southeast corner corridor 12-20	2x2 smooth, dotted, and fissure act	ND
10-CT2--29		Main east/west first floor adjoining north of room 12-51	2x2 smooth, dotted, and fissure act	ND
10-CT2--30		Main admin basement in corridor 30-20 south wall	2x2 smooth, dotted, and fissure act	ND
11-FPI-31[2]		North east mechanical room adjoining the kitchen	Sprayed on fireproofing	ND
12[1]-CM2--34-Ceramic Block		Southeast corner of corridor	Green ceramic block	ND
12-CM2--34-Grout		Southeast corner of corridor	Gray grout	ND
12-CM2--35-Ceramic Block		1969 basement corridor 30-20	Green ceramic block	ND
12-CM2--35-Grout		1969 basement corridor 30-20	Gray grout	ND
12-CM2--36-Ceramic Block		15-feet south of northe4ast corner of corridor 12-40	Green ceramic block	ND
12-CM2--36-Grout		15-feet south of northe4ast corner of corridor 12-40	Gray grout	ND
13[1]-PL2-37		North corner of main admin building wall above check-in	Plaster base coat	ND
13-PL2-38-Finish Coat		East wall of 1969 addition basement control room	Plaster finish coat	ND
13-PL2-38-Base Coat		East wall of 1969 addition basement control room	Plaster base coat	ND
13-PL2-39-Finish Coat		North wall lobby 3-20	Plaster finish coat	ND
13-PL2-39-Base Coat		North wall lobby 3-20	Plaster base coat	ND
14[1]-CT2-40		South end of corridor 3-17	2'x2' semi-rough and dotted act	ND
14-CT2-41		Southwest corner of office 3-31	2'x2' semi-rough and dotted act	ND

[1] This HA spans multiple buildings.

[2]Only one sample collected from this HA. Found in isolated area.

Sample ID	Building Name	Sample Location	Sample Description	Total Asbestos
14-CT2-42[3]		2nd floor west wall of control corridor 9-86	2'x2' semi-rough and dotted act	ND
15[4]-WB1-43[1]		Elevator equipment room 44 north wall	Gypsum board	ND
15-WB1-43-Tape		Elevator equipment room 44 north wall	Tape	ND
15-WB1-43-Joint Compound		Elevator equipment room 44 north wall	Joint compound	ND
15[5]-WB1-44		North wall l-14 machine room	Gypsum board	ND
15-WB1-44-Tape		North wall l-14 machine room	Tape	ND
15-WB1-44-Joint Compound		North wall l-14 machine room	Joint compound	ND
15-WB1-45-Gypsum Board		North wall central supply 7-65	Gypsum board	ND
15-WB1-45-Tape		North wall central supply 7-65	Tape	ND
15-WB1-45-Joint Compound		North wall central supply 7-65	Joint compound	ND
16-CM1-46-CMU	North Building	North building 1" floor clerical east middle wall	Gray CMU	ND
16-CM1-46-Mortar		North building 1" floor clerical east middle wall	Gray mortar	ND
16-CM1-47		North building 1st in15	Gray CMU	ND
16-CM1-48-CMU		North building 1st floor in 12	Gray CMU	ND
16-CM1-48-Mortar		North building 1st floor in 12	Gray mortar	ND
17-CN1-49		Northeast corner of in 13	Pre-formed concrete	ND
17-CN1-50		Northeast corner of in 12	Pre-formed concrete	ND
17-CN1-51		North building 1st floor east wall of clerical	Pre-formed concrete	ND

[3] Sample collected from second floor of Main building.

[5] Collected from North Building.

Sample ID	Building Name	Sample Location	Sample Description	Total Asbestos
18[6]-FC5-52	Main Building	Mechanical equipment 9-27	White with tan and gray terrazzo	ND
18-FC5-53		South wall corridor 7-67	White with tan and gray terrazzo	ND
18-FC5-54		Exam treatment corridor 7-18	White with tan and gray terrazzo	ND
19[7]-PL1-55-Plaster		Pass 9-73 west south wall	Plaster base coat	ND
19-PL1-55-Skim Coat		Pass 9-73 west south wall	Plaster finish coat	ND
19-PL1-56-Plaster		Central supply 7-65 southwest corner	Plaster base coat	ND
19-PL1-56-Skim Coat		Central supply 7-65 southwest corner	Plaster finish coat	ND
19-PL1-57-Plaster		Corridor 7-14 middle of corridor north wall	Plaster base coat	Not Analyzed[8]
19-PL1-57-Skim Coat		Corridor 7-14 middle of corridor north wall	Plaster finish coat	Not Analyzed
20[9]-CM1-58	Buildings S and R	Toilet shower d134 entrance	Gray CMU	ND
20-CM1-59		Southwest corner ad127	Gray CMU	ND
20-CM1-60-CMU		Stair d203	Gray CMU	ND
20-CM1-60-Mortar		Stair d203	Gray mortar	ND
21-ACT-61		Northwest corner of mezzanine d210	4x2 dotted and fissured acoustical ceiling tile	ND
21-ACT-62		5-feet north of southeast corner of mezzanine d210	4x2 dotted and fissured acoustical ceiling tile	ND
21-ACT-63		Corridor D162 vestibule northwest corner	4x2 dotted and fissured acoustical ceiling tile	ND
22-WB1-64-Gypsum Board		South end of floor dayroom d135	Gypsum board	ND

[6] Sample collected from second floor of Main building.

[7] Sample collected from second floor of Main building.

[8] Sample not analyzed. Insufficient material.

Sample ID	Building Name	Sample Location	Sample Description	Total Asbestos
22-WB1-64-Joint Compound	Buildings T and V	South end of floor dayroom d135	Joint compound	ND
22-WB1-64-Tape		South end of floor dayroom d135	Tape	ND
22-WB1-65-Gypsum Board		Northeast corner of 2nd floor mezzanine d210	Gypsum board	ND
22-WB1-65-Joint Compound		Northeast corner of 2nd floor mezzanine d210	Joint compound	ND
22-WB1-65-Tape		Northeast corner of 2nd floor mezzanine d210	Tape	ND
22-WB1-66-Gypsum Board		East middle wall of sleeping area d211	Gypsum board	ND
22-WB1-66-Joint Compound		East middle wall of sleeping area d211	Joint compound	ND
22-WB1-66-Tape		East middle wall of sleeping area d211	Tape	Not Analyzed
23-CM1-67		Northwest corner of sleeping 50-104	Gray CMU	ND
23-CM1-68		Northeast corner sleeping 50-206	Gray CMU	ND
23-CM1-69-CMU		Northeast corner sleeping 49-101	Gray CMU	ND
23-CM1-69-Mortar		Northeast corner sleeping 49-101	Gray mortar	ND
24-WB1-70-Gypsum Board		Southwest corner of day room 50-100	Gypsum board	ND
24-WB1-70-Joint Compound		Southwest corner of day room 50-100	Joint compound	ND
24-WB1-70-Tape		Southwest corner of day room 50-100	Tape	ND
24-WB1-71-Gypsum Board		Adjoining north of sleeping 50-206	Gypsum board	ND
24-WB1-71-Joint Compound		Adjoining north of sleeping 50-206	Joint compound	ND
24-WB1-71-Tape		Adjoining north of sleeping 50-206	Tape	ND
24-WB1-72-Gypsum Board		Middle of west wall of chase 50-109	Gypsum board	ND
24-WB1-72-Joint Compound		Middle of west wall of chase 50-109	Joint compound	ND
24-WB1-72-Tape		Middle of west wall of chase 50-109	Tape	ND

Sample ID	Building Name	Sample Location	Sample Description	Total Asbestos
25-CT2-73		West wall of classroom 50-110	2x2 and 4x2 smooth dotted and fissured act	ND
25-CT2-74		East wall of classroom 50-110	2x2 and 4x2 smooth dotted and fissured act	ND
25-CT2-75		North wall of classroom 49-110	2x2 and 4x2 smooth dotted and fissured act	ND

Table 2 – Lead-Containing Paint Survey Summary

Sample #	Floor	Building Name	Room	Substrate	Component	Color	Location	XRF Reading (mg/cm²)	Notes
1	N/A	N/A	N/A	N/A	N/A	Calibration	N/A	1.06	Cal (Calibration)
2	N/A		N/A	N/A	N/A	Calibration	N/A	1.11	Cal
3	N/A		N/A	N/A	N/A	Calibration	N/A	1.04	Cal
4	N/A		N/A	N/A	N/A	Calibration	N/A	0.00	Cal
5	N/A		N/A	N/A	N/A	Calibration	N/A	0.00	Cal
6	N/A		N/A	N/A	N/A	Calibration	N/A	0.00	Cal
7	First	Powerhouse	Pump room 61-127	Metal	Door frame	Grey	Around the southeast exit door	0.0	Negative
8	First		Pump room 61-127	Metal	Door frame	Brown	Around the northwest exit door	0.0	Negative
9	First		Boiler room 61-130	Ceramic masonry unit block	Wall	White	East wall of Boiler room just before it becomes a hallway	0.0	Negative
10	First		High/Low voltage switchgear 61-132/133	Metal	Door frame	Grey	Exit double doors along west wall	0.0	Negative
11	First		Boiler room 61-130	Ceramic masonry unit block	Wall	White	East wall just before the door that separates the boiler room 61-130 and corridor 61-143	0.0	Negative
12	First		Corridor 61-143	Ceramic masonry unit block	Wall	White	North wall of corridor right of the electronic shop 61-137	0.0	Negative
13	First		Corridor 61-142	Ceramic masonry unit block	Wall	White	Next to entrance door into dead record storage	0.0	Negative
14	First		Corridor 61-142	Metal	Double door trim	Grey	Northern most double exit doors	0.0	Negative
15	First		Corridor 61-142	Metal	Double door trim	Tan	Northern most double exit doors	0.0	Negative

Sample #	Floor	Building Name	Room	Substrate	Component	Color	Location	XRF Reading (mg/cm²)	Notes
16	First		Dead record storage 61-100	Ceramic masonry unit block	Wall	White	Middle of west wall	0.0	Negative
17	First		Dead record storage 61-100	Ceramic masonry unit block	Wall	White	Southeast corner of south wall	0.0	Negative
18	First		Grain storage 61-134	Ceramic masonry unit block	Wall	White	Northeast corner of wall	0.0	Negative
19	First		Grain storage 61-134	Ceramic masonry unit block	Wall	White	South section of the east wall before the garage door	0.0	Negative
20	First		Main storeroom 61-129	Ceramic masonry unit block	Wall	White	15-feet north along the west wall from the southwest corner	0.0	Negative
21	First		Corridor 61-112	Ceramic masonry unit block	Wall	White	Next to the east exit door	0.0	Negative
22	First		Corridor 61-112	Metal	Door trim	Brown	East exit door	0.0	Negative
23	First		Staging 61-118	Ceramic masonry unit block	Wall	White	West wall, 6-feet south of the northwest door into the multipurpose room 61-119	0.0	Negative
24	First		Loading dock 61-124	Ceramic masonry unit block	Wall	White	North wall, 6-feet west of the southeast corner of Storekeeper warehouse MGR 61-125	0.0	Negative
25	Second		Corridor 62-207	Drywall	Wall	White	West wall, 18-feet south of corridor dead end	0.0	Negative
26	Second		Corridor 62-207	Ceramic masonry unit block	Wall	White	Northwest corner of the corridor	0.0	Negative
27	N/A	N/A	N/A	N/A	N/A	Calibration	N/A	1.13	Cal
28	N/A		N/A	N/A	N/A	Calibration	N/A	1.07	Cal
29	N/A		N/A	N/A	N/A	Calibration	N/A	1.10	Cal
30	N/A		N/A	N/A	N/A	Calibration	N/A	0.00	Cal

Sample #	Floor	Building Name	Room	Substrate	Component	Color	Location	XRF Reading (mg/cm²)	Notes
31	N/A		N/A	N/A	N/A	Calibration	N/A	0.00	Cal
32	N/A		N/A	N/A	N/A	Calibration	N/A	0.00	Cal
33	1st	SNU	SW SNU	Concrete masonry unit block	Wall	White	SW corner of NW SNU adjoining vestibule	0.00	Negative
34	1st		SW SNU	Concrete masonry unit block	Wall	Blue	Adjoining single person exercise court in SW SNU	0.00	Negative
35	1st		SW SNU	Concrete masonry unit block	Wall	White	Adjoining storage in NE part of SW SNU	0.00	Negative
36	1st		South SNU	Concrete masonry unit block	Wall	White	Adjoining Trauma Cast and Vitals in south SNU	0.00	Negative
37	1st		South SNU ICN	Drywall	Wall	White	SE corner of ICN in south SNU	0.00	Negative
38	1st		South SNU	Concrete masonry unit block	Wall	White	South SNU east to west corridor, 10-feet south of north end of corridor	0.00	Negative
39	1st		South SNU	Concrete masonry unit block	Wall	White	Wall adjoining carport in south SNU	0.00	Negative
40	2nd		SW SNU	Concrete masonry unit block	Wall	White	NE corner of soiled utility in SW SNU	0.00	Negative
41	2nd		SW SNU	Drywall	Ceiling	White	Adjoining east of north ADA cell in SW SNU	0.00	Negative
42	2nd		NW SNU	Concrete masonry unit block	Wall	White	15-feet SE of NW corner of NW SNU	0.00	Negative
43	2nd		NW SNU	Drywall	Ceiling	White	10-feet NW of SW corner of NW SNU upper level ceiling	0.00	Negative
44	2nd		South SNU	Concrete masonry unit block	Wall	White	Wall adjoining Stair 5 in south SNU	0.00	Negative
45	2nd		South SNU	Concrete masonry unit block	Wall	White	South SNU SE to NW corridor, SE wall	0.00	Negative

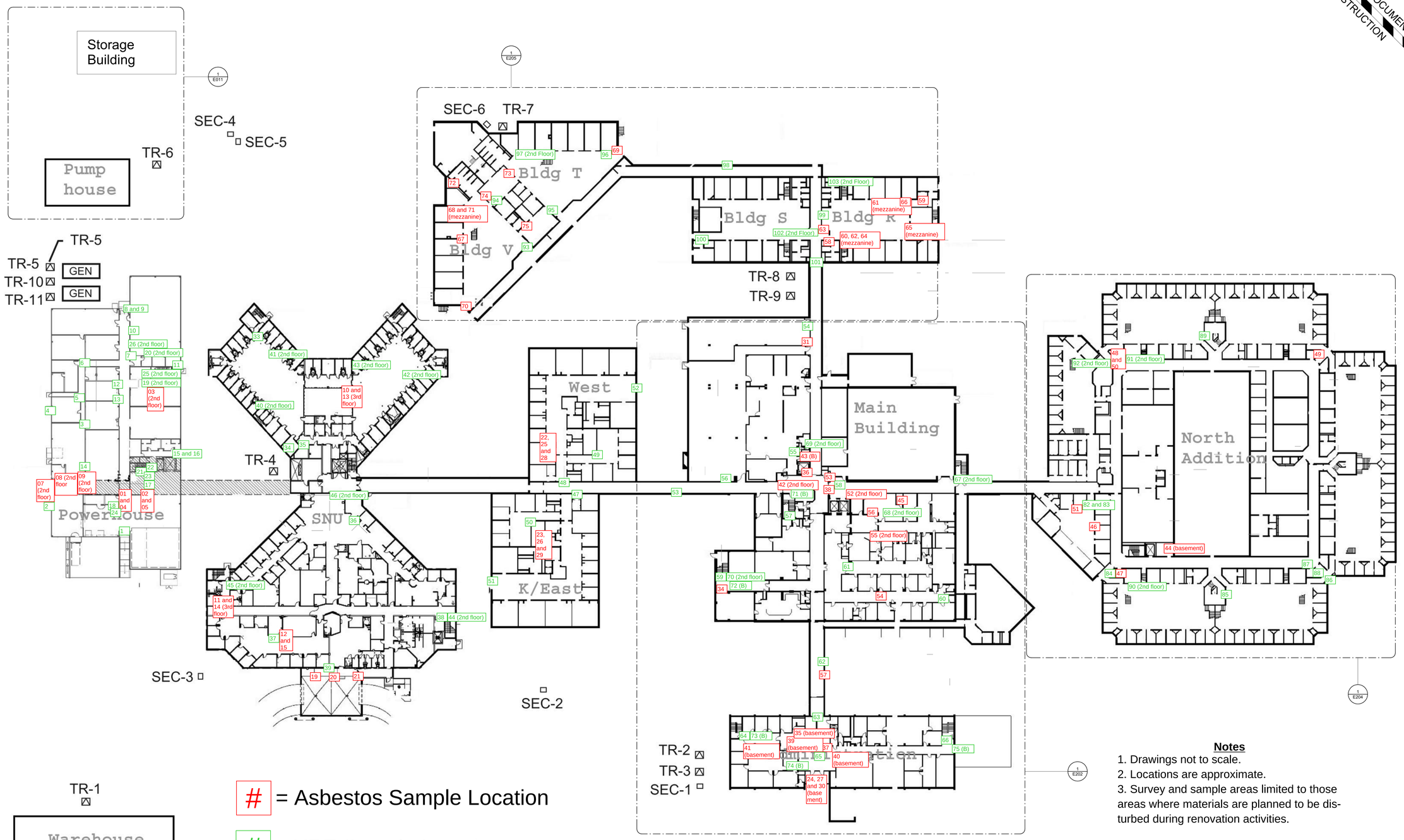
Sample #	Floor	Building Name	Room	Substrate	Component	Color	Location	XRF Reading (mg/cm²)	Notes
46	2nd		South SNU	Concrete masonry unit block	Wall	White	South SNU north wall adjoining south wall of central vestibule	0.00	Negative
47	1st	Main East/West	West Main	Concrete masonry unit block	Wall	Black	Hallway wall of Corridor 12-40 adjoining Toilet 12-4	0.00	Negative
48	1st		West Main	Ceramic masonry unit block	Wall	Green	Hallway wall of Corridor 12-40 adjoining Toilet 12-4	0.00	Negative
49	1st		West Main	Concrete masonry unit block	Wall	White	NE corner of Mechanical Equipment 12-11 in Clerical 12-7	0.00	Negative
50	1st		East Main	Concrete masonry unit block	Wall	White	SW corner of Mechanical Equipment 12-51 in Clerical 12-47	0.00	Negative
51	1st		East Main	Concrete masonry unit block	Wall	White	South wall of Dayroom 12-64	0.00	Negative
52	1st		West Main	Concrete masonry unit block	Wall	White	North wall of Dayroom 12-24	0.0	Negative
53	1st	Main Building	Corridor 12-40	Ceramic masonry unit block	Wall	Green	50-feet south of north end of Corridor 12-40 on east wall	0.00	Negative
54	1st		Day Stores 8-15	Ceramic masonry unit block	Wall	White	Mechanical room adjoining NW of Day Stores 8-15	0.00	Negative
55	1st		Day Stores 8-15	Concrete masonry unit block	Wall	White	15-feet south of northeast corner of Day Stores 8-15 south wall	0.00	Negative
56	1st		Day Stores 8-15	Concrete masonry unit block	Wall	White	Adjoining Day Stores 8-15 south doorway	0.00	Negative
57	1st		Stair 4	Concrete masonry unit block	Wall	White	East wall of Stair 4	0.00	Negative
58	1st		Corridor 7-67	Concrete masonry unit block	Wall	White	Corridor 7-67 south wall	0.00	Negative
59	1st		Corridor 7-21	Concrete masonry unit block	Wall	White	West wall adjoining Stair 3	0.00	Negative

Sample #	Floor	Building Name	Room	Substrate	Component	Color	Location	XRF Reading (mg/cm²)	Notes
60	1st		Exam Treatment Corridor 7-13	Concrete masonry unit block	Wall	White	North wall of Exam Treatment Corridor 7-13	0.00	Negative
61	1st		Waiting 7-26	Concrete masonry unit block	Wall	White	North wall of Exam Treatment Corridor 7-13	0.00	Negative
62	1st		Corridor 7-14	Ceramic masonry unit block	Wall	Green	75-feet east of west end of Corridor 7-14 on north wall	0.00	Negative
63	1st		Control 3-37	Concrete masonry unit block	Wall	White	East wall of Control 3-37 adjoining Corridor 7-14	0.00	Negative
64	1st		Stair 1	Concrete masonry unit block	Wall	White	Northeast corner of Stair 1	0.00	Negative
65	1st		Lobby 3-20	Plaster	Wall	Brown	Above reception desk in Lobby 3-20	0.00	Negative
66	1st		Stair 2	Concrete masonry unit block	Wall	White	Southeast corner of Stair 2	0.00	Negative
67	2nd		Stair 5	Concrete masonry unit block	Wall	White	Southeast corner of Stair 5	0.00	Negative
68	2nd		Mechanical Equipment 9-72	Concrete masonry unit block	Wall	White	10-feet north of southeast corner of Mechanical 9-72	0.00	Negative
69	2nd		Corridor 16-18	Concrete masonry unit block	Wall	White	Doorway adjoining Corridor 10-5	0.00	Negative
70	2nd		Stair 3	Concrete masonry unit block	Wall	White	Doorway adjoining Dayroom 9-22	0.00	Negative
71	B		Control Room 5-17	Concrete masonry unit block	Wall	White	South wall of Control Room 5-17	0.00	Negative
72	B		Dormitory 5-5	Concrete masonry unit block	Wall	White	East wall of Dormitory 5-5 adjoining Electric Equipment 5-8	0.00	Negative
73	B		Stair 1	Concrete masonry unit block	Wall	White	Northeast corner of Stair 1	0.00	Negative
74	B		Locker Room 3-19	Concrete masonry unit block	Wall	White	North wall of Locker room 2-19	0.00	Negative

Sample #	Floor	Building Name	Room	Substrate	Component	Color	Location	XRF Reading (mg/cm²)	Notes
75	B		Corridor 30-20	Concrete masonry unit block	Wall	White	North wall of Corridor 30-20	0.00	Negative
76	N/A	N/A	N/A	N/A	N/A	Calibration	N/A	1.10	N/A
77	N/A		N/A	N/A	N/A	Calibration	N/A	1.08	N/A
78	N/A		N/A	N/A	N/A	Calibration	N/A	1.12	N/A
79	N/A		N/A	N/A	N/A	Calibration	N/A	0.00	N/A
80	N/A		N/A	N/A	N/A	Calibration	N/A	0.00	N/A
81	N/A		N/A	N/A	N/A	Calibration	N/A	0.00	N/A
82	1	North Building	North building Clerical	Concrete masonry unit block	Wall	White	South wall of entryway to north building Clerical	0.00	Negative
83	1		North building Clerical	Concrete masonry unit block	Wall	Gray	South wall of entryway to north building Clerical	0.00	Negative
84	1		North building IN15	Concrete masonry unit block	Wall	White	North wall of IN15	0.00	Negative
85	1		North building Control Center	Concrete masonry unit block	Wall	White	North wall of north building Control Center	0.00	Negative
86	1		North building NE vestibule	Concrete masonry unit block	Wall	White	North wall of north building Control Center	0.00	Negative
87	1		North building IN14	Concrete masonry unit block	Wall	White	Corridor east wall adjoining west wall of IN14	0.00	Negative
88	1		North building IN14	Concrete masonry unit block	Wall	White	North wall of IN14	0.00	Negative
89	1		North building Control Room	Concrete masonry unit block	Wall	White	South wall of north building Control Room	0.00	Negative
90	2		North building south Upper Dayroom	Concrete masonry unit block	Wall	White	15-feet north of southwest corner of north building Upper Dayroom west wall	0.00	Negative

Sample #	Floor	Building Name	Room	Substrate	Component	Color	Location	XRF Reading (mg/cm²)	Notes
91	2		North building north Upper Dayroom	Concrete masonry unit block	Wall	White	Southeast corner adjoining north Fanroom	0.00	Negative
92	2		North building south Upper Dayroom	Concrete masonry unit block	Wall	White	Northwest corner of north building south Upper Dayroom	0.00	Negative
93	1	Buildings T and V	Building V Dayroom 50-100	Concrete masonry unit block	Wall	White	Doorway to Building V Dayroom 50-100	0.00	Negative
94	1		Building V Classroom 50-110	Concrete masonry unit block	Wall	White	Northeast corner of Building V Classroom 50-110	0.00	Negative
95	1		Building T Dayroom 49-100	Concrete masonry unit block	Wall	White	10-feet southwest of entryway door to Dayroom 49-100 on east wall	0.00	Negative
96	1		Building T Dayroom 49-100	Drywall	Wall	White	NW corner of Dayroom 49-100	0.00	Negative
97	2		Building T Dayroom 49-100	Concrete masonry unit block	Wall	White	NW wall of 49-107	0.00	Negative
98	1	Buildings S and R	Corridor between Building T and Building S	Concrete masonry unit block	Wall	White	West wall of corridor	0.00	Negative
99	1		Building S Corridor D116Z	Concrete masonry unit block	Wall	White	North wall of Corridor D116Z adjoining Toilet D121	0.00	Negative
100	1		Building S D109A	Concrete masonry unit block	Wall	White	West wall of D109A	0.00	Negative
101	1		Corridor between Building S and Building R	Concrete masonry unit block	Wall	White	East wall of the Corridor between Building S and Building R	0.00	Negative
102	2		Building S D221	Concrete masonry unit block	Wall	White	South wall of Storage D221	0.00	Negative
103	2		Building R Stair D213	Concrete masonry unit block	Wall	White	South wall of Storage D221	0.00	Negative

Appendix B: Exhibits



= Asbestos Sample Location

= XRF Sample Location

Notes

1. Drawings not to scale.
2. Locations are approximate.
3. Survey and sample areas limited to those areas where materials are planned to be disturbed during renovation activities.

OVERALL SITE PLAN
1 : 432

Proposal No.	06247171
Scale:	AS SHOWN
Client:	IDAS
Date:	March 2025

Terracon
2640 12th St SW
Cedar Rapids, IA 52404-3440

ACM AND LCP SAMPLE LOCATION DIAGRAM

IMCC Emergency Electrical Upgrades
2700 Coral Ridge Avenue
Coralville, Iowa

Exhibit 1

90% CONSTRUCTION DOCUMENTS
NOT FOR CONSTRUCTION

KCL ENGINEERING
300 4th Street
West Des Moines, Iowa
50265
515.724.7938
info@kclengineering.com

IMCC LIFE SAFETY UPGRADE AND UPS REPLACEMENT

2700 Coral Ridge Ave
Coralville, Iowa 52241

Project No: 9353.00
Date: 10/18/2024
90% CD

#	Revision	Date

Drawing Name:
BUILDING LAYOUT

Drawing #:
E010

Plot Date & Time: 11/4/2025 8:59:21 AM

Appendix C: Laboratory Analytical Reports and COCs

EMSL Analytical, Inc.

6340 CastlePlace Dr. Indianapolis, IN 46250

Tel/Fax: (317) 803-2997 / (317) 803-3047

http://www.EMSL.com / indianapolislab@emsl.com

EMSL Order:	162501880
Customer ID:	ACON77
Customer PO:	06247171
Project ID:	

Attention:	Daniel Green	**Phone:**	(319) 366-8321
	Terracon Consultants, Inc.	**Fax:**	(319) 366-0032
	2640 12th Street Southwest	**Received Date:**	02/12/2025 9:50 AM
	Cedar Rapids, IA 52404	**Analysis Date:**	02/14/2025 - 03/04/2025
		Collected Date:	

Project: IMCC - ELECTRICAL UPGRADE 2700 CORAL RIDGE AVENUE

Test Report: Asbestos Analysis of Bulk Materials via AHERA Method 40CFR 763 Subpart E Appendix E supplemented with EPA 600/R-93/116 using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
01-WB1-01 *162501880-0001* *Joint Compound only.*	3 FEET NORTH OF EAST 61-142 DOORWAY - DRYWALL SYSTEM (DRYWALL AND JOINT COMPOUND)	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
01-WB1-02-Drywall *162501880-0002*	15 FEET NORTH OF EAST 61-142 DOORWAY - DRYWALL SYSTEM (DRYWALL AND JOINT COMPOUND)	Brown/White Fibrous Heterogeneous	35% Cellulose <1% Glass	60% Gypsum 5% Non-fibrous (Other)	None Detected
01-WB1-02-Joint Compound *162501880-0002A*	15 FEET NORTH OF EAST 61-142 DOORWAY - DRYWALL SYSTEM (DRYWALL AND JOINT COMPOUND)	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
01-WB1-03-Drywall *162501880-0003*	2ND FLOOR CORRIDOR 62-20 - DRYWALL SYSTEM (DRYWALL AND JOINT COMPOUND)	Brown/White Fibrous Heterogeneous	20% Cellulose <1% Glass	70% Gypsum 10% Non-fibrous (Other)	None Detected
01-WB1-03-Joint Compound *162501880-0003A*	2ND FLOOR CORRIDOR 62-20 - DRYWALL SYSTEM (DRYWALL AND JOINT COMPOUND)	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
02-SC7-04 *162501880-0004* *Sealant only.*	3 FEET NORTH OF EAST 61-142 DOORWAY - CMU AND DRYWALL SEALANT	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
02-SC7-05-CMU *162501880-0005*	15 FEET NORTH OF EAST 61-142 DOORWAY - CMU AND DRYWALL SEALANT	Gray Non-Fibrous Homogeneous		20% Quartz 80% Non-fibrous (Other)	None Detected
02-SC7-05-Sealant *162501880-0005A*	15 FEET NORTH OF EAST 61-142 DOORWAY - CMU AND DRYWALL SEALANT	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
02-SC7-06 *162501880-0006*	ABOVE MAIN FLOOR BIOHAZARD ROOM DOOR - CMU AND DRYWALL SEALANT	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

Initial report from: 02/14/2025 15:56:20

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http://www.EMSL.com / indianapolislab@emsl.com

EMSL Order: 162501880
Customer ID: ACON77
Customer PO: 06247171
Project ID:

Test Report: Asbestos Analysis of Bulk Materials via AHERA Method 40CFR 763 Subpart E Appendix E supplemented with EPA 600/R-93/116 using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
03-CT2-07 *162501880-0007*	ADJOINING SOUTHEAST CORNER OF CENTRAL OFFICE STORAGE - 2'X2' SEMI-ROUGH ACT	Gray/White Fibrous Homogeneous	95% Min. Wool	5% Non-fibrous (Other)	None Detected
03-CT2-08 *162501880-0008*	ADJOINING EAST OF MIDDLE OF CENTRAL OFFICE STORAGE - 2'X2' SEMI-ROUGH ACT	Gray/White Fibrous Homogeneous	95% Min. Wool	5% Non-fibrous (Other)	None Detected
03-CT2-09 *162501880-0009*	ADJOINING NORTHEAST CORNER OF CENTRAL OFFICE STORAGE - 2'X2' SEMI-ROUGH ACT	Gray/White Fibrous Homogeneous	95% Min. Wool	5% Non-fibrous (Other)	None Detected
04-WB1-10-Gypsum Board *162501880-0010*	THIRD FLOOR HOBBY/CRAFT ROOM EAST WALL - DRYWALL SYSTEM GYPSUMBOARD JOINT COMPOUND TAPE	Brown/White Fibrous Heterogeneous	40% Cellulose <1% Glass	55% Gypsum 5% Non-fibrous (Other)	None Detected
04-WB1-10-Joint Compound *162501880-0010A*	THIRD FLOOR HOBBY/CRAFT ROOM EAST WALL - DRYWALL SYSTEM GYPSUMBOARD JOINT COMPOUND TAPE	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
04-WB1-10-Tape *162501880-0010B*	THIRD FLOOR HOBBY/CRAFT ROOM EAST WALL - DRYWALL SYSTEM GYPSUMBOARD JOINT COMPOUND TAPE	White Fibrous Homogeneous	98% Cellulose	2% Non-fibrous (Other)	None Detected
04-WB1-11-Gypsum Board *162501880-0011*	2ND FLOOR SNU NORTHEAST CORNER OF EQUIPMENT STORAGE - DRYWALL SYSTEM GYPSUMBOARD JOINT COMPOUND TAPE	Brown/White Fibrous Heterogeneous	40% Cellulose <1% Glass	55% Gypsum 5% Non-fibrous (Other)	None Detected
04-WB1-11-Joint Compound *162501880-0011A*	2ND FLOOR SNU NORTHEAST CORNER OF EQUIPMENT STORAGE - DRYWALL SYSTEM GYPSUMBOARD JOINT COMPOUND TAPE	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

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Test Report: Asbestos Analysis of Bulk Materials via AHERA Method 40CFR 763 Subpart E Appendix E supplemented with EPA 600/R-93/116 using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
04-WB1-11-Tape *162501880-0011B*	2ND FLOOR SNU NORTHEAST CORNER OF EQUIPMENT STORAGE - DRYWALL SYSTEM GYPSUMBOARD JOINT COMPOUND TAPE	White Fibrous Homogeneous	98% Cellulose	2% Non-fibrous (Other)	None Detected
04-WB1-12-Gypsum Board *162501880-0012*	ICN CONFERENCE ROOM SOUTHEAST CORNER - DRYWALL SYSTEM GYPSUMBOARD JOINT COMPOUND TAPE	Brown/White Fibrous Heterogeneous	30% Cellulose <1% Glass	60% Gypsum 10% Non-fibrous (Other)	None Detected
04-WB1-12-Joint Compound *162501880-0012A*	ICN CONFERENCE ROOM SOUTHEAST CORNER - DRYWALL SYSTEM GYPSUMBOARD JOINT COMPOUND TAPE	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
04-WB1-12-Tape *162501880-0012B*	ICN CONFERENCE ROOM SOUTHEAST CORNER - DRYWALL SYSTEM GYPSUMBOARD JOINT COMPOUND TAPE				**Layer Not Present**
05-CT2-13 *162501880-0013*	THIRD FLOOR HOBBY/CRAFT ROOM EAST WALL - 2'X2' SMOOTH PINHOLED AND BLOTCHED ACT	Gray/White Fibrous Homogeneous	40% Cellulose 40% Min. Wool	15% Perlite 5% Non-fibrous (Other)	None Detected
05-CT2--14 *162501880-0014*	2ND FLOOR SNU NORTHEAST CORNER OF EQUIPMENT STORAGE - 2'X2' SMOOTH PINHOLED AND BLOTCHED ACT	Gray/White Fibrous Homogeneous	40% Cellulose 40% Min. Wool	15% Perlite 5% Non-fibrous (Other)	None Detected
05-CT2--15 *162501880-0015*	CN CONFERENCE ROOM SOUTHEAST CORNER - 2'X2' SMOOTH PINHOLED AND BLOTCHED ACT	Gray/White Fibrous Homogeneous	40% Cellulose 40% Min. Wool	15% Perlite 5% Non-fibrous (Other)	None Detected
06-SC7-16-Concrete *162501880-0016*	SOUTH WALL OF 51-100 - PRE-CAST CONCRETE	Gray Non-Fibrous Homogeneous		20% Quartz 80% Non-fibrous (Other)	None Detected
06-SC7-16-Foam *162501880-0016A*	SOUTH WALL OF 51-100 - PRE-CAST CONCRETE	Blue Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
06-SC7-17 *162501880-0017*	SOUTH WALL OF STAGING 51-118 - PRE-CAST CONCRETE	Gray Non-Fibrous Homogeneous		20% Quartz 80% Non-fibrous (Other)	None Detected

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Project ID:

Test Report: Asbestos Analysis of Bulk Materials via AHERA Method 40CFR 763 Subpart E Appendix E supplemented with EPA 600/R-93/116 using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
06-SC7-18 *162501880-0018*	NORTHEAST CORNER OF 61-125 - PRE-CAST CONCRETE	Gray Non-Fibrous Homogeneous		20% Quartz 80% Non-fibrous (Other)	None Detected
07-FP1-19-Firestop *162501880-0019*	ABOVE EAST MAN-DOOR - GRAY SPRAY ON FIRE-PROOFING	Red Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
07-FP1-19-Insulation *162501880-0019A*	ABOVE EAST MAN-DOOR - GRAY SPRAY ON FIRE-PROOFING	Gray/White Fibrous Homogeneous	95% Min. Wool	5% Non-fibrous (Other)	None Detected
07-FP1-20-Firestop *162501880-0020*	5-FEET EAST OFR NORTH MAIN-DOOR - GRAY SPRAY ON FIRE-PROOFING	Red Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
07-FP1-20-Insulation *162501880-0020A*	5-FEET EAST OFR NORTH MAIN-DOOR - GRAY SPRAY ON FIRE-PROOFING	Gray/White Fibrous Homogeneous	95% Min. Wool	5% Non-fibrous (Other)	None Detected
07-FP11-21-Firestop *162501880-0021*	10-FEET WEST OF NORTH MAIN-DOOR - GRAY SPRAY ON FIRE-PROOFING	Red Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
07-FP11-21-Insulation *162501880-0021A*	10-FEET WEST OF NORTH MAIN-DOOR - GRAY SPRAY ON FIRE-PROOFING	Gray Fibrous Homogeneous	95% Min. Wool	5% Non-fibrous (Other)	None Detected
08-CM1-22-CMU *162501880-0022*	MAIN EAST/WEST 1ST FLOOR SOUTHEAST CORNER CORRIDOR 12-20 - GREY CMU AND MORTAR	Gray/White Non-Fibrous Homogeneous		20% Quartz 80% Non-fibrous (Other)	None Detected
08-CM1-22-Mortar *162501880-0022A*	MAIN EAST/WEST 1ST FLOOR SOUTHEAST CORNER CORRIDOR 12-20 - GREY CMU AND MORTAR	Gray Non-Fibrous Homogeneous		20% Quartz 80% Non-fibrous (Other)	None Detected
08-CM1-23-CMU *162501880-0023*	MAIN EAST/WEST FIRST FLOOR ADJOINING NORTH OF ROOM 12-51 - GREY CMU AND MORTAR	Gray/White Non-Fibrous Homogeneous		20% Quartz 80% Non-fibrous (Other)	None Detected
08-CM1-23-Mortar *162501880-0023A*	MAIN EAST/WEST FIRST FLOOR ADJOINING NORTH OF ROOM 12-51 - GREY CMU AND MORTAR	Gray Non-Fibrous Homogeneous		20% Quartz 80% Non-fibrous (Other)	None Detected
08-CM1-24-CMU *162501880-0024*	MAIN ADMIN BASEMENT IN CORRIDOR 30-20 SOUTH WALL - GREY CMU AND MORTAR	Gray Non-Fibrous Homogeneous		20% Quartz 80% Non-fibrous (Other)	None Detected

Initial report from: 02/14/2025 15:56:20

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EMSL Order: 162501880
Customer ID: ACON77
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Project ID:

Test Report: Asbestos Analysis of Bulk Materials via AHERA Method 40CFR 763 Subpart E Appendix E supplemented with EPA 600/R-93/116 using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
08-CM1-24-Mortar *162501880-0024A*	MAIN ADMIN BASEMENT IN CORRIDOR 30-20 SOUTH WALL - GREY CMU AND MORTAR	Gray Non-Fibrous Homogeneous		20% Quartz 80% Non-fibrous (Other)	None Detected
09-CN1-25 *162501880-0025*	MAIN EAST/WEST 1ST FLOOR SOUTHEAST CORNER CORRIDOR 12-20 - PRECAST CONCRETE	Gray Non-Fibrous Homogeneous		20% Quartz 80% Non-fibrous (Other)	None Detected
09-CN1-26 *162501880-0026*	MAIN EAST/WEST FIRST FLOOR ADJOINING NORTH OF ROOM 12-51 - PRECAST CONCRETE	Gray Non-Fibrous Homogeneous		20% Quartz 80% Non-fibrous (Other)	None Detected
09-CN1-27 *162501880-0027*	MAIN ADMIN BASEMENT IN CORRIDOR 30-20 SOUTH WALL - PRECAST CONCRETE	Gray Non-Fibrous Homogeneous		20% Quartz 80% Non-fibrous (Other)	None Detected
10-CT2-28 *162501880-0028*	MAIN EAST/WEST 1ST FLOOR SOUTHEAST CORNER CORRIDOR 12-20 - 2X2 SMOOTH, DOTTED, AND FISSURE ACT	Gray/White Fibrous Homogeneous	50% Cellulose 30% Min. Wool	15% Perlite 5% Non-fibrous (Other)	None Detected
10-CT2--29 *162501880-0029*	MAIN EAST/WEST FIRST FLOOR ADJOINING NORTH OF ROOM 12-51 - 2X2 SMOOTH, DOTTED, AND FISSURE ACT	Gray/White Fibrous Homogeneous	50% Cellulose 30% Min. Wool	15% Perlite 5% Non-fibrous (Other)	None Detected
10-CT2--30 *162501880-0030*	MAIN ADMIN BASEMENT IN CORRIDOR 30-20 SOUTH WALL - 2X2 SMOOTH, DOTTED, AND FISSURE ACT	Gray/White Fibrous Homogeneous	50% Cellulose 30% Min. Wool	15% Perlite 5% Non-fibrous (Other)	None Detected
11-FPI-31 *162501880-0031*	NORTHEAST MECHANICAL ROOM ADJOINING THE KITCHEN - SPRAYED ON FIREPROOFING	Gray Fibrous Homogeneous	20% Cellulose	80% Non-fibrous (Other)	None Detected
12-CM2--34-Ceramic Block *162501880-0032*	SOUTHEAST CORNER OF CORRIDOR - GREEN CERAMIC BLOCK	Tan/Green Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
12-CM2--34-Grout *162501880-0032A*	SOUTHEAST CORNER OF CORRIDOR - GREEN CERAMIC BLOCK	Gray Non-Fibrous Homogeneous		20% Quartz 80% Non-fibrous (Other)	None Detected

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Test Report: Asbestos Analysis of Bulk Materials via AHERA Method 40CFR 763 Subpart E Appendix E supplemented with EPA 600/R-93/116 using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
12-CM2--35-Ceramic Block *162501880-0033*	1969 BASEMENT CORRIDOR 30-20 - GREEN CERAMIC BLOCK	Tan/Green Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
12-CM2--35-Grout *162501880-0033A*	1969 BASEMENT CORRIDOR 30-20 - GREEN CERAMIC BLOCK	Gray Non-Fibrous Homogeneous		20% Quartz 80% Non-fibrous (Other)	None Detected
12-CM2--36-Ceramic Block *162501880-0034*	15-FEET SOUTH OF NORTHE4AST CORNER OF CORRIDOR 12-40 - GREEN CERAMIC BLOCK	Yellow/Green Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
12-CM2--36-Grout *162501880-0034A*	15-FEET SOUTH OF NORTHE4AST CORNER OF CORRIDOR 12-40 - GREEN CERAMIC BLOCK	Gray Non-Fibrous Homogeneous		20% Quartz 80% Non-fibrous (Other)	None Detected
13-PL2-37 *162501880-0035* *Plaster finish coat only.*	NORTH CORNER OF MAIN ADMIN BUILDING WALL ABOVE CHECK-IN - PLASTER	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
13-PL2-38-Finish Coat *162501880-0036*	EAST WALL OF 1969 ADDITION BASEMENT CONTROL ROOM - PLASTER	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
13-PL2-38-Base Coat *162501880-0036A*	EAST WALL OF 1969 ADDITION BASEMENT CONTROL ROOM - PLASTER	Gray Non-Fibrous Homogeneous		20% Quartz 80% Non-fibrous (Other)	None Detected
13-PL2-39-Finish Coat *162501880-0037*	NORTH WALL LOBBY 3-20 - PLASTER	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
13-PL2-39-Base Coat *162501880-0037A*	NORTH WALL LOBBY 3-20 - PLASTER	Gray Non-Fibrous Homogeneous	<1% Cellulose	20% Quartz 80% Non-fibrous (Other)	None Detected
14-CT2-40 *162501880-0038*	SOUTH END OF CORRIDOR 3-17 - 2'X2' SEMI-ROUGH AND DOTTED ACT	Gray/White Fibrous Homogeneous	50% Cellulose 30% Min. Wool	15% Perlite 5% Non-fibrous (Other)	None Detected
14-CT2-41 *162501880-0039*	SOUTHWEST CORNER OF OFFICE 3-31 - 2'X2' SEMI-ROUGH AND DOTTED ACT	Gray/White Fibrous Homogeneous	50% Cellulose 30% Min. Wool	15% Perlite 5% Non-fibrous (Other)	None Detected
14-CT2-42 *162501880-0040*	2ND FLOOR WEST WALL OF CONTROL CORRIDOR 9-86 - 2'X2' SEMI-ROUGH AND DOTTED ACT	Gray/White Fibrous Homogeneous	50% Cellulose 30% Min. Wool	15% Perlite 5% Non-fibrous (Other)	None Detected

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			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
15-WB1-43 *162501880-0041*	ELEVATOR EQUIPMENT ROOM 44 NORTH WALL - DRYWALL SYSTEM GYPSUMBOARD TAPE JOINT COMPOUND	Brown/White/Yellow Fibrous Heterogeneous	30% Cellulose 10% Glass	55% Gypsum 5% Non-fibrous (Other)	None Detected
15-WB1-43-Tape *162501880-0041A*	ELEVATOR EQUIPMENT ROOM 44 NORTH WALL - DRYWALL SYSTEM GYPSUMBOARD TAPE JOINT COMPOUND	White Fibrous Homogeneous	98% Cellulose	2% Non-fibrous (Other)	None Detected
15-WB1-43-Joint Compound *162501880-0041B*	ELEVATOR EQUIPMENT ROOM 44 NORTH WALL - DRYWALL SYSTEM GYPSUMBOARD TAPE JOINT COMPOUND	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
15-WB1-44 *162501880-0042*	NORTH WALL L-14 MACHINE ROOM - DRYWALL SYSTEM GYPSUMBOARD TAPE JOINT COMPOUND	Brown/White Fibrous Heterogeneous	35% Cellulose <1% Glass	60% Gypsum 5% Non-fibrous (Other)	None Detected
15-WB1-44-Tape *162501880-0042A*	NORTH WALL L-14 MACHINE ROOM - DRYWALL SYSTEM GYPSUMBOARD TAPE JOINT COMPOUND	White Fibrous Homogeneous	98% Cellulose	2% Non-fibrous (Other)	None Detected
15-WB1-44-Joint Compound *162501880-0042B*	NORTH WALL L-14 MACHINE ROOM - DRYWALL SYSTEM GYPSUMBOARD TAPE JOINT COMPOUND	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
15-WB1-45-Gypsum Board *162501880-0043*	NORTH WALL CENTRAL SUPPLY 7-65 - DRYWALL SYSTEM GYPSUMBOARD TAPE JOINT COMPOUND	Brown/White Fibrous Heterogeneous	25% Cellulose <1% Glass	60% Gypsum 15% Non-fibrous (Other)	None Detected
15-WB1-45-Tape *162501880-0043A*	NORTH WALL CENTRAL SUPPLY 7-65 - DRYWALL SYSTEM GYPSUMBOARD TAPE JOINT COMPOUND	White Fibrous Homogeneous	98% Cellulose	2% Non-fibrous (Other)	None Detected
15-WB1-45-Joint Compound *162501880-0043B*	NORTH WALL CENTRAL SUPPLY 7-65 - DRYWALL SYSTEM GYPSUMBOARD TAPE JOINT COMPOUND	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

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			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
16-CM1-46-CMU *162501880-0044*	NORTH BUILDING 1" FLOOR CLERICAL EAST MIDDLE WALL - CMU AND MORTAR	Gray/White Non-Fibrous Homogeneous		20% Quartz 80% Non-fibrous (Other)	None Detected
16-CM1-46-Mortar *162501880-0044A*	NORTH BUILDING 1" FLOOR CLERICAL EAST MIDDLE WALL - CMU AND MORTAR	Gray Non-Fibrous Homogeneous		20% Quartz 80% Non-fibrous (Other)	None Detected
16-CM1-47 *162501880-0045*	NORTH BUILDING 1ST IN15 - CMU AND MORTAR	Gray/White Non-Fibrous Homogeneous		20% Quartz 80% Non-fibrous (Other)	None Detected
16-CM1-48-CMU *162501880-0046*	NORTH BUIULDING 1ST FLOOR IN 12 - CMU AND MORTAR	Gray Non-Fibrous Homogeneous		20% Quartz 80% Non-fibrous (Other)	None Detected
16-CM1-48-Mortar *162501880-0046A*	NORTH BUIULDING 1ST FLOOR IN 12 - CMU AND MORTAR	Gray Non-Fibrous Homogeneous		20% Quartz 80% Non-fibrous (Other)	None Detected
17-CN1-49 *162501880-0047*	NORTHEAST CORNER OF IN13 - PRE FORMED CONCRETE	Gray Non-Fibrous Homogeneous		20% Quartz 80% Non-fibrous (Other)	None Detected
17-CN1-50 *162501880-0048*	NORTHEAST CORNER OF IN12 - PRE FORMED CONCRETE	Gray Non-Fibrous Homogeneous		20% Quartz 80% Non-fibrous (Other)	None Detected
17-CN1-51 *162501880-0049*	NORTH BUILDING 1ST FLOOR EAST WALL OF CLERICAL - PRE FORMED CONCRETE	Gray Non-Fibrous Homogeneous		20% Quartz 80% Non-fibrous (Other)	None Detected
18-FC5-52 *162501880-0050*	MECHANICAL EQUIPMENT 9-27 - WHITE WITH TAN AND GRAY TERRAZO	Gray/Tan/White Non-Fibrous Homogeneous		30% Quartz 70% Non-fibrous (Other)	None Detected
18-FC5-53 *162501880-0051*	SOUTH WALL CORRIDOR 7-67 - WHITE WITH TAN AND GRAY TERRAZO	Gray/Tan/White Non-Fibrous Homogeneous		30% Quartz 70% Non-fibrous (Other)	None Detected
18-FC5-54 *162501880-0052*	EXAM TREATMENT CORRIDOR 7-18 - WHITE WITH TAN AND GRAY TERRAZO	Gray/White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
19-PL1-55-Plaster *162501880-0053*	PASS 9-73 WEST SOUTH WALL - PLASTER AND SKIMCOAT	Gray Non-Fibrous Homogeneous		20% Quartz 80% Non-fibrous (Other)	None Detected
19-PL1-55-Skim Coat *162501880-0053A*	PASS 9-73 WEST SOUTH WALL - PLASTER AND SKIMCOAT	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
19-PL1-56-Plaster *162501880-0054*	CENTRAL SUPPLY 7-65 SOUTHWEST CORNER - PLASTER AND SKIMCOAT	Gray Non-Fibrous Homogeneous		20% Quartz 80% Non-fibrous (Other)	None Detected

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			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
19-PL1-56-Skim Coat *162501880-0054A*	CENTRAL SUPPLY 7-65 SOUTHWEST CORNER - PLASTER AND SKIMCOAT	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
19-PL1-57-Plaster *162501880-0055*	CORRIDOR 7-14 MIDDLE OF CORRIDOR NORTH WALL - PLASTER AND SKIMCOAT				**Insufficient Material**
19-PL1-57-Skim Coat *162501880-0055A*	CORRIDOR 7-14 MIDDLE OF CORRIDOR NORTH WALL - PLASTER AND SKIMCOAT				**Insufficient Material**
20-CM1-58 *162501880-0056*	TOILET SHOWER D134 ENTRANCE - CMU AND MORTAR	Gray/White Non-Fibrous Homogeneous		20% Quartz 80% Non-fibrous (Other)	None Detected
20-CM1-59 *162501880-0057*	SOUTHWEST CORNER AD127 - CMU AND MORTAR	Gray/White Non-Fibrous Homogeneous		20% Quartz 80% Non-fibrous (Other)	None Detected
20-CM1-60-CMU *162501880-0058*	STAIR D203 - CMU AND MORTAR	Gray Non-Fibrous Homogeneous		20% Quartz 80% Non-fibrous (Other)	None Detected
20-CM1-60-Mortar *162501880-0058A*	STAIR D203 - CMU AND MORTAR	Gray Non-Fibrous Homogeneous		20% Quartz 80% Non-fibrous (Other)	None Detected
21-ACT-61 *162501880-0059*	NORTHWEST CORNER OF MEZZANINW D210 - 4X2 DOTTED AND FISSURED ACOUSTICAL CEILING TILE	Gray/White Non-Fibrous Homogeneous	50% Cellulose 30% Min. Wool	15% Perlite 5% Non-fibrous (Other)	None Detected
21-ACT-62 *162501880-0060*	5-FEET NORTH OF SOUTHEAST CORNER OF MEZZANINE D210 - 4X2 DOTTED AND FISSURED ACOUSTICAL CEILING TILE	Gray/White Fibrous Homogeneous	50% Cellulose 30% Min. Wool	15% Perlite 5% Non-fibrous (Other)	None Detected
21-ACT-63 *162501880-0061*	CORRIDOR D162 VESTIBULE NORTHWEST CORNER - 4X2 DOTTED AND FISSURED ACOUSTICAL CEILING TILE	Gray/White Fibrous Homogeneous	50% Cellulose 30% Min. Wool	15% Perlite 5% Non-fibrous (Other)	None Detected
22-WB1-64-Gypsum Board *162501880-0062*	SOUTH END OF FLOOR DAYROOM D135 - DRYWALL SYSTEM GYPSUMBOARD JOINT COMPOUND TAPE	Brown/White Fibrous Heterogeneous	45% Cellulose <1% Glass	50% Gypsum 5% Non-fibrous (Other)	None Detected

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			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
22-WB1-64-Joint Compound *162501880-0062A*	SOUTH END OF FLOOR DAYROOM D135 - DRYWALL SYSTEM GYPSUMBOARD JOINT COMPOUND TAPE	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
22-WB1-64-Tape *162501880-0062B*	SOUTH END OF FLOOR DAYROOM D135 - DRYWALL SYSTEM GYPSUMBOARD JOINT COMPOUND TAPE	White Fibrous Homogeneous	98% Cellulose	2% Non-fibrous (Other)	None Detected
22-WB1-65-Gypsum Board *162501880-0063*	NORTHEAST CORNER OF 2ND FLOOR MEZZANINIE D210 - DRYWALL SYSTEM GYPSUMBOARD JOINT COMPOUND TAPE	Brown/White Fibrous Heterogeneous	45% Cellulose <1% Glass	50% Gypsum 5% Non-fibrous (Other)	None Detected
22-WB1-65-Joint Compound *162501880-0063A*	NORTHEAST CORNER OF 2ND FLOOR MEZZANINIE D210 - DRYWALL SYSTEM GYPSUMBOARD JOINT COMPOUND TAPE	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
22-WB1-65-Tape *162501880-0063B*	NORTHEAST CORNER OF 2ND FLOOR MEZZANINIE D210 - DRYWALL SYSTEM GYPSUMBOARD JOINT COMPOUND TAPE	White Fibrous Homogeneous	98% Cellulose	2% Non-fibrous (Other)	None Detected
22-WB1-66-Gypsum Board *162501880-0064*	EAST MIDDLE WALL OF SLEEPING AREA D211 - DRYWALL SYSTEM GYPSUMBOARD JOINT COMPOUND TAPE	Brown/White Fibrous Heterogeneous	40% Cellulose <1% Glass	50% Gypsum 10% Non-fibrous (Other)	None Detected
22-WB1-66-Joint Compound *162501880-0064A*	EAST MIDDLE WALL OF SLEEPING AREA D211 - DRYWALL SYSTEM GYPSUMBOARD JOINT COMPOUND TAPE	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
22-WB1-66-Tape *162501880-0064B*	EAST MIDDLE WALL OF SLEEPING AREA D211 - DRYWALL SYSTEM GYPSUMBOARD JOINT COMPOUND TAPE				**Layer Not Present**

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			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
23-CM1-67 *162501880-0065*	NORTHWEST CORNER OF SLEEPING 50-104 - GREY CMU AND MORTAR	Gray/White Non-Fibrous Homogeneous		20% Quartz 80% Non-fibrous (Other)	None Detected
23-CM1-68 *162501880-0066*	NORTHEAST CORNER SLEEPING 50-206 - GREY CMU AND MORTAR	Gray/White Non-Fibrous Homogeneous		20% Quartz 80% Non-fibrous (Other)	None Detected
23-CM1-69-CMU *162501880-0067*	NORTHEAST CORNER SLEEPING 49-101 - GREY CMU AND MORTAR	Gray Non-Fibrous Homogeneous		20% Quartz 80% Non-fibrous (Other)	None Detected
23-CM1-69-Mortar *162501880-0067A*	NORTHEAST CORNER SLEEPING 49-101 - GREY CMU AND MORTAR	Gray Non-Fibrous Homogeneous		20% Quartz 80% Non-fibrous (Other)	None Detected
24-WB1-70-Gypsum Board *162501880-0068*	SOUTHWEST CORNER OF DAY ROOM 50-100 - DRYWALL SYSTEM GYPSUMBOARD JOINT COMPOUND TAPE	Brown/White Fibrous Heterogeneous	45% Cellulose <1% Glass	50% Gypsum 5% Non-fibrous (Other)	None Detected
24-WB1-70-Joint Compound *162501880-0068A*	SOUTHWEST CORNER OF DAY ROOM 50-100 - DRYWALL SYSTEM GYPSUMBOARD JOINT COMPOUND TAPE	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
24-WB1-70-Tape *162501880-0068B*	SOUTHWEST CORNER OF DAY ROOM 50-100 - DRYWALL SYSTEM GYPSUMBOARD JOINT COMPOUND TAPE	White Fibrous Homogeneous	98% Cellulose	2% Non-fibrous (Other)	None Detected
24-WB1-71-Gypsum Board *162501880-0069*	ADJOINING NORTH OF SLEEPING 50-206 - DRYWALL SYSTEM GYPSUMBOARD JOINT COMPOUND TAPE	Brown/White Fibrous Heterogeneous	45% Cellulose <1% Glass	50% Gypsum 5% Non-fibrous (Other)	None Detected
24-WB1-71-Joint Compound *162501880-0069A*	ADJOINING NORTH OF SLEEPING 50-206 - DRYWALL SYSTEM GYPSUMBOARD JOINT COMPOUND TAPE	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
24-WB1-71-Tape *162501880-0069B*	ADJOINING NORTH OF SLEEPING 50-206 - DRYWALL SYSTEM GYPSUMBOARD JOINT COMPOUND TAPE	White Fibrous Homogeneous	98% Cellulose	2% Non-fibrous (Other)	None Detected

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			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
24-WB1-72-Gypsum Board *162501880-0070*	MIDDLE OF WEST WALL OF CHASE 50-109 - DRYWALL SYSTEM GYPSUMBOARD JOINT COMPOUND TAPE	Brown/White Fibrous Heterogeneous	60% Cellulose <1% Glass	30% Gypsum 10% Non-fibrous (Other)	None Detected
24-WB1-72-Joint Compound *162501880-0070A*	MIDDLE OF WEST WALL OF CHASE 50-109 - DRYWALL SYSTEM GYPSUMBOARD JOINT COMPOUND TAPE	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
24-WB1-72-Tape *162501880-0070B*	MIDDLE OF WEST WALL OF CHASE 50-109 - DRYWALL SYSTEM GYPSUMBOARD JOINT COMPOUND TAPE	White Fibrous Homogeneous	98% Cellulose	2% Non-fibrous (Other)	None Detected
25-CT2-73 *162501880-0071*	WEST WALL OF CLASSROOM 50-110 - 2X2 AND 4X2 SMOOTH DOTTED AND FISSURED ACT	Gray/White Fibrous Homogeneous	60% Cellulose 20% Min. Wool	15% Perlite 5% Non-fibrous (Other)	None Detected
25-CT2-74 *162501880-0072*	EAST WALL OF CLASSROOM 50-110 - 2X2 AND 4X2 SMOOTH DOTTED AND FISSURED ACT	Gray/White Fibrous Homogeneous	60% Cellulose 20% Min. Wool	15% Perlite 5% Non-fibrous (Other)	None Detected
25-CT2-75 *162501880-0073*	NORTH WALL OF CLASSROOM 49-110 - 2X2 AND 4X2 SMOOTH DOTTED AND FISSURED ACT	Gray Fibrous Homogeneous	60% Cellulose 20% Min. Wool	15% Perlite 5% Non-fibrous (Other)	None Detected

Analyst(s)

Hilary Jarvis (37)
Luke Anderson (78)

Melissa Newkirk

Asbestos Laboratory Manager
or Other Approved Signatory

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Terracon

Asbestos Bulk Sample and Chain of Custody Form

Lab Order ID: 162501880
EMSL

Lab Location: Indianapolis, IN 200188-0

Cedar Rapids: 2640 12th St., SW, Cedar Rapids, IA 52404 (319) 366 8321

Project Name:	IMCC – Electrical Upgrades	**Project Number:**	06247171	**Project Manager:**	Daniel Green
Project Address:	2700 Coral Ridge Avenue	**City/State / Zip:**	Coralville, Iowa	**Email Results To:**	dan.green@terracon.com

Site/Building:

Sample Identification HA – BS Code – Sample #	Sample Location Description	HA General Location	Material Description (Type; Color/Texture)	Quantity (SF, LF, Cubic Ft, Units)	NESHAP Classification[1]	Notes/Physical Condition[2]
01 – WB1 – 01	3 feet north of east 61-142 doorway	1st floor powerhouse freezer, loading dock, and corridors 61-142 and 62-20	Drywall system (drywall and joint compound)		F C1 (C2)	(G) D SD
01 – WB1 – 02	15 feet north of east 61-142 doorway					
01 – WB1 – 03	2nd floor corridor 62-20					
02 – SC7 – 04	Same as sample #01	1st floor powerhouse freezer, loading dock, and corridor 61-142	CMU and Drywall sealant		F C1 (C2)	(G) D SD
02 – SC7 – 05	Same as sample #02					
02 – SC7 – 06	Above main floor biohazard room door					
03 – CT2 – 07	Adjoining southeast corner of central office storage	2nd floor powerhouse corridor 62-20	2'x2' semi-rough ACT		(F) C1 C2	(G) D SD
03 – CT2 – 08	Adjoining east of middle of central office storage					
03 – CT2 – 09	Adjoining northeast corner of central office storage					
04 – WB1 – 10	Third floor Hobby/Craft room east wall	Hobby/Crafts areas in SNU floors 1-3, SNU nurse stations, SNU east and west storage areas, ICN Conference room	Drywall System -Gypsumboard -Joint Compound -Tape		F C1 (C2)	(G) D SD
04 – WB1 – 11	2nd floor SNU northeast corner of Equipment Storage					
04 – WB1 – 12	ICN conference room southeast corner					
05 – CT2 – 13	Same as sample #10	South SNU hallways, south SNU east and west storage areas, North SNU inmate area ceilings	2'x2' smooth pinholed and blotched ACT		(F) C1 C2	(G) D SD
05 – CT2 – 14	Same as sample #11					
05 – CT2 – 15	Same as sample #12					

Sampling Date: 2/3 – 2/5 2025 **Collected by (print):** Jordan Smith **Inspector's Signature:**

Relinquished by: **Date/Time:** 1-7-25 **Received by:** **Date/Time:** 2/12/25 950

Analysis: PLM EPA 600/R-93/116 ☒ PLM 400 Point Count ☒ TEM ☐ Other _____

Turnaround Time (circle): 6 Hrs 24 Hrs 2 Days 3 Days (5 Days) Other _____

Instructions: complete 400 PC (with grav. Reduction prep as warranted) on samples ≤3%

Terracon ARMS: ☒ **Stop Positive:** ☐ **Number of samples:** _____

[1] F = Friable; C1 = Category I: packings, gaskets, asphaltic roofing products, resilient flooring; C2 = Category II Non-Friable: any materials other than Cat. I containing >1% asbestos

[2] G = Good (<1%); D = Damaged (<10% distributed or >25% localized); or SD = Significantly Damaged (>10% distributed or >25% localized)

Terracon

Asbestos Bulk Sample and Chain of Custody Form

Lab Order ID: 1890
EMSL

Cedar Rapids: 2640 12th St., SW, Cedar Rapids, IA 52404 (319) 366 8321

Lab Location: Indianapolis, IN 200188-0

Sample Identification	Sample Location Description	HA General Location	Material Description (Type; Color/Texture)	Quantity (SF, LF, Cubic Ft, Units)	NESHAP[1] Classification	Notes/Physical Condition[2]
HA – BS Code – Sample #						
06 – SC7 – 16	South wall of 51-100	Powerhouse building 1st and 2nd floor ceilings	Pre-cast concrete		F C1 (C2)	(G) D SD
06 – SC7 – 17	South wall of Staging 51-118					
06 – SC7 – 18	Northeast corner of 61-125					
07 – FP1 – 19	Above east man-door	SNU vehicular sallyport	Grey spray on fire-proofing		(F) C1 C2	(G) D SD
07 – FP1 – 20	5-feet east of north man-door					
07 – FP1 – 21	10-feet west of north man-door					
08 – CM1 – 22	Main east/west 1st floor southeast corner corridor 12-20		Grey CMU and mortar		F C1 (C2)	(G) D SD
08 – CM1 – 23	Main east/west first floor adjoining north of room 12-51					
08 – CM1 – 24	Main admin basement in corridor 30-20 south wall					
09 – CN1 – 25	Same as sample #22	Ceilings of 1969 addition above HA-10	Precast concrete		F C1 (C2)	(G) D SD
09 – CN1 – 26	Same as sample #23					
09 – CN1 – 27	Same as sample #24					
10 – CT2 – 28	Same as sample #25	Ceilings of 1969 addition below HA-9	2x2 smooth, dotted, and fissure ACT		(F) C1 C2	(G) D SD
10 – CT2 – 29	Same as sample #26					
10 – CT2 – 30	Same as sample #27					
11 – FP1 – 31	Northeast mechanical room adjoining the kitchen	Northeast mechanical room adjoining the kitchen	Sprayed on fireproofing		(F) C1 C2	(G) D SD
[redacted]						

Terracon

Asbestos Bulk Sample and Chain of Custody Form

Lab Order ID: 1880
EMSL

Cedar Rapids: 2640 12th St., SW, Cedar Rapids, IA 52404 (319) 366 8321

Lab Location: Indianapolis, IN 200188-0

Sample Identification	Sample Location Description	HA General Location	Material Description (Type; Color/Texture)	Quantity (SF, LF, Cubic Ft, Units)	NESHAP[1] Classification	Notes/Physical Condition[2]
HA – BS Code – Sample #						
12 – CM2 – 34	Southeast corner of corridor 7-27	Vestibules and corridors in 1969 additions	Green ceramic block		F C1 C2	G D SD
12 – CM2 – 35	1969 basement corridor 30-20					
12 – CM2 – 36	15-feet south of northeast corner of corridor 12-40					
13 – PL2 – 37	North corner of main admin building wall above check-in	1969 basement and first floor ceilings and walls	Plaster		F C1 C2	G D SD
13 – PL2 – 38	East wall of 1969 addition basement control room					
13 – PL2 – 39	North wall Lobby 3-20					
14 – CT2 – 40	South end of corridor 3-17	1969 basement and first floor ceilings	2'x2' semi-rough and dotted ACT		F C1 C2	G D SD
14 – CT2 – 41	Southwest corner of office 3-31					
14 – CT2 – 42	2nd floor west wall of control corridor 9-86					
15 – WB1 – 43	Elevator equipment room 44 north wall	44, L14, 7-65 in Main, North, and Admin	Drywall system -Gypsumboard -Tape -Joint Compound		F C1 C2	G D SD
15 – WB1 – 44	North wall L-14 machine room					
15 – WB1 – 45	North wall central supply 7-65					
16 – CM1 – 46	North building 1st floor Clerical east middle wall	Walls in north building	CMU and mortar		F C1 C2	G D SD
16 – CM1 – 47	North building 1st floor IN15					
16 – CM1 – 48	North building 1st floor IN12					

Terracon

Asbestos Bulk Sample and Chain of Custody Form

Lab Order ID: 1880
EMSL

Cedar Rapids: 2640 12th St., SW, Cedar Rapids, IA 52404 (319) 366 8321

Lab Location: Indianapolis, IN 200188-0

Sample Identification HA – BS Code – Sample #	Sample Location Description	HA General Location	Material Description (Type; Color/Texture)	Quantity (SF, LF, Cubic Ft, Units)	NESHAP[1] Classification	Notes/Physical Condition[2]
17 – CN1 – 49	Northeast corner of IN13	Ceilings of north building 1st and 2nd foors	Pre-formed concrete		F C1 (C2)	(G) D SD
17 – CN1 – 50	Northeast corner of IN12					
17 – CN1 – 51	North building 1st floor east wall of Clerical					
18 – FC5 – 52	Mechanical equipment 9-72	Main building corridor flooring	White with tan and gray terrazo		F C1 (C2)	(G) D SD
18 – FC5 – 53	South wall corridor 7-67					
18 – FC5 – 54	Exam treatment corridor 7-18					
19 – PL1 – 55	Pass 9-73 west south wall	Main building non-inmate areas	Plaster and skimcoat		F C1 (C2)	(G) D SD
19 – PL1 – 56	Central Supply 7-65 southwest corner					
19 – PL1 – 57	Corridor 7-14 middle of corridor north wall					
20 – CM1 – 58	Toilet shower D134 entrance	R&S/T&V first and second floor walls	CMU and mortar		F C1 (C2)	(G) D SD
20 – CM1 – 59	Southwest corner AD127					
20 – CM1 – 60	Stair D203					
21 – ACT – 61	Northwest corner of Mezzanine D210	Corridors and upper ceiling inmate areas in R&S/T&V	4x2 dotted and fissured acoustical ceiling tile		(F) C1 C2	(G) D SD
21 – ACT – 62	5-feet north of southeast corner of Mezzanine D210					
21 – ACT – 63	Corridor D162 vestibule northwest corner					

Terracon

Asbestos Bulk Sample and Chain of Custody Form

Lab Order ID: 1880
EMSL

Cedar Rapids: 2640 12th St., SW, Cedar Rapids, IA 52404 (319) 366 8321

Lab Location: Indianapolis, IN 200188-0

Sample Identification	Sample Location Description	HA General Location	Material Description (Type; Color/Texture)	Quantity (SF, LF, Cubic Ft, Units)	NESHAP[1] Classification	Notes/Physical Condition[2]
HA – BS Code – Sample #						
22 – WB1 – 64	South end of floor Dayroom D135	R&S/T&V inmate areas upper and lower level soffits adjoining cell doors	Drywall system -Gypsumboard -Joint compound -Tape		F C1 (C2)	(G) D SD
22 – WB1 – 65	Northeast corner of 2nd floor Mezzanine D210					
22 – WB1 – 66	East middle wall of Sleeping Area D211					
23 – CM1 – 67	Northwest corner of Sleeping 50-104	R&S/T&V first and second floor walls	Grey CMU and mortar		F C1 (C2)	(G) D SD
23 – CM1 – 68	Northeast corner Sleeping 50-206					
23 – CM1 – 69	Northeast corner Sleeping 49-101					
24 – WB1 – 70	Southeast corner of Day Room 50-100	R&S/T&V first and second floor soffits adjoining inmate cells	Drywall System -Gypsumboard -Joint Compound -Tape		F C1 (C2)	(G) D SD
24 – WB1 – 71	Adjoining north of Sleeping 50-206					
24 – WB1 – 72	Middle of west wall of Chase 50-109					
25 – CT2 – 73	West wall of classroom 50-110	R&S/T&V first and floor between day rooms	2x2 and 4x2 smooth dotted and fissured ACT		(F) C1 C2	(G) D SD
25 – CT2 – 74	East wall of classroom 50-110					
25 – CT2 – 75	North wall of classroom 49-110					
– –					F C1 C2	G D SD
– –						
– –						

Appendix D: Photographic Documentation

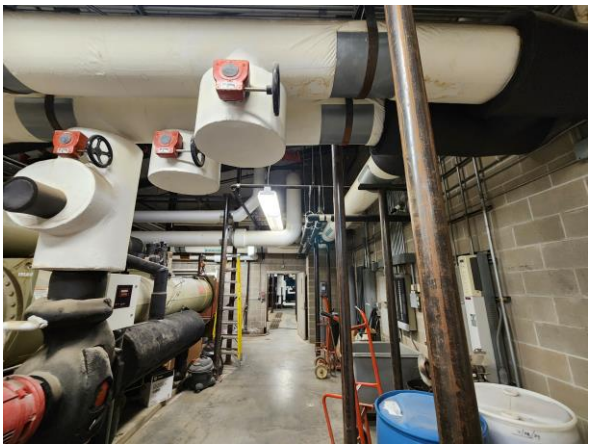

Photo #1 1st floor southern east to west portion of Powerhouse.

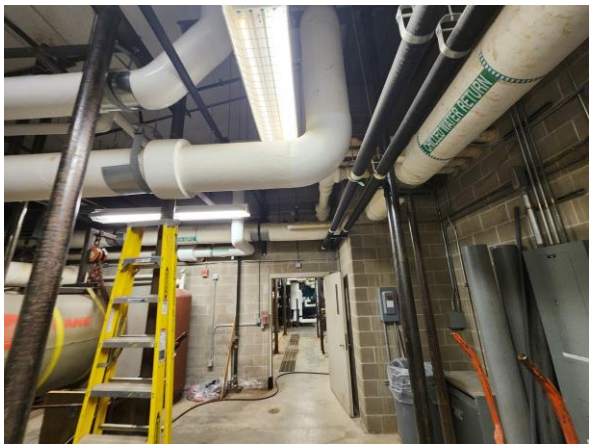

Photo #2 1st floor southern east to west portion of Powerhouse.

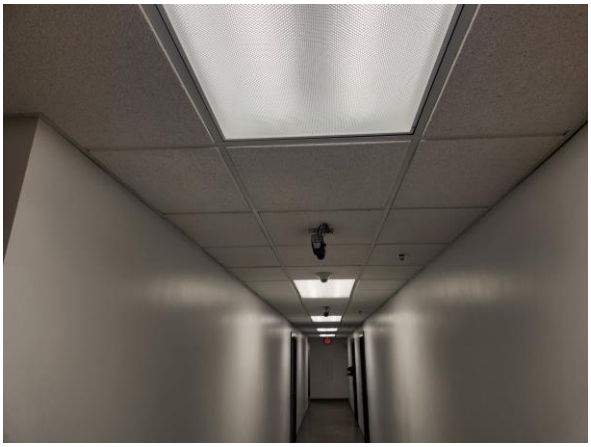

Photo #3 Example of corridor in SNU.

Photo #4 Inmate area in SNU.

Photo #5 Inmate area in SNU.

Photo #6 Inmate area in SNU.

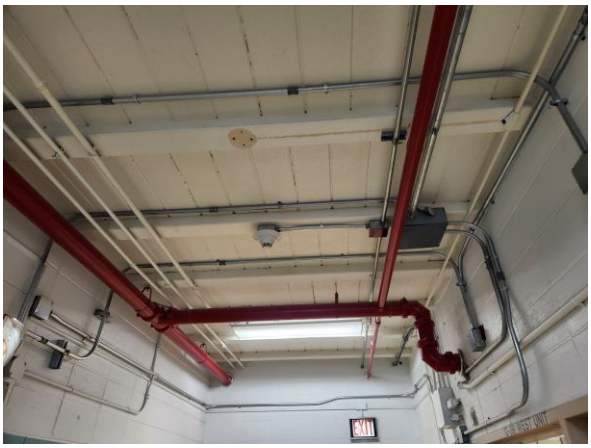

Photo #7 Corridor between SNU and Main East and West.

Photo #8 Kitchen area in Main Building.

Photo #9 Example of electrical panel in Main Building.

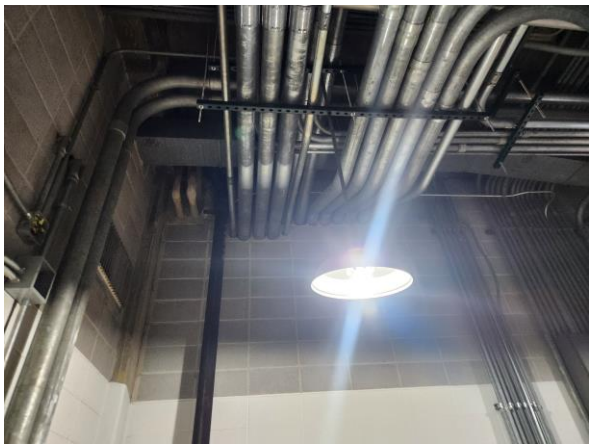

Photo #10 Example of mechanical room utility penetrations in Main Building.

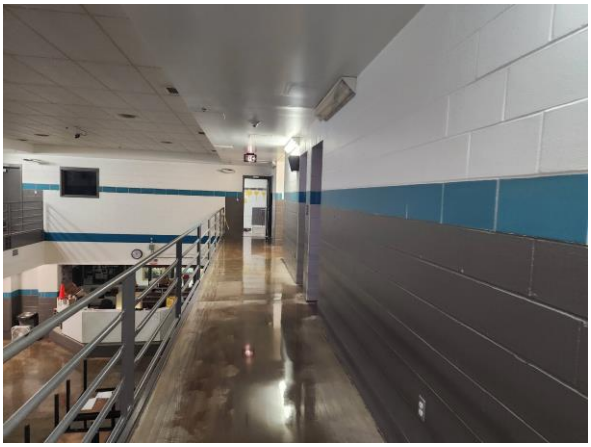

Photo #11 Inmate are in Building R.

Photo #12 Inmate area in Building R.

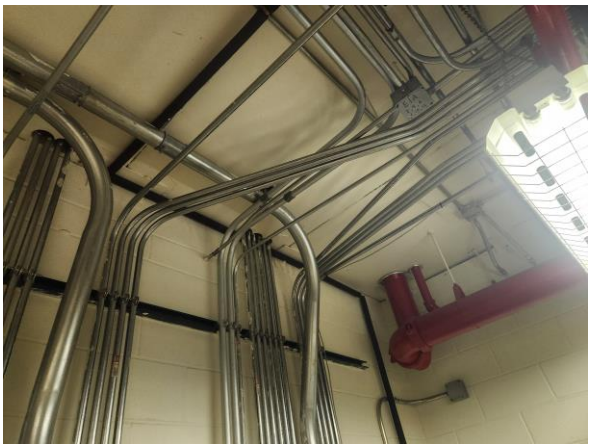

Photo #13 Example of utility runs in Building T.

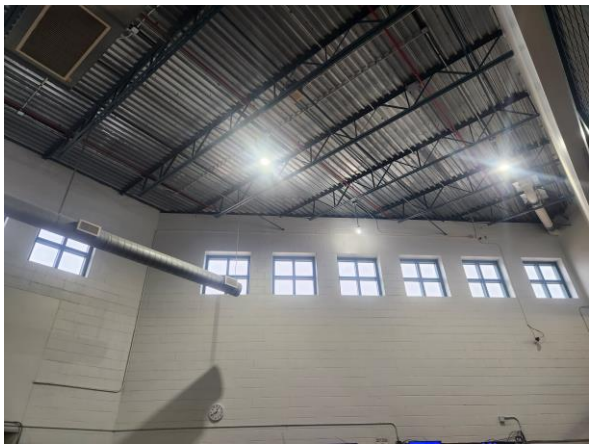

Photo #14 Inmate area in Building T.

Appendix E: Regulatory Overview

ASBESTOS REGULATORY OVERVIEW

In Iowa, asbestos activities are regulated by the Iowa Department of Natural Resources (IDNR) and Iowa Workforce Development (IWD), Division of Labor. IDNR regulates asbestos fiber emissions under Iowa Administrative Code 567 Chapter 23 (IAC 567–23) and asbestos-containing waste disposal under IAC 567–109. IWD regulates occupational exposure to asbestos under IAC 875–10 and asbestos removal and encapsulation activities under IAC 875–155.

IAC 567–23.1(3) adopts the United States Environmental Protection Agency's (USEPA) asbestos NESHAP (40 Code of Federal Regulations (CFR) Part 61, Subpart M) by reference. Subpart M regulates asbestos fiber emissions and asbestos waste disposal practices. It also requires the identification and classification of existing building materials prior to demolition or renovation activity. Under NESHAP, asbestos-containing building materials are classified as friable, Category I nonfriable, or Category II nonfriable ACM. Friable materials are those that, when dry, may be crumbled, pulverized, or reduced to powder by hand pressure. Category I nonfriable ACM includes packings, gaskets, resilient floor coverings, and asphalt roofing products containing more than 1% asbestos. Category II nonfriable ACM are any materials other than Category I nonfriable materials that contain more than 1% asbestos.

Regulated ACM (RACM) must be removed before renovation or demolition activities that will disturb the materials. RACM includes:

- Friable ACM;
- Category I nonfriable ACM that has become friable or will be subjected to drilling, sanding, grinding, cutting, or abrading; and
- Category II nonfriable ACM that could be crumbled, pulverized, or reduced to powder during renovation or demolition activities.

The owner or operator must provide the IDNR and IWD with written notification of planned removal activities at least 10 working days prior to the commencement of asbestos abatement activities. Removal of RACM must be conducted by an Iowa-permitted asbestos abatement contractor.

IAC 875–155 Asbestos Removal and Encapsulation requires that any asbestos-related activity conducted in a public building be performed by personnel licensed or permitted by the IWD. Inspections for ACM must be conducted by IWD-licensed inspectors. Asbestos abatement must be performed by IWD-permitted asbestos abatement contractors. Management plans developed for the in-place management of asbestos-containing materials must be developed by an IWD-licensed management planner. When an abatement project design is prepared, it must be prepared by an IWD-licensed project designer.

IAC 875–10 adopts the Occupational Safety and Health Administration (OSHA) Asbestos standard for construction (29 CFR 1926.1101) by reference. The OSHA standard requires that employee exposure to airborne asbestos fibers be maintained below the permissible exposure limits (PEL) of 0.1 asbestos fiber per cubic centimeter of air (0.1 f/cc) as an 8-hour time-weighted average and 1.0 f/cc as a 30-minute excursion. The OSHA standard classifies construction and maintenance activities that could disturb ACM and specifies work practices and precautions that employers must follow when engaging in each class of regulated work.

LEAD-CONTAINING PAINT REGULATORY OVERVIEW

The Iowa Department of Public Health (IDPH) regulates lead-based paint activities in the State of Iowa. Iowa Administrative Code (IAC) 641, Chapter 70[10], *Lead-Based Paint Activities*, covers how lead professionals should conduct lead activities. The IDPH does not require pre-renovation surveys for LBP in housing.

HUD *Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing* provides information on how to identify LBP and related hazards in housing. Chapter 7, *Lead-Based Paint Inspection*[11], provides specific information relating to the performance of LBP inspections in housing. HUD also does not require pre-renovation surveys for LBP in housing.

USEPA has defined LBP as containing 1.0 mg/cm^2 or 0.5 % by weight. LCP waste from renovation or demolition activities, such as debris, paint chips, dust, and sludges, that exhibit the toxicity characteristic must be managed and disposed as a hazardous waste under RCRA, with the exception of whole-building demolition debris. Whole-building demolition debris is considered a non-hazardous waste with regard to lead. Therefore, sampling/analysis of painted components for lead is not required for disposal as non-hazardous waste. If it is not a whole-building demolition debris, a composite representative sample of the demolition debris must be tested to determine if it is regulated as hazardous waste under 40 CFR 261 Identification and Listing of Hazardous Waste.

IAC 875-10 adopts the OSHA lead standard for construction (29 CFR 1926.62) by reference. For the purpose of the standard, lead includes metallic lead, all inorganic lead compounds, and organic lead soaps. The OSHA standard does not define the amount of lead in paint that constitutes LBP, and it applies to all construction work where an employee may be occupationally exposed to lead. All work related to construction, alteration, or repair (including painting and decorating) is included. The standard applies to any detectable concentration of lead in paint, as even small concentrations of lead can result in unacceptable employee exposures depending upon on the method of removal and other workplace conditions. Under this standard, construction includes, but is not limited to, the following:

- Demolition or salvage of structures where lead or materials containing lead are present
- Removal or encapsulation of materials containing lead
- New construction, alteration, repair, or renovation of structures, substrates, portions containing lead, or materials containing lead
- Installation of products containing lead
- Lead contamination/emergency clean-up
- Transportation, disposal, storage, or containment of lead or materials containing lead on the site or location at which construction activities are performed
- Maintenance operations associated with construction activities described above

[10] Posted at https://idph.iowa.gov/lpp/rules-regulations.

[11] Posted at https://www.hud.gov/program_offices/healthy_homes/lbp/hudguidelines.

REGULATORY OVERVIEW

Employers must assure that no employee will be exposed to lead at concentrations greater than the PEL of 50 micrograms per cubic meter ($\mu g/m^3$) averaged over an eight-hour period without adequate protection. The OSHA standard also establishes an action level of 30 $\mu g/m^3$, which if exceeded, triggers certain requirements, including periodic exposure monitoring and medical monitoring.

MERCURY REGULATORY OVERVIEW

USEPA regulates disposal of mercury-containing fluorescent lights tubes as universal waste under 40 CFR 273. Disposal of mercury from other sources is regulated under 40 CFR 260-262.

OSHA regulates occupational exposure to mercury under 29 CFR 1910.1000 Air Contaminants, Table Z-1 – Limits for Air Contaminants. The PEL for mercury is 0.1 milligrams per cubic meter (mg/m^3) as an 8-hr TWA.

PCB REGULATORY OVERVIEW

USEPA regulates transportation, disposal, and spill cleanup of PCB-containing ballasts under the Toxic Substances Control Act (TSCA), which can be found in 40 CFR 761. Fluorescent light ballasts manufactured prior to 1979 are assumed to contain PCBs unless clearly marked as containing "NO PCB."

OSHA regulates occupational exposure to PCBs under 29 CFR 1910.1000 Air Contaminants, Table Z-1 – Limits for Air Contaminants. The PEL for chlorodiphenyl (42% chlorine) is 1.0 mg/m^3 and for chlorodiphenyl (54% chlorine) is 0.5 mg/m^3 as 8-hr TWAs.

CFC REGULATORY OVERVIEW

USEPA regulates the use, release, and disposal of CFCs and hydrochlorofluorocarbons (HCFCs) under Section 608 of the Clean Air Act. Section 608 prohibits individuals from intentionally venting ozone-depleting refrigerants (including CFCs and HCFCs) and their substitutes (such as HFCs), while maintaining, servicing, repairing, or disposing of air conditioning or refrigeration equipment.

Appendix F: Asbestos Inspector License

WYATT HEISTERKAMP

DOB: 03-07-2001

Issued: 03-07-2001

This person is licensed to perform asbestos work in the State of Iowa. ID card is intended for official use only and must be present on jobsite.

License Type	Number	Expires
INSPECTOR	[redacted]	[redacted]

IOWA

Asbestos

Larry Johnson, Jr.
Labor Commissioner

Appendix E: Regulatory Overview

ASBESTOS REGULATORY OVERVIEW

In Iowa, asbestos activities are regulated by the Iowa Department of Natural Resources (IDNR) and Iowa Workforce Development (IWD), Division of Labor. IDNR regulates asbestos fiber emissions under Iowa Administrative Code 567 Chapter 23 (IAC 567–23) and asbestos-containing waste disposal under IAC 567–109. IWD regulates occupational exposure to asbestos under IAC 875–10 and asbestos removal and encapsulation activities under IAC 875–155.

IAC 567–23.1(3) adopts the United States Environmental Protection Agency's (USEPA) asbestos NESHAP (40 Code of Federal Regulations (CFR) Part 61, Subpart M) by reference. Subpart M regulates asbestos fiber emissions and asbestos waste disposal practices. It also requires the identification and classification of existing building materials prior to demolition or renovation activity. Under NESHAP, asbestos-containing building materials are classified as friable, Category I nonfriable, or Category II nonfriable ACM. Friable materials are those that, when dry, may be crumbled, pulverized, or reduced to powder by hand pressure. Category I nonfriable ACM includes packings, gaskets, resilient floor coverings, and asphalt roofing products containing more than 1% asbestos. Category II nonfriable ACM are any materials other than Category I nonfriable materials that contain more than 1% asbestos.

Regulated ACM (RACM) must be removed before renovation or demolition activities that will disturb the materials. RACM includes:

- Friable ACM;
- Category I nonfriable ACM that has become friable or will be subjected to drilling, sanding, grinding, cutting, or abrading; and
- Category II nonfriable ACM that could be crumbled, pulverized, or reduced to powder during renovation or demolition activities.

The owner or operator must provide the IDNR and IWD with written notification of planned removal activities at least 10 working days prior to the commencement of asbestos abatement activities. Removal of RACM must be conducted by an Iowa-permitted asbestos abatement contractor.

IAC 875–155 Asbestos Removal and Encapsulation requires that any asbestos-related activity conducted in a public building be performed by personnel licensed or permitted by the IWD. Inspections for ACM must be conducted by IWD-licensed inspectors. Asbestos abatement must be performed by IWD-permitted asbestos abatement contractors. Management plans developed for the in-place management of asbestos-containing materials must be developed by an IWD-licensed management planner. When an abatement project design is prepared, it must be prepared by an IWD-licensed project designer.

IAC 875–10 adopts the Occupational Safety and Health Administration (OSHA) Asbestos standard for construction (29 CFR 1926.1101) by reference. The OSHA standard requires that employee exposure to airborne asbestos fibers be maintained below the permissible exposure limits (PEL) of 0.1 asbestos fiber per cubic centimeter of air (0.1 f/cc) as an 8-hour time-weighted average and 1.0 f/cc as a 30-

minute excursion. The OSHA standard classifies construction and maintenance activities that could disturb ACM and specifies work practices and precautions that employers must follow when engaging in each class of regulated work.

LEAD-CONTAINING PAINT REGULATORY OVERVIEW

The Iowa Department of Public Health (IDPH) regulates lead-based paint activities in the State of Iowa. Iowa Administrative Code (IAC) 641, Chapter 70[1], *Lead-Based Paint Activities*, covers how lead professionals should conduct lead activities. The IDPH does not require pre-renovation surveys for LBP in housing.

HUD *Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing* provides information on how to identify LBP and related hazards in housing. Chapter 7, *Lead-Based Paint Inspection*[2], provides specific information relating to the performance of LBP inspections in housing. HUD also does not require pre-renovation surveys for LBP in housing.

USEPA has defined LBP as containing 1.0 mg/cm^2 or 0.5 % by weight. LCP waste from renovation or demolition activities, such as debris, paint chips, dust, and sludges, that exhibit the toxicity characteristic must be managed and disposed as a hazardous waste under RCRA, with the exception of whole-building demolition debris. Whole-building demolition debris is considered a non-hazardous waste with regard to lead. Therefore, sampling/analysis of painted components for lead is not required for disposal as non-hazardous waste. If it is not a whole-building demolition debris, a composite representative sample of the demolition debris must be tested to determine if it is regulated as hazardous waste under 40 CFR 261 Identification and Listing of Hazardous Waste.

IAC 875-10 adopts the OSHA lead standard for construction (29 CFR 1926.62) by reference. For the purpose of the standard, lead includes metallic lead, all inorganic lead compounds, and organic lead soaps. The OSHA standard does not define the amount of lead in paint that constitutes LBP, and it applies to all construction work where an employee may be occupationally exposed to lead. All work related to construction, alteration, or repair (including painting and decorating) is included. The standard applies to any detectable concentration of lead in paint, as even small concentrations of lead can result in unacceptable employee exposures depending upon on the method of removal and other workplace conditions. Under this standard, construction includes, but is not limited to, the following:

- Demolition or salvage of structures where lead or materials containing lead are present
- Removal or encapsulation of materials containing lead

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[1] Posted at https://idph.iowa.gov/lpp/rules-regulations.

[2] Posted at https://www.hud.gov/program_offices/healthy_homes/lbp/hudguidelines.

- New construction, alteration, repair, or renovation of structures, substrates, portions containing lead, or materials containing lead
- Installation of products containing lead
- Lead contamination/emergency clean-up
- Transportation, disposal, storage, or containment of lead or materials containing lead on the site or location at which construction activities are performed
- Maintenance operations associated with construction activities described above

Employers must assure that no employee will be exposed to lead at concentrations greater than the PEL of 50 micrograms per cubic meter ($\mu g/m^3$) averaged over an eight-hour period without adequate protection. The OSHA standard also establishes an action level of 30 $\mu g/m^3$, which if exceeded, triggers certain requirements, including periodic exposure monitoring and medical monitoring.

Appendix F: Asbestos Inspector License

JORDAN SMITH

DOB: 04-03-1988

Issued: 03-14-2025

This person is licensed to perform asbestos work in the State of Iowa. ID card is intended for official use only and must be present on jobsite.

License Type	Number	Expires
INSPECTOR	25-13147	01-24-2026
SUPERVISOR	23-10182	12-29-2023

IOWA

Asbestos

Larry Johnson, Jr.
Labor Commissione

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. 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

SECTION 00 4116

BID FORM

The Bid Form must be submitted online through the State's IMPACS Electronic Procurement System.

RFB #944500-01

BID FORM for CONSTRUCTION CONTRACT
for
Iowa Medical Classification Center
2700 Coral Ridge Avenue, Coralville, Iowa 52241
Project 9445.00

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

The following information is to be completed and submitted with your bid..

1. Bid Form - Completed and Signed (to be uploaded with bid submission)
2. Non Discrimination Clause Information
3. Contractor Targeted Small Business Enterprise Pre-Bid Contract Information
4. Bid Security – 5% of total Bid amount (to be uploaded with bid submission)

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 July 31, 2025, 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: This project consists of a comprehensive removal and replacement of the existing fire alarm systems across the entire campus. The scope of work includes the complete demolition of outdated fire alarm equipment, followed by the installation of new, code-compliant systems designed to meet current life safety standards. This includes, but is not limited to, all fire alarm control panels, initiating devices, notification appliances, control modules, power supplies, and all associated accessories required for a fully functional system. Additionally, the project will encompass the installation and extension of conduit, cabling, and other pathway infrastructure necessary to support added devices required for code compliance. The work shall ensure full integration with existing building systems and provide reliable campus-wide coverage.

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

_____

_____ Dollars

($_____).

ALTERNATES:

ALT 01

Description: Inclusion of a new fire alarm system in the Warehouse Building; consisting of the installation of a new panel, breaker, pull stations, various types of detectors and notification devices by utilizing new EMT conduit. This new system will be tied back to master controls utilizing new fiber through an existing pathway.

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

_____

_____ Dollars

($_____).

ALT 02

Description: Replacement of the existing pre-action system in the Powerhouse; including but not limited to a new panel and wiring, notification devices and a new local smoke detector within 5’ of the panel. Additional fire alarm devices and system integration may be included and provided by the contractor as a suitable alternative to the pre-action system & detection.

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

REQUIRED: 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

SECTION 00 4116.01

NON-DISCRIMINATION CLAUSE

This Section is for informational purposes only. All information will be submitted online through the State's IMPACS Electronic Procurement System.

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 certify and 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.

PART 2 - PRODUCTS – NOT USED

PART 3 - EXECUTION – NOT USED

END OF SECTION

SECTION 00 4116.02

TARGETED SMALL BUSINESS INFORMATION

This Section is for informational purposes only. All information will be submitted online through the State's IMPACS Electronic Procurement System.

PART 1 - GENERAL

1.01 TARGETED SMALL BUSINESS INFORMATION

A. Subcontractor Targeted Small Business Enterprise Pre-Bid Contact Information, including subcontractor and dollar amount to be subcontracted, is to accompany the Bid submission. 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.

B. Search the Targeted Small Business Directory for certified State of Iowa Targeted Small Businesses.

PART 2 - PRODUCTS – NOT USED

PART 3 - EXECUTION – NOT USED

END OF SECTION

IOWA DEPARTMENT OF ADMINISTRATIVE SERVICES
SUBCONTRACTOR
TARGETED SMALL BUSINESS ENTERPRISE
PRE-BID CONTRACT INFORMATION

CONTRACTOR	**BID NO.**	**PAGE #**

(to be completed by bidder)

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.

TABLE OF INFORMATION SHOWING BIDDER'S PRE-BID TARGETED SMALL BUSINESS ENTERPRISE CONTACTS

SUBCONTRACTOR	TSB	DATES CONTACTED	QUOTES RECEIVED		QUOTATION USED IN BID	
			YES/NO	DATES	YES/NO	DOLLAR AMOUNT PROPOSED TO BE SUBCONTRACTED

Total dollar amount proposed to be subcontracted to TSB on this project $ _____
List items to be subcontracted. *(If more space is needed, use reverse side.)*

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.

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)

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

END OF SECTION

ConsensusDocs 802

STANDARD FORM OF AGREEMENT BETWEEN OWNER AND TRADE CONTRACTOR

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

TABLE OF ARTICLES

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 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 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 constructionmeans, 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 Contactor'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 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 Contract 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 [X] 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. f 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 be 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 propertyinsurance,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.)

[X] 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.

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,

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.

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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,

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: IMCC 2700 Coral Ridge Avenue, Coralville, Iowa 52241
B. DAS Project #: 9445.00
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: Mac McKeever, The Samuels Group, 2929 Westown Parkway Suite 200, West Des Moines, Iowa 50266

1.03 PROJECT SUMMARY

1. The project includes a comprehensive removal and replacement of the existing fire alarm systems across the entire campus. The scope of work includes the complete demolition of outdated fire alarm equipment, followed by the installation of new, code-compliant systems designed to meet current life safety standards. This includes, but is not limited to, all fire alarm control panels, initiating devices, notification appliances, control modules, power supplies, and all associated accessories required for a fully functional system. Additionally, the project will encompass the installation and extension of conduit, cabling, and other pathway infrastructure necessary to support added devices required for code compliance. The work shall ensure full integration with existing building systems and provide reliable campus-wide coverage.

B. Target date to provide substantial completion is April 22, 2026.

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. Contractor to provide dust and debris control as necessary to protect adjacent areas of construction.
9. Contractor to provide cleaning of the work area at minimum on a daily basis.
10. All tools shall be required to be placed under tool control with the facility as they enter 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 REMAIL ON SITE UNTIL SUCH LISTED ITEM IS RECOVERED.
11. Contractor personnel shall immediately report lost or missing tools.
12. 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 workday.

1.05 WORK HOUR RESTRICTIONS

A. Work hours are from 07:00 AM to 03:00 PM, Monday through Friday unless arrangements are made in advance.

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.

D. Coordinate schedule of work with facility and construction manager. Work areas shall be scheduled at a minimum of seven days in advance.
E. Coordinate with the facility for location of material storage. Contractor is responsible for securing and protection of all stored materials.

1.07 OWNER OCCUPANCY

A. Owner intends to occupy the Project throughout construction.
B. Cooperate with Owner to minimize conflict and to facilitate Owner's operations.
C. Schedule the Work to accommodate Owner occupancy.
D. Coordinate schedule of work with facility and construction manager. Work areas shall be scheduled at a minimum of seven days in advance.

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. Contractor shall provide all OSHA required PPE for the project and their personnel.

1.09 BID PACKAGE INSTRUCTIONS

A. **Bid Package #01** – Fire Alarm System Replacement: Trade Contractor shall include all of the following, but not limited to, as part of the contract:
   1. The scope of the project includes a comprehensive removal and replacement of the existing fire alarm systems across the entire campus. The scope of work includes the complete demolition of outdated fire alarm equipment, followed by the installation of new, code-compliant systems designed to meet current life safety standards. This includes, but is not limited to, all fire alarm control panels, initiating devices, notification appliances, control modules, power supplies, and all associated accessories required for a fully

functional system. Additionally, the project will encompass the installation and extension of conduit, cabling, and other pathway infrastructure necessary to support added devices required for code compliance. The work shall ensure full integration with existing building systems and provide reliable campus-wide coverage.

2. Includes ALL specifications.
3. Includes ALL drawing sheets.
4. Includes clean up of the work area at a minimum daily. Contractor to provide clean up of the work area at minimum daily.
5. Includes scheduling of all deliveries of materials to the project site. Includes all labor and equipment to load and unload materials to the construction site.
6. Includes all costs for removal and disposal of demolished equipment and materials.

B. **Alternate #01 –** New Fire Alarm System in Warehouse. Trade Contractor shall include all of the following, but not limited to, as part of the contract:

1. Inclusion of a new fire alarm system in the Warehouse Building; consisting of the installation of a new panel, breaker, pull stations, various types of detectors and notification devices by utilizing new EMT conduit. This new system will be tied back to master controls utilizing new fiber through an existing pathway.
2. Includes ALL specifications.
3. Includes ALL drawing sheets.
4. Includes clean up of the work area at a minimum daily. Contractor to provide clean up of the work area at minimum daily.
5. Includes scheduling of all deliveries of materials to the project site. Includes all labor and equipment to load and unload materials to the construction site.
6. Includes all costs for removal and disposal of demolished equipment and materials.
7. Coordination: Revise or adjust affected adjacent work as necessary to completely integrate work of the alternate into Project.
8. 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.
9. Execute accepted alternates under the same conditions as other work of the Contract.

C. **Alternate #02 –** Powerhouse Pre-Action System Replacement. Trade Contractor shall include all of the following, but not limited to, as part of the contract:

1. Replacement of the existing pre-action system in the Powerhouse; including but not limited to a new panel and wiring, notification devices and a new local smoke detector within 5’ of the panel. Additional fire alarm devices and system integration may be included and provided by the contractor as a suitable alternative to the pre-action system & detection.
2. Includes ALL specifications.
3. Includes ALL drawing sheets.
4. Includes clean up of the work area at a minimum daily. Contractor to provide clean up of the work area at minimum daily.
5. Includes scheduling of all deliveries of materials to the project site. Includes all labor and equipment to load and unload materials to the construction site.
6. Includes all costs for removal and disposal of demolished equipment and materials.
7. Coordination: Revise or adjust affected adjacent work as necessary to completely integrate work of the alternate into Project.
8. 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.
9. Execute accepted alternates under the same conditions as other work of the Contract.

D. **Work Performed by Owner:** IMCC will perform the following work items:
   1. No items noted
E. **Owner Furnished Products:** IMCC will provide the following materials for installation by the contractor:
   1. No items noted

PART 2 - PRODUCTS – NOT USED

PART 3 - EXECUTION – NOT USED

END OF SECTION

SECTION 01 2500

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, a substitute product will be considered when written request is received by the date and time identified in Section 00 1113 NOTICE TO BIDDERS. Substitution requests will be considered for all products, even if the specification does not include a statement such as “or equal,” “equal to,” “equivalent to,” or “basis of design,” unless noted otherwise.
B. References in the Bidding Documents to brand or trade names are intended to illustrate the general characteristics of the item and not to limit competition unless noted otherwise.
C. 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.
D. Substitution requests received after the specified date 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).
E. 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.
F. 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.
G. 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.
B. Substitution requests shall be emailed to the Issuing Officer at the email address provided in Instructions to Bidders Section 1.04.

END OF SECTION

DOC IMCC Fire Alarm System Replacement
Coralville, Iowa
DAS#9445.00
RFB944500-01

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

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

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~~

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 CONSENSUSDOCS 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 Contactor 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 Procore 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, labor cost and subcontractor cost for each building separately for the base bid and all accepted alternates. Identify site mobilization, bonds and insurance and include a line item for closeout paperwork for a value of no less than 1% of the total contract value or $1,000, whichever is greater.
   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 30th of any year needs to be submitted by July 15th 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. 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 the Certificate of Substantial Completion has been fully executed, submit an Application for Payment showing 100 percent completion for the portion of the Work claimed as substantially complete, not including the closeout paperwork line item.
   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 the full amount of the line item for closeout paperwork, plus such other retainage as the engineer shall determine for all incomplete work and unsettled claims will be authorized. The closeout paperwork line item may only be billed once the certificate of final completion has been fully executed.

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

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 Procore:
   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 Procore 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 Procore.
   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 Procore, 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 #

END OF SECTION

SECTION 01 3100.01

WEB BASED CONSTRUCTION MANAGEMENT

PART 1 - GENERAL

1.01 DESCRIPTION

A. The Owner and Contractor shall utilize **Procore Technologies, Inc. Procore** system for electronic submittal of all data and documents (unless specified otherwise by the owner's representative) throughout the duration of the Contract. **Procore** is a web-based electronic media site that is hosted by **Procore Technologies, Inc.**, utilizing their **Procore** web solution. **Procore** 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. **Procore** 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. **Procore** is a registered trademark of **Procore Technologies, Inc.**

1.02 USER ACCESS LIMITATIONS

A. The Owner's Representative/Construction Manager will control the Contractor's access to **Procore** 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 **Procore** through the Contractor. Entry of information exchanged and transferred between the Contractor and its sub-contractors and suppliers on **Procore** 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 **Procore** 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 **Procore** 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

Procore system as recommended by **Procore Technologies, Inc.** to access and utilize **Procore**. As recommendations are modified by **Procore**, 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 **Procore** 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. **Procore** 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 **Procore** 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 **Procore** to the maximum extent possible. If a form does not exist in **Procore** 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 **Procore** (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 **Procore** 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 **Procore.**

1.06 CONNECTIVITY PROBLEMS

A. **Procore** 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. **Procore** 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 **Procore** 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 **Procore** 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 **Procore** 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. **Procore** project management application (no equal) Provided by Procore Technologies, Inc. www.**Procore**.com

PART 3 - EXECUTION

3.01 PROCORE UTILIZATION

A. **Procore** 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 **Procore** 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 **Procore** 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 **Procore** 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 **Procore** 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 **Procore**. 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 **Procore** 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 **Procore** 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 **Procore.** Supporting material for Pay Applications and Change Requests shall be submitted on **Procore** 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 Procore, 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 Procore.
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 Procore.

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

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 Procore. 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 Procore.

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. Telephone Service
C. Removal of Utilities, Facilities, and Controls
D. Temporary Facilities
E. Equipment
F. Vehicular Access and Parking
G. Traffic Regulation
H. Barriers
I. 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 TELEPHONE SERVICE

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

1.04 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.

2.02 EQUIPMENT

A. Fire Extinguishers: Portable, UL rated, with class and extinguishing agent as required by locations and classes of fire exposures.

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 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

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, with or without a provision for substitutions: Use a product of one of the manufacturers named and meeting specifications or submit a request for substitution for any manufacturer not named by the date specified in this project manual. Substitution requests shall be emailed to the Issuing Officer at the email address provided in Instructions to Bidders Section 1.04.

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

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 Procore.
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 Procore.
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 be 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 Procore 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 Procore 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 Procore.

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 Procore.

END OF SECTION

Substantial Completion Project Checklist

Date: _____

DAS Project Number: _____
Project Title: _____
Location: _____
Contractor: _____

In order to process the 99% payment (100% pay app less closeout and retainage) on a Capital Project, the Department of Administrative Services needs the following information. Please complete this form and obtain the necessary documents.

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

Boiler Inspection	❑ **Yes**	❑ **No**	❑ **N/A**
Water Heater Inspection	❑ **Yes**	❑ **No**	❑ **N/A**
Energy Code Inspection	❑ **Yes**	❑ **No**	❑ **N/A**
Building Code Inspection	❑ **Yes**	❑ **No**	❑ **N/A**
Electrical Inspection	❑ **Yes**	❑ **No**	❑ **N/A**
Elevator Inspection	❑ **Yes**	❑ **No**	❑ **N/A**
Other: _____	❑ **Yes**	❑ **No**	❑ **N/A**

❑ **Occupancy Permit if applicable**

❑ **Test and Balance has been performed**

❑ **Certificate of Substantial Completion in Procore (Consensus Docs 814)**

Are there any disputes with the above mentioned vendor which need resolution?
❑ **Yes (provide description below)** ❑ **No**

_____

_____

Can payment (less closeout and retainage) be released? ❑ **Yes** ❑ **No**

Final Completion Project Checklist

Date: _____

DAS Project Number: _____
Project Title: _____
Location: _____
Contractor: _____

In order to process the 100% payment and Retainage payment on a Capital Project, the Department of Administrative Services needs the following information. Please complete this form and obtain the necessary documents.

Have all Warranties been received? ❑ **Yes** ❑ **No**

Have the Operations and Maintenance Manuals been received? ❑ **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 Procore? ❑ **Yes** ❑ **No**

Have electronic drawing/specification files been transferred to DAS? ❑ **Yes** ❑ **No**

Have all Test & Balance reports been received? ❑ **Yes** ❑ **No**

Have all punchlist items been corrected? ❑ **Yes** ❑ **No**

❑ **573 Notification** *(To be obtained from the general contractor):* Copy of general contractor's notification of application for retainage to all subcontractors and suppliers. General contractor must follow IAC 26 section 23.13.2.

❑ **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 in Procore (Consensus Docs 815)**

Are there any disputes with the above mentioned vendor which need resolution?
❑ **Yes (provide description below)** ❑ **No**

_____

_____

Can 100% payment and retainage payment be released? ❑ Yes ❑ No

SECTION 07 8400
FIRESTOPPING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Firestopping systems.

B. Firestopping of joints and penetrations in fire resistance rated and smoke resistant assemblies. Install in all wall penetrations throughout building.

1.02 REFERENCE STANDARDS

A. ASTM E119 - Standard Test Methods for Fire Tests of Building Construction and Materials.

B. ASTM E814 - Standard Test Method for Fire Tests of Penetration Firestop Systems.

C. ASTM E2174 - Standard Practice for On-Site Inspection of Installed Firestop Systems.

D. ASTM E2393 - Standard Practice for On-Site Inspection of Installed Fire Resistive Joint Systems and Perimeter Fire Barriers.

E. ASTM E2837 - Standard Test Method for Determining the Fire Resistance of Continuity Head-of-Wall Joint Systems Installed between Rated Wall Assemblies and Nonrated Horizontal Assemblies.

F. ITS (DIR) - Directory of Listed Products.

G. FM 4991 - Approval Standard of Firestop Contractors.

H. FM (AG) - FM Approval Guide.

I. UL 1479 - Standard for Fire Tests of Penetration Firestops.

J. UL (DIR) - Online Certifications Directory.

K. UL (FRD) - Fire Resistance Directory.

1.03 SUBMITTALS

A. Product Data: Provide data on product characteristics, performance ratings, and limitations.

B. Manufacturer's Installation Instructions: Indicate preparation and installation instructions.

1.04 FIELD CONDITIONS

A. Comply with firestopping manufacturer's recommendations for temperature and conditions during and after installation; maintain minimum temperature before, during, and for three days after installation of materials.

B. Provide ventilation in areas where solvent-cured materials are being installed.

PART 2 PRODUCTS

2.01 MATERIALS

A. Firestopping Materials: Any materials meeting requirements.

B. Primers, Sleeves, Forms, Insulation, Packing, Stuffing, and Accessories: Provide type of materials as required for tested firestopping assembly.

C. Fire Ratings: Refer to drawings for required systems and ratings.

2.02 FIRESTOPPING PENETRATIONS THROUGH CONCRETE AND CONCRETE MASONRY CONSTRUCTION

A. Penetrations Through Floors or Walls By:
   1. Uninsulated Non-Metallic Pipe, Conduit, and Tubing:
      a. 2 Hour Construction: UL System C-AJ-2167; Hilti FS-ONE MAX Intumescent Firestop Sealant or engineer pre-approved equal.

b. 2 Hour Construction: UL System C-AJ-2106; Specified Technologies Inc. SSW wrap strips or engineer pre-approved equal.
c. 2 Hour Construction: UL System C-AJ-2282; Specified Technologies Inc. SSW wrap strips or engineer pre-approved equal.

2.03 FIRESTOPPING PENETRATIONS THROUGH GYPSUM BOARD WALLS

A. Penetrations By:
1. Uninsulated Metallic Pipe, Conduit, and Tubing:
a. 2 Hour Construction: UL System W-L-1033; Specified Technologies Inc. SIL silicone sealant or engineer pre-approved equal.
b. 2 Hour Construction: UL System W-L-1049; Specified Technologies Inc. SSS Intumescent Firestop Sealant or engineer pre-approved equal.
c. 2 Hour Construction: UL System W-L-1090; Specified Technologies Inc. LC Endothermic Firestop Sealant or engineer pre-approved equal.
d. 2 Hour Construction: UL System W-L-1054; Hilti FS-ONE MAX Intumescent Firestop Sealant or engineer pre-approved equal.
e. 2 Hour Construction: UL System W-L-1164; Hilti FS-ONE MAX Intumescent Firestop Sealant or engineer pre-approved equal.
f. 2 Hour Construction: UL System W-L-1222; Specified Technologies Inc. LCI Intumescent Firestop Sealant or engineer pre-approved equal.

2.04 FIRESTOPPING SYSTEMS

A. Firestopping: Any material meeting requirements.
1. Fire Ratings: Use system that is listed by FM (AG), ITS (DIR), or UL (FRD) and tested in accordance with ASTM E814, ASTM E119, or UL 1479 with F Rating equal to fire rating of penetrated assembly and minimum T Rating Equal to F Rating and in compliance with other specified requirements.
2. Fire Ratings: See drawings for required systems and ratings.

B. Firestopping at Uninsulated Metallic Pipe and Conduit Penetrations, of diameter 4 inches (100 mm) or less: Caulk or putty.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify openings are ready to receive the work of this section.

3.02 PREPARATION

A. Clean substrate surfaces of dirt, dust, grease, oil, loose material, or other materials that could adversely affect bond of firestopping material.

B. Remove incompatible materials that could adversely affect bond.

C. Install backing materials to prevent liquid material from leakage.

3.03 INSTALLATION

A. Install materials in manner described in fire test report and in accordance with manufacturer's instructions, completely closing openings.

3.04 CLEANING

A. Clean adjacent surfaces of firestopping materials.

3.05 PROTECTION

A. Protect adjacent surfaces from damage by material installation.

END OF SECTION

SECTION 26 0500
COMMON WORK RESULTS FOR ELECTRICAL

PART 1 GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract apply to this Section.

1.02 SUMMARY

A. Section Includes:
1. Basic Requirements.
2. Detailed Requirements.
3. Demolition Requirements.
4. Coordination.
5. Quality Assurance.
6. Codes, Ordinances, & Permits.
7. Common requirements for electrical installation.
8. Painting.
9. Cleaning & Rubbish

1.03 SUBMITTALS

A. Shop Drawings:
1. Submit shop drawings, wiring diagrams, and descriptive literature on all equipment furnished in this contract. Contractor shall “approve” shop drawings as specified in Division 1 prior to submitting to Engineer for approval. Shop drawing submittals shall comply with Division 1 requirements.
2. Make submittals as soon as practical after the signing of the contract. Shipment shall not be released until drawings and literature have been finally approved.
3. Shop drawings shall be checked by the Contractor for shape, dimensions, and details of attachment to the construction before submittal. Submitted shop drawings will be presumed to have been so checked by the Contractor.
4. The literature shall be complete, giving materials, gauges, weights, finishes, etc.
5. Number of copies required is the number of copies the Contractor desires returned, or the quantity listed in Division 1, whichever is greater.
6. Wiring diagrams shall be furnished for all communication and control systems under this contract.

B. Test reports: Submit written installation test reports for review and approval immediately after testing has been satisfactorily completed.

C. Acceptance certificates: Submit written manufacturer, testing agency and/or Code authority acceptance certificates with project closeout documentation.

D. Warranty: Submit a written warranty statement detailing all system and equipment warranties. Warranties shall be signed by Submittal section and are not required for this Section.

E. Operation & Maintenance Instructions:
1. Refer to Division 1 for submittal and training requirements.
2. Furnish approved operation and maintenance instruction booklets covering each listed item of equipment installed under this contract. These booklets shall provide complete instructions on the proper operation, use and periodic maintenance, together with the source of replacement parts and service for the item of equipment covered.
3. Operation and maintenance manuals shall include copies of test reports, acceptance certificates and warranty information.
4. After final acceptance of all work and occupancy of the building, the Contractor shall have on the job, a qualified representative to make final adjustments of electrical systems and

to instruct the Owner's representative in operating procedures, adjustment, and maintenance of system components, and to acquaint the Owner's representative with locations and functions of circuit breakers, fuses, switches, control devices, etc.

F. Record Drawings:
   1. Refer to Division 1 for submittal requirements.
   2. Record actual locations of equipment, devices, routing of conduits and locations of pull boxes for the following facilities:
      a. All branch circuit wiring
      b. Empty conduits for use by others
   3. The information shall be neatly marked and the prints delivered to the Architect.

G. Contractor's Warranty:
   1. All work shall be warranted to be free of defects and to function properly for one year from the date of substantial completion. Defects appearing within the warranty period shall be repaired to the satisfaction of the Architect/Engineer. Refer to Division 1 for additional requirements.
   2. The warranty shall not obligate the Contractor for failure resulting from accident or from improper operation or care on the part of the Owner.

1.04 BASIC REQUIREMENTS

A. Discrepancies: Whenever a discrepancy or inconsistency exists between related information indicated on the contract drawings and/or specifications (such as differences between product descriptions and catalog numbers) this contractor shall obtain additional clarification and direction from the Architect/Engineer before proceeding.

B. Deficiencies: The Contractor and subcontractors shall resolve all known deficiencies and inadvertent omissions, including non-compliance with applicable codes, with the Architect/Engineer prior to ordering materials or proceeding with the work. Any work performed prior to receipt of instruction from the Architect/Engineer will be done so at the Contractor’s risk.

C. Manufacturer’s Catalog Numbers: Product series, model, or catalog numbers, whether indicated on drawings or specifications, shall not be considered complete. This Contractor shall not order any product based solely upon the stated catalog number. Furnish products including accessories and options necessary to match the full product description and its intended purpose and application based on all information available from the contract documents.

1.05 DETAILED REQUIREMENTS

A. Equipment and material specifications are minimum general requirements.

B. In cases where construction requirements and/or special features not mentioned are stated in subsequent sections, on the drawings, or by State Code, the higher standard shall apply.

C. Coordinate rough-in work and other electrical provisions for temperature sensors, CO2 sensors, humidistats, thermostats, and other wall-mounted BMS wired devices shown on the mechanical drawings. Refer to the mechanical plans and the mechanical symbols list to identify such items. Install a double-gang junction box with a single-gang plaster ring with ¾-inch conduit to above accessible ceiling, unless otherwise indicated on mechanical drawings or specifications. Coordinate exact requirements with the contractor providing the wired device.

D. Electrical installations shall not hinder the regular maintenance of or replacement of mechanical equipment. Conduit and cable trays shall not be installed beneath suspended mechanical units. Coordinate and plan installations.

1.06 DEMOLITION REQUIREMENTS

A. A site visit will not be mandatory for a bid submittal.

B. Remove, relocate, and extend existing installations to accommodate new construction on existing project site.

C. Existing unused wiring shall be removed under this contract. Unused wiring shall be regarded as scrap materials to be recycled by this Contactor. Scrap value shall be determined by the Contractor and accounted for in the Contractor's bid. The Owner reserves the right to identify which items shall be salvaged-and, thus, carefully removed by this Contractor and placed in storage on site as directed by the Owner. The Contractor shall be responsible for the proper disposal of all demolished materials that the Owner does not want to salvage.

D. Verify that abandoned wiring and equipment serve only abandoned equipment or facilities. Extend conduit and wire to facilities, equipment, light poles, etc. that remain in operation. Extension of conduit and wire to equipment shall be compatible with the surrounding area.
   1. Maintain access to existing electrical installations that remain active. Modify installation or provide access panel and/or junction boxes as appropriate.
   2. Remove exposed abandoned conduit and raceway, including abandoned conduit and raceway above accessible ceiling finishes. Cut raceway flush with walls and floors, and patch surfaces. Remove all associated clamps, hangers, supports, etc. associated with raceway removal.
   3. Disconnect and remove electrical devices and equipment serving utilization equipment that has been removed.
   4. Disconnect and remove abandoned luminaires. Remove brackets, stems, hangers, and other accessories.

1.07 COORDINATION

A. Coordinate arrangement, mounting, and support of electrical equipment:
   1. To allow maximum possible headroom unless specific mounting heights that reduce headroom are indicated.
   2. To provide for ease of disconnecting the equipment with minimum interference to other installations.
   3. To allow right of way for piping and conduit installed at required slope.
   4. So connecting raceways, cables, cable trays, and wireways will be clear of obstructions and of the working and access space of other equipment.

B. Prior to bidding, this contractor shall determine conduit routings, including the means and methods of installation, maximum feeder/branch-circuit lengths, pull boxes, junction boxes, conduit bodies, fittings, and any other related work in accordance with the contract documents and the applicable building codes.

1.08 QUALITY ASSURANCE

A. Test Equipment Suitability and Calibration: Comply with NETA ATS, "Suitability of Test Equipment" and "Test Instrument Calibration."

B. Tests & Adjustments
   1. Contractor shall perform at his own expense, except for electrical energy, any tests that the Architect/Engineer may order to prove the performance of any device(s) and/or equipment supplied under this contract.
   2. Such tests will be limited to non-destructive test and will involve only direct reading(s) of the parameter(s) involved, i.e., actual trip rating or time delay of a circuit breaker may be required but coordination study is beyond the scope of this requirement.
   3. Provide adjustments such as branch circuit re-arranging, circuit breaker trip settings, final selection of fuse sizes, motor starter overload element settings, and the like that may be indicated by the tests and/or to suit equipment to be installed.

1.09 CODES, ORDINANCES, & PERMITS

A. All governmental codes and ordinances that are applicable and in effect at the time and location of this work are hereby referenced as an integral part of the specification to establish minimum standards of design detail, materials, and workmanship. Extra payment will not be allowed for work or changes required by code enforcement authorities and/or utility companies.

This is not to preclude the establishment of non-conflicting higher standards as may be specified herein and/or indicated on the drawings. In case of conflict between any of the standards established herein and a governmental code or ordinance, refer to the Architect/Engineer and obtain instructions before proceeding with the work involved.

B. Apply for, obtain, and pay for required permits and certificates of inspection

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. In all Division 26 Part 2 articles where titles introduce lists, the following requirements apply to product selection:
   1. Manufacturers: Subject to compliance with requirements, provide products by one of the manufacturers specified or engineering pre-approved product substitution. No product manufacturer will be accepted after this bid unless approved through a contractual change or written acceptance by Engineer. See “Substitution Procedures” article herein.

2.02 PROPRIETARY REFERENCES

A. Except where there is indication to the contrary, the intent of this specification is to be open to all brand names and suppliers that offer equipment that complies with the stated requirements of capacity, function, quality configuration, size, shape, and operating characteristics that are compatible with the design objectives of the system and interfacing equipment.

B. The perceived operational limitations and maintenance requirements as well as the availability of suitable maintenance support will be evaluated in comparison to competing equipment as an important factor in deciding if an item of equipment is acceptable or not acceptable.

C. The product manufacturers listed are manufacturers that are believed to be producers of like equipment or materials and locally represented, with service capability and otherwise meeting the requirements of the contract documents. Reference to a brand name is not to be construed as a representation that the named supplier actually has available the equipment or materials that meet the detailed requirements of the contract documents.

D. Details of construction, control, or operation that are proprietary and not significant to the Owner's utilization of the equipment will not be used as a basis for qualifying or disqualifying any equipment.

2.03 SUBSTITUTIONS

A. The materials, products and equipment described in the Bidding Documents establish a standard of required function, dimension, appearance and quality to be met by any proposed substitution.

B. No substitution will be considered prior to receipt of Bids unless written request for approval has been received by the Engineer at least 7 days prior to the date for receipt of Bids. Such requests shall include the name of the material or equipment for which it is to be substituted and a complete description of the proposed substitution including drawings, performance and test data, and other information necessary for an evaluation. A statement setting forth changes in other materials, equipment or other portions of the work including changes in the work of other contracts that incorporation of the proposed substitution would require shall be included. The burden of proof of the merit of the proposed substitution is upon the proposer. The Engineer's decision of approval or disapproval of a proposed substitution shall be final. Refer to Division 1 for additional requirements.

C. If the Engineer approves a proposed substitution prior to receipt of bids, such approval will be set forth in an addendum. Bidders shall not rely upon approvals made in any other manner.

D. No substitutions will be considered after the contract award unless specifically provided in the contract documents.

2.04 UL LABEL

A. All materials, devices, etc. installed under this contract shall bear the UL label, or be UL listed as applicable except those specified items not covered by existing UL Standards.

PART 3 EXECUTION

3.01 REBATES

A. The work of this contract may include equipment, controls or systems to be furnished and/or installed that qualify for rebate(s) under local utility company energy conservation and efficiency programs.

B. In such instance(s), the Contractor shall cooperate with the Owner by providing information and filings as necessary for the Owner to receive the rebate(s).

3.02 INSPECTION OF SITE

A. Determine information regarding existing construction by the site inspection prior to bidding.

B. By submitting a bid for this work, contractor agrees they have inspected the existing site and familiarized themselves with existing conditions and how they relate to the contract documents.

3.03 COMMON REQUIREMENTS FOR ELECTRICAL INSTALLATION

A. Examine the site and drawings before proceeding with the layout and installation of this work. Locate work so it does not interfere with access to service for any equipment.

B. Obtain and follow manufacturer's installation instructions in the installation of all electrical equipment. Observe all restrictions imposed by the equipment manufacturer, UL label, NEC, or other applicable code in regard to setting; anchoring; hanging; clearances; electric, magnetic or thermal separation; shielding; weather and moisture protection. In case of conflict between the specifications herein and instructions or code governing the installation, notify the Engineer and receive his instructions before proceeding.

C. Arrange exposed work as closely as practicable to wall or ceiling surfaces and in accurate alignment with exposed features of structure and/or trim. Locate concealed work so fittings, connectors, and other projections will clear surfaces. Where the option of more than one material is given, selection shall be confined to those which may be properly installed.

D. Install all work in a neat and workmanlike manner by workmen thoroughly qualified in the trade or duties they are to perform. Rough work will be rejected.

E. The Contractor is responsible for correct size and location of chases, slots, and openings require and will be liable for any cutting or patching made necessary by his failure to make proper arrangements in this respect.

F. Maintain a competent full-time superintendent on the job to oversee and coordinate work with other trades, receive instructions from the Architect/Engineer, make layout of work to suit actual conditions, and to satisfy requirements of the drawings, specifications, and good workmanship.

3.04 PAINTING

A. Exposed electrical work in finished and unfinished areas will not require painting unless so noted.

B. Protect the manufacturer's finish on equipment that is so finished. Clean and/or touch-up as necessary to repair damage at the end of the job.

C. Protect the manufacturer's finish on equipment that is so finished. Clean and/or touch-up as necessary to repair damage at the end of the job.

3.05 CLEANING & RUBBISH

A. During the work, keep the premises clear of unnecessary accumulation of debris.

B. Plug or cap open ends of conduits to prevent the entrance of dirt and/or moisture during construction. Protect boxes, panel enclosures, etc. against the entrance of mortar, plaster,

moisture, and other foreign material during construction, and thoroughly clean these spaces before pulling wires, and again, if necessary, before installing covers of fronts.

C. On completion of the work, remove all rubbish and debris resulting from the work or the work of subcontractors and dispose of same.

D. All equipment, fixtures, etc. shall be thoroughly cleaned of accumulated dust, plaster, or other dirt and left in a satisfactory condition for use.

END OF SECTION

SECTION 26 0519
LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Single conductor building wire.

B. Wiring connectors.

C. Electrical tape.

1.02 RELATED REQUIREMENTS

A. Section 26 0526 - Grounding and Bonding for Electrical Systems: Additional requirements for grounding conductors and grounding connectors.

PART 2 PRODUCTS

2.01 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.

2.02 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. 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.

H. Minimum Conductor Size:
   1. Branch Circuits: 12 AWG.

I. 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.
   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.

2.03 SINGLE CONDUCTOR BUILDING WIRE

A. Description: Single conductor insulated wire.

B. Conductor Stranding:
   1. Feeders and Branch Circuits: Stranded.
   2. Control Circuits: Stranded.

C. Insulation Voltage Rating: 600 V.

D. Insulation:
   1. Copper Building Wire: Type THHN/THWN or THHN/THWN-2, except as indicated below.
      a. Installed Underground: Type XHHW-2.

2.04 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.

2.05 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).

PART 3 EXECUTION

3.01 INSTALLATION

A. Circuiting Requirements:
   1. Unless dimensioned, circuit routing indicated is diagrammatic.
   2. Arrange circuiting to minimize splices.
   3. Maintain separation of wiring for emergency systems in accordance with NFPA 70.

B. Install products in accordance with manufacturer's instructions.

C. Perform work in accordance with NECA 1 (general workmanship).

D. 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.

E. Paralleled Conductors: Install conductors of the same length and terminate in the same manner.

F. 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.

G. Install conductors with a minimum of 12 inches (300 mm) of slack at each outlet.

H. Neatly train and bundle conductors inside boxes, wireways, panelboards and other equipment enclosures.

I. Group or otherwise identify neutral/grounded conductors with associated ungrounded conductors inside enclosures in accordance with NFPA 70.

J. 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 contaminates. Do not use wire brush on plated connector surfaces.

K. 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.

L. Insulate ends of spare conductors using vinyl insulating electrical tape.

M. Install firestopping to preserve fire resistance rating of partitions and other elements.

N. 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.

END OF SECTION

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SECTION 26 0526
GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Grounding and bonding requirements.

B. Conductors for grounding and bonding.

C. Connectors for grounding and bonding.

PART 2 PRODUCTS

2.01 GROUNDING AND BONDING REQUIREMENTS

A. Existing Work: Where existing grounding and bonding system components are indicated to be reused, they may be reused only where they are free from corrosion, integrity and continuity are verified, and where acceptable to the authority having jurisdiction.

B. Do not use products for applications other than as permitted by NFPA 70 and product listing.

C. 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.

D. Where conductor size is not indicated, size to comply with NFPA 70 but not less than applicable minimum size requirements specified.

E. Grounding System Resistance:
   1. Achieve specified grounding system resistance under normally dry conditions unless otherwise approved by Engineer. Precipitation within the previous 48 hours does not constitute normally dry conditions.
   2. Grounding Electrode System: Not greater than 5 ohms to ground, when tested according to IEEE 81 using "fall-of-potential" method.

F. Separately Derived System Grounding:
   1. Separately derived systems include, but are not limited to:
      a. Transformers (except autotransformers such as buck-boost transformers).
   2. Provide grounding electrode conductor to connect derived system grounded conductor to nearest effectively grounded metal building frame. Unless otherwise indicated, make connection at neutral (grounded) bus in source enclosure.
   3. Provide bonding jumper to connect derived system grounded conductor to nearest metal building frame and nearest metal water piping in the area served by the derived system, where not already used as a grounding electrode for the derived system. Make connection at same location as grounding electrode conductor connection.
   4. Provide system bonding jumper to connect system grounded conductor to equipment ground bus. Make connection at same location as grounding electrode conductor connection. Do not make any other connections between neutral (grounded) conductors and ground on load side of separately derived system disconnect.
   5. Where the source and first disconnecting means are in separate enclosures, provide supply-side bonding jumper between source and first disconnecting means.

G. 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.

2.02 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 for underground, concealed and other inaccessible connections.
   3. Unless otherwise indicated, use mechanical connectors, compression connectors, or exothermic welded connections for accessible connections.

PART 3 EXECUTION

3.01 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. Exothermic Welds: Make connections using molds and weld material suitable for the items to be connected in accordance with manufacturer's recommendations.
   4. Mechanical Connectors: Secure connections according to manufacturer's recommended torque settings.
   5. Compression Connectors: Secure connections using manufacturer's recommended tools and dies.

D. Identify grounding and bonding system components in accordance with Section 26 0553.

3.02 FIELD QUALITY CONTROL

A. Inspect and test in accordance with NETA ATS except Section 4.

B. Perform inspections and tests listed in NETA ATS, Section 7.13.

C. Investigate and correct deficiencies where measured ground resistances do not comply with specified requirements.

D. Submit detailed reports indicating inspection and testing results and corrective actions taken.

END OF SECTION

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SECTION 26 0529
HANGERS AND SUPPORTS FOR ELECTRICAL SYSTEMS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Support and attachment requirements and components for equipment, conduit, cable, boxes, and other electrical work.

1.02 RELATED REQUIREMENTS

A. Section 26 0533.13 - Conduit for Electrical Systems: Additional support and attachment requirements for conduits.

B. Section 26 0533.16 - Boxes for Electrical Systems: Additional support and attachment requirements for boxes.

PART 2 PRODUCTS

2.01 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 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. Zinc-Plated Steel: Electroplated in accordance with ASTM B633.
      b. 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. Outlet Box Supports: Hangers, brackets, etc. suitable for the boxes to be supported.

D. 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.

E. Hanger Rods: Threaded zinc-plated steel unless otherwise indicated.

F. Anchors and Fasteners:
   1. Unless otherwise indicated and where not otherwise restricted, use the anchor and fastener types indicated for the specified applications.

PART 3 EXECUTION

3.01 INSTALLATION

A. Install products in accordance with manufacturer's instructions.

B. Perform work in accordance with NECA 1 (general workmanship).

C. Provide independent support from building structure. Do not provide support from piping, ductwork, or other systems.

D. Do not penetrate or otherwise notch or cut structural members without approval of Structural Engineer.

E. 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. Securely fasten floor-mounted equipment. Do not install equipment such that it relies on its own weight for support.

F. Secure fasteners according to manufacturer's recommended torque settings.

G. Remove temporary supports.

END OF SECTION

SECTION 26 0533.13
CONDUIT FOR ELECTRICAL SYSTEMS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Galvanized steel rigid metal conduit (RMC).

B. Aluminum rigid metal conduit (RMC).

C. PVC-coated galvanized steel rigid metal conduit (RMC).

D. Electrical metallic tubing (EMT).

E. Rigid polyvinyl chloride (PVC) conduit.

F. Liquidtight flexible nonmetallic conduit (LFNC).

G. Conduit fittings.

1.02 REFERENCE STANDARDS

A. ANSI C80.1 - American National Standard for Electrical Rigid Steel Conduit (ERSC).

B. ANSI C80.3 - American National Standard for Electrical Metallic Tubing -- Steel (EMT-S).

C. ANSI C80.5 - American National Standard for Electrical Rigid Metal Conduit -- Aluminum (ERMC-A).

D. ANSI C80.6 - American National Standard for Electrical Intermediate Metal Conduit (EIMC).

E. NECA 1 - Standard for Good Workmanship in Electrical Construction.

F. NECA 101 - Standard for Installing Steel Conduits (Rigid, IMC, EMT).

G. NECA 102 - Standard for Installing Aluminum Rigid Metal Conduit.

H. NECA 111 - Standard for Installing Nonmetallic Raceways (RNC, ENT, LFNC).

I. NEMA FB 1 - Fittings, Cast Metal Boxes, and Conduit Bodies for Conduit, Electrical Metallic Tubing, and Cable.

J. NEMA RN 1 - Polyvinyl-Chloride (PVC) Externally Coated Galvanized Rigid Steel Conduit and Intermediate Metal Conduit.

K. NEMA TC 2 - Electrical Polyvinyl Chloride (PVC) Conduit.

L. NEMA TC 3 - Polyvinyl Chloride (PVC) Fittings for Use with Rigid PVC Conduit and Tubing.

M. NFPA 70 - National Electrical Code.

N. UL 6 - Electrical Rigid Metal Conduit-Steel.

O. UL 6A - Electrical Rigid Metal Conduit-Aluminum, Red Brass, and Stainless Steel.

P. UL 514B - Conduit, Tubing, and Cable Fittings.

Q. UL 651 - Schedule 40, 80, Type EB and A Rigid PVC Conduit and Fittings.

R. UL 797 - Electrical Metallic Tubing-Steel.

S. UL 1242 - Electrical Intermediate Metal Conduit-Steel.

T. UL 1660 - Liquid-Tight Flexible Nonmetallic Conduit.

PART 2 PRODUCTS

2.01 CONDUIT APPLICATIONS

A. Do not use conduit and associated fittings for applications other than as permitted by NFPA 70 and product listing.

B. Unless otherwise indicated and where not otherwise restricted, use the conduit types indicated for the specified applications. Where more than one listed application applies, comply with the

most restrictive requirements. Where conduit type for a particular application is not specified, use galvanized steel rigid metal conduit.

C. Underground:
   1. Under Slab on Grade: Use rigid PVC conduit or HDPE conduit.
   2. Exterior, Direct-Buried: Use rigid PVC conduit or HDPE conduit.
   3. Exterior, Embedded Within Concrete: Use galvanized steel rigid metal conduit, intermediate metallic conduit (IMC), PVC-coated galvanized steel rigid metal conduit, rigid PVC conduit, or reinforced thermosetting resin conduit (RTRC).
   4. Where rigid polyvinyl (PVC) or HDPE conduit is provided, transition to galvanized steel rigid metal conduit where emerging from underground.

D. Concealed Above Accessible Ceilings: Use galvanized steel rigid metal conduit, intermediate metal conduit (IMC), or electrical metallic tubing (EMT).

E. Exposed, Interior, Not Subject to Physical Damage: Use galvanized steel rigid metal conduit, intermediate metal conduit (IMC), or electrical metallic tubing (EMT).

F. Exposed, Interior, Subject to Physical Damage: Use galvanized steel rigid metal conduit or intermediate metal conduit (IMC).

G. Exposed, Exterior: Use galvanized steel rigid metal conduit, intermediate metal conduit (IMC), or PVC-coated galvanized steel rigid metal conduit.

H. Corrosive Locations Above Ground: Use PVC-coated galvanized steel rigid metal conduit, aluminum rigid metal conduit, or reinforced thermosetting resin conduit (RTRC).

2.02 CONDUIT REQUIREMENTS

A. Existing Work: Where existing conduits are indicated to be reused, they may be reused only where they comply with specified requirements, are free from corrosion, and integrity is verified by pulling a mandrel through them.

B. Provide all conduit, fittings, supports, and accessories required for a complete raceway system.

C. Provide products listed, classified, and labeled as suitable for the purpose intended.

D. Minimum Conduit Size, Unless Otherwise Indicated:
   1. Branch Circuits: 3/4 inch (21 mm) trade size.
   2. Underground, Exterior: 1 inch (27 mm) trade size.

E. Where conduit size is not indicated, size to comply with NFPA 70 but not less than applicable minimum size requirements specified.

2.03 GALVANIZED STEEL RIGID METAL CONDUIT (RMC)

A. Description: NFPA 70, Type RMC galvanized steel rigid metal conduit complying with ANSI C80.1 and listed and labeled as complying with UL 6.

B. Fittings:
   1. Non-Hazardous Locations: Use fittings complying with NEMA FB 1 and listed and labeled as complying with UL 514B.
   2. Material: Use steel or malleable iron.
   3. Connectors and Couplings: Use threaded type fittings only. Threadless set screw and compression (gland) type fittings are not permitted.

2.04 ALUMINUM RIGID METAL CONDUIT (RMC)

A. Description: NFPA 70, Type RMC aluminum rigid metal conduit complying with ANSI C80.5 and listed and labeled as complying with UL 6A.

B. Fittings:
   1. Non-Hazardous Locations: Use fittings complying with NEMA FB 1 and listed and labeled as complying with UL 514B.
   2. Material: Use aluminum.

3. Connectors and Couplings: Use threaded type fittings only. Threadless set screw and compression (gland) type fittings are not permitted.

2.05 INTERMEDIATE METAL CONDUIT (IMC)

A. Description: NFPA 70, Type IMC galvanized steel intermediate metal conduit complying with ANSI C80.6 and listed and labeled as complying with UL 1242.

B. Fittings:
   1. Non-Hazardous Locations: Use fittings complying with NEMA FB 1 and listed and labeled as complying with UL 514B.
   2. Material: Use steel or malleable iron.
   3. Connectors and Couplings: Use threaded type fittings only. Threadless set screw and compression (gland) type fittings are not permitted.

2.06 PVC-COATED GALVANIZED STEEL RIGID METAL CONDUIT (RMC)

A. Description: NFPA 70, Type RMC galvanized steel rigid metal conduit with external polyvinyl chloride (PVC) coating complying with NEMA RN 1 and listed and labeled as complying with UL 6.

B. Exterior Coating: Polyvinyl chloride (PVC), nominal thickness of 40 mil (1.02 mm).

C. PVC-Coated Fittings:
   1. Manufacturer: Same as manufacturer of PVC-coated conduit to be installed.
   2. Non-Hazardous Locations: Use fittings listed and labeled as complying with UL 514B.
   3. Material: Use steel or malleable iron.
   4. Exterior Coating: Polyvinyl chloride (PVC), minimum thickness of 40 mil (1.02 mm).

D. PVC-Coated Supports: Furnish with exterior coating of polyvinyl chloride (PVC), minimum thickness of 15 mil (0.38 mm).

2.07 ELECTRICAL METALLIC TUBING (EMT)

A. Description: NFPA 70, Type EMT steel electrical metallic tubing complying with ANSI C80.3 and listed and labeled as complying with UL 797.

B. Fittings:
   1. Description: Fittings complying with NEMA FB 1 and listed and labeled as complying with UL 514B.
   2. Material: Use steel or malleable iron.
   3. Connectors and Couplings: Use compression (gland) or set-screw type.
      a. Do not use indenter type connectors and couplings.

2.08 RIGID POLYVINYL CHLORIDE (PVC) CONDUIT

A. Description: NFPA 70, Type PVC rigid polyvinyl chloride conduit complying with NEMA TC 2 and listed and labeled as complying with UL 651; Schedule 40 unless otherwise indicated, Schedule 80 where subject to physical damage; rated for use with conductors rated 90 degrees C.

B. Fittings:
   1. Manufacturer: Same as manufacturer of conduit to be connected.
   2. Description: Fittings complying with NEMA TC 3 and listed and labeled as complying with UL 651; material to match conduit.

2.09 LIQUIDTIGHT FLEXIBLE NONMETALLIC CONDUIT (LFNC)

A. Description: NFPA 70, Type LFNC liquidtight flexible nonmetallic conduit listed and labeled as complying with UL 1660.

B. Fittings:
   1. Manufacturer: Same as manufacturer of conduit to be connected.

2. Description: Fittings complying with NEMA FB 1 and listed and labeled as complying with UL 514B; suitable for the type of conduit to be connected.

PART 3 EXECUTION

3.01 INSTALLATION

A. Install products in accordance with manufacturer's instructions.

B. Perform work in accordance with NECA 1 (general workmanship).

C. Install galvanized steel rigid metal conduit (RMC) in accordance with NECA 101.

D. Install aluminum rigid metal conduit (RMC) in accordance with NECA 102.

E. Install intermediate metal conduit (IMC) in accordance with NECA 101.

F. Install PVC-coated galvanized steel rigid metal conduit (RMC) using only tools approved by the manufacturer.

G. Install rigid polyvinyl chloride (PVC) conduit in accordance with NECA 111.

H. Install liquidtight flexible nonmetallic conduit (LFNC) in accordance with NECA 111.

I. Conduit Support:
   1. Secure and support conduits in accordance with NFPA 70 and Section 26 0529 using suitable supports and methods approved by the authority having jurisdiction.
   2. Provide independent support from building structure. Do not provide support from piping, ductwork, or other systems.

J. Connections and Terminations:
   1. Use approved zinc-rich paint or conduit joint compound on field-cut threads of galvanized steel conduits prior to making connections.
   2. Where two threaded conduits must be joined and neither can be rotated, use three-piece couplings or split couplings. Do not use running threads.
   3. Use suitable adapters where required to transition from one type of conduit to another.
   4. Provide drip loops for liquidtight flexible conduit connections to prevent drainage of liquid into connectors.
   5. Terminate threaded conduits in boxes and enclosures using threaded hubs or double lock nuts for dry locations and raintight hubs for wet locations.
   6. Provide insulating bushings or insulated throats at all conduit terminations to protect conductors.
   7. Secure joints and connections to provide maximum mechanical strength and electrical continuity.

K. Penetrations:
   1. Do not penetrate or otherwise notch or cut structural members, including footings and grade beams, without approval of Structural Engineer.
   2. Make penetrations perpendicular to surfaces unless otherwise indicated.
   3. Provide sleeves for penetrations as indicated or as required to facilitate installation. Set sleeves flush with exposed surfaces unless otherwise indicated or required.
   4. Conceal bends for conduit risers emerging above ground.
   5. Seal interior of conduits entering the building from underground at first accessible point to prevent entry of moisture and gases.
   6. Where conduits penetrate waterproof membrane, seal as required to maintain integrity of membrane.
   7. Make penetrations for roof-mounted equipment within associated equipment openings and curbs where possible to minimize roofing system penetrations. Where penetrations are necessary, seal as indicated or as required to preserve integrity of roofing system and maintain roof warranty. Include proposed locations of penetrations and methods for sealing with submittals.

8. Install firestopping to preserve fire resistance rating of partitions and other elements.

L. Underground Installation:
   1. Minimum Cover, Unless Otherwise Indicated or Required:
      a. Underground, Exterior: 42" inches.
      b. Under Slab on Grade: 12 inches (300 mm) to bottom of slab.
   2. Provide underground warning tape in accordance with Section 26 0553 along entire conduit length.

M. Conduit Movement Provisions: Where conduits are subject to movement, provide expansion and expansion/deflection fittings to prevent damage to enclosed conductors or connected equipment. This includes, but is not limited to:
   1. Where conduits cross structural joints intended for expansion, contraction, or deflection.
   2. Where calculated in accordance with NFPA 70 for rigid polyvinyl chloride (PVC) conduit installed above ground to compensate for thermal expansion and contraction.
   3. Where conduits are subject to earth movement by settlement or frost.

N. Condensation Prevention: Where conduits cross barriers between areas of potential substantial temperature differential, provide sealing fitting or approved sealing compound at an accessible point near the penetration to prevent condensation. This includes, but is not limited to:
   1. Where conduits pass from outdoors into conditioned interior spaces.
   2. Where conduits pass from unconditioned interior spaces into conditioned interior spaces.

O. Provide grounding and bonding in accordance with Section 26 0526.

END OF SECTION

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SECTION 26 0533.16
BOXES FOR ELECTRICAL SYSTEMS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Outlet and device boxes up to 100 cubic inches (1,650 cu cm), including those used as junction and pull boxes.

PART 2 PRODUCTS

2.01 BOXES

A. General Requirements:
   1. Do not use boxes and associated accessories for applications other than as permitted by NFPA 70 and product listing.
   2. Provide all boxes, fittings, supports, and accessories required for a complete raceway system and to accommodate devices and equipment to be installed.
   3. Provide products listed, classified, and labeled as suitable for the purpose intended.
   4. Where box size is not indicated, size to comply with NFPA 70 but not less than applicable minimum size requirements specified.
   5. Provide grounding terminals within boxes where equipment grounding conductors terminate.

B. Outlet and Device Boxes Up to 100 cubic inches (1,650 cu cm), Including Those Used as Junction and Pull Boxes:
   1. Use sheet-steel boxes for dry locations unless otherwise indicated or required.
   2. Use cast iron boxes or cast aluminum boxes for damp or wet locations unless otherwise indicated or required; furnish with compatible weatherproof gasketed covers.
   3. Use suitable concrete type boxes where flush-mounted in concrete.
   4. Use suitable masonry type boxes where flush-mounted in masonry walls.
   5. Use raised covers suitable for the type of wall construction and device configuration where required.
   6. Use shallow boxes where required by the type of wall construction.
   7. Do not use "through-wall" boxes designed for access from both sides of wall.
   8. Sheet-Steel Boxes: Comply with NEMA OS 1, and list and label as complying with UL 514A.
   9. Cast Metal Boxes: Comply with NEMA FB 1, and list and label as complying with UL 514A; furnish with threaded hubs.
   10. Boxes for Ganged Devices: Use multigang boxes of single-piece construction. Do not use field-connected gangable boxes unless specifically indicated or permitted.

C. Cabinets and Enclosures, Including Junction and Pull Boxes Larger Than 100 cubic inches (1,650 cu cm):
   1. Comply with NEMA EN 10250, and list and label as complying with UL 50 and UL 50E, or UL 508A.
   2. NEMA EN 10250 Environment Type, Unless Otherwise Indicated:
   3. Junction and Pull Boxes Larger Than 100 cubic inches (1,650 cu cm):
      a. Provide screw-cover or hinged-cover enclosures unless otherwise indicated.

PART 3 EXECUTION

3.01 INSTALLATION

A. Install products in accordance with manufacturer's instructions.

B. Install boxes in accordance with NECA 1 (general workmanship) and, where applicable, NECA 130, including mounting heights specified in those standards where mounting heights are not indicated.

C. Arrange equipment to provide minimum clearances in accordance with manufacturer's instructions and NFPA 70.

D. Box Supports:
   1. Secure and support boxes in accordance with NFPA 70 and Section 26 0529 using suitable supports and methods approved by the authority having jurisdiction.
   2. Provide independent support from building structure except for cast metal boxes (other than boxes used for fixture support) supported by threaded conduit connections in accordance with NFPA 70. Do not provide support from piping, ductwork, or other systems.

E. Install boxes plumb and level.

F. Install boxes as required to preserve insulation integrity.

G. Install permanent barrier between ganged wiring devices when voltage between adjacent devices exceeds 300 V.

H. Close unused box openings.

I. Provide grounding and bonding in accordance with Section 26 0526.

END OF SECTION

SECTION 26 0553
IDENTIFICATION FOR ELECTRICAL SYSTEMS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Electrical identification requirements.

B. Identification nameplates and labels.

C. Warning signs and labels.

PART 2 PRODUCTS

2.01 IDENTIFICATION REQUIREMENTS

A. Identification for Equipment:
   1. Use identification nameplate to identify each piece of electrical distribution and control equipment and associated sections, compartments, and components.
   2. Use identification label to identify overcurrent protective devices for branch circuits serving fire alarm circuits. Identify with text "FIRE ALARM CIRCUIT".

B. Identification for Conductors and Cables:
   1. Color Coding for Power Conductors 600 V and Less: Comply with Section 26 0519.
   2. Use identification nameplate or identification label to identify color code for ungrounded and grounded power conductors inside door or enclosure at each piece of feeder or branch-circuit distribution equipment when premises has feeders or branch circuits served by more than one nominal voltage system.

C. Identification for Boxes:
   1. Use identification labels or handwritten text using indelible marker to identify circuits enclosed. Provide label on inside of box cover.

2.02 IDENTIFICATION NAMEPLATES AND LABELS

A. Identification Nameplates:
   1. Materials:
      a. Indoor Clean, Dry Locations: Use plastic nameplates.
      b. Outdoor Locations: Use plastic, stainless steel, or aluminum nameplates suitable for exterior use.
   2. Plastic Nameplates: Two-layer or three-layer laminated acrylic or electrically non-conductive phenolic with beveled edges; minimum thickness of 1/16 inch (1.6 mm); engraved text.
   3. Stainless Steel Nameplates: Minimum thickness of 1/32 inch (0.8 mm); engraved or laser-etched text.
   4. Aluminum Nameplates: Anodized; minimum thickness of 1/32 inch (0.8 mm); engraved or laser-etched text.
   5. Mounting Holes for Mechanical Fasteners: Two, centered on sides for sizes up to 1 inch (25 mm) high; Four, located at corners for larger sizes.

B. Identification Labels:
   1. Materials: Use self-adhesive laminated plastic labels; UV, chemical, water, heat, and abrasion resistant.
   2. Text: Use factory pre-printed or machine-printed text. Do not use handwritten text unless otherwise indicated.

C. Format for Equipment Identification:
   1. Minimum Size: 1 inch (25 mm) by 2.5 inches (64 mm).
   2. Legend:
      a. Equipment designation or other approved description.
   3. Text: All capitalized unless otherwise indicated.

4. Minimum Text Height:
   a. Equipment Designation: 1/2 inch (13 mm).
5. Color:
   a. Normal Power System: White text on black background.

2.03 WARNING SIGNS AND LABELS

A. Comply with ANSI Z535.2 or ANSI Z535.4 as applicable.

B. Warning Signs:
   1. Materials:
      a. Indoor Dry, Clean Locations: Use factory pre-printed rigid plastic or self-adhesive vinyl signs.
   2. Rigid Signs: Provide four mounting holes at corners for mechanical fasteners.
   3. Minimum Size: 7 by 10 inches (178 by 254 mm) unless otherwise indicated.

C. Warning Labels:
   1. Materials: Use factory pre-printed or machine-printed self-adhesive polyester or self-adhesive vinyl labels; UV, chemical, water, heat, and abrasion resistant; produced using materials recognized to UL 969.
   2. Machine-Printed Labels: Use thermal transfer process printing machines and accessories recommended by label manufacturer.
   3. Minimum Size: 2 by 4 inches (51 mm by 102 mm) unless otherwise indicated.

PART 3 EXECUTION

3.01 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. Interior Components: Legible from the point of access.
   6. Boxes: Outside face of cover.
   7. Conductors and Cables: Legible from the point of access.

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. Secure rigid signs using stainless steel screws.

G. Mark all handwritten text, where permitted, to be neat and legible.

END OF SECTION

SECTION 27 1000
STRUCTURED CABLING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Communications system design requirements.

B. Fiber optic cable and interconnecting devices.

C. Communications identification.

D. BICSI N1 - Installation Practices for Telecommunications and ICT Cabling and Related Cabling Infrastructure, 1st Edition.

E. ICEA S-83-596 - Indoor Optical Fiber Cable.

F. NFPA 70 - National Electrical Code.

G. TIA-455-21 - FOTP-21 - Mating Durability of Fiber Optic Interconnecting Devices.

H. TIA-492CAAA - Detail Specification for Class IVa Dispersion-Unshifted Single-Mode Optical Fibers.

I. TIA-568 (SET) - Commercial Building Telecommunications Cabling Standard Set.

J. TIA-568.3 - Optical Fiber Cabling and Components Standard.

K. TIA-569 - Telecommunications Pathways and Spaces.

L. TIA-598 - Optical Fiber Cable Color Coding.

M. TIA-606 - Administration Standard for Telecommunications Infrastructure.

N. TIA-607 - Generic Telecommunications Bonding and Grounding (Earthing) for Customer Premises.

O. UL 444 - Communications Cables.

P. UL 1651 - Fiber Optic Cable.

1.02 SUBMITTALS

A. Product Data: Provide manufacturer's standard catalog pages and data sheets for each product.

B. Project Record Documents:
   1. Record actual locations of outlet boxes and distribution frames.
   2. Show as-installed color coding, pair assignment, polarization, and cross-connect layout.
   3. Identify distribution frames and equipment rooms by room number on drawings.

C. Operation and Maintenance Data: List of all components with part numbers, sources of supply, and operation and maintenance instructions; include copy of project record documents.

PART 2 PRODUCTS

2.01 SYSTEM DESIGN

A. Provide a complete permanent system of cabling and pathways for voice and data communications, including cables, conduits and wireways, pull wires, support structures, enclosures and cabinets, and outlets.
   1. Comply with TIA-568 (SET) (cabling) and TIA-569 (pathways) (commercial standards).
   2. Provide fixed cables and pathways that comply with NFPA 70 and TIA-607 and are UL listed or third party independent testing laboratory certified.
   3. Provide connection devices that are rated for operation under conditions of 32 to 140 degrees F (0 to 60 degrees C) at relative humidity of 0 to 95 percent, noncondensing.
   4. In this project, the term plenum is defined as return air spaces above ceilings, inside ducts, under raised floors, and other air-handling spaces.

B. System Description:
   1. Building Entrance Cable: By others.
   2. Backbones - Within Building: Fiber optic, 12 strand -fiber.
   3. Provide infrastructure and outlets where indicated on drawings.

C. Main Distribution Frame (MDF): Centrally located support structure for terminating horizontal cables that extend to telecommunications outlets and backbone cables that extend to intermediate distribution frames (IDFs), functioning as point of presence to external service provider.
   1. Locate main distribution frame as indicated on the drawings.
   2. Capacity: As required to terminate all cables required by design criteria plus minimum 25 percent spare space.

D. Intermediate Distribution Frames (IDF): Support structures for terminating horizontal cables that extend to telecommunications outlets.
   1. Locate intermediate distribution frames as indicated on the drawings.

E. Backbone Cabling: Cabling, pathways, and terminal hardware connecting intermediate distribution frames (IDF's) with main distribution frame (MDF), wired in star topology with main distribution frame at center hub of star.

F. Cabling to Outlets: Specified horizontal cabling, wired in star topology to distribution frame located at center hub of star; also referred to as "links".

2.02 FIBER OPTIC CABLE AND INTERCONNECTING DEVICES

A. Manufacturers:
   1. Corning
   2. As pre-approved by engineer

B. Fiber Optic Backbone Cable - Indoor Non-Conductive:
   1. Description: Tight buffered, non-conductive fiber optic cable complying with TIA-568.3, TIA-598, ICEA S-83-596 and listed as complying with UL 444 and UL 1651.
   2. Cable Type: Single-mode, 8.3/125 um (OS1) complying with TIA-492CAAA.
   3. Cable Capacity: 12 strand fiber.
   4. Cable Applications:
      a. Plenum Applications: Use listed NFPA 70 Type OFNP plenum cable.
   5. Cable Jacket Color:
      a. Multimode Fiber (OM1/OM2): Orange.

C. Fiber Optic Interconnecting Devices:
   1. Connector Type: Type LC.
   2. Connector Performance: 500 mating cycles, when tested in accordance with TIA-455-21.
   3. Maximum Attenuation/Insertion Loss: 0.3 dB.

D. Fiber Optic Patch Cords:
   1. Description: Factory-fabricated 2-fiber cable assemblies with suitable connectors at each end.
   2. Patch Cords for Patch Panels:
      a. Quantity: One for each pair of patch panel ports.
      b. Length: 10 Feet.

2.03 IDENTIFICATION PRODUCTS

A. Comply with TIA-606.

PART 3 EXECUTION

3.01 INSTALLATION - GENERAL

A. Comply with latest editions and addenda of TIA-568 (SET) (cabling), TIA-569 (pathways), TIA-607 (grounding and bonding), BICSI N1, NFPA 70, and SYSTEM DESIGN as specified in PART 2.

B. Comply with Communication Service Provider requirements.

C. Grounding and Bonding: Perform in accordance with TIA-607 and NFPA 70.

END OF SECTION

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SECTION 28 0000
GENERAL REQUIREMENTS FOR ELECTRONIC SAFETY & SECURITY SYSTEMS

PART 1 GENERAL

1.01 DESCRIPTION

A. Division 28 specifications are provided to define the standards and criteria to be used to bid, plan, furnish, install, test, and document electronic safety & security systems for Iowa PBS . These specifications shall form the basis for implementation of the design, installation, inspection, and close-out process.

B. Division 28 has been designed and developed based on the most current and adopted International Series Building and Fire Code, Facility Guidelines, Iowa Administrative Code and Amendments, NFPA 72, NFPA 70 (NEC), and National Electrical Safety Code (NESC) requirements. The requirements within those documents are not superseded herein unless specifically stated. Code requirements are unable to be superseded by this document at any time. The absence of a specific reference to an element within the aforementioned codes, and standards does not relieve all parties of compliance with them.

C. Within this document use of the word “shall” marks mandatory requirements. Use of the word “may” or “should” suggests optional elements. All conflicts within this document shall be resolved by the Construction Manager in consultation with the Design Team. The standards of State of Iowa Department of Administrative Services shall take precedence in the resolution of any dispute.

D. Unauthorized changes and/or deviations from these specifications, regardless of scale, may result in re-design, reconstruction, or re-installation of communications elements at the contractor’s expense. Contractors shall obtain formal written approval prior to bidding and prior to installation in order to deviate from these specifications. Contractors shall not deviate from code requirements.

E. Division 28 Specifications address information transport pathways, multiple different types of Safety and Security systems, spaces, media, grounding, identification, testing, and documentation requirements in support of multiple information transport infrastructures.

F. Specific responsibilities of Division 28 include, but are not limited to:
   1. Installation of the intra-building pathways, cabling, and coordinating space requirements necessary to house the safety and security systems and associated electronic information transport equipment. Pathways and spaces shall be provided to support the known systems and cabling requirements, as well as provisions for those that may be required in the future for growth purposes.
   2. The procurement and installation of each safety and security system and the associated components and cabling to create a fully functional system.
   3. Thorough testing shall be conducted of each individual safety and security system to illustrate compliance with specific performance requirements.
   4. Definition and establishment of administration and labeling schemes, conforming to Owner's requirements.
   5. Securing all necessary permits and licenses, payment of all fees, and provision of all construction work notifications.
   6. Compliance with all applicable laws, ordinances, rules, and regulations.
   7. Mandatory project manager attendance at a weekly project status meeting with the Construction Manager.
   8. It is the intent of the project drawings and specifications to provide complete and fully functional Division 28 safety and security systems, ready for use. Any item, not specifically shown in the project drawings or called for in the project specifications but normally required for a complete systems, is to be considered a part of this contract.

1.02 ADMINISTRATIVE REQUIREMENTS

A. Sequencing: Ensure that any fire alarm cutover is achieved in a coordinated and orderly manner.

B. All Division 28 Contractor Project Managers shall schedule and conduct a coordination meeting with State of Iowa Department of Administrative Services to confirm and coordinate scope of work requirements prior to commencement of work. Project meetings shall be scheduled through Samuels Group the Construction Manager.

1.03 QUALITY ASSURANCE

A. Contracting firm shall constitute a company with successful installation experience with projects utilizing infrastructure and systems work similar to that required for this project.

B. Fire alarm contractor shall have at least one (1) NICET Level II on staff responsible for this project. Provide copies of these certificates in the submittal process.

C. Work crew, not involved in final connections to the fire alarm system (e.g. laborers delivering/moving materials, installing grounding by an electrician, or workers installing pathway elements) do not require NICET or manufacturer certification or registration.

D. Contractor shall provide with a manufacturer certification for the system solution bid, issued directly in the bidder’s company name, valid for the time frame in which the installation will be completed. Contractor shall be manufacturer certified in order to participate in the bid event.

E. The Contractor shall be knowledgeable in state codes and regulations. All work shall comply with the latest revision of codes or regulations. When conflict exists between codes or regulations, the most stringent codes or regulations shall apply.

F. Only installers trained and certified by the proposed manufacturer shall be allowed to install products. Installers must possess the highest level of certification available by the manufacturer for the specific solution being installed.

G. Only installers trained and certified by the proposed manufacturer shall be allowed to install firestop products.

H. Only installers trained and certified by the proposed systems manufacturer shall be allowed to terminate and test any of the electronic safety & security systems. Others may pull cabling and install field devices under the supervision of an installer trained and certified by the manufacturer.

1.04 DELIVERY, STORAGE, AND HANDLING

A. Equipment, materials, and supplies shall be shipped, handled and stored in ways that shall prevent damage to the items.

B. All items shall be handled and stored as recommended by the manufacturer.

C. Arrange storage in a manner to provide easy access for inspection. Make periodic inspections of stored products to assure that products are maintained under manufacturer's specified conditions, and free from damage or deterioration.

D. Equipment, materials, and supplies to be incorporated in the area of work shall be new unless otherwise noted.

E. Equipment, materials, and supplies shall be produced in a good workmanlike manner.

F. When the quality of a material, process, or article is not specifically set forth in the Drawings or Specifications, the best available quality of the material, process, or article shall be provided.

1.05 FIELD CONDITIONS

A. Conditions and Measurements: Visit the jobsite to verify installation conditions and confirm measurements for all required systems and associated cabling connectivity.

1.06 WARRANTY

A. The Contractor shall submit, in the bid documents, any additional contractor-specific warranties or guarantees to be offered on the project.

B. The Contractor shall supply any and all necessary documentation needed to process and record the warranty(s) and to verify the installation solution.

C. Unless listed elsewhere within these specifications, a warranty shall be provided for a minimum of one (1) year for all safety and security systems. One year shall begin from the date of Substantial Completion. This warranty shall cover both product and service to address remedial maintenance and replacement parts as is appropriate to keep each system complete and fully functional.

PART 2 PRODUCTS

2.01 MANUFACTURER'S, PRODUCTS, AND SERVICES

A. If a bidder proposes to substitute an article, device, material, equipment, form of construction, fixture, or item other than the approved manufacturers and part numbers, listed and named in the specifications, the bidder shall certify that the proposed item is equal in quality and all aspects of performance and appearance, to the items specified. The bidder shall submit a request for substitution to the Design Team by following the instruction for substituion requests, which must include:

1. The name and complete description of the proposed Substitution including Drawings, performance and test data, and other information necessary for a complete evaluation; and
2. A statement setting forth any changes that the Proposed Substitution will require in the Contract Documents or the project.

B. If the Design Team approves the proposed substitution, the Design Team shall issue an Addendum. If the Design Team does not approve the substitution, the Design Team shall inform the bidder of its decision, which is final. The Design Team may reject a proposed Substitution because the bidder failed to provide sufficient information to enable the Design Team to completely evaluate the proposed substitution without causing a delay in the scheduled bid opening.

C. Bidder shall confirm all reference part numbers, listed within Division 28, as current and suitable for the items described and specified and shall file a formal RFI for all perceived discrepancies prior to bidding.

D. All materials associated with reference parts shall be included so as to constitute a complete and functional system, whether or not specifically identified and itemized.

PART 3 EXECUTION

3.01 FINAL CLEANING

A. Division 28 Contractor shall thoroughly clean all enclosures, assemblies and field devices before they are turned over to State of Iowa Department of Administrative Services for operation. Should the special system's room(s) be completed prior to the balance of the floor space construction that it serves, racks, cabinets, and wall frames shall be covered with plastic sheeting to repel dust and other contaminants to which they will be subjected.

3.02 SAFETY REQUIREMENTS

A. All contract work shall be performed in accordance with the policies, procedures, and standards established by the State of Iowa Department of Administrative Services.

B. In construction areas, all Contractor personnel shall wear personnel protection devices, as deemed appropriate by the Construction Manager and as required by OSHA for the work

location and work operation being performed. Devices shall include, but not be limited to hardhats, work boots, safety eye protection, reflective vests, etc.

C. All exposed holes, pits, pipes, etc., either inside or outside the project facilities, shall be barricaded or plated and adequately secured when Contractor personnel are not present. All ladders, hanging wires, pipes, and other items protruding at a pedestrian level travel way most be removed or secured following the final shift of the day.

D. During breaks or when only a portion of work has been completed, tools shall not be left exposed where others may risk injury or attempt to use them. Windows and doors shall not be left unsecured or propped open during breaks. At the completion of the final shift each day, doors, windows, or other openings shall be adequately secured.

E. When driving on property, Contractor personnel shall observe all traffic safety regulations and pay particular attention to pedestrians. All loose material and debris on vehicles shall be adequately secured and tied down.

END OF SECTION

SECTION 28 4600
DIGITAL, ADDRESSABLE FIRE ALARM SYSTEM

DIGITAL, ADDRESSABLE FIRE-ALARM SYSTEM

1.01 SUMMARY

A. Section Includes:
1. Fire-alarm control unit.
2. Manual fire-alarm boxes.
3. System smoke detectors.
4. Heat detectors.
5. Notification appliances.
6. Device guards.
7. Magnetic door holders.
8. Remote annunciator.
9. Addressable interface device.
10. Digital alarm communicator transmitter.
11. Network communications.

1.02 DEFINITIONS

A. EMT: Electrical Metallic Tubing.

B. FACP: Fire Alarm Control Panel.

C. HLI: High Level Interface.

D. NICET: National Institute for Certification in Engineering Technologies.

E. PC: Personal computer.

1.03 ACTION SUBMITTALS

A. Product Data: For each type of product, including furnished options and accessories.
1. Include construction details, material descriptions, dimensions, profiles, and finishes.
2. Include rated capacities, operating characteristics, and electrical characteristics.

B. Shop Drawings: For fire-alarm system.
1. Comply with recommendations and requirements in the "Documentation" section of the "Fundamentals" chapter in NFPA 72.
2. Include plans, elevations, sections, details, and attachments to other work.
3. Include details of equipment assemblies. Indicate dimensions, weights, loads, required clearances, method of field assembly, components, and locations. Indicate conductor sizes, indicate termination locations and requirements, and distinguish between factory and field wiring.
4. Detail assembly and support requirements.
5. Include voltage drop calculations for notification-appliance circuits.
6. Include battery-size calculations.
7. Include input/output matrix.
8. Include statement from manufacturer that all equipment and components have been tested as a system and meet all requirements in this Specification and in NFPA 72.
9. Include performance parameters and installation details for each detector.
10. Verify that each duct detector is listed for complete range of air velocity, temperature, and humidity possible when air-handling system is operating.
11. Include plans, sections, and elevations of heating, ventilating, and air-conditioning ducts, drawn to scale; coordinate location of duct smoke detectors and access to them.
    a. Show critical dimensions that relate to placement and support of sampling tubes, detector housing, and remote status and alarm indicators.
    b. Show field wiring required for HVAC unit shutdown on alarm.

c. Show field wiring and equipment required for HVAC unit shutdown on alarm and override by firefighters' control system.
d. Locate detectors according to manufacturer's written recommendations.

12. Include Voice/Alarm signaling-service equipment rack or console layout, grounding schematic, amplifier power calculation, and single-line connection diagram.
13. Include floor plans to indicate final outlet locations showing address of each addressable device. Show size and route of cable and conduits and point-to-point wiring diagrams.

C. General Submittal Requirements:
1. Submittals shall be approved by authorities having jurisdiction prior to submitting them to Architect.
2. Shop Drawings shall be prepared by persons with the following qualifications:
a. Trained and certified by manufacturer in fire-alarm system design.
b. NICET-certified, fire-alarm technician; Level III minimum.
c. Licensed or certified by authorities having jurisdiction.

D. Delegated-Design Submittal: For notification appliances and smoke and heat detectors, in addition to submittals listed above, indicate compliance with performance requirements and design criteria, including analysis data signed and sealed by the NIC responsible for their preparation.
1. Drawings showing the location of each notification appliance and smoke and heat detector, ratings of each, and installation details as needed to comply with listing conditions of the device.
2. Design Calculations: Calculate requirements for selecting the spacing and sensitivity of detection, complying with NFPA 72. Calculate spacing and intensities for strobe signals and sound-pressure levels for audible appliances.
3. Indicate audible appliances required to produce square wave signal per NFPA 72.

1.04 INFORMATIONAL SUBMITTALS

A. Qualification Data: For Installer.

B. Field quality-control reports.

1.05 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: For fire-alarm systems and components to include in emergency, operation, and maintenance manuals.
1. In addition to items specified in Section 017700 "Operation and Maintenance Data," include the following and deliver copies to authorities having jurisdiction:
a. Comply with the "Records" section of the "Inspection, Testing and Maintenance" chapter in NFPA 72.
b. Provide "Fire Alarm and Emergency Communications System Record of Completion Documents" according to the "Completion Documents" Article in the "Documentation" section of the "Fundamentals" chapter in NFPA 72.
c. Complete wiring diagrams showing connections between all devices and equipment. Each conductor shall be numbered at every junction point with indication of origination and termination points.
d. Riser diagram.
e. Device addresses.
f. Record copy of site-specific software.
g. Provide "Inspection and Testing Form" according to the "Inspection, Testing and Maintenance" chapter in NFPA 72, and include the following:
1) Equipment tested.
2) Frequency of testing of installed components.
3) Frequency of inspection of installed components.
4) Requirements and recommendations related to results of maintenance.

5) Manufacturer's user training manuals.

h. Manufacturer's required maintenance related to system warranty requirements.

i. Abbreviated operating instructions for mounting at fire-alarm control unit and each annunciator unit.

B. Software and Firmware Operational Documentation:
1. Software operating and upgrade manuals.
2. Program Software Backup: On magnetic media or compact disk, complete with data files.
3. Device address list.
4. Printout of software application and graphic screens.

1.06 PROJECT CONDITIONS

A. Existing System: Fire alarm system is existing. Replace with new system as indicated on drawings.

B. Fire alarm system type:
1. Speaker/Strobe

C. Building Fire Protection Conditions:
1. Sprinkled

D. Building Equipment/occupancy conditions:
1. Elevator
2. Kitchen Ansul/fire Supression Hood
3. Sleeping Units

E. Interruption of Existing Fire-Alarm Service: Do not interrupt fire-alarm service to facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary guard service according to requirements indicated:
1. Notify Construction Manager and Owner no fewer than 7 days in advance of proposed interruption of fire-alarm service.

F. Use of Devices during Construction: Protect devices during construction unless devices are placed in service to protect the facility during construction.

1.07 SEQUENCING AND SCHEDULING

A. Equipment Removal: After acceptance of new fire-alarm system, remove existing disconnected fire-alarm equipment.

PART 2 PRODUCTS

2.01 SYSTEM DESCRIPTION

A. Provide system manufacturer's certification that all components provided have been tested as, and will operate as, a system.

B. Noncoded, UL-certified addressable system, with multiplexed signal transmission and voice/strobe evacuation.

C. Automatic sensitivity control of certain smoke detectors.

D. All components provided shall be listed for use with the selected system.

E. 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.

2.02 SYSTEMS OPERATIONAL DESCRIPTION

A. Fire-alarm signal initiation shall be by one or more of the following devices and systems:
1. Manual stations.
2. Heat detectors.
3. Smoke detectors.
4. Duct smoke detectors.

5. Automatic sprinkler system water flow.

B. Fire-alarm signal shall initiate the following actions:
   1. Continuously operate alarm notification appliances:
      a. Including voice evacuation notices.
   2. Identify alarm and specific initiating device at fire-alarm control unit connected network panels and remote annunciators.
   3. Release fire and smoke doors held open by magnetic door holders.
   4. Activate voice/alarm communication system.
   5. Switch heating, ventilating, and air-conditioning equipment controls to fire-alarm mode.
   6. Close smoke dampers in air ducts of designated air-conditioning duct systems.
   7. Recall elevators to primary or alternate recall floors.
   8. Activate elevator power shunt trip.
   9. Activate emergency shutoffs for gas and fuel supplies.
   10. Record events in the system memory.

C. Supervisory signal initiation shall be by one or more of the following devices and actions:
   1. Valve supervisory switch.
   2. Elevator shunt-trip supervision.
   3. Independent fire-detection and -suppression systems.
   4. User disabling of zones or individual devices.
   5. Loss of communication with any panel on the network.

D. System trouble signal initiation shall be by one or more of the following devices and actions:
   1. Open circuits, shorts, and grounds in designated circuits.
   2. Opening, tampering with, or removing alarm-initiating and supervisory signal-initiating devices.
   3. Loss of communication with any addressable sensor, input module, relay, control module, remote annunciator, printer interface, or Ethernet module.
   4. Loss of primary power at fire-alarm control unit.
   5. Ground or a single break in internal circuits of fire-alarm control unit.
   6. Abnormal ac voltage at fire-alarm control unit.
   7. Break in standby battery circuitry.
   8. Failure of battery charging.
   9. Abnormal position of any switch at fire-alarm control unit or annunciator.
   10. Voice signal amplifier failure.

E. System Supervisory Signal Actions:
   1. Initiate notification appliances.
   2. Identify specific device initiating the event at fire-alarm control unit connected network panels and remote annunciators.
   3. After a time delay of 200 seconds, transmit a trouble or supervisory signal to the remote alarm receiving station.
   4. Transmit system status to building management system.

2.03 FIRE-ALARM CONTROL UNIT

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
   1. Notifier
   2. Siemens
   3. Simplex
   4. Silent Knight
   5. Fire Lite
   6. Edwards

7. Potter
8. Or Engineer Pre-Approved Equal

B. General Requirements for Fire-Alarm Control Unit:
   1. Field-programmable, microprocessor-based, modular, power-limited design with electronic modules, complying with UL 864.
      a. System software and programs shall be held in nonvolatile flash, electrically erasable, programmable, read-only memory, retaining the information through failure of primary and secondary power supplies.
      b. Include a real-time clock for time annotation of events on the event recorder.
      c. Provide communication between the FACP and remote circuit interface panels, annunciators, and displays.
      d. The FACP shall be listed for connection to a central-station signaling system service.
      e. Provide nonvolatile memory for system database, logic, and operating system and event history. The system shall require no manual input to initialize in the event of a complete power down condition. The FACP shall provide a minimum 500-event history log.
   2. Addressable Initiation Device Circuits: The FACP shall indicate which communication zones have been silenced and shall provide selective silencing of alarm notification appliance by building communication zone.
   3. Addressable Control Circuits for Operation of Notification Appliances and Mechanical Equipment: The FACP shall be listed for releasing service.

C. Initiating-Device, Notification-Appliance, and Signaling-Line Circuits:
   1. Pathway Class Designations: NFPA 72, Class B.
   2. Pathway Survivability: Level 1.
   3. Install no more than 100 addressable devices on each signaling-line circuit.
   4. Serial Interfaces:
      a. One RS 485 port for remote annunciators, Ethernet module, or multi-interface module (printer port).
      b. One USB port for PC configuration.
      c. One RS 232 port for voice evacuation interface.

D. Notification-Appliance Circuit:
   1. Where notification appliances provide signals to sleeping areas, the alarm signal shall be a 520-Hz square wave with an intensity 15 dB above the average ambient sound level or 5 dB above the maximum sound level, or at least 75 dBA, whichever is greater, measured at the pillow.
   2. Visual alarm appliances shall flash in synchronization where multiple appliances are in the same field of view, as defined in NFPA 72.

E. Elevator Recall:
   1. Elevator recall shall be initiated only by one of the following alarm-initiating devices:
      a. Elevator lobby detectors except the lobby detector on the designated floor.
      b. Smoke detector in elevator machine room.
      c. Smoke detectors in elevator hoistway.
   2. Elevator controller shall be programmed to move the cars to the alternate recall floor if lobby detectors located on the designated recall floors are activated.
   3. Water-flow alarm connected to sprinkler in an elevator shaft and elevator machine room shall shut down elevators associated with the location without time delay.
      a. Water-flow switch associated with the sprinkler in the elevator pit may have a delay to allow elevators to move to the designated floor.

F. Door Controls: Door hold-open devices that are controlled by smoke detectors at doors in smoke-barrier walls shall be connected to fire-alarm system.

G. Remote Smoke-Detector Sensitivity Adjustment: Controls shall select specific addressable smoke detectors for adjustment, display their current status and sensitivity settings, and change those settings. Allow controls to be used to program repetitive, time-scheduled, and automated changes in sensitivity of specific detector groups. Record sensitivity adjustments and sensitivity-adjustment schedule changes in system memory, and print out the final adjusted values on system printer.

H. Transmission to Remote Alarm Receiving Station: Automatically transmit alarm, supervisory, and trouble signals to a remote alarm station.
   1. Tranmission of alarms shall be through cellular communicator equal to Telguard TG-7FS for both primary and secondary requirements.

I. Voice/Alarm Signaling Service: Central emergency communication system with redundant microphones, preamplifiers, amplifiers, and tone generators provided as a special module that is part of fire-alarm control unit.
   1. Indicate number of alarm channels for automatic, simultaneous transmission of different announcements to different zones or for manual transmission of announcements by use of the central-control microphone. Amplifiers shall comply with UL 1711.
      a. Allow the application of, and evacuation signal to, indicated number of zones and, at the same time, allow voice paging to the other zones selectively or in any combination.
      b. Programmable tone and message sequence selection.
      c. Standard digitally recorded messages for "Evacuation" and "All Clear."
      d. Generate tones to be sequenced with audio messages of type recommended by NFPA 72 and that are compatible with tone patterns of notification-appliance circuits of fire-alarm control unit.
   2. Status Annunciator. Indicate the status of voice;
      a. Voice alarm speaker zones.
   3. Preamplifiers, amplifiers, and tone generators shall automatically transfer to backup units, on primary equipment failure.

J. Record of Events: On receipt of signal, record alarm, supervisory, and trouble events. Identify zone, device, and function. Include type of signal (alarm, supervisory, or trouble) and date and time of occurrence. Differentiate alarm signals from all other record indications. Also record system reset events, including same information for device, location, date, and time. Commands initiate the recording of a list of existing alarm, supervisory, and trouble conditions in the system and a historical log of events.

K. Primary Power: 24-V dc obtained from 120-V ac service and a power-supply module. Initiating devices, notification appliances, signaling lines, trouble signals, supervisory and digital alarm communicator transmitters shall be powered by 24-V dc source.
   1. Alarm current draw of entire fire-alarm system shall not exceed 80 percent of the power-supply module rating.

L. Secondary Power: 24-V dc supply system with batteries, automatic battery charger, and automatic transfer switch.
   1. Batteries: Sealed Lead Calcium.

M. Instructions: Computer printout or typewritten instruction card mounted behind a plastic or glass cover in a stainless-steel or aluminum frame. Include interpretation and describe appropriate response for displays and signals. Briefly describe the functional operation of the system under normal, alarm, and trouble conditions.

2.04 MANUAL FIRE-ALARM BOXES

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
   1. Source products from same manufacturer as control unit.

B. General Requirements for Manual Fire-Alarm Boxes: Comply with UL 38. Boxes shall be finished in red with molded, raised-letter operating instructions in contrasting color; shall show visible indication of operation; and shall be mounted on recessed outlet box. If indicated as surface mounted, provide manufacturer's surface back box.
   1. Double-action mechanism requiring two actions to initiate an alarm, pull-lever type; with integral addressable module arranged to communicate manual-station status (normal, alarm, or trouble) to fire-alarm control unit.
   2. Station Reset: Key- or wrench-operated switch.
   3. Indoor Protective Shield: Factory-fabricated, clear plastic enclosure hinged at the top to permit lifting for access to initiate an alarm. Lifting the cover actuates an integral battery-powered audible horn intended to discourage false-alarm operation.
   4. Weatherproof Protective Shield: Factory-fabricated, clear plastic enclosure hinged at the top to permit lifting for access to initiate an alarm.

2.05 SYSTEM SMOKE DETECTORS

A. Manufacturers:Subject to compliance with requirements, provide products by one of the following:
   1. Source products from same manufacturer as control unit.

B. General Requirements for System Smoke Detectors:
   1. Comply with UL 268; operating at 24-V dc, nominal.
   2. Integral Addressable Module: Arranged to communicate detector status (normal, alarm, or trouble) to fire-alarm control unit.
   3. Base Mounting: Detector and associated electronic components shall be mounted in a twist-lock module that connects to a fixed base. Provide terminals in the fixed base for connection to building wiring.
   4. Self-Restoring: Detectors do not require resetting or readjustment after actuation to restore them to normal operation.
   5. Integral Visual-Indicating Light: LED type, indicating detector has operated and power-on status.
   6. Remote Control: Unless otherwise indicated, detectors shall be digital-addressable type, individually monitored at fire-alarm control unit for calibration, sensitivity, and alarm condition and individually adjustable for sensitivity by fire-alarm control unit.
      a. Rate-of-rise temperature characteristic of combination smoke- and heat-detection units shall be selectable at fire-alarm control unit for 15 or 20 deg F (8 or 11 deg C) per minute.
      b. Fixed-temperature sensing characteristic of combination smoke- and heat-detection units shall be independent of rate-of-rise sensing and shall be settable at fire-alarm control unit to operate at 135 or 155 deg F (57 or 68 deg C).
      c. Multiple levels of detection sensitivity for each sensor.
      d. Sensitivity levels based on time of day.

C. Photoelectric Smoke Detectors:
   1. Detector address shall be accessible from fire-alarm control unit and shall be able to identify the detector's location within the system and its sensitivity setting.

D. Duct Smoke Detectors: Photoelectric type complying with UL 268A.
   1. Detector address shall be accessible from fire-alarm control unit and shall be able to identify the detector's location within the system and its sensitivity setting.
   2. Each sensor shall have multiple levels of detection sensitivity.
   3. Sampling Tubes: Design and dimensions as recommended by manufacturer for specific duct size, air velocity, and installation conditions where applied.
   4. Relay Fan Shutdown: Fully programmable relay rated to interrupt fan motor-control circuit.

2.06 HEAT DETECTORS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
   1. Source products from same manufacturer as control unit.

B. General Requirements for Heat Detectors: Comply with UL 521.
   1. Temperature sensors shall test for and communicate the sensitivity range of the device.

C. Heat Detector, Fixed-Temperature Type: Actuated by temperature that exceeds a fixed temperature of 190 deg F (88 deg C).
   1. Mounting: Twist-lock base interchangeable with smoke-detector bases.
   2. Integral Addressable Module: Arranged to communicate detector status (normal, alarm, or trouble) to fire-alarm control unit.

2.07 NOTIFICATION APPLIANCES

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
   1. Source products from same manufacturer as control unit.

B. General Requirements for Notification Appliances: Individually addressed, connected to a signaling-line circuit, equipped for mounting as indicated, and with screw terminals for system connections.

C. Horns: Electric-vibrating-polarized type, 24-V dc; with provision for housing the operating mechanism behind a grille. Comply with UL 464. Horns shall produce a sound-pressure level of 90 dBA, measured 10 feet (3 m) from the horn, using the coded signal prescribed in UL 464 test protocol.

D. Visible Notification Appliances: Xenon strobe lights complying with UL 1971, with clear or nominal white polycarbonate lens mounted on an aluminum faceplate. The word "FIRE" is engraved in minimum 1-inch- (25-mm-) high letters on the lens.
   1. Rated Light Output:
      a. 15/30/75/110 cd, selectable in the field.
   2. Mounting: Wall mounted unless otherwise indicated.
   3. For units with guards to prevent physical damage, light output ratings shall be determined with guards in place.
   4. Flashing shall be in a temporal pattern, synchronized with other units.
   5. Strobe Leads: Factory connected to screw terminals.
   6. Mounting Faceplate: Factory finished, white with red lettering.

E. Voice/Tone Notification Appliances:
   1. Comply with UL 1480.
   2. Speakers for Voice Notification: Locate speakers for voice notification to provide the intelligibility requirements of the "Notification Appliances" and "Emergency Communications Systems" chapters in NFPA 72.
   3. High-Range Units: Rated 2 to 15 W.
   4. Low-Range Units: Rated 1 to 2 W.
   5. Mounting: Flush or surface mounted as indicated on drawings.
   6. Matching Transformers: Tap range matched to acoustical environment of speaker location.

F. Exit Marking Audible Notification Appliance:
   1. Exit marking audible notification appliances shall meet the audibility requirements in NFPA 72.
   2. Provide exit marking audible notification appliances at the entrance to all building exits.
   3. Provide exit marking audible notification appliances at the entrance to areas of refuge with audible signals distinct from those used for building exit marking.

2.08 MAGNETIC DOOR HOLDERS

A. Description: Units are equipped for wall or floor mounting as indicated and are complete with matching doorplate.
   1. Electromagnets: Require no more than 3 W to develop 25-lbf (111-N) holding force.
   2. Wall-Mounted Units: Flush mounted unless otherwise indicated.
   3. Rating: 120-V ac.

B. Material and Finish: Match door hardware.

2.09 REMOTE ANNUNCIATOR

A. Description: Annunciator functions shall match those of fire-alarm control unit for alarm, supervisory, and trouble indications. Manual switching functions shall match those of fire-alarm control unit, including acknowledging, silencing, resetting, and testing.
   1. Mounting: Flush cabinet, NEMA 250, Type 1.

B. Display Type and Functional Performance: Alphanumeric display and LED indicating lights shall match those of fire-alarm control unit. Provide controls to acknowledge, silence, reset, and test functions for alarm, supervisory, and trouble signals.

2.10 ADDRESSABLE INTERFACE DEVICE

A. General:
   1. Include address-setting means on the module.
   2. Store an internal identifying code for control panel use to identify the module type.
   3. Listed for controlling HVAC fan motor controllers.
   4. Listed for multi-voltage door hold applications.

B. Monitor Module: Microelectronic module providing a system address for alarm-initiating devices for wired applications with normally open contacts.

C. Integral Relay:
   1. Capable of providing a direct signal to elevator controller to initiate elevator recall.
   2. Capable of providing a direct signal to circuit-breaker shunt trip for power shutdown.
   3. Allow the control panel to switch the relay contacts on command.
   4. Have a minimum of two normally open and two normally closed contacts available for field wiring.

D. Control Module:
   1. Operate notification devices.
   2. Operate solenoids for use in sprinkler service.
   3. Operate door hold open to toggle physical voltage.

2.11 DIGITAL ALARM COMMUNICATOR TRANSMITTER

A. Digital alarm communicator transmitter shall be acceptable to the remote central station and shall comply with UL 632.

B. Tranmission of alarms shall be through cellular communicator equal to Telguard TG-7FS for both primary and secondary requirements.

C. Functional Performance: Unit shall receive an alarm, supervisory, or trouble signal from fire-alarm control unit and automatically capture one telephone line(s) and dial a preset number for a remote central station. When contact is made with central station(s), signals shall be transmitted. If service on either line is interrupted for longer than 45 seconds, transmitter shall initiate a local trouble signal and transmit the signal indicating loss of telephone line to the remote alarm receiving station over the remaining line. Transmitter shall automatically report telephone service restoration to the central station. If service is lost on both telephone lines, transmitter shall initiate the local trouble signal.

D. Local functions and display at the digital alarm communicator transmitter shall include the following:
   1. Verification that both telephone lines are available.

2. Programming device.
3. LED display.
4. Manual test report function and manual transmission clear indication.
5. Communications failure with the central station or fire-alarm control unit.

E. Digital data transmission shall include the following:
1. Address of the alarm-initiating device.
2. Address of the supervisory signal.
3. Address of the trouble-initiating device.
4. Loss of ac supply.
5. Loss of power.
6. Low battery.
7. Abnormal test signal.
8. Communication bus failure.

F. Secondary Power: Integral rechargeable battery and automatic charger.

G. Self-Test: Conducted automatically every 24 hours with report transmitted to central station.

2.12 NETWORK COMMUNICATIONS

A. Provide network communications for fire-alarm system according to fire-alarm manufacturer's written requirements.

B. Provide network communications pathway per manufacturer's written requirements and requirements in NFPA 72 and NFPA 70.

C. Provide integration gateway using BACnet for connection to building automation system.

2.13 DEVICE GUARDS

A. Description: Welded wire mesh of size and shape for the manual station, smoke detector, gong, or other device requiring protection.
1. Factory fabricated and furnished by device manufacturer.
2. Finish: Paint of color to match the protected device.

PART 3 EXECUTION

3.01 EXAMINATION

A. Examine areas and conditions for compliance with requirements for ventilation, temperature, humidity, and other conditions affecting performance of the Work.
1. Verify that manufacturer's written instructions for environmental conditions have been permanently established in spaces where equipment and wiring are installed, before installation begins.

B. Examine roughing-in for electrical connections to verify actual locations of connections before installation.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.02 EQUIPMENT INSTALLATION

A. Comply with NFPA 72, NFPA 101, and requirements of authorities having jurisdiction for installation and testing of fire-alarm equipment. Install all electrical wiring to comply with requirements in NFPA 70 including, but not limited to, Article 760, "Fire Alarm Systems."
1. Devices placed in service before all other trades have completed cleanup shall be replaced.
2. Devices installed but not yet placed in service shall be protected from construction dust, debris, dirt, moisture, and damage according to manufacturer's written storage instructions.

B. Connecting to Existing Equipment: Verify that existing fire-alarm system is operational before making changes or connections.

1. Connect new equipment to existing control panel in existing part of the building.
2. Connect new equipment to existing monitoring equipment at the supervising station.
3. Expand, modify, and supplement existing system as necessary to extend existing control and monitoring functions to the new points. New components shall be capable of merging with existing configuration without degrading the performance of either system.

C. Install wall-mounted equipment, with tops of cabinets not more than 78 inches (1980 mm) above the finished floor.

D. Manual Fire-Alarm Boxes:
1. Install manual fire-alarm box in the normal path of egress within 60 inches (1520 mm) of the exit doorway.
2. Mount manual fire-alarm box on a background of a contrasting color.
3. The operable part of manual fire-alarm box shall be between 42 inches (1060 mm) and 48 inches (1220 mm) above floor level. All devices shall be mounted at the same height unless otherwise indicated.

E. Smoke- or Heat-Detector Spacing:
1. Comply with the "Smoke-Sensing Fire Detectors" section in the "Initiating Devices" chapter in NFPA 72, for smoke-detector spacing.
2. Comply with the "Heat-Sensing Fire Detectors" section in the "Initiating Devices" chapter in NFPA 72, for heat-detector spacing.
3. Smooth ceiling spacing shall not exceed 30 feet (9 m) .
4. Spacing of detectors for irregular areas, for irregular ceiling construction, and for high ceiling areas shall be determined according to Annex A or Annex B in NFPA 72.
5. HVAC: Locate detectors not closer than 36 inches (910 mm) from air-supply diffuser or return-air opening.
6. Lighting Fixtures: Locate detectors not closer than 12 inches (300 mm) from any part of a lighting fixture and not directly above pendant mounted or indirect lighting.

F. Install a cover on each smoke detector that is not placed in service during construction. Cover shall remain in place except during system testing. Remove cover prior to system turnover.

G. Duct Smoke Detectors: Comply with NFPA 72 and NFPA 90A. Install sampling tubes so they extend the full width of duct. Tubes more than 36 inches (9100 mm) long shall be supported at both ends.
1. Do not install smoke detector in duct smoke-detector housing during construction. Install detector only during system testing and prior to system turnover.

H. Dwelling units: Where more than one smoke alarm is installed within a dwelling or suite, they shall be connected so that the operation of any smoke alarm in the unit causes all alarms in the unit to activate.
1. Provide system detection devices within dwelling units. Program devices such that dwelling unit local alarm shall not trigger building-wide alarm.
2. For hearing impaired designated units, provide system smoke detectors and system notification devices. Program devices such that dwelling unit local alarm shall not trigger building-wide alarm. Local smoke detection shall activate all local visual notification devices in unit.

I. Remote Status and Alarm Indicators: Install in a visible location near each smoke detector, sprinkler water-flow switch, and valve-tamper switch that is not readily visible from normal viewing position.

J. Audible Alarm-Indicating Devices: Install not less than 6 inches (150 mm) below the ceiling. Install bells and horns on flush-mounted back boxes with the device-operating mechanism concealed behind a grille. Install all devices at the same height unless otherwise indicated.

K. Visible Alarm-Indicating Devices: Install adjacent to each alarm bell or alarm horn and at least 6 inches (150 mm) below the ceiling. Install all devices at the same height unless otherwise indicated.

L. Device Location-Indicating Lights: Locate in public space near the device they monitor.

3.03 PATHWAYS

A. Cabling above accessible ceilings and in nonaccessible (eg. gypsum) ceiling locations must be installed in conduit.

B. Pathways shall be installed in EMT.

3.04 CONNECTIONS

A. Connect doors in fire-rated walls to fire-alarm system.
   1. Verify that hardware and devices are listed for use with installed fire-alarm system before making connections.

B. Make addressable connections with a supervised interface device to the following devices and systems. Install the interface device less than 36 inches (910 mm) from the device controlled. Make an addressable confirmation connection when such feedback is available at the device or system being controlled.
   1. Smoke dampers in air ducts of designated HVAC duct systems.
   2. Magnetically held-open doors.
   3. Electronically locked doors and access gates.
   4. Alarm-initiating connection to elevator recall system and components.
   5. Alarm-initiating connection to activate emergency shutoffs for gas and fuel supplies.
   6. Supervisory connections at valve supervisory switches.
   7. Supervisory connections at elevator shunt-trip breaker.

3.05 IDENTIFICATION

A. Install framed instructions in a location visible from fire-alarm control unit.

B. Incorporate owner's final room designations into the addressable panel programming.Obtain approval before programming in final room names and numbers to identify and associate addressable initiating devices.

3.06 GROUNDING

A. Ground fire-alarm control unit and associated circuits; comply with IEEE 1100. Install a ground wire from main service ground to fire-alarm control unit.

B. Ground shielded cables at the control panel location only. Insulate shield at device location.

3.07 FIELD QUALITY CONTROL

A. Field tests shall be witnessed by authorities having jurisdiction .

B. Perform the following tests and inspections with the assistance of a factory-authorized service representative:
   1. Visual Inspection: Conduct visual inspection prior to testing.
      a. Inspection shall be based on completed record Drawings and system documentation that is required by the "Completion Documents, Preparation" table in the "Documentation" section of the "Fundamentals" chapter in NFPA 72.
      b. Comply with the "Visual Inspection Frequencies" table in the "Inspection" section of the "Inspection, Testing and Maintenance" chapter in NFPA 72; retain the "Initial/Reacceptance" column and list only the installed components.
   2. System Testing: Comply with the "Test Methods" table in the "Testing" section of the "Inspection, Testing and Maintenance" chapter in NFPA 72.

3. Test audible appliances for the public operating mode according to manufacturer's written instructions. Perform the test using a portable sound-level meter complying with Type 2 requirements in ANSI S1.4.
4. Test audible appliances for the private operating mode according to manufacturer's written instructions.
5. Test visible appliances for the public operating mode according to manufacturer's written instructions.
6. Factory-authorized service representative shall prepare the "Fire Alarm System Record of Completion" in the "Documentation" section of the "Fundamentals" chapter in NFPA 72 and the "Inspection and Testing Form" in the "Records" section of the "Inspection, Testing and Maintenance" chapter in NFPA 72.

C. Reacceptance Testing: Perform reacceptance testing to verify the proper operation of added or replaced devices and appliances.

D. Fire-alarm system will be considered defective if it does not pass tests and inspections.

E. Prepare test and inspection reports.

F. Maintenance Test and Inspection: Perform tests and inspections listed for weekly, monthly, quarterly, and semiannual periods. Use forms developed for initial tests and inspections.

3.08 SOFTWARE SERVICE AGREEMENT

A. Comply with UL 864.

B. Technical Support: Beginning at Substantial Completion, service agreement shall include software support for one year.

C. Upgrade Service: At Substantial Completion, update software to latest version. Install and program software upgrades that become available within one year from date of Substantial Completion. Upgrading software shall include operating system and new or revised licenses for using software.
1. Upgrade Notice: At least 30 days to allow Owner to schedule access to system and to upgrade computer equipment if necessary.

3.09 DEMONSTRATION

A. Train owner's maintenance personnel to adjust, operate, and maintain fire-alarm system.
1. Include up to (4) 1 hour sessions for training. Training to be split up into multiple sessions due to construction phasing.

END OF SECTION