

PROJECT MANUAL

PROJECT NAME:

WRC Fire Alarm Phase 4 (#9279.40) Bid
Issuance #3

PROJECT ADDRESS:

1251 334th Street
Woodward, Iowa 50276

PROJECT DATE: Friday, December 12, 2025

-

OWNER:

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



OWNER PROJECT NUMBER: 9279.40

OWNER REQUEST FOR BID NUMBER: RFB 927940-03

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CONSTRUCTION MANAGER:

Story Construction
2810 Wakefield Circle
Ames, Iowa 50010



CONSTRUCTION MANAGER PROJECT NUMBER: 25504

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ARCHITECT:

Shive – Hattery
4125 Westown Parkway Suite 100
West Des Moines, Iowa 50266



ARCHITECT PROJECT NUMBER: 2240007040


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SECTION 00 0105

CERTIFICATIONS PAGE

STATE OF IOWA

	<p>I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa.</p> <p><i>Kevin Bruxvoort</i> _____ 12/12/2025</p> <p>Signature Date</p> <p>Printed or typed name: Kevin Bruxvoort License Number: 19927 My license renewal date is: 12-31-2025 Pages, Sheets, or Divisions covered by this Seal: Divisions 07, 26, and 28</p>
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END OF SECTION

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MM.	20-ED301	First Floor Systems Demolition Plan
NN.	20-ED302	Second and Third Floor Systems Demolition Plan
OO.	20-E300	Basement Level Systems Plan
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END OF SECTION

SECTION 00 0116

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

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SECTION 00 1113

NOTICE TO BIDDERS

RFB #927940-03

The Iowa Department of Administrative Services will be receiving bids for installing new fire alarm in the following buildings: Administration, Larches, Hemlock, Employee Home, Maple Lodge, Laundry, Car Wash, Supply Depot, Oak Hall, Water Treatment, CDC Central Distribution, Westwood Storage Building, and the Chiller Building at Woodward Resource Center, 1251 334th Street, Woodward, Iowa 50276.

The Iowa Department of Administrative Services anticipates construction to begin on March 9, 2026 and end on December 4, 2026.

Bids must be received no later than **2:00 pm, Thursday, February 5th, 2026**. 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/yrb-iffu-twb teleconference number (US)+1 414-909-4797 Pin: 651 771 508# at 3:00 pm on February 5th, 2026.

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 10:00 am, January 28, 2026, to the Issuing Officer.

Bidding documents may stipulate a specific product. Substitute product will be considered if a written request is received by 10:00 am, January 28, 2026, 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 Thursday, January 22, 2026, at 10:00 am at Woodward Resource Center at the Story Construction trailer at 1251 334th Street, Woodward, Iowa 50276. This meeting is not mandatory but is highly recommended.

Bidding Documents, including drawing sheets bearing the project name Fire Alarm Phase 4 (#9279.40) Bid Issuance #3, Dated 12/12/2025 and the Project Manual prepared by Shive-Hattery dated 12/12/2025, may be obtained from Rapids Reproductions by visiting www.rapidsrepro.com or by calling (515) 251-3222 on Monday through Friday 8:00 am to 5:00 pm.

For further information regarding this project contact:

Michael Bradbury – Issuing Officer

Phone: (515) 823-9327

E-Mail: construction.procurement@iowa.gov

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SECTION 00 2113
INSTRUCTIONS TO BIDDERS
RFB #927940-03

PART 1 - GENERAL

1.01 SECTION INCLUDES

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

1.02 PROJECT DESCRIPTION

- A. Project Description: Installing new fire alarm in the following buildings: Administration, Larches, Hemlock, Employee Home, Maple Lodge, Laundry, Car Wash, Supply Depot, Oak Hall, Water Treatment, CDC Central Distribution, Westwood Storage Building, and the Chiller building.

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: Rodney Carr, Plant Operations Manager, 1251 334th Street, Woodward, Iowa 50276, Phone: 515-314-6643; email: Rodney.carr@hhs.iowa.gov
- D. CONSTRUCTION MANAGER CONTACT: Darren Milliken, Story Construction, 2810 Wakefield Circle, Ames, Iowa 50226, Phone: 515-291-5358; email: darren.milliken@storycon.com
- E. DESIGN PROFESSIONAL CONTACT: Chris Bauer, Shive-Hattery Inc, 4125 Westown Parkway Suite 100, West Des Moines, Iowa 50266, (515) 223-8104 cbauer@shive-hattery.com

PART 2 - PRODUCTS – NOT USED

PART 3 - 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.21 may, among other things, result in civil penalties assessed by the Commissioner of the Division of Labor of Iowa Workforce Development. The bidder should seek out the advice of an attorney if he or she has questions about Iowa Code Section 73A.21. As a part of the competitive procurement of contracts for Public Improvements that must be awarded to the low bidder (if the bid is responsive and the bidder is deemed responsible), Public Bodies shall allow a preference to Resident Bidders if a Nonresident Bidder places a bid for the contract for the Public Improvement and that Nonresident Bidder's state or foreign country gives resident bidders of that state or foreign country a preference (including a labor force preference or any type of preferential treatment). The preference allowed, or reciprocally applied, shall be equal to the preference given or required by the state or foreign country in which the Nonresident Bidder is a resident bidder.

"Public Body" means the State of Iowa (and its agencies) and any of its political subdivisions, including school districts, public utilities, and the state board of regents.

"Public Improvement" means a building or other construction work to be paid for in whole or in part by the use of funds of the State of Iowa, its agencies, and any of its political subdivisions and includes road construction, reconstruction, and maintenance projects.

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

"Nonresident Bidder" means a person or entity who does not meet the definition of a resident bidder.
- C. Nonresident bidders shall be required to certify on the Bid 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.

Sourcing Events ?

Show Opening or Closing Soon ▾ [Go to Public Opportunities](#)

Event Number	Status	Event Title	Dates	Action
RFB923700-02	Open	Hoover East Side Pavers	Open: 4/27/2022 12:00:00 PM CDT Close: 5/5/2022 12:00:00 PM CDT	View Event ▾

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.

SECTION 00 2113.02

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): E-MAIL ADDRESS:	FAX (A/C, No):
INSURED Trade Contractor's Name Trade Contractor's Mailing Address	INSURER(S) AFFORDING COVERAGE	
	INSURER A: Company A (AM Best Rated A/VI or Better)	NAIC # Admitted
	INSURER B:	Carriers
	INSURER C:	
	INSURER D:	
	INSURER E:	

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/SUBR INSD W/D	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	Minimum
* A	COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PROJECT <input type="checkbox"/> LOC OTHER:	X X	#TBD-CGL	3/1/17	3/1/18	EACH OCCURRENCE \$ 1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ MED EXP (Any one person) \$ PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 2,000,000 PRODUCTS - COM/POP AGG \$ 1,000,000 \$	
B	AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO <input type="checkbox"/> ALL OWNED AUTOS <input type="checkbox"/> HIRED AUTOS <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> NON-OWNED AUTOS	X X	#TBD-AL	3/1/17	3/1/18	COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$	amount varies based on paragraph 10.2.2 of the ConsensusDocs 802 contract
C	UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE DED RETENTION \$	X X	#TBD-UMB	3/1/17	3/1/18	EACH OCCURRENCE \$ 10,000,000 AGGREGATE \$	
D	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N N/A X	#TBD-WC	3/1/17	3/1/18	<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTH-ER E.L. EACH ACCIDENT \$ 500,000 E.L. DISEASE - EA EMPLOYEE \$ 500,000 E.L. DISEASE - POLICY LIMIT \$ 500,000	
* E	Owners Contrators Protective Liability		#TBD-OCF	3/1/17	3/1/18	*Limits equal to CGL (or) as required by owner (Note- Would be either CGL or OCF, not both)	

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

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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

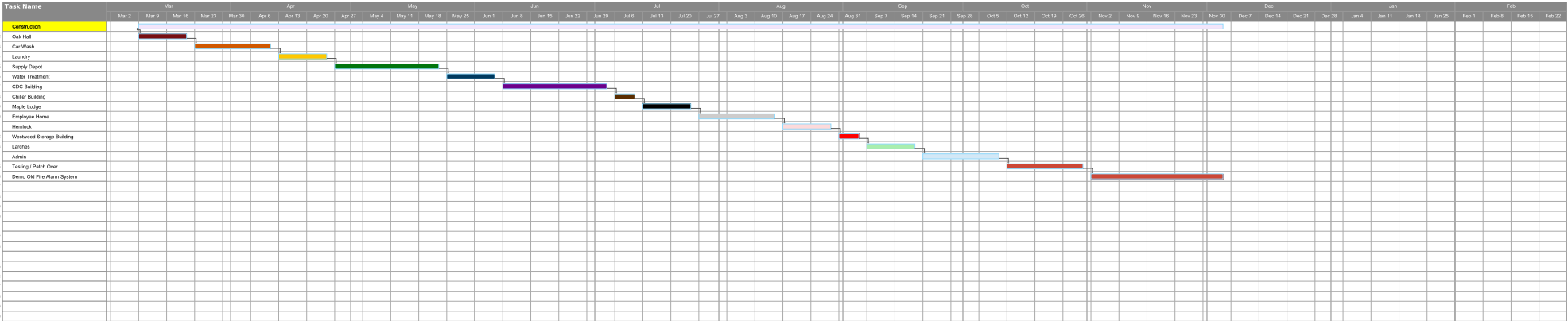
- A. Anticipated Notice of Intent to Award – 02/06/2026
- B. Anticipated Date of Commencement – 03/09/2026
- C. Substantial Completion by – 12/04/2026

PART 2 - PRODUCTS – NOT USED

PART 3 - EXECUTION – NOT USED

END OF SECTION

WRC Fire Alarm Ph.4



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. Atlas Technical Consultants LLC
4503 East 50th Street, Suite 800 Des Moines, IA 50317
- 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.
 - 2. Atlas Survey Report for Hazardous Building Materials dated
 - a. Survey Number: 204BS09428

PART 2 - PRODUCTS – NOT USED

PART 3 - EXECUTION – NOT USED

END OF SECTION

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LIMITED LEAD AND ASBESTOS SURVEY

WOODWARD RESOURCE CENTER, FIRE ALARM PHASE 4
PROJECT #9279.40

1251 334TH STREET
WOODWARD, IOWA

PREPARED FOR:

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

PREPARED BY:

Atlas Technical Consultants LLC
11117 Mockingbird Drive
Omaha, NE 68137

January 12, 2026



11117 Mockingbird Drive
Omaha, NE 68137
(402) 697-9747 | oneatlas.com

January 8, 2026

Ms. Jennifer Kleene
Iowa Department of Administrative Services
109 SE 13th Street
Des Moines, IA 50319

Subject: Limited Lead and Asbestos Survey
WRC, Fire Alarm Phase 4 Project #9279.40
Woodward Resource Center
1251 334th Street
Woodward, Iowa
Atlas No: 204BS09428

Dear Ms. Kleene:

Atlas Technical Consultants LLC (Atlas) is pleased to submit the attached Limited Asbestos and Lead Paint Survey Report conducted at the above-referenced site. This report includes procedures, methodologies and analytical laboratory results.

Atlas appreciates the opportunity to perform these services for the Iowa Department of Administrative Services (IDAS) and we look forward to working with you in the future. If you need any assistance with the implementation of the recommendations contained in this report, please feel free to contact the us and we will respond promptly to your needs.

Respectfully submitted,

Atlas Technical Consultants LLC

Matthew Podjenski
Matthew Podjenski
Iowa Asbestos Inspector

Phillip Thomas, OHST, CHMM
Sr. Project Manager

T A B L E O F C O N T E N T S

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APPENDICES

- APPENDIX A: Laboratory Analytical Report and Chain of Custody
- APPENDIX B: Lead Analytical Report and Chain of Custody
- APPENDIX C: Drawings with Sample Locations
- APPENDIX D: Photo Log of ACM and Lead-based Paint
- APPENDIX E: Staff and Company Accreditations



Limited Asbestos and Lead Paint Survey

WRC, Fire Alarm Phase 4 Project #9279.40
Woodward Resource Center
1251 334th Street
Woodward, Iowa
Atlas No.: 204BS09428

1.0 SCOPE OF SERVICES

The purpose of this project was to perform a Limited Asbestos and Lead Paint Survey of the above-referenced property prior to proposed renovation and demolition activities.

2.0 GENERAL SITE CONDITIONS

The survey was conducted in the Administration Building, Larches Building, Hemlock Building, Employee Home, Maple Lodge, Laundry, Car Wash, Supply Depot, Oak Hall, Water Treatment, Central Distribution Center, Central Distribution Center Storage and Chiller Buildings at the Woodward Resource Center located at 1251 334th Street in Woodward, Iowa. The survey area was limited to interior materials that will be disturbed as part of the WRC, Fire Alarm Phase 4 Project #9279.

3.0 ASBESTOS SURVEY

On December 8, 9, and 10, 2025, the ceiling, floor, and walls that are planned to be disturbed as a part of the fire alarm phase 4 project #9279.40 was inspected for ACM by inspector Mr. Matthew Podjenski and Chris Nicolet of Atlas. Mr. Podjenski and Mr. Nicolet have completed the requisite training for asbestos accreditation as inspectors at a state approved training provider under TSCA Title II. Mr. Podjenski's and Mr. Nicolet's State of Iowa Inspector numbers are 25-13358 and 25-12809.

Atlas conducted an asbestos survey of the identified building as required by United States Environmental Protection Agency (USEPA) regulation 40 Code of Federal Regulations (CFR) Part 61, the asbestos National Emissions Standards for Hazardous Air Pollutants (NESHAP) and applicable state and local regulations. The purpose of the inspection was to identify, sample, quantify and assess suspect ACM in locations that may be disturbed as part of planned renovation and demolition activities.

The survey was limited to suspect materials that might be disturbed during planned renovation or demolition activities. Materials that were hidden, not accessible, or when sampled would damage the integrity of the structure, were not sampled as part of this limited survey. Materials visibly identified as non-asbestos (fibrous glass, foam rubber, wood, etc.) were not sampled. The asbestos survey consisted of three basic steps: **1)** a visual inspection of the proposed site; **2)** a determination of homogeneous areas with suspect surfacing, thermal system insulation, and miscellaneous materials; and **3)** sampling accessible, friable and non-friable, suspect materials.

3.1 Regulation Review

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 USEPA asbestos NESHAP (40 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 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 fibers per cubic centimeter (0.1 f/cc) of air 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.

3.2 Homogeneous Areas

Prior to sampling, homogeneous areas were identified in order to facilitate a sampling strategy. A homogeneous sampling area can be described as one or more areas with suspect material similar in appearance and texture that have the same installation date and function. The actual number of samples collected from each homogeneous sampling area may vary, dependent upon material type and the professional judgment of the inspector.

3.3 Sampling Strategy

The sampling strategy incorporated the asbestos hazard emergency response act (AHERA) sampling requirements, estimated quantities of suspect ACM, and the inspector's judgment to aid in the identification of suspect ACM. If the analytical results indicated that all the samples collected per homogeneous area did not contain asbestos, then the homogeneous area (material) was considered non-asbestos-containing. However,

if the analytical results of one or more of the samples collected per homogeneous area indicated that asbestos was present in quantities greater than one percent asbestos (as defined by USEPA), all of the homogeneous area (material) was treated as an ACM regardless of any other analytical results. Materials which were visually determined to be non-asbestos (i.e. fibrous glass, foam rubber, etc.) by the accredited inspector were not required to be sampled. Actual collection of a bulk asbestos sample involves physically removing a small piece of material and placing it in an airtight sample container. Sample containers were marked with a unique identification number, which was documented in the field notes.

3.4 Laboratory Analytical Results

A total of **105** samples were collected from building materials suspected of containing asbestos and a total of 161 layers were analyzed.. The samples were submitted under chain of custody to EMSL Analytical, Inc. (EMSL) located at 6340 CastlePlace Drive in Indianapolis, Indiana for analysis by polarized light microscopy (PLM) with dispersion staining techniques per the *USEPA Method for the Determination of Asbestos in Bulk Building Materials (600/R-93-116)*. The percentage of asbestos, if applicable, was established by microscopic visual estimation. EMSL is an accredited laboratory by the National Voluntary Laboratory Accreditation Plan (NVLAP) No. 101048-0. Any material that contains greater than one percent (>1%) asbestos is considered an ACM and must be handled according to Occupational Safety and Health Administration (OSHA), USEPA, and all applicable state and local regulations

Details of sample analysis are included in Appendix A, which contains a listing of all analyzed samples, sample locations, and analytical results relating to the site. Asbestos analytical results are reported as percentage and type. Other common non-asbestos components may also be noted in the analytical report.

3.5 Suspect Asbestos-Containing Materials

A summary of the suspect ACM sampled can be found in Table 1 below:

Table 1: Suspect Asbestos-Containing Materials		
Sample Number	Material	Location
A-1 – Finish Coat	Plaster	3 rd Floor Oak Hall Ceiling North Bathroom
A-1 – Base Coat	Plaster	3 rd Floor Oak Hall Ceiling North Bathroom
A-2 – Finish Coat	Plaster	3 rd Floor Oak Hall Wall North Bathroom
A-2 – Base Coat	Plaster	3 rd Floor Oak Hall Wall North Bathroom
A-3	Vinyl Sheet Flooring	3 rd Floor Oak Hall East Hallway
A-3 – Mastic	Mastic Associated with Vinyl Sheet Flooring	3 rd Floor Oak Hall East Hallway
A-4 – Drywall	Drywall	2 nd Floor Oak Hall South Hallway
A-4 – Joint Compound	Joint Compound	2 nd Floor Oak Hall South Hallway
A-5 – Finish Coat	Plaster	2 nd Floor Oak Hall South Lobby Area
A-5 – Base Coat	Plaster	2 nd Floor Oak Hall South Lobby Area

Table 1: Suspect Asbestos-Containing Materials

Sample Number	Material	Location
A-6 – Finish Coat	Plaster	2 nd Floor Oak Hall South Lobby Area
A-6 – Base Coat	Plaster	2 nd Floor Oak Hall South Lobby Area
A-7 – Floor Tile	9” x 9” Floor Tile (Brown)	2 nd Floor Oak Hall Central Area
A-7 – Mastic	Mastic Associated with 9” x 9” Floor Tile	2 nd Floor Oak Hall Central Area
A-8	Vinyl Sheet Flooring	2 nd Floor Oak Hall West Stairwell
A-8 – Mastic	Mastic Associated with Vinyl Sheet Flooring	2 nd Floor Oak Hall West Stairwell
A-9	Plaster	1 st Floor Oak Hall Lobby Wall
A-10 – Finish Coat	Plaster	1 st Floor Oak Hall Lobby Ceiling
A-10 – Base Coat	Plaster	1 st Floor Oak Hall Lobby Ceiling
A-11 – Drywall	Drywall	1 st Floor Car Wash Garage Ceiling
A-11 – Joint Compound	Joint Compound	1 st Floor Car Wash Garage Ceiling
A-12 – Drywall	Drywall	1 st Floor Car Wash Storage Wall
A-12 – Joint Compound	Joint Compound	1 st Floor Car Wash Storage Wall
A-13	Ceiling Texture	1 st Floor Car Wash Garage Ceiling
A-14	Ceiling Texture	1 st Floor Car Wash Garage Ceiling
A-15	Ceiling Texture	1 st Floor Car Wash Storage Ceiling
A-16 – Drywall	Drywall	1 st Floor Laundry Garage Wall
A-16 – Joint Compound	Joint Compound	1 st Floor Laundry Garage Wall
A-17 – Drywall	Drywall	1 st Floor Laundry Storage Ceiling
A-17 – Joint Compound	Joint Compound	1 st Floor Laundry Storage Ceiling
A-18 – Finish Coat	Plaster	1 st Floor Laundry Garage Wall
A-18 – Base Coat	Plaster	1 st Floor Laundry Garage Wall
A-19	Plaster	1 st Floor Laundry Garage Ceiling

Table 1: Suspect Asbestos-Containing Materials

Sample Number	Material	Location
A-20	2' x 2' Ceiling Tile	1 st Floor Laundry Break Room
A-21	Plaster	1 st Floor Chiller HVAC Room Wall
A-21 – Vapor Barrier	Vapor Barrier Associated with Plaster Wall	1 st Floor Chiller HVAC Room Wall
A-22 – Finish Coat	Plaster	1 st Floor Water Treatment Entry Ceiling
A-22 – Base Coat	Plaster	1 st Floor Water Treatment Entry Ceiling
A-23 – Finish Coat	Plaster	Basement Water Treatment Ceiling Stairway
A-23 – Base Coat	Plaster	Basement Water Treatment Ceiling Stairway
A-24 – Finish Coat	Plaster	2 nd Floor Water Treatment Loft Ceiling Stairway
A-24 – Base Coat	Plaster	2 nd Floor Water Treatment Loft Ceiling Stairway
A-25	2' x 4' Ceiling Tile	1 st Floor CDC Central Distribution Office Room Next to Stairs
A-26	Ceiling Texture	1 st Floor CDC Central Distribution Hallway
A-27	Ceiling Texture	1 st Floor CDC Central Distribution Hallway
A-28	Ceiling Texture	1 st Floor CDC Central Distribution Hallway
A-29 – Drywall	Drywall	1 st Floor CDC Central Distribution Hallway Ceiling
A-29 – Joint Compound	Joint Compound	1 st Floor CDC Central Distribution Hallway Ceiling
A-30	Plaster	1 st Floor Supply Depot East Elevator Room Ceiling
A-31 – Drywall	Drywall	1 st Floor Supply Depot East Elevator Room Ceiling
A-31 – Joint Compound	Joint Compound	1 st Floor Supply Depot East Elevator Room Ceiling
A-32	Plaster	1 st Floor Supply Depot Wall Large Northwest Room
A-33 – Base Coat	Plaster	2 nd Floor Supply Depot Wall Large North Room
A-33 – Finish Coat	Plaster	2 nd Floor Supply Depot Wall Large North Room
A-34	Plaster	2 nd Floor Supply Depot Ceiling Center South Room
A-35	Fireproofing Insulation	Larches Basement Ceiling Center Hallway
A-36 – Finish Coat	Plaster	1 st Floor Larches Ceiling South Center Room

Table 1: Suspect Asbestos-Containing Materials

Sample Number	Material	Location
A-36 – Base Coat	Plaster	1 st Floor Larches Ceiling South Center Room
A-37	Plaster	1 st Floor Larches Wall South Center Room
A-38 – Drywall	Drywall	1 st Floor Larches Ceiling South Center Room
A-38 – Joint Compound	Joint Compound	1 st Floor Larches Ceiling South Center Room
A-39	2' x 2' Ceiling Tile	1 st Floor Larches South Center Room
A-40	Vinyl Sheet Flooring	1 st Floor Larches Ceiling Center Room
A-41	Plaster	2 nd Floor Larches Ceiling Center Room
A-42	Plaster	2 nd Floor Larches Wall Center Room
A-43	Vinyl Sheet Flooring	2 nd Floor Larches West Room
A-43 – Mastic	Mastic Associated with Vinyl Sheet Flooring	2 nd Floor Larches West Room
A-44	2' x 2' Ceiling Tile	2 nd Floor Larches East Wing Hallway
A-45	Drywall	2 nd Floor Larches Bathroom
A-46 – Finish Coat	Plaster	3 rd Floor Larches Ceiling Hallway
A-46 – Base Coat	Plaster	3 rd Floor Larches Ceiling Hallway
A-47	Plaster	1 st Floor Maple Lodge Ceiling East Wing Northeast Room
A-48	Plaster	1 st Floor Maple Lodge Wall East Wing Northeast Room
A-49 – Drywall	Drywall	1 st Floor Maple Lodge Wall East Wing Hallway
A-49 – Joint Compound	Joint Compound	1 st Floor Maple Lodge Wall East Wing Hallway
A-50	2' x 4' Ceiling Tile	1 st Floor Maple Lodge West Wing Hallway
A-51 – Tile	9" x 9" Floor Tile	1 st Floor Maple Lodge Central Corridor Center Room
A-51 – Mastic	Mastic Associated with 9" x 9" Floor Tile	1 st Floor Maple Lodge Central Corridor Center Room
A-52 – Tile	9" x 9" Floor Tile	2 nd Floor Maple Lodge Central Room
A-52 – Mastic	Mastic Associated with 9" x 9" Floor Tile	2 nd Floor Maple Lodge Central Room
A-53 – Drywall	Drywall	2 nd Floor Maple Lodge Wall East Wing North Room

Table 1: Suspect Asbestos-Containing Materials

Sample Number	Material	Location
A-53 – Joint Compound	Joint Compound	2 nd Floor Maple Lodge Wall East Wing North Room
A-54	Plaster	2 nd Floor Maple Lodge Ceiling West Wing Hallway
A-55	Plaster	2 nd Floor Maple Lodge Wall West Wing Southwest Room
A-56 – Finish Coat	Plaster	3 rd Floor Maple Lodge Wall West Wing Hallway
A-56 – Base Coat	Plaster	3 rd Floor Maple Lodge Wall West Wing Hallway
A-57 – Finish Coat	Plaster	3 rd Floor Maple Lodge Ceiling Northwest Room
A-57 – Base Coat	Plaster	3 rd Floor Maple Lodge Ceiling Northwest Room
A-58	2' x 4' Ceiling Tile	3 rd Floor Maple Lodge Northeast Room
A-59 – Tile	9" x 9" Floor Tile	3 rd Floor Maple Lodge Hallway
A-59 – Mastic	Mastic Associated with 9" x 9" Floor Tile	3 rd Floor Maple Lodge Hallway
A-60	Ceiling Texture	2 nd Floor Employee Home Ceiling Southeast Hallway
A-61	Ceiling Texture	2 nd Floor Employee Home Ceiling Central Corridor Central Room
A-62	Ceiling Texture	2 nd Floor Employee Home Ceiling Southwest Hallway
A-63 – Drywall	Drywall	2 nd Floor Employee Home Ceiling Southeast Hallway
A-63 – Joint Compound	Joint Compound	2 nd Floor Employee Home Ceiling Southeast Hallway
A-64 – Tile	9" x 9" Floor Tile (Brown with Red Specs)	1 st Floor Employee Home North Connecting Hallway
A-65 – Mastic	Mastic Associated with 9" x 9" Floor Tile	1 st Floor Employee Home North Connecting Hallway
A-65 – Tile	12" x 12" Floor Tile (Brown)	1 st Floor Employee Home North Connecting Hallway
A-65 – Mastic	Mastic Associated with 12" x 12" Floor Tile	1 st Floor Employee Home North Connecting Hallway
A-66 – Tile	9" x 9" Floor Tile (Tan)	1 st Floor Employee Home North Connecting Hallway
A-66 – Mastic	Mastic Associated with 9" x 9" Floor Tile	1 st Floor Employee Home North Connecting Hallway
A-67 – Tile	9" x 9" Floor Tile (Cream)	1 st Floor Employee Home North Connecting Hallway
A-67 – Mastic	Mastic Associated with 9" x 9" Floor Tile	1 st Floor Employee Home North Connecting Hallway

Table 1: Suspect Asbestos-Containing Materials

Sample Number	Material	Location
A-68 – Tile	12" x 12" Floor Tile (White)	1 st Floor Employee Home North Connecting Hallway
A-68 – Mastic	Mastic Associated with 12" x 12" Floor Tile	1 st Floor Employee Home North Connecting Hallway
A-69 – Ceiling Tile	12" x 12" Ceiling Tile	1 st Floor Employee Home Conference Room
A-69 – Adhesive	Adhesive Associated with 12" x 12" Ceiling Tile	1 st Floor Employee Home Conference Room
A-70 – Flooring	Flooring (Red)	1 st Floor Employee Home South Connecting Hallway
A-70 – Adhesive	Adhesive Associated with Flooring	1 st Floor Employee Home South Connecting Hallway
A-71 – Flooring	Flooring (Black)	1 st Floor Employee Home South Connecting Hallway
A-71 – Adhesive	Adhesive Associated with Flooring	1 st Floor Employee Home South Connecting Hallway
A-71 – Leveler	Leveler Associated with Flooring	1 st Floor Employee Home South Connecting Hallway
A-72	Vinyl Sheet Flooring	1 st Floor Employee Home Southeast Hallway
A-72 – Adhesive	Adhesive Associated with Vinyl Sheet Flooring	1 st Floor Employee Home Southeast Hallway
A-73	Ceiling Texture	1 st Floor Employee Home South Connecting Hallway
A-74	Ceiling Texture	1 st Floor Employee Home West Entrance
A-75	Ceiling Texture	1 st Floor Employee Home North Connecting Hallway
A-76 – Texture	Plaster	2 nd Floor Employee Home Ceiling Northeast Hallway
A-76	Plaster	2 nd Floor Employee Home Ceiling Northeast Hallway
A-78 – Finish Coat	Plaster	1 st Floor Employee Home Ceiling North Connecting Hallway
A-78 – Base Coat	Plaster	1 st Floor Employee Home Ceiling North Connecting Hallway
A-79	Ceiling Texture	Employee Home Basement Ceiling East Wing Hallway
A-80	Ceiling Texture	Employee Home Basement Ceiling Center Room
A-81	Ceiling Texture	Employee Home Basement Ceiling West Wing Hallway
A-82	Plaster	Employee Home Basement Ceiling Center Hallway
A-83 – Texture	Plaster	Employee Home Basement Wall East Wing North Room

Table 1: Suspect Asbestos-Containing Materials

Sample Number	Material	Location
A-83 – Plaster	Plaster	Employee Home Basement Wall East Wing North Room
A-84 – Finish Coat	Plaster	3 rd Floor Hemlock Ceiling Hallway
A-84 – Base Coat	Plaster	3 rd Floor Hemlock Ceiling Hallway
A-85 – Finish Coat	Plaster	3 rd Floor Hemlock Wall Northwest Room
A-85 – Base Coat	Plaster	3 rd Floor Hemlock Wall Northwest Room
A-86 – Drywall	Drywall	2 nd Floor Hemlock Wall Southeast Hallway
A-86 – Joint Compound	Joint Compound	2 nd Floor Hemlock Wall Southeast Hallway
A-87 – Drywall	Drywall	2 nd Floor Hemlock Ceiling Center Hallway
A-87 – Joint Compound	Joint Compound	2 nd Floor Hemlock Ceiling Center Hallway
A-88 – Finish Coat	Plaster	2 nd Floor Hemlock Ceiling Southwest Hallway
A-88 – Base Coat	Plaster	2 nd Floor Hemlock Ceiling Southwest Hallway
A-89	Plaster	2 nd Floor Hemlock Wall
A-90	Vinyl Sheet Flooring (Stone Pattern)	2 nd Floor Hemlock
A-91	2' x 2' Ceiling Tile	2 nd Floor Hemlock
A-92	Vinyl Sheet Flooring (Brown)	2 nd Floor Hemlock
A-93	Vinyl Sheet Flooring (Black)	2 nd Floor Hemlock
A-94	Vinyl Sheet Flooring (Tan Stone Pattern)	2 nd Floor Hemlock
A-94 – Mastic	Mastic Associated with Vinyl Sheet Flooring	2 nd Floor Hemlock
A-95	Vinyl Sheet Flooring (Tan)	2 nd Floor Hemlock
A-95 – Mastic	Mastic Associated with Vinyl Sheet Flooring	2 nd Floor Hemlock
A-96 – Drywall	Drywall	1 st Floor Hemlock Wall
A-96 – Joint Compound	Joint Compound	1 st Floor Hemlock Wall

Table 1: Suspect Asbestos-Containing Materials		
Sample Number	Material	Location
A-97 – Finish Coat	Plaster	1 st Floor Hemlock Wall
A-97 – Base Coat	Plaster	1 st Floor Hemlock Wall
A-98	Plaster	1 st Floor Hemlock Ceiling
A-99	2' x 2' Ceiling Tile	1 st Floor Hemlock
A-100	Vinyl Sheet Flooring (Red)	1 st Floor Hemlock
A-101	Vinyl Sheet Flooring (Tan Stone Pattern)	1 st Floor Hemlock
A-101 – Mastic	Mastic Associated with Vinyl Sheet Flooring	1 st Floor Hemlock
A-102	Vinyl Sheet Flooring (Cream)	1 st Floor Hemlock
A-102 – Mastic	Mastic Associated with Vinyl Sheet Flooring	1 st Floor Hemlock
A-103	Fireproofing	Hemlock Basement Ceiling
A-104	Plaster	Hemlock Basement Wall
A-105	Plaster	Hemlock Basement Ceiling

3.5 Asbestos-Containing Materials

The following table is a summary of the suspect asbestos-containing materials that have been determined, through laboratory analysis, to contain asbestos in concentrations >1%:

Table 2: Asbestos-Containing Materials			
Sample Number	Material	Location	Asbestos Content
A-7	9" x 9" Floor Tile (Brown) and Black Mastic	2 nd Floor Oak Hall Central Area	Tile: 3% Mastic 2% Chrysotile
A-8	Vinyl Sheet Flooring and Black mastic	2 nd Floor Oak Hall West Stairwell	Flooring: 15% Mastic: 2% Chrysotile
A-21 – Vapor Barrier	Vapor Barrier Associated with Plaster Wall	1 st Floor Chiller HVAC Room Wall	3% Chrysotile
A-43	Vinyl Sheet Flooring	2 nd Floor Larches West Room	15% Chrysotile

Table 2: Asbestos-Containing Materials

Sample Number	Material	Location	Asbestos Content
A-51	9" x 9" Floor Tile and Black Mastic	1 st Floor Maple Lodge Central Corridor Center Room	Tile: 3% Mastic: 2% Chrysotile
A-52	9" x 9" Floor Tile and Black Mastic	2 nd Floor Maple Lodge Central Room	Tile: 3% Mastic: 2% Chrysotile
A-59 – Tile	9" x 9" Floor Tile and Black Mastic	3 rd Floor Maple Lodge Hallway	Tile: 3% Mastic: 2% Chrysotile
A-64 – Tile	9" x 9" Floor Tile (Brown with Red Specs)	1 st Floor Employee Home North Connecting Hallway	3% Chrysotile
A-65 – Tile	12" x 12" Floor Tile (Brown)	1 st Floor Employee Home North Connecting Hallway	2% Chrysotile
A-66 – Tile	9" x 9" Floor Tile (Tan)	1 st Floor Employee Home North Connecting Hallway	3% Chrysotile
A-67 – Tile	9" x 9" Floor Tile (Cream)	1 st Floor Employee Home North Connecting Hallway	3% Chrysotile
A-68 – Tile	12" x 12" Floor Tile (White) and Black Mastic	1 st Floor Employee Home North Connecting Hallway	Tile: 2% Mastic: 3% Chrysotile
A-70 – Flooring	Flooring (Red)	1 st Floor Employee Home North Connecting Hallway	2% Chrysotile
A-71 – Flooring	Flooring (Black)	1 st Floor Employee Home North Connecting Hallway	2% Chrysotile
A-72	Vinyl Sheet Flooring	1 st Floor Employee Home North Connecting Hallway	20% Chrysotile
A-90	Vinyl Sheet Flooring (Stone Pattern)	2 nd Floor Hemlock	15% Chrysotile
A-92	Vinyl Sheet Flooring (Brown)	2 nd Floor Hemlock	20% Chrysotile
A-95	Vinyl Sheet Flooring (Tan)	2 nd Floor Hemlock	2% Chrysotile
A-102	Vinyl Sheet Flooring (Cream) and Black Mastic	1 st Floor Hemlock	Floring: 15% Mastic: 2% Chrysotile

SF = Square Feet; LF = Linear Feet; MF = Mechanical Fittings

Table 2 below identifies materials that were determined to contain asbestos fibers in concentrations of less than one percent (<1%) asbestos. Materials with asbestos concentrations <1% are not defined as asbestos containing materials, per the USEPA.

Table 2: Materials Containing <1% Asbestos			
Sample Number	Homogenous Material	Location	Asbestos Content
A-36 – Base Coat	Plaster	1 st Floor Larches Ceiling	<1% Chrysotile
A-42	Plaster	2 nd Floor Larches Wall	<1% Chrysotile

Materials with an asbestos content of <1% that are not classified as an ACM are not required to be abated prior to renovation or demolition of a building. However, the OSHA Asbestos Standard does regulate exposures associated with disturbance of materials containing <1% asbestos. The renovation contractor should be notified that this material could generate airborne concentrations of asbestos so that they can take the necessary precautions to protect their personnel from potential exposures during work-related activities as per the OSHA standard.

4.0 LEAD PAINT TESTING

Atlas collected paint chip samples from representative surface coatings that may be impacted by renovation/demolition activities.

Surface coatings that were collected were considered to be representative of materials in a homogeneous area if:

1. They exhibited similar physical characteristics (suspect materials alike in appearance, substrate, color, and time of application were tested as homogenous areas)
2. The application of the tested surface could be associated to an application of an unsampled surface.

Atlas collected and submitted a total of **four** paint chip samples from surface coatings. The samples were submitted to EMSL of Cinnaminson, New Jersey, under proper chain of custody for analysis by Lead in Paint Chips by Flame AAS (SW 846 3050B/7000B). EMSL is accredited under the American Industrial Hygiene Association-Laboratory Accreditation Program (AIHA-LAP, LLC) (AIHA-LAP; lab code 100194).

A copy of the analytical results and chain of custody can be found in Appendix B.

The USEPA has defined LBP as “*paint or other surface coatings that contain lead in excess of 0.5 percent by weight (>0.5%)*”. Results less than 0.5% by weight indicate that lead is not present at or above the USEPA regulatory level; however, lead was present in lower concentrations above the laboratory detection limit in other surfaces tested and these are classified as lead-containing paint (LCP). Negative results do not mean that lead is not present.

4.1 Regulation Review

The disturbance and disposal of materials with surface coatings that contain lead paint are regulated by the USEPA, OSHA and the State of Iowa. The Resource Conservation and Recovery Act (RCRA) provides the USEPA with the authority to regulate the waste status of demolition or renovation debris, including lead-containing materials. Specific notification and testing requirements must be addressed prior to transporting, treating, storing, or disposing of hazardous wastes.



Construction work covered by 29 CFR 1926.62 includes any repair, renovation or other activities that disturb in-place, lead-containing materials, but does not include routine cleaning and repainting where there is insignificant damage, wear or corrosion of existing lead-containing coatings or substrates. Unless adequately protected, employee exposures to lead must not exceed airborne concentrations >50 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) averaged over an 8-hour period.

Occupational exposure to lead occurring in the course of construction work, including maintenance activities, painting, alteration and repairs is subject to the OSHA Lead standard (29 CFR 1926.62). The lead standard applies to any detectable concentration of lead in paint, as even small concentrations of lead can result in unacceptable employee exposures depending upon the method of removal and other workplace conditions.

The disposal of lead-based paint waste, as well as paint waste containing other heavy metals, is regulated by the USEPA and State of Iowa. Wastes generated by industrial businesses, commercial businesses, and government institutions are subject to regulation. Commercial business owners and removal contractors are required to determine if paint waste generated from nonresidential structures (such as public and commercial buildings, warehouses, bridges, water towers, and transmission towers) contains heavy metals that would cause the debris to be considered a hazardous waste. Disposal options and applicable management requirements for collected debris will be based upon whether the waste stream is considered a hazardous waste and the amount of debris generated. Removal contractors and building owners need to include these factors when preparing and responding to bid specifications. Specific notification and testing requirements must be addressed prior to transporting, treating, storing, or disposing of hazardous wastes. Lead-containing wastes are considered hazardous waste under RCRA if Toxicity Characteristic Leachate Procedure (TCLP) results exceed 5 milligrams per liter (mg/L). The USEPA has made exceptions for the handling and disposal of lead wastes generated from residential housing.

Specific notification and testing requirements must be addressed prior to transporting, treating, storing, or disposing of hazardous wastes. Lead-containing wastes are considered hazardous waste under RCRA if Toxicity Characteristic Leachate Procedure (TCLP) results exceed 5 milligrams per liter (mg/L). The USEPA has made exceptions for the handling and disposal of lead wastes generated from residential housing.

The above overview is not intended to be inclusive of all potentially pertinent regulatory information. The relevant USEPA, OSHA and State of Iowa regulations should be consulted prior to undertaking activities involving the demolition, renovation or maintenance of surface coatings that contain lead.

4.2 Summary of Findings

The following surface coatings were found to contain LBP in concentrations greater than or equal to $\geq 0.5\%$ by weight:

Sample Number	Sample Location	Representative Material	Paint Color	Lead Concentration (% by weight)
L-1	Oak Hall 3 rd Floor Northwest Room	Plaster	Yellow	0.16
L-2	Oak Hall 3rd Floor South Stair Landing	Plaster	White	1.6
L-3	Oak Hall 3 rd Floor Southwest Room	Plaster	Brown	0.28

Table 4: Lead Paint Summary

Sample Number	Sample Location	Representative Material	Paint Color	Lead Concentration (% by weight)
L-4	Oak Hall 2 nd Floor East Room	Plaster	Light Blue	21.0
L-5	Oak Hall 2 nd Floor North Central Stem Landing	Plaster	Dark Green	32.0
L-6	Oak Hall 2 nd Floor South Connector	Drywall	Light Blue	23.0
L-7	Car Wash Mechanical Room	Drywall	White	0.0085
L-8	Car Wash Storage	Drywall	Light Brown	0.0081
L-9	Laundry Northwest Room	Drywall	White	<0.0064
L-10	Laundry Dock	Brick	White	<0.0011
L-11	Water Treatment 1 st Floor Northeast Room	Plaster	White	0.075
L-12	Water Treatment 1 st Floor Room	Brick	White	0.14
L-13	Water Treatment Basement	Concrete	White	0.031
L-14	CDC Central Distribution Front Office	Drywall	White	<0.0070
L-15	Supply Depot Basement Southwest Area	Brick	White	0.57
L-16	Supply Depot 1 st Floor Hallway	Plaster	White	1.2
L-17	Supply Depot 1 st Floor West Room	Plaster	Teal	15.0
L-18	Supply Depot 1 st Floor West Room	Plaster	Green	35.0
L-19	Supply Depot 1 st Floor Southwest	Plaster	Grey	31.0
L-20	Supply Depot 2 nd Floor South Room	Plaster	Brown	0.023
L-21	Supply Depot 2 nd Floor North Room	Plaster	Yellow	0.95
L-22	Larches Basement	Concrete	White	<0.0064
L-23	Larches 1 st Floor South Entry	Plaster	White	0.080
L-24	Larches 1 st Floor South Entry	Plaster	Grey	0.053

Table 4: Lead Paint Summary

Sample Number	Sample Location	Representative Material	Paint Color	Lead Concentration (% by weight)
L-25	Larches 1st Floor South Entry	Plaster	Blue	14.0
L-26	Larches 1 st Floor Southeast Entry Room	Plaster	Green	0.10
L-27	Larches 2 nd Floor Center Room	Plaster	Brown	0.13
L-28	Larches 2 nd Floor East Wing Southeast Room	Plaster	Yellow	<0.0064
L-29	Larches 2nd Floor East Wing East Large Room	Plaster	Grey	0.58
L-30	Larches 2 nd Floor East Wing Southwest Room	Plaster	White	0.12
L-31	Larches 2nd Floor East Room	Plaster	Pink	4.1
L-32	Larches 2 nd Floor East Wing Northwest Room	Plaster	Green	0.14
L-33	Larches 2 nd Floor West Room	Plaster	White	<0.0064
L-34	Larches 3rd Floor Hallway	Plaster	White	0.90
L-35	Maple Lodge Basement	Brick	White	17.0
L-36	Maple Lodge 1 st Floor Center Room	Plaster	White/Cream	0.015
L-37	Maple Lodge 1 st Floor West Wing Hallway	Plaster	White/Cream	<0.0064
L-38	Maple Lodge 2 nd Floor East Wing Hallway	Plaster	Salmon	0.13
L-39	Maple Lodge 2 nd Floor East Wing Hallway	Plaster	White	0.15
L-40	Maple Lodge 2 nd Floor East Wing Hallway	Plaster	Lime Green	0.26
L-41	Maple Lodge 2 nd Floor East Wing Hallway	Plaster	Light Purple	0.12
L-42	Maple Lodge 2 nd Floor East Wing	Plaster	Cream	0.24
L-43	Maple Lodge 3rd Floor South Center Room	Plaster	Cream	23.0
L-44	Maple Lodge 3rd Floor Hallway	Plaster	White	13.0
L-45	Maple Lodge 3rd Floor South Center Room	Plaster	Brown	28.0

Table 4: Lead Paint Summary

Sample Number	Sample Location	Representative Material	Paint Color	Lead Concentration (% by weight)
L-46	Maple Lodge 3 rd Floor Hallway	Plaster	Burnt Orange	0.014
L-47	Employee Home 2 nd Floor Southeast Wing Hallway	Plaster	White	0.31
L-48	Employee Home 2 nd Floor Southwest Wing Hallway	Plaster	White	<0.0064
L-49	Employee Home 2 nd Floor Southeast Wing Hallway	Plaster	Light Blue	0.28
L-50	Employee Home 2 nd Floor Central Corridor Room	Concrete	Pink	<0.023
L-51	Employee Home 2 nd Floor Central Corridor Room	Concrete	White	<0.0064
L-52	Employee Home 2 nd Floor Connecting Hallway	Concrete	White	0.0082
L-53	Employee Home 2 nd Floor Northwest Hallway	Concrete	White	0.0087
L-54	Employee Home 2 nd Floor Central Corridor Room	Drywall	Brown	0.027
L-55	Employee Home 1 st Floor South Entry Hallway	Concrete	White	0.0076
L-56	Employee Home 1 st Floor South Entry Hallway	Concrete	Blue	0.33
L-57	Employee Home 1 st Floor Southwest Hallway	Concrete	White	0.0097
L-58	Employee Home 1 st Floor Conference Room	Plaster	Cream	<0.0064
L-59	Employee Home 1 st Floor South Entry Hallway	Concrete	White	0.15
L-60	Employee Home 1 st Floor Northeast Hallway	Concrete	Whitw	<0.0064
L-61	Employee Home 1 st Floor North Connecting Hallway	Concrete	Brown	<0.0084
L-62	Employee Home 1 st Floor Northwest Hallway	Drywall	Green	<0.0064
L-63	Employee Home Basement Center Hallway	Concrete	White	0.56
L-64	Employee Home Basement Center Hallway	Concrete	White	0.0072
L-65	Hemlock 3 rd Floor Hallway	Plaster	Cream	0.18
L-66	Hemlock 3 rd Floor West Stairwell	Plaster	White	0.028

Table 4: Lead Paint Summary

Sample Number	Sample Location	Representative Material	Paint Color	Lead Concentration (% by weight)
L-67	Hemlock 2 nd Floor West Hallway	Plaster	White	<0.0064
L-68	Hemlock 2 nd Floor West Wing Northwest Room	Plaster	Blue	<0.0064
L-69	Hemlock 2 nd Floor West Wing Southwest Room	Plaster	Peach	<0.0064
L-70	Hemlock 2 nd Floor West Wing North Room	Plaster	Cream	<0.0064
L-71	Hemlock 2 nd Floor Central Corridor Northwest Room	Plaster	Cream	0.028
L-72	Hemlock 2 nd Floor Central Corridor South Room	Drywall	Cream	0.011
L-73	Hemlock 2 nd Floor Central Corridor South Room	Brick	White	0.063
L-74	Hemlock 1 st Floor West Hallway	Concrete	Cream	0.12
L-75	Hemlock 1 st Floor West Wing Southeast Room	Concrete	Yellow	0.21
L-76	Wall in Hemlock 1st Floor Central Corridor Main Room	Concrete	Blue	4.7
L-77	Hemlock 1 st Floor Central Corridor Entry	Brick	White	0.055
L-78	Hemlock 1 st Floor East Wing South Room	Concrete	Dark Yellow	<0.0064
L-79	Hemlock 1 st Floor East Wing Hallway	Concrete	White	0.18
L-80	Hemlock Basement Southwest Hallway	Concrete	Cream	0.24

bolded = lead-based paint

If surface coatings are identified to contain concentrations of lead above regulatory levels, they should be removed, controlled and/or disposed of in accordance with federal, state, and local regulations, prior to disturbance.

This evaluation report can help the Owner develop a plan for renovating the building by having concentrations of lead in the paint identified. It is our understanding that the information in this report will be provided to the contractors so that appropriate precautions can be made to minimize worker exposure to lead. If surface coatings with lead containing paint are handled improperly, exposure could occur to workers and future occupants of the facility.



5.0 CONCLUSIONS

5.1 Asbestos

The NESHAP and OSHA regulations govern the removal of ACM. Atlas recommends that a State of Iowa certified abatement contractor be retained to properly abate and dispose of ACM identified in Table 2 above and in accordance with local, state, and federal regulations.

5.2 Lead

Lead **was identified** in excess of the USEPA level of 0.5% in 19 of the surface coatings collected and analyzed.

6.0 LIMITATIONS

The results, findings, conclusions, and recommendations expressed in this report are based solely on conditions noted during the December 8, 9, and 10, 2025, Atlas inspection of the Woodward Resource Center Administration Building, Larches Building, Hemlock Building, Employee Home, Maple Lodge, Laundry, Car Wash, Supply Depot, Oak Hall, Water Treatment, Central Distribution Center, Central Distribution, Central Distribution Center Storage and Chiller Buildings at the located at 34 Cedar Street in Woodward, Iowa.

Although Atlas performed limited destructive sampling to access suspect ACM, additional suspect but unsampled materials could be located under existing building materials, in isolated areas or in other concealed areas. Therefore, if suspect materials are encountered during renovation/demolition activities that do not appear to have been characterized as non-ACM, samples should be collected and analyzed prior to disturbing these materials or the materials can be assumed to be ACM and abated accordingly. Atlas's selection of sample locations and frequency of sampling was based on the inspector's assumption that like materials in the same area are homogeneous in content.

The report is designed to aid the building owner, architect, construction manager, general contractor, and potential asbestos and lead abatement contractor(s) in locating ACM and lead containing surface coatings. Under no circumstances is the report to be utilized as a bidding document or as a project specification document since it does not have all the components required to serve as a Project Design or an Abatement Work plan.

Our professional services have been performed, our findings obtained, and our conclusions and recommendations prepared in accordance with customary principles and practices in the fields of environmental science and engineering. This statement is in lieu of other statements either expressed or implied. This report does not warrant against future operations or conditions, nor does it warrant against operations or conditions present of a type or at a location not investigated.

This report is intended for the sole use of the IDAS. The scope of services performed in execution of this evaluation may not be appropriate to satisfy the needs of other users and use or re-use of this document or the findings, conclusions, or recommendations is at the risk of said user.

**APPENDIX A
ASBESTOS ANALYTICAL REPORT AND
CHAIN OF CUSTODY**



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Received Date: 12/11/2025 9:54 AM

Analysis Date: 12/12/2025 - 12/15/2025

Collected Date: 12/10/2025

Project: 204B509428-State Of Iowa-Woodward Resource Center

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
A-1-Finish Coat <small>162515754-0001</small>	N. BATHROOM (OAK HALL) - PLASTER (CEILING)	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-1-Base Coat <small>162515754-0001A</small>	N. BATHROOM (OAK HALL) - PLASTER (CEILING)	Gray Non-Fibrous Homogeneous		20% Quartz 80% Non-fibrous (Other)	None Detected
A-2-Finish Coat <small>162515754-0002</small>	N. BATHROOM (OAK HALL) - PLASTER (WALL)	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-2-Base Coat <small>162515754-0002A</small>	N. BATHROOM (OAK HALL) - PLASTER (WALL)	Gray Non-Fibrous Homogeneous		20% Quartz 80% Non-fibrous (Other)	None Detected
A-3-Vinyl Sheet Flooring <small>162515754-0003</small>	E. HALLWAY (OAK HALL) - VINYL SHEET FLOORING W/ MASTIC (BLACK)	Gray/Black Fibrous Heterogeneous	30% Cellulose	70% Non-fibrous (Other)	None Detected
A-3-Mastic <small>162515754-0003A</small>	E. HALLWAY (OAK HALL) - VINYL SHEET FLOORING W/ MASTIC (BLACK)	Tan/Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-4-Drywall <small>162515754-0004</small>	S. HALLWAY (OAK HALL) - DRYWALL & JOINT COMPOUND (WALL)	Brown/White Fibrous Heterogeneous	30% Cellulose	60% Gypsum 10% Non-fibrous (Other)	None Detected
A-4-Joint Compound <small>162515754-0004A</small>	S. HALLWAY (OAK HALL) - DRYWALL & JOINT COMPOUND (WALL)	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-5-Finish Coat <small>162515754-0005</small>	S LOBBY AREA (OAK HALL) - PLASTER (WALL)	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-5-Base Coat <small>162515754-0005A</small>	S LOBBY AREA (OAK HALL) - PLASTER (WALL)	Gray Non-Fibrous Homogeneous		20% Quartz 80% Non-fibrous (Other)	None Detected
A-6-Finish Coat <small>162515754-0006</small>	S LOBBY AREA (OAK HALL) - PLASTER (CEILING)	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-6-Base Coat <small>162515754-0006A</small>	S LOBBY AREA (OAK HALL) - PLASTER (CEILING)	Gray Non-Fibrous Homogeneous		20% Quartz 80% Non-fibrous (Other)	None Detected
A-7-Floor Tile <small>162515754-0007</small>	S LOBBY AREA (OAK HALL) - 9X9 FLOOR TILE (BROWN) W/ MASTIC BLACK	Brown Non-Fibrous Homogeneous		97% Non-fibrous (Other)	3% Chrysotile
A-7-Mastic <small>162515754-0007A</small>	S LOBBY AREA (OAK HALL) - 9X9 FLOOR TILE (BROWN) W/ MASTIC BLACK	Black Non-Fibrous Homogeneous		98% Non-fibrous (Other)	2% Chrysotile

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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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
A-8-Vinyl Sheet Flooring 162515754-0008	S LOBBY AREA (OAK HALL) - VINYL SHEET FLOORING W/ BLACK MASTIC	Gray/Tan Fibrous Heterogeneous	10% Cellulose	75% Non-fibrous (Other)	15% Chrysotile
A-8-Mastic 162515754-0008A	S LOBBY AREA (OAK HALL) - VINYL SHEET FLOORING W/ BLACK MASTIC	Black Non-Fibrous Homogeneous		98% Non-fibrous (Other)	2% Chrysotile
A-9 162515754-0009	LOBY (OAK HALL) - PLASTER (WALL)	White Non-Fibrous Homogeneous		20% Perlite 80% Non-fibrous (Other)	None Detected
A-10-Finish Coat 162515754-0010	LOBY (OAK HALL) - PLASTER (CEILING)	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-10-Base Coat 162515754-0010A	LOBY (OAK HALL) - PLASTER (CEILING)	Gray Non-Fibrous Homogeneous		20% Quartz 80% Non-fibrous (Other)	None Detected
A-11-Drywall 162515754-0011	GARAGE (CARWASH) - DRYWALL & JOINT COMPOUND (CEILING)	Brown/White Fibrous Heterogeneous	60% Cellulose	30% Gypsum 10% Non-fibrous (Other)	None Detected
A-11-Joint Compound 162515754-0011A	GARAGE (CARWASH) - DRYWALL & JOINT COMPOUND (CEILING)	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-12-Drywall 162515754-0012	STORAGE (CARWASH) - DRYWALL & JOINT COMPOUND (WALL)	Brown/White Fibrous Heterogeneous	40% Cellulose	50% Gypsum 10% Non-fibrous (Other)	None Detected
A-12-Joint Compound 162515754-0012A	STORAGE (CARWASH) - DRYWALL & JOINT COMPOUND (WALL)	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-13 162515754-0013	GARAGE (CARWASH) - CEILING TEXTURE	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-14 162515754-0014	GARAGE (CARWASH) - CEILING TEXTURE	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-15 162515754-0015	STORAGE (CARWASH) - CEILING TEXTURE	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-16-Drywall 162515754-0016	GARAGE (LAUNDRY) - DRYWALL & JOINT COMPOUND (WALL)	Brown/White Non-Fibrous Homogeneous	<1% Cellulose	90% Gypsum 10% Non-fibrous (Other)	None Detected
A-16-Joint Compound 162515754-0016A	GARAGE (LAUNDRY) - DRYWALL & JOINT COMPOUND (WALL)	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-17-Drywall 162515754-0017	STORAGE (LAUNDRY) - DRYWALL & JOINT COMPOUND (CEILING)	Brown/White Fibrous Heterogeneous	30% Cellulose	60% Gypsum 10% 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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
A-17-Joint Compound <small>162515754-0017A</small>	STORAGE (LAUNDRY) - DRYWALL & JOINT COMPOUND (CEILING)	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-18-Finish Coat <small>162515754-0018</small>	GARAGE (LAUNDRY) - PLASTER (WALL)	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-18-Base Coat <small>162515754-0018A</small>	GARAGE (LAUNDRY) - PLASTER (WALL)	Gray Non-Fibrous Homogeneous		20% Quartz 80% Non-fibrous (Other)	None Detected
A-19 <small>162515754-0019</small>	GARAGE (LAUNDRY) - PLASTER (CEILING)	White Non-Fibrous Homogeneous		20% Perlite 80% Non-fibrous (Other)	None Detected
A-20 <small>162515754-0020</small>	BREAKROOM (LAUNDRY) - 2X2 CEILING TILE	Gray/White Fibrous Homogeneous	60% Cellulose 20% Min. Wool	15% Perlite 5% Non-fibrous (Other)	None Detected
A-21-Plaster <small>162515754-0021</small>	HVAC ROOM (CHILLER) - PLASTER WALL W/ VAPOR BARRIER (BLACK)	Gray Non-Fibrous Homogeneous		20% Quartz 80% Non-fibrous (Other)	None Detected
A-21-Vapor Barrier <small>162515754-0021A</small>	HVAC ROOM (CHILLER) - PLASTER WALL W/ VAPOR BARRIER (BLACK)	Black Non-Fibrous Homogeneous		97% Non-fibrous (Other)	3% Chrysotile
A-22-Finish Coat <small>162515754-0022</small>	ENTRY (WATER TREATMENT) - PLASTER (CEILING)	White Non-Fibrous Homogeneous		10% Quartz 90% Non-fibrous (Other)	None Detected
A-22-Base Coat <small>162515754-0022A</small>	ENTRY (WATER TREATMENT) - PLASTER (CEILING)	Gray Non-Fibrous Homogeneous		20% Quartz 80% Non-fibrous (Other)	None Detected
A-23-Finish Coat <small>162515754-0023</small>	BASEMENT (WATER TREATMENT) - PLASTER (CEILING)	Gray/White Non-Fibrous Homogeneous		10% Quartz 90% Non-fibrous (Other)	None Detected
A-23-Base Coat <small>162515754-0023A</small>	BASEMENT (WATER TREATMENT) - PLASTER (CEILING)	Gray Non-Fibrous Homogeneous		20% Quartz 80% Non-fibrous (Other)	None Detected
A-24-Finish Coat <small>162515754-0024</small>	LOFT (WATER TREATMENT) - PLASTER (CEILING)	Gray/White Non-Fibrous Homogeneous		10% Quartz 90% Non-fibrous (Other)	None Detected
A-24-Base Coat <small>162515754-0024A</small>	LOFT (WATER TREATMENT) - PLASTER (CEILING)	Gray Non-Fibrous Homogeneous		20% Quartz 80% Non-fibrous (Other)	None Detected
A-25 <small>162515754-0025</small>	OFFICE (DISTRIBUTION) - 2X4 CEILING TILE	Gray/White Fibrous Homogeneous	60% Cellulose 20% Min. Wool	15% Perlite 5% Non-fibrous (Other)	None Detected
A-26 <small>162515754-0026</small>	HALLWAY - CEILING TEXTURE	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-27 <small>162515754-0027</small>	HALLWAY (DISTRIBUTION) - CEILING TEXTURE	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-28 <small>162515754-0028</small>	HALLWAY (DISTRIBUTION) - CEILING TEXTURE	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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
A-29-Drywall <small>162515754-0029</small>	HALLWAY (DISTRIBUTION) - DRYWALL & JOINT COMPOUND (CEILING)	Brown/White Fibrous Heterogeneous	40% Cellulose	50% Gypsum 10% Non-fibrous (Other)	None Detected
A-29-Joint Compound <small>162515754-0029A</small>	HALLWAY (DISTRIBUTION) - DRYWALL & JOINT COMPOUND (CEILING)	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-30 <small>162515754-0030</small>	E ELEVATOR ROOM (SUPPLY) - PLASTER CEILING	White Non-Fibrous Homogeneous		20% Perlite 80% Non-fibrous (Other)	None Detected
A-31-Drywall <small>162515754-0031</small>	E ELEVATOR ROOM (SUPPLY) - DRYWALL & JOINT COMPOUND CEILING	Brown/White Fibrous Heterogeneous	30% Cellulose	60% Gypsum 10% Non-fibrous (Other)	None Detected
A-31-Joint Compound <small>162515754-0031A</small>	E ELEVATOR ROOM (SUPPLY) - DRYWALL & JOINT COMPOUND CEILING	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-32 <small>162515754-0032</small>	E ELEVATOR ROOM (SUPPLY) - PLASTER (WALL)	Gray Non-Fibrous Homogeneous		20% Quartz 80% Non-fibrous (Other)	None Detected
A-33-Finish Coat <small>162515754-0033</small>	E ELEVATOR ROOM (SUPPLY) - PLASTER (WALL)	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-33-Base Coat <small>162515754-0033A</small>	E ELEVATOR ROOM (SUPPLY) - PLASTER (WALL)	Gray Non-Fibrous Homogeneous		20% Quartz 80% Non-fibrous (Other)	None Detected
A-34 <small>162515754-0034</small>	E ELEVATOR ROOM (SUPPLY) - PLASTER (CEILING)	Gray/Tan Non-Fibrous Homogeneous		20% Quartz 80% Non-fibrous (Other)	None Detected
A-35 <small>162515754-0035</small>	(LARCHES) - CEILING FIRE PROOFING	Gray Fibrous Homogeneous	70% Min. Wool	30% Non-fibrous (Other)	None Detected
A-36-Finish Coat <small>162515754-0036</small>	(LARCHES) - PLASTER (CEILING)	Tan/White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	<1% Chrysotile
A-36-Base Coat <small>162515754-0036A</small>	(LARCHES) - PLASTER (CEILING)	Gray Non-Fibrous Homogeneous	<1% Cellulose	20% Quartz 80% Non-fibrous (Other)	None Detected
A-37 <small>162515754-0037</small>	(LARCHES) - PLASTER (WALL)	Gray Non-Fibrous Homogeneous	<1% Cellulose	20% Quartz 80% Non-fibrous (Other)	None Detected
A-38-Drywall <small>162515754-0038</small>	(LARCHES) - DRYWALL (CEILING)	Brown/White Fibrous Heterogeneous	20% Cellulose	75% Gypsum 5% Non-fibrous (Other)	None Detected
A-38-Joint Compound <small>162515754-0038A</small>	(LARCHES) - DRYWALL (CEILING)	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-39 <small>162515754-0039</small>	(LARCHES) - 2X2 CEILING TILE	Gray/White Fibrous Homogeneous	20% Cellulose 60% Min. Wool	15% Perlite 5% Non-fibrous (Other)	None Detected
A-40 <small>162515754-0040</small>	LARCHES - VINYL SHEET FLOORING	Tan 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**

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
A-41 <small>162515754-0041</small>	LARCHES - PLASTER (CEILING)	Gray Non-Fibrous Homogeneous		20% Quartz 80% Non-fibrous (Other)	None Detected
A-42 <small>162515754-0042</small>	LARCHES - PLASTER (WALL)	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	<1% Chrysotile
A-43-Vinyl Sheet Flooring <small>162515754-0043</small>	LARCHES - VINYL SHEET FLOORING	Gray/Tan Fibrous Heterogeneous	5% Cellulose	80% Non-fibrous (Other)	15% Chrysotile
A-43-Mastic <small>162515754-0043A</small>	LARCHES - VINYL SHEET FLOORING	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-44 <small>162515754-0044</small>	LARCHES - 2X2 CEILING TILE	Gray/White Fibrous Homogeneous	70% Cellulose 5% Min. Wool	20% Perlite 5% Non-fibrous (Other)	None Detected
A-45 <small>162515754-0045</small>	BATHROOMS LARCHES - DRYWALL (CEILING)	Brown/Tan Fibrous Heterogeneous	30% Cellulose <1% Glass	60% Gypsum 10% Non-fibrous (Other)	None Detected
A-46-Finish Coat <small>162515754-0046</small>	BATHROOMS LARCHES - PLASTER (CEILING)	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-46-Base Coat <small>162515754-0046A</small>	BATHROOMS LARCHES - PLASTER (CEILING)	Gray Non-Fibrous Homogeneous	<1% Cellulose	20% Quartz 80% Non-fibrous (Other)	None Detected
A-47 <small>162515754-0047</small>	MAPLE - PLASTER (CEILING)	Gray Non-Fibrous Homogeneous	<1% Cellulose	20% Quartz 80% Non-fibrous (Other)	None Detected
A-48 <small>162515754-0048</small>	MAPLE - PLASTER (WALL)	Gray Non-Fibrous Homogeneous	<1% Cellulose	20% Quartz 80% Non-fibrous (Other)	None Detected
A-49-Drywall <small>162515754-0049</small>	MAPLE - DRYWALL & JOINT COMPOUND (WALL)	Brown/White Fibrous Heterogeneous	40% Cellulose	50% Gypsum 10% Non-fibrous (Other)	None Detected
A-49-Joint Compound <small>162515754-0049A</small>	MAPLE - DRYWALL & JOINT COMPOUND (WALL)	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-50 <small>162515754-0050</small>	MAPLE - 2X4 CEILING TILE	Gray/White Fibrous Homogeneous	60% Cellulose 20% Min. Wool	15% Perlite 5% Non-fibrous (Other)	None Detected
A-51-Floor Tile <small>162515754-0051</small>	MAPLE - 9"X9" FLOOR TILE W/ MASTIC	Gray Non-Fibrous Homogeneous		97% Non-fibrous (Other)	3% Chrysotile
A-51-Mastic <small>162515754-0051A</small>	MAPLE - 9"X9" FLOOR TILE W/ MASTIC	Black Non-Fibrous Homogeneous		98% Non-fibrous (Other)	2% Chrysotile
A-52-Floor Tile <small>162515754-0052</small>	MAPLE - 9"X9" FLOOR TILE W/ MASTIC	Gray Non-Fibrous Homogeneous		97% Non-fibrous (Other)	3% Chrysotile
A-52-Mastic <small>162515754-0052A</small>	MAPLE - 9"X9" FLOOR TILE W/ MASTIC	Black Non-Fibrous Homogeneous		98% Non-fibrous (Other)	2% Chrysotile
A-53-Drywall <small>162515754-0053</small>	MAPLE - DRYWALL & JOINT COMPOUND (WALL)	Brown/White Fibrous Heterogeneous	30% Cellulose	60% Gypsum 10% Non-fibrous (Other)	None Detected
A-53-Joint Compound <small>162515754-0053A</small>	MAPLE - DRYWALL & JOINT COMPOUND (WALL)	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

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Appendix E supplemented with EPA 600/R-93/116 using Polarized Light Microscopy**

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
A-54 <small>162515754-0054</small>	MAPLE - PLASTER (CEILING)	White Non-Fibrous Homogeneous		20% Perlite 80% Non-fibrous (Other)	None Detected
A-55 <small>162515754-0055</small>	MAPLE - PLASTER (WALL)	White Non-Fibrous Homogeneous		20% Perlite 80% Non-fibrous (Other)	None Detected
A-56-Finish Coat <small>162515754-0056</small>	MAPLE - PLASTER (WALL)	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-56-Base Coat <small>162515754-0056A</small>	MAPLE - PLASTER (WALL)	Gray Non-Fibrous Homogeneous		20% Quartz 80% Non-fibrous (Other)	None Detected
A-57-Finish Coat <small>162515754-0057</small>	MAPLE - PLASTER (CEILING)	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-57-Base Coat <small>162515754-0057A</small>	MAPLE - PLASTER (CEILING)	Gray Non-Fibrous Homogeneous		10% Quartz 90% Non-fibrous (Other)	None Detected
A-58 <small>162515754-0058</small>	MAPLE - 2X4 CEILING TILE	Gray/White Fibrous Homogeneous	60% Cellulose 20% Min. Wool	15% Perlite 5% Non-fibrous (Other)	None Detected
A-59-Floor Tile <small>162515754-0059</small>	MAPLE - 9X9 FLOOR TILE W/ MASTIC	Gray Non-Fibrous Homogeneous		97% Non-fibrous (Other)	3% Chrysotile
A-59-Mastic <small>162515754-0059A</small>	MAPLE - 9X9 FLOOR TILE W/ MASTIC	Black Non-Fibrous Homogeneous		98% Non-fibrous (Other)	2% Chrysotile
A-60 <small>162515754-0060</small>	EMPLOYEE - CEILING TEXTURE	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-61 <small>162515754-0061</small>	EMPLOYEE - CEILING TEXTURE	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-62 <small>162515754-0062</small>	EMPLOYEE - CEILING TEXTURE	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-63-Drywall <small>162515754-0063</small>	EMPLOYEE - DRYWALL & JOINT COMPOUND (CEILING)	Brown/White Fibrous Heterogeneous	50% Cellulose	40% Gypsum 10% Non-fibrous (Other)	None Detected
A-63-Joint Compound <small>162515754-0063A</small>	EMPLOYEE - DRYWALL & JOINT COMPOUND (CEILING)	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-64-Floor Tile <small>162515754-0064</small>	EMPLOYEE - 9X9 FLOOR TILE W/ MASTIC (BROWN W/ SPECS)	Brown Non-Fibrous Homogeneous		97% Non-fibrous (Other)	3% Chrysotile
A-64-Mastic <small>162515754-0064A</small>	EMPLOYEE - 9X9 FLOOR TILE W/ MASTIC (BROWN W/ SPECS)	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-65-Floor Tile <small>162515754-0065</small>	EMPLOYEE - 12X12 FLOOR TILE (BROWN) W/ MASTIC	Brown Non-Fibrous Homogeneous		98% Non-fibrous (Other)	2% Chrysotile

Initial report from: 12/15/2025 14:59:53



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EMSL Order: 162515754
Customer ID: ATC55
Customer PO:
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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
A-65-Mastic <small>162515754-0065A</small>	EMPLOYEE - 12X12 FLOOR TILE (BROWN) W/ MASTIC	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-66-Floor Tile <small>162515754-0066</small>	EMPLOYEE - 9X9 FLOOR TILE (TAN) W/ MASTIC CREAM	Tan Non-Fibrous Homogeneous		97% Non-fibrous (Other)	3% Chrysotile
A-66-Mastic <small>162515754-0066A</small>	EMPLOYEE - 9X9 FLOOR TILE (TAN) W/ MASTIC CREAM	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-67-Floor Tile <small>162515754-0067</small>	EMPLOYEE - 9X9 FLOOR TILE (TAN) W/ MASTIC CREAM	Tan Non-Fibrous Homogeneous		97% Non-fibrous (Other)	3% Chrysotile
A-67-Mastic <small>162515754-0067A</small>	EMPLOYEE - 9X9 FLOOR TILE (TAN) W/ MASTIC CREAM	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-68-Floor Tile <small>162515754-0068</small>	EMPLOYEE - 12X12 FLOOR TILE W/ MASTIC (WHITE)	Gray/White Non-Fibrous Homogeneous		98% Non-fibrous (Other)	2% Chrysotile
A-68-Mastic <small>162515754-0068A</small>	EMPLOYEE - 12X12 FLOOR TILE W/ MASTIC (WHITE)	Black Non-Fibrous Homogeneous		97% Non-fibrous (Other)	3% Chrysotile
A-69-Ceiling Tile <small>162515754-0069</small>	CONFERENCE ROOM EMPLOYEE - 12"X12" CEILING TILE W/ BROWN ADHESIVE	Tan Fibrous Homogeneous	95% Cellulose	5% Non-fibrous (Other)	None Detected
A-69-Adhesive <small>162515754-0069A</small>	CONFERENCE ROOM EMPLOYEE - 12"X12" CEILING TILE W/ BROWN ADHESIVE	Brown Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-70-Flooring <small>162515754-0070</small>	EMPLOYEE - FLOORING (RED)	Red Non-Fibrous Homogeneous		98% Non-fibrous (Other)	2% Chrysotile
A-70-Adhesive <small>162515754-0070A</small>	EMPLOYEE - FLOORING (RED)	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-71-Flooring <small>162515754-0071</small>	EMPLOYEE - FLOORING (BLACK)	Black Non-Fibrous Homogeneous		98% Non-fibrous (Other)	2% Chrysotile
A-71-Adhesive <small>162515754-0071A</small>	EMPLOYEE - FLOORING (BLACK)	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-71-Leveler <small>162515754-0071B</small>	EMPLOYEE - FLOORING (BLACK)	Gray Non-Fibrous Homogeneous		10% Quartz 90% Non-fibrous (Other)	None Detected
A-72-Vinyl Sheet Flooring <small>162515754-0072</small>	EMPLOYEE - VINYL SHEET FLOORING W/ ADHESIVE	Gray/Tan/White Fibrous Heterogeneous	15% Cellulose	65% Non-fibrous (Other)	20% Chrysotile
A-72-Adhesive <small>162515754-0072A</small>	EMPLOYEE - VINYL SHEET FLOORING W/ ADHESIVE	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-73 <small>162515754-0073</small>	EMPLOYEE - CEILING TEXTURE	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

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EMSL Order: 162515754
Customer ID: ATC55
Customer PO:
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**

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
A-74 <small>162515754-0074</small>	EMPLOYEE - CEILING TEXTURE	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-75 <small>162515754-0075</small>	EMPLOYEE - CEILING TEXTURE	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-76-Texture <small>162515754-0076</small>	EMPLOYEE - PLASTER (CEILING)	Tan/White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-76-Plaster <small>162515754-0076A</small>	EMPLOYEE - PLASTER (CEILING)	Gray Non-Fibrous Homogeneous		20% Quartz 80% Non-fibrous (Other)	None Detected
A-78-Finish Coat <small>162515754-0077</small>	EMPLOYEE - PLASTER (CEILING)	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-78-Base Coat <small>162515754-0077A</small>	EMPLOYEE - PLASTER (CEILING)	Gray/Tan Non-Fibrous Homogeneous	<1% Cellulose	10% Quartz 90% Non-fibrous (Other)	None Detected
A-79 <small>162515754-0078</small>	EMPLOYEE - CEILING TEXTURE	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-80 <small>162515754-0079</small>	EMPLOYEE - CEILING TEXTURE	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-81 <small>162515754-0080</small>	EMPLOYEE - CEILING TEXTURE	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-82 <small>162515754-0081</small>	EMPLOYEE - PLASTER (CEILING)	Gray Non-Fibrous Homogeneous		20% Quartz 80% Non-fibrous (Other)	None Detected
A-83-Texture <small>162515754-0082</small>	EMPLOYEE - PLASTER (WALL)	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-83-Plaster <small>162515754-0082A</small>	EMPLOYEE - PLASTER (WALL)	Gray Non-Fibrous Homogeneous		20% Quartz 80% Non-fibrous (Other)	None Detected
A-84-Finish Coat <small>162515754-0083</small>	HEMLOCK - PLASTER (CEILING)	Tan/White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-84-Base Coat <small>162515754-0083A</small>	HEMLOCK - PLASTER (CEILING)	Gray Non-Fibrous Homogeneous		20% Quartz 80% Non-fibrous (Other)	None Detected
A-85-Finish Coat <small>162515754-0084</small>	HEMLOCK - PLASTER (WALL)	Tan/White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-85-Base Coat <small>162515754-0084A</small>	HEMLOCK - PLASTER (WALL)	Gray Non-Fibrous Homogeneous		20% Quartz 80% Non-fibrous (Other)	None Detected
A-86-Drywall <small>162515754-0085</small>	HEMLOCK - DRYWALL & JOINT COMPOUND (WALL)	White Non-Fibrous Homogeneous	<1% Glass	95% Gypsum 5% Non-fibrous (Other)	None Detected
A-86-Joint Compound <small>162515754-0085A</small>	HEMLOCK - DRYWALL & JOINT COMPOUND (WALL)	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-87-Drywall <small>162515754-0086</small>	HEMLOCK - DRYWALL & JOINT COMPOUND (CEILING)	Brown/White Fibrous Heterogeneous	55% Cellulose <1% Glass	40% Gypsum 5% Non-fibrous (Other)	None Detected

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EMSL Order: 162515754
Customer ID: ATC55
Customer PO:
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**

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
A-87-Joint Compound <small>162515754-0086A</small>	HEMLOCK - DRYWALL & JOINT COMPOUND (CEILING)	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-88-Finish Coat <small>162515754-0087</small>	HEMLOCK - PLASTER	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-88-Base Coat <small>162515754-0087A</small>	HEMLOCK - PLASTER	Gray Non-Fibrous Homogeneous		5% Perlite 95% Non-fibrous (Other)	None Detected
A-89 <small>162515754-0088</small>	HEMLOCK - PLASTER	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-90 <small>162515754-0089</small>	HEMLOCK - VINYL SHEET FLOORING (STONE PATTERN)	Gray/Tan Fibrous Heterogeneous	5% Cellulose	80% Non-fibrous (Other)	15% Chrysotile
A-91 <small>162515754-0090</small>	HEMLOCK - 2X2 CEILING TILE	Gray/White Fibrous Homogeneous	60% Cellulose 20% Min. Wool	15% Perlite 5% Non-fibrous (Other)	None Detected
A-92 <small>162515754-0091</small>	HEMLOCK - VINYL SHEET FLOORING (BROWN)	Brown/White Fibrous Heterogeneous	15% Cellulose	65% Non-fibrous (Other)	20% Chrysotile
A-93 <small>162515754-0092</small>	HEMLOCK - VINYL SHEET FLOORING (BLACK)	Gray/Tan/White Fibrous Heterogeneous	20% Cellulose <1% Glass	80% Non-fibrous (Other)	None Detected
A-94-Vinyl Sheet Flooring <small>162515754-0093</small>	HEMLOCK - VINYL SHEET FLOORING (TANSTONE)	Gray/Tan/White Fibrous Heterogeneous	20% Cellulose <1% Glass	80% Non-fibrous (Other)	None Detected
A-94-Mastic <small>162515754-0093A</small>	HEMLOCK - VINYL SHEET FLOORING (TANSTONE)	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-95-Vinyl Sheet Flooring <small>162515754-0094</small>	HEMLOCK - VINYL SHEET FLOORING (TAN)	Gray/Beige Non-Fibrous Homogeneous		98% Non-fibrous (Other)	2% Chrysotile
A-95-Mastic <small>162515754-0094A</small>	HEMLOCK - VINYL SHEET FLOORING (TAN)	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-96-Drywall <small>162515754-0095</small>	HEMLOCK - DRYWALL & JOINT COMPOUND (WALL)	Brown/White Fibrous Heterogeneous	55% Cellulose <1% Glass	40% Gypsum 5% Non-fibrous (Other)	None Detected
A-96-Joint Compound <small>162515754-0095A</small>	HEMLOCK - DRYWALL & JOINT COMPOUND (WALL)	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-97-Finish Coat <small>162515754-0096</small>	HEMLOCK - PLASTER (WALL)	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-97-Base Coat <small>162515754-0096A</small>	HEMLOCK - PLASTER (WALL)	White Non-Fibrous Homogeneous	<1% Cellulose	20% Quartz 80% Non-fibrous (Other)	None Detected
A-98 <small>162515754-0097</small>	HEMLOCK - PLASTER (CEILING)	White Non-Fibrous Homogeneous	<1% Cellulose	20% Quartz 80% Non-fibrous (Other)	None Detected
A-99 <small>162515754-0098</small>	HEMLOCK - 2X2 CEILING TILE	Gray/White Fibrous Homogeneous	40% Cellulose 40% Min. Wool	15% Perlite 5% Non-fibrous (Other)	None Detected

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EMSL Order: 162515754
Customer ID: ATC55
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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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
A-100 <small>162515754-0099</small>	HEMLOCK - VINYL SHEET FLOORING (RED)	Red Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-101-Vinyl Sheet Flooring <small>162515754-0100</small>	HEMLOCK - VINYL SHEET FLOORING (TAN STONE)	Gray/Tan/White Fibrous Heterogeneous	20% Cellulose <1% Glass	80% Non-fibrous (Other)	None Detected
A-101-Mastic <small>162515754-0100A</small>	HEMLOCK - VINYL SHEET FLOORING (TAN STONE)	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
A-102-Vinyl Sheet Flooring <small>162515754-0101</small>	HEMLOCK - VINYL SHEET FLOORING (CREAM)	Gray/Tan Fibrous Heterogeneous	10% Cellulose	75% Non-fibrous (Other)	15% Chrysotile
A-102-Mastic <small>162515754-0101A</small>	HEMLOCK - VINYL SHEET FLOORING (CREAM)	Black Non-Fibrous Homogeneous		98% Non-fibrous (Other)	2% Chrysotile
A-103 <small>162515754-0102</small>	HEMLOCK - CEILING FIRE PROOFING	Gray/White Fibrous Homogeneous	80% Min. Wool	20% Non-fibrous (Other)	None Detected
A-104 <small>162515754-0103</small>	HEMLOCK - PLASTER (WALL)	Gray Non-Fibrous Homogeneous		20% Quartz 80% Non-fibrous (Other)	None Detected
A-105 <small>162515754-0104</small>	HEMLOCK - PLASTER (CEILING)	Gray Non-Fibrous Homogeneous		20% Quartz 80% Non-fibrous (Other)	None Detected

Analyst(s)

Kailee Konyshak (44)

Ross Matlock (117)

Asbestos Laboratory Manager
or Other Approved Signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. The above analyses were performed in general compliance with Appendix E to Subpart E of 40 CFR (previously EPA 600/M4-82-020 "Interim Method") but augmented with procedures outlined in the 1993 ("final") version of the method. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Estimation of uncertainty is available on request.

Samples analyzed by EMSL Analytical, Inc. Indianapolis, IN NVLAP Lab Code 200188-0, AZ0939, CA 2575, CO AL-15132, TX 300262, A2LA Accredited - Certificate #2845.25

Initial report from: 12/15/2025 14:59:53



Asbestos Chain of Custody (Air, Bulk, Soil)

EMSL Analytical, Inc.

EMSL Order Number / Lab Use Only

162515754

Indianapolis, IN 46250
 PHONE: (317) 803-2997
 EMAIL: indianapolislab@emsl.c

EMSL ANALYTICAL, INC.
 LABORATORY PRODUCTS • TRADING

Customer ID:		Billing ID:	
Company Name: Atlas Technical		Company Name: Atlas Technical	
Contact Name: Phillip Thomas		Billing Contact: Accounting	
Street Address: 11117 Mockingbird Drive		Street Address: 11117 Mockingbird Drive	
City, State, Zip: Omaha NE 68114 Country: US		City, State, Zip: Omaha NE 68137 Country: US	
Phone: 4026703661		Phone: 4026702512	
Email(s) for Report: phil.thomas@oneatlas.com		Email(s) for Invoice: annabelle.rawis@oneatlas.com	

Project Information

Project Name/No: **204BS09428 - State of Iowa - Woodward Resource Center** Purchase Order:

EMSL LIMS Project ID: (If applicable, EMSL will provide) US State where samples collected: **NE IA** State of Connecticut (CT) must select project location: Commercial (Taxable) Residential (Non-Taxable)

Sampled By Name: **Matthew Podjenski** Sampled By Signature: *Matthew Podjenski* No. of Samples in Shipment: **104**

Turn-Around-Time (TAT): 3 Hour 4-6 Hour 6 Hour 24 Hour 32 Hour 48 Hour 72 Hour 96 Hour 1 Week 2 Week

TEM Air 3-6 Hour, please call ahead to schedule. 32 Hour TAT available for select tests only; samples must be submitted by 11:30 am.

Test Selection

PCM Air

NIOSH 7400
 NIOSH 7400 w/ 8hr. TWA

PLM - Bulk (reporting limit)

PLM EPA 600/R-93/116 (<1%)
 PLM EPA NOB (<1%)
 POINT COUNT

400 (<0.25%) 1,000 (<0.1%)
 POINT COUNT w/ GRAVIMETRIC
 400 (<0.25%) 1,000 (<0.1%)
 NIOSH 9002 (<1%)
 NYS 198.1 (Friable - NY)
 NYS 198.6 NOB (Non-Friable - NY)
 NYS 198.8 (Vermiculite SM-V)

TEM - Air

AHERA 40 CFR, Part 763
 NIOSH 7402
 EPA Level II
 ISO 10312*

TEM - Bulk

TEM EPA NOB
 NYS NOB 198.4 (Non-Friable-NY)
 TEM EPA 600/R-93/116 w Milling Prep (0.1%)

TEM - Settled Dust

Microvac - ASTM D5755
 Wipe - ASTM D6480
 Qualitative via Filtration Prep
 Qualitative via Drop Mount Prep

Soil - Rock - Vermiculite (reporting limit)*

PLM EPA 600/R-93/116 with milling prep (<0.25%)
 PLM EPA 600/R-93/116 with milling prep (<0.1%)
 TEM EPA 600/R-93/116 with milling prep (<0.1%)
 TEM Qualitative via Filtration Prep
 TEM Qualitative via Drop Mount Prep

Other Test (please specify)

*Please call with your project-specific requirements.

Positive Stop - Clearly Identified Homogeneous Areas (HA) Filter Pore Size (Air Samples) 0.8um 0.45um

Sample Number	Sample Location / Description	Volume, Area or Homogeneous Area	Date / Time Sampled (Air Monitoring Only)
See Attached Sheet(s)			

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

Method of Shipment: Fed Ex	Sample Condition Upon Receipt:
Relinquished by: Matthew Podjenski Date/Time: 12/10/25	Received by: <i>Matthew Newkirk</i> Date/Time: 12/11/25 @ 9:30
Relinquished by:	Received by:

Controlled Document - CQC-05 Asbestos R15 4/23/2021 AGREE TO ELECTRONIC SIGNATURE (By checking, I consent to signing this Chain of Custody document by electronic signature.)

EMSL Analytical, Inc.'s Laboratory Terms and Conditions are incorporated into this Chain of Custody by reference in their entirety. Submission of samples to EMSL Analytical, Inc. constitutes acceptance and acknowledgment of all terms and conditions by Customer.

ASBESTOS BULK SAMPLE FORM



11117 Mockingbird Drive
Omaha, NE 68137

Phone (402) 697-9747
Fax (402) 597-8532

Project Information

Client: State of Iowa	Project Description: Limited pbt Asbsurvey	Project Manager: PT Inspector: MP
Date: 12/8/25	Site Location: Woodward Resource Center	ATLAS PROJECT NUMBER: 204BS09428

Sample #	Material Description	Floor	Sample Location	Quantity
A-1	Plaster (ceiling)	3	N. Bathroom (oak hall)	T/O
A-2	Plaster (wall)	3	↓	↓
A-3	Vinyl Sheet flooring w/ Mastic (Black)	3	E. Hallway	T/O Except + RR
A-4	Drywall + Joint Compound (wall)	2	S. Hallway	T/O
A-5	Plaster (wall)	2	S Lobby area	↓
A-6	Plaster (ceiling)	2	↓	↓
A-7	9x9 floortile (Brown) w/ Mastic Black	2		↓ ↓
A-8	Vinyl Sheet flooring w/ Black Mastic	2		↓
A-9	Plaster (wall)	1	Lobby	T/O
A-10	(ceiling)	1	Lobby	↓
A-11	Drywall + Joint Compound (ceiling)	1	Garage (carwash)	↓
A-12	(wall)	1	Storage	↓
A-13	Ceiling Texture	1	Garage	↓

①

ASBESTOS BULK SAMPLE FORM



11117 Mockingbird Drive
Omaha, NE 68137

Phone (402) 697-9747
Fax (402) 597-8532

Project Information

Client:	Project Description:	Project Manager: Inspector:
Date:	Site Location:	ATLAS PROJECT NUMBER: 204BS0

Sample #	Material Description	Floor	Sample Location	Quantity
A-14	Ceiling Texture	1	Garage (carwash)	T/0
A-15			storage ↓	1
A-16	Drywall & Joint compound (wall)		Garage (Laundry)	
A-17	(ceiling)		Storage	
A-18	Plaster (wall)		Garage ↓	
A-19	(ceiling)			
A-20	2x2 ceiling Tile		Breakroom ↓	
A-21	Plaster wall w/ Vapor Barrier (Black)		HVAC Room (chiller)	200sf
A-22	Plaster (ceiling)	1	Entry (water Treatment)	T/0
A-23		B	Basement ↓	1
A-24		2	Loft ↓	1
A-25	2x4 ceiling Tile	1	office (distribution)	
A-26	Ceiling Texture	1	Hallway	

2

ASBESTOS BULK SAMPLE FORM



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Project Information

Client:	Project Description:	Project Manager: Inspector:
Date:	Site Location:	ATLAS PROJECT NUMBER: 204BS0

Sample #	Material Description	Floor	Sample Location	Quantity
A27	Ceiling Texture	1	Hallway (distribution)	
A28	↓	1	↓	
A29	Drywall + Joint compound (ceiling)	1	↓	
A30	Plaster Ceiling	1	E Elevator room (Supply)	T/O
A31	Drywall + Joint compound ceiling	1	↓	↓
A32	Plaster (wall)	1		
A33	(wall)	2		
A34	(ceiling)	2		↓
A35	Ceiling fire proofing	B	(Larches)	
A36	Plaster (ceiling)	1		
A37	(wall)	1		
A38	Drywall (ceiling)	1		
A39	2x2 ceiling Tile	1		

③

ASBESTOS BULK SAMPLE FORM



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Omaha, NE 68137

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Project Information

Client:	Project Description:	Project Manager: Inspector:
Date:	Site Location:	ATLAS PROJECT NUMBER: 204BS0

Sample #	Material Description	Floor	Sample Location	Quantity	
A40	Vinyl sheet flooring	1	Larches	300sf	
A41	Plaster (ceiling)	2	↓		
A42	(wall)	2			
A43	Vinyl sheet flooring	2			
A44	2x2' ceiling tile	2			
A45	Drywall (ceiling)	2		Bathrooms	
A46	Plaster (ceiling)	3		↓	T/O
A47	Plaster (ceiling)	1		Maple	
A48	(wall)	1		↓	
A49	drywall + joint compound (wall)	1			
A50	2x4 ceiling tile	1			
A51	9"x9" floor tile w/ mastic	1			
A52		2	↓		

New day →

(4)

ASBESTOS BULK SAMPLE FORM



11117 Mockingbird Drive
Omaha, NE 68137

Phone (402) 697-9747
Fax (402) 597-8532

Project Information

Client:	Project Description:	Project Manager: Inspector:
Date:	Site Location:	ATLAS PROJECT NUMBER: 204BS0

Sample #	Material Description	Floor	Sample Location	Quantity
A53	Drywall + Joint Compound (wall)	2	Maple ↓ Employee ↓	
A54	Plaster (wall)	2		T/10
A55	↓ (ceiling)	2		T/10
A56	↓ (wall)	3		T/10
A57	↓ (ceiling)	3		T/10
A58	2x4 Ceiling Tile	3		T/10
A59	9x9 Floor Tile w/ mastic	3		T/10
A60	Ceiling Texture	2		T/10
A61	↓	2		T/10
A62	↓	2		T/10
A63	Drywall + Joint compound (ceiling)	2		T/10
A64	9x9 Floor tile (Brown w/red specs) w/ mastic	1		
A65	12x12 Floor tile (Brown) w/ mastic	1		

↑ Trim around 9x9 (5)

ASBESTOS BULK SAMPLE FORM



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Omaha, NE 68137

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Fax (402) 597-8532

Project Information

Client:	Project Description:	Project Manager: Inspector:
Date:	Site Location:	ATLAS PROJECT NUMBER: 204BS0

Sample #	Material Description	Floor	Sample Location	Quantity
A66	9X9 Floor Tile (Tan) w/ mastic		Employee	
A67	cream			
A68	12X12 Floor tile w/ mastic (white)			
A69	12" X 12" Ceiling Tile w/ Brown Adhesive		Conference room	300sf
A70	Flooring (red)			
A71	flooring (black)			
A72	Vinyl sheet flooring w/ adhesive			
A73	ceiling Texture			T/O
A74				T/O
A75				T/O
A76	Plaster (ceiling)	2		T/O
A78				T/O
A79	Ceiling Texture	B		

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ASBESTOS BULK SAMPLE FORM



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Fax (402) 597-8532

Project Information

Client:	Project Description:	Project Manager: Inspector:
Date:	Site Location:	ATLAS PROJECT NUMBER: 204BS0

Sample #	Material Description	Floor	Sample Location	Quantity
A80	Ceiling Texture	B	Employee ↓ Hemlock ↓	
A81	↓	B		
A82	Plaster (ceiling)	B		
A83	↓ (wall)	B		
A84	↓ (ceiling)	3		
A85	↓ (wall)	3		
A86	Drywall + Joint Compound (wall)	2		
A87	↓ (ceiling)	2		
A88	Plaster	2		
A89	↓	2		
A90	Vinyl sheet flooring (stone pattern)	2		
A91	2x2 ceiling Tile	2		
A92	vinyl sheet flooring (Brown)	2		



ASBESTOS BULK SAMPLE FORM



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Project Information

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Date:	Site Location:	ATLAS PROJECT NUMBER: 204BS0

Sample #	Material Description	Floor	Sample Location	Quantity
A93	vinyl sheet flooring (Black)	2	Hemlock	50st
A94	↓ (Tan stone)	2		
A95	↓ (Tan)	2		
A96	Drywall Joint Compound (wall)	1		
A97	Plaster (wall)	1		
A98	↓ (ceiling)	1		
A99	2x2 ceiling Tile	1		
A100	vinyl sheet flooring (red)	1		
A101	↓ (Tan stone)	1		
A102	↓ (cream)	1		
A103	Ceiling fire Proofing	B		
A104	Plaster (wall)	B		
A105	↓ (ceiling)	B		

8

APPENDIX B
LEAD ANALYTICAL REPORT AND CHAIN OF CUSTODY

**EMSL Analytical, Inc.**

6340 Castleplace Drive, Indianapolis, IN, 46250
 Telephone: 317.803.2997 Fax:317.803.3047
 www.emsl.com

EMSL Order ID: 162564533
LIMS Reference ID: CD64533
EMSL Customer ID: ATC55

Attention: Matthew Podjenski
 Atlas Technical [ATC55]
 11117 Mockingbird Drive
 Omaha, NE 68137
 (402) 697-9747
 Matthew.Podjenski@oneatlas.com

Project Name: 204BS09428-STATE OF IOWA-WOODWARD
 RESOURCE CENTER

Customer PO:
EMSL Sales Rep: Anthony DeRosa
Received: 12/11/2025 09:54
Reported: 12/15/2025 08:41

Analytical Results

Analyte	Results	RL	Weight(g)	Prep Date & Tech	Prep Method	Analysis Date & Analyst	Analytical Method	Q	DF
Client Sample ID: L-1/YELLOW PLASTER OAK HALL 3RD FLOOR NORTHWEST ROOM							Date Sampled: 12/10/25		
Matrix: Chips							LIMS Reference ID: CD64533-01		
Lead	0.16 % wt	0.012 % wt	0.1282	12/11/25 CG	SW-846 3050B	12/11/25 CG	SW 846-7000B	Pb2	1
Sample Comments:									
Client Sample ID: L-2/WHITE PLASTER OAK HALL 3RD FLOOR SOUTH STAIR LANDING							Date Sampled: 12/10/25		
Matrix: Chips							LIMS Reference ID: CD64533-02		
Lead	1.6 % wt	0.062 % wt	0.256	12/11/25 CG	SW-846 3050B	12/11/25 CG	SW 846-7000B	Pb2	10
Sample Comments:									
Client Sample ID: L-3/BROWN PLASTER OAK HALL 3RD FLOOR SOUTHWEST ROOM							Date Sampled: 12/10/25		
Matrix: Chips							LIMS Reference ID: CD64533-03		
Lead	0.28 % wt	0.0064 % wt	0.2511	12/11/25 CG	SW-846 3050B	12/11/25 CG	SW 846-7000B	Pb2	1
Sample Comments:									
Client Sample ID: L-4/LIGHT BLUE PLASTER OAK HALL 2ND FLOOR EAST ROOM							Date Sampled: 12/10/25		
Matrix: Chips							LIMS Reference ID: CD64533-04		
Lead	21 % wt	0.62 % wt	0.2597	12/11/25 CG	SW-846 3050B	12/11/25 CG	SW 846-7000B	Pb2	100
Sample Comments:									
Client Sample ID: L-5/DARK GREEN PLASTER OAK HALL 2ND FLOOR NORTH CENTRAL STEM LANDING							Date Sampled: 12/10/25		
Matrix: Chips							LIMS Reference ID: CD64533-05		
Lead	32 % wt	0.63 % wt	0.2546	12/11/25 CG	SW-846 3050B	12/11/25 CG	SW 846-7000B	Pb2	100
Sample Comments:									
Client Sample ID: L-6/LIGHT BLUE DRYWALL OAK HALL 2ND SOUTH CONNECTOR							Date Sampled: 12/10/25		
Matrix: Chips							LIMS Reference ID: CD64533-06		
Lead	23 % wt	0.62 % wt	0.2561	12/11/25 CG	SW-846 3050B	12/11/25 CG	SW 846-7000B	Pb2	100
Sample Comments:									
Client Sample ID: L-7/WHITE DRYWALL CAR WASH MECHANICAL ROOM							Date Sampled: 12/10/25		
Matrix: Chips							LIMS Reference ID: CD64533-07		
Lead	0.0085 % wt	0.0064 % wt	0.2501	12/11/25 CG	SW-846 3050B	12/11/25 CG	SW 846-7000B	Pb2	1
Sample Comments:									
Client Sample ID: L-8/LIGHT BROWN DRYWALL CAR WASH STORAGE							Date Sampled: 12/10/25		
Matrix: Chips							LIMS Reference ID: CD64533-08		
Lead	0.0081 % wt	0.0075 % wt	0.2137	12/11/25 CG	SW-846 3050B	12/11/25 CG	SW 846-7000B	Pb2	1
Sample Comments:									
Client Sample ID: L-9/WHITE DRYWALL LAUNDRY							Date Sampled: 12/10/25		
Matrix: Chips							LIMS Reference ID: CD64533-09		
Lead	<0.0064 % wt	0.0064 % wt	0.251	12/11/25 CG	SW-846 3050B	12/11/25 CG	SW 846-7000B	Pb2	1
Sample Comments:									

**EMSL Analytical, Inc.**6340 Castleplace Drive, Indianapolis, IN, 46250
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EMSL Customer ID: ATC55**Attention:** Matthew Podjenski
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(402) 697-9747
Matthew.Podjenski@oneatlas.com**Project Name:** 204BS09428-STATE OF IOWA-WOODWARD
RESOURCE CENTER**Customer PO:**
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(Continued)**

Analyte	Results	RL	Weight(g)	Prep Date & Tech	Prep Method	Analysis Date & Analyst	Analytical Method	Q	DF
Client Sample ID: L-10/WHITE BRICK LAUNDRY							Date Sampled: 12/10/25		
Matrix: Chips							LIMS Reference ID: CD64533-10		
Lead	<0.011 % wt	0.011 % wt	0.1485	12/11/25 CG	SW-846 3050B	12/11/25 CG	SW 846-7000B	Pb2	1
Sample Comments:									
Client Sample ID: L-11/WHITE PLASTER WATER TREATMENT 1ST FLOOR							Date Sampled: 12/10/25		
Matrix: Chips							LIMS Reference ID: CD64533-11		
Lead	0.075 % wt	0.0064 % wt	0.2538	12/11/25 CG	SW-846 3050B	12/11/25 CG	SW 846-7000B	Pb2	1
Sample Comments:									
Client Sample ID: L-12/WHITE BRICK WATER TREATMENT 1ST FLOOR							Date Sampled: 12/10/25		
Matrix: Chips							LIMS Reference ID: CD64533-12		
Lead	0.14 % wt	0.0064 % wt	0.2597	12/11/25 CG	SW-846 3050B	12/11/25 CG	SW 846-7000B	Pb2	1
Sample Comments:									
Client Sample ID: L-13/WHITE CONCRETE WATER TREATMENT BASEMENT							Date Sampled: 12/10/25		
Matrix: Chips							LIMS Reference ID: CD64533-13		
Lead	0.031 % wt	0.0064 % wt	0.2544	12/11/25 CG	SW-846 3050B	12/11/25 CG	SW 846-7000B	Pb2	1
Sample Comments:									
Client Sample ID: L-14/WHITE DRYWALL DISTRIBUTION FRONT OFFICE							Date Sampled: 12/10/25		
Matrix: Chips							LIMS Reference ID: CD64533-14		
Lead	<0.0070 % wt	0.0070 % wt	0.2284	12/11/25 CG	SW-846 3050B	12/11/25 CG	SW 846-7000B	Pb2	1
Sample Comments:									
Client Sample ID: L-15/WHITE BRICK SUPPLY DEPOT BASEMENT							Date Sampled: 12/10/25		
Matrix: Chips							LIMS Reference ID: CD64533-15		
Lead	0.057 % wt	0.023 % wt	0.0694	12/11/25 CG	SW-846 3050B	12/11/25 CG	SW 846-7000B	Pb2	1
Sample Comments:									
Client Sample ID: L-16/WHITE PLASTER SUPPLY DEPOT 1ST FLOOR							Date Sampled: 12/10/25		
Matrix: Chips							LIMS Reference ID: CD64533-16		
Lead	1.2 % wt	0.062 % wt	0.2593	12/11/25 CG	SW-846 3050B	12/11/25 CG	SW 846-7000B	Pb2	10
Sample Comments:									
Client Sample ID: L-17/TEAL CONCRETE SUPPLY DEPOT 1ST FLOOR							Date Sampled: 12/10/25		
Matrix: Chips							LIMS Reference ID: CD64533-17		
Lead	15 % wt	0.31 % wt	0.257	12/11/25 CG	SW-846 3050B	12/11/25 CG	SW 846-7000B	Pb2	50
Sample Comments:									
Client Sample ID: L-18/LIME GREEN CONCRETE SUPPLY DEPOT 1ST FLOOR							Date Sampled: 12/10/25		
Matrix: Chips							LIMS Reference ID: CD64533-18		
Lead	35 % wt	0.62 % wt	0.2564	12/11/25 CG	SW-846 3050B	12/11/25 CG	SW 846-7000B	Pb2	100
Sample Comments:									

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Analytical Results (Continued)

Analyte	Results	RL	Weight(g)	Prep Date & Tech	Prep Method	Analysis Date & Analyst	Analytical Method	Q	DF
Client Sample ID: L-19/BLUE-GREY CONCRETE CUPPLY DEPOT 1ST FLOOR							Date Sampled: 12/10/25		
Matrix: Chips							LIMS Reference ID: CD64533-19		
Lead	31 % wt	0.63 % wt	0.2542	12/11/25 CG	SW-846 3050B	12/11/25 CG	SW 846-7000B	Pb2	100
Sample Comments:									
Client Sample ID: L-20/BROWN PLASTER SUPPLY DEPOT 2ND FLOOR							Date Sampled: 12/10/25		
Matrix: Chips							LIMS Reference ID: CD64533-20		
Lead	0.023 % wt	0.0064 % wt	0.2533	12/11/25 OCX	SW-846 3050B	12/11/25 CG	SW 846-7000B		1
Sample Comments:									
Client Sample ID: L-21/YELLOW PLASTER SUPPLY DEPOT 2ND FLOOR							Date Sampled: 12/10/25		
Matrix: Chips							LIMS Reference ID: CD64533-21		
Lead	0.95 % wt	0.031 % wt	0.0517	12/11/25 OCX	SW-846 3050B	12/11/25 CG	SW 846-7000B		1
Sample Comments:									
Client Sample ID: L-22/WHITE CONCRETE LARCHES/BASEMENT							Date Sampled: 12/10/25		
Matrix: Chips							LIMS Reference ID: CD64533-22		
Lead	<0.0064 % wt	0.0064 % wt	0.2546	12/11/25 OCX	SW-846 3050B	12/11/25 CG	SW 846-7000B		1
Sample Comments:									
Client Sample ID: L-23/WHITE PLASTER LARCHES 1ST FLOOR							Date Sampled: 12/10/25		
Matrix: Chips							LIMS Reference ID: CD64533-23		
Lead	0.080 % wt	0.0064 % wt	0.2531	12/11/25 OCX	SW-846 3050B	12/11/25 CG	SW 846-7000B		1
Sample Comments:									
Client Sample ID: L-24/GREY PLASTER LARCHES 1ST FLOOR							Date Sampled: 12/10/25		
Matrix: Chips							LIMS Reference ID: CD64533-24		
Lead	0.053 % wt	0.0064 % wt	0.254	12/11/25 OCX	SW-846 3050B	12/11/25 CG	SW 846-7000B		1
Sample Comments:									
Client Sample ID: L-25/LIGHT BLUE PLASTER LARCHES 1ST FLOOR							Date Sampled: 12/10/25		
Matrix: Chips							LIMS Reference ID: CD64533-25		
Lead	14 % wt	0.31 % wt	0.255	12/11/25 OCX	SW-846 3050B	12/11/25 CG	SW 846-7000B		50
Sample Comments:									
Client Sample ID: L-26/GREEN PLASTER LARCHES 1ST FLOOR							Date Sampled: 12/10/25		
Matrix: Chips							LIMS Reference ID: CD64533-26		
Lead	0.10 % wt	0.0064 % wt	0.2591	12/11/25 OCX	SW-846 3050B	12/11/25 CG	SW 846-7000B		1
Sample Comments:									
Client Sample ID: L-27/BROWN PLASTER LARCHES 2ND FLOOR							Date Sampled: 12/10/25		
Matrix: Chips							LIMS Reference ID: CD64533-27		
Lead	0.13 % wt	0.0064 % wt	0.2555	12/11/25 OCX	SW-846 3050B	12/11/25 CG	SW 846-7000B		1
Sample Comments:									

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Received: 12/11/2025 09:54
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(Continued)**

Analyte	Results	RL	Weight(g)	Prep Date & Tech	Prep Method	Analysis Date & Analyst	Analytical Method	Q	DF
Client Sample ID: L-28/YELLOW PLASTER LARCHES 2ND FLOOR							Date Sampled: 12/10/25		
Matrix: Chips							LIMS Reference ID: CD64533-28		
Lead	<0.0064 % wt	0.0064 % wt	0.2518	12/11/25 OCX	SW-846 3050B	12/11/25 CG	SW 846-7000B	1	
Sample Comments:									
Client Sample ID: L-29/BLUE GREY PLASTER LARCHES 2ND FLOOR							Date Sampled: 12/10/25		
Matrix: Chips							LIMS Reference ID: CD64533-29		
Lead	0.58 % wt	0.063 % wt	0.2541	12/11/25 OCX	SW-846 3050B	12/11/25 CG	SW 846-7000B	10	
Sample Comments:									
Client Sample ID: L-30/WHITE PLASTER LARCHES 2ND FLOOR							Date Sampled: 12/10/25		
Matrix: Chips							LIMS Reference ID: CD64533-30		
Lead	0.12 % wt	0.0064 % wt	0.2568	12/11/25 OCX	SW-846 3050B	12/11/25 CG	SW 846-7000B	1	
Sample Comments:									
Client Sample ID: L-31/PINK PLASTER LARCHES 2ND FLOOR							Date Sampled: 12/10/25		
Matrix: Chips							LIMS Reference ID: CD64533-31		
Lead	4.1 % wt	0.16 % wt	0.2563	12/11/25 OCX	SW-846 3050B	12/11/25 CG	SW 846-7000B	25	
Sample Comments:									
Client Sample ID: L-32/GREEN PLASTER LARCHES 2ND FLOOR							Date Sampled: 12/10/25		
Matrix: Chips							LIMS Reference ID: CD64533-32		
Lead	0.14 % wt	0.0064 % wt	0.2552	12/11/25 OCX	SW-846 3050B	12/11/25 CG	SW 846-7000B	1	
Sample Comments:									
Client Sample ID: L-33/WHITE PLASTER LARCHES 2ND FLOOR							Date Sampled: 12/10/25		
Matrix: Chips							LIMS Reference ID: CD64533-33		
Lead	<0.0064 % wt	0.0064 % wt	0.2513	12/11/25 OCX	SW-846 3050B	12/11/25 CG	SW 846-7000B	1	
Sample Comments:									
Client Sample ID: L-34/WHITE PLASTER LARCHES 3RD FLOOR							Date Sampled: 12/10/25		
Matrix: Chips							LIMS Reference ID: CD64533-34		
Lead	0.90 % wt	0.063 % wt	0.2551	12/11/25 OCX	SW-846 3050B	12/11/25 CG	SW 846-7000B	10	
Sample Comments:									
Client Sample ID: L-35/WHITE BRICK MAPLE BASEMENT							Date Sampled: 12/10/25		
Matrix: Chips							LIMS Reference ID: CD64533-35		
Lead	17 % wt	0.32 % wt	0.253	12/11/25 OCX	SW-846 3050B	12/11/25 CG	SW 846-7000B	50	
Sample Comments:									
Client Sample ID: L-36/WHITE/CREAM PLASTER MAPLE 1ST FLOOR							Date Sampled: 12/10/25		
Matrix: Chips							LIMS Reference ID: CD64533-36		
Lead	0.015 % wt	0.0064 % wt	0.2536	12/11/25 OCX	SW-846 3050B	12/11/25 CG	SW 846-7000B	1	
Sample Comments:									

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Analytical Results (Continued)

Analyte	Results	RL	Weight(g)	Prep Date & Tech	Prep Method	Analysis Date & Analyst	Analytical Method	Q	DF
Client Sample ID: L-37/WHITE/CREAM PLASTER MAPLE 1ST FLOOR							Date Sampled: 12/10/25		
Matrix: Chips							LIMS Reference ID: CD64533-37		
Lead	<0.0064 % wt	0.0064 % wt	0.2596	12/11/25 OCX	SW-846 3050B	12/11/25 CG	SW 846-7000B	1	
Sample Comments:									
Client Sample ID: L-38/SALMON PLASTER MAPLE 2ND FLOOR							Date Sampled: 12/10/25		
Matrix: Chips							LIMS Reference ID: CD64533-38		
Lead	0.13 % wt	0.0064 % wt	0.2514	12/11/25 OCX	SW-846 3050B	12/11/25 CG	SW 846-7000B	1	
Sample Comments:									
Client Sample ID: L-39/WHITE PLASTER MAPLE 2ND FLOOR							Date Sampled: 12/10/25		
Matrix: Chips							LIMS Reference ID: CD64533-39		
Lead	0.15 % wt	0.0064 % wt	0.2549	12/12/25 CG	SW-846 3050B	12/12/25 CG	SW 846-7000B	1	
Sample Comments:									
Client Sample ID: L-40/LIME GREEN PLASTER MAPLE 2ND FLOOR ABOVE CEILING TILE							Date Sampled: 12/10/25		
Matrix: Chips							LIMS Reference ID: CD64533-40		
Lead	0.26 % wt	0.0064 % wt	0.2544	12/12/25 CG	SW-846 3050B	12/12/25 CG	SW 846-7000B	1	
Sample Comments:									
Client Sample ID: L-41/LIGHT PURPLE PLASTER MAPLE 2ND FLOOR EAST WING							Date Sampled: 12/10/25		
Matrix: Chips							LIMS Reference ID: CD64533-41		
Lead	0.12 % wt	0.0064 % wt	0.254	12/12/25 CG	SW-846 3050B	12/12/25 CG	SW 846-7000B	1	
Sample Comments:									
Client Sample ID: L-42/CREAM PLASTER MAPLE 2ND FLOOR EAST WING							Date Sampled: 12/10/25		
Matrix: Chips							LIMS Reference ID: CD64533-42		
Lead	0.24 % wt	0.0064 % wt	0.2548	12/12/25 CG	SW-846 3050B	12/12/25 CG	SW 846-7000B	1	
Sample Comments:									
Client Sample ID: L-43/CREAM PLASTER MAPLE 3RD FLOOR WALLS							Date Sampled: 12/10/25		
Matrix: Chips							LIMS Reference ID: CD64533-43		
Lead	23 % wt	0.64 % wt	0.2509	12/12/25 CG	SW-846 3050B	12/12/25 CG	SW 846-7000B	100	
Sample Comments:									
Client Sample ID: L-44/WHITE PLASTER MAPLE 3RD FLOOR WEST STAIRWELL							Date Sampled: 12/10/25		
Matrix: Chips							LIMS Reference ID: CD64533-44		
Lead	13 % wt	0.31 % wt	0.2572	12/12/25 CG	SW-846 3050B	12/12/25 CG	SW 846-7000B	50	
Sample Comments:									
Client Sample ID: L-45/LIGHT BROWN PLASTER MAPLE 3RD FLOOR ABOVE CEILING TILES							Date Sampled: 12/10/25		
Matrix: Chips							LIMS Reference ID: CD64533-45		
Lead	28 % wt	0.64 % wt	0.2511	12/12/25 CG	SW-846 3050B	12/12/25 CG	SW 846-7000B	100	
Sample Comments:									

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(Continued)**

Analyte	Results	RL	Weight(g)	Prep Date & Tech	Prep Method	Analysis Date & Analyst	Analytical Method	Q	DF
Client Sample ID: L-46/BURNT ORANGE PLASTER MAPLE 3RD FLOOR							Date Sampled: 12/10/25		
Matrix: Chips							LIMS Reference ID: CD64533-46		
Lead	0.014 % wt	0.0064 % wt	0.2517	12/12/25 CG	SW-846 3050B	12/12/25 CG	SW 846-7000B	1	
Sample Comments:									
Client Sample ID: L-47/WHITE PLASTER E- HOME 2ND FLOOR SOUTHWEST WING							Date Sampled: 12/10/25		
Matrix: Chips							LIMS Reference ID: CD64533-47		
Lead	0.31 % wt	0.0064 % wt	0.2526	12/12/25 CG	SW-846 3050B	12/12/25 CG	SW 846-7000B	1	
Sample Comments:									
Client Sample ID: L-48/WHITE PLASTER E- HOME 2ND FLOOR SOUTHWEST WING							Date Sampled: 12/10/25		
Matrix: Chips							LIMS Reference ID: CD64533-48		
Lead	<0.0064 % wt	0.0064 % wt	0.2554	12/12/25 CG	SW-846 3050B	12/12/25 CG	SW 846-7000B	1	
Sample Comments:									
Client Sample ID: L-49/LIGHT BLUE, PLASTER E-HOME 2ND FLOOR SOUTHWEST WING							Date Sampled: 12/10/25		
Matrix: Chips							LIMS Reference ID: CD64533-49		
Lead	0.28 % wt	0.0064 % wt	0.2531	12/12/25 CG	SW-846 3050B	12/12/25 CG	SW 846-7000B	1	
Sample Comments:									
Client Sample ID: L-50/PINK CONCRETE E-HOME 2ND FLOOR CENTRAL CORRIDOR							Date Sampled: 12/10/25		
Matrix: Chips							LIMS Reference ID: CD64533-50		
Lead	<0.023 % wt	0.023 % wt	0.0702	12/12/25 CG	SW-846 3050B	12/12/25 CG	SW 846-7000B	1	
Sample Comments:									
Client Sample ID: L-51/WHITE CONCRETE E-HOME 2ND FLOOR CENTRAL CORRIDOR							Date Sampled: 12/10/25		
Matrix: Chips							LIMS Reference ID: CD64533-51		
Lead	<0.0064 % wt	0.0064 % wt	0.2519	12/12/25 CG	SW-846 3050B	12/12/25 CG	SW 846-7000B	1	
Sample Comments:									
Client Sample ID: L-52/WHITE CONCRETE E-HOME 2ND FLOOR NORTHEAST WING							Date Sampled: 12/10/25		
Matrix: Chips							LIMS Reference ID: CD64533-52		
Lead	0.0082 % wt	0.0080 % wt	0.2012	12/12/25 CG	SW-846 3050B	12/12/25 CG	SW 846-7000B	1	
Sample Comments:									
Client Sample ID: L-53/WHITE CONCRETE E-HOM 2ND FLOOR NORTHEAST WING							Date Sampled: 12/10/25		
Matrix: Chips							LIMS Reference ID: CD64533-53		
Lead	0.0087 % wt	0.0064 % wt	0.2563	12/12/25 CG	SW-846 3050B	12/12/25 CG	SW 846-7000B	1	
Sample Comments:									
Client Sample ID: L-54/BROWN DRYWALL E-HOME 2ND FLOOR CENTRAL CORRIDOR							Date Sampled: 12/10/25		
Matrix: Chips							LIMS Reference ID: CD64533-54		
Lead	0.027 % wt	0.0064 % wt	0.2583	12/12/25 CG	SW-846 3050B	12/12/25 CG	SW 846-7000B	1	
Sample Comments:									

**EMSL Analytical, Inc.**

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EMSL Order ID: 162564533
LIMS Reference ID: CD64533
EMSL Customer ID: ATC55

Attention: Matthew Podjenski
 Atlas Technical [ATC55]
 11117 Mockingbird Drive
 Omaha, NE 68137
 (402) 697-9747
 Matthew.Podjenski@oneatlas.com

Project Name: 204BS09428-STATE OF IOWA-WOODWARD
 RESOURCE CENTER

Customer PO:
EMSL Sales Rep: Anthony DeRosa
Received: 12/11/2025 09:54
Reported: 12/15/2025 08:41

Analytical Results (Continued)

Analyte	Results	RL	Weight(g)	Prep Date & Tech	Prep Method	Analysis Date & Analyst	Analytical Method	Q	DF
Client Sample ID: L-55/WHITE CONCRETE E-HOME 1ST FLOOR NORTHEAST WING							Date Sampled: 12/10/25		
Matrix: Chips							LIMS Reference ID: CD64533-55		
Lead	0.0076 % wt	0.0064 % wt	0.2529	12/12/25 CG	SW-846 3050B	12/12/25 CG	SW 846-7000B	1	
Sample Comments:									
Client Sample ID: L-56/BLUE CONCRETE E-HOME 1ST FLOOR NORTHEAST WING							Date Sampled: 12/10/25		
Matrix: Chips							LIMS Reference ID: CD64533-56		
Lead	0.33 % wt	0.0069 % wt	0.232	12/12/25 CG	SW-846 3050B	12/12/25 CG	SW 846-7000B	1	
Sample Comments:									
Client Sample ID: L-57/WHITE CONCRETE E-HOM 1ST FLOOR NORTHEAST WING							Date Sampled: 12/10/25		
Matrix: Chips							LIMS Reference ID: CD64533-57		
Lead	0.0097 % wt	0.0064 % wt	0.2547	12/12/25 CG	SW-846 3050B	12/12/25 CG	SW 846-7000B	1	
Sample Comments:									
Client Sample ID: L-58/CREAM PLASTER E-HOME 1ST FLOOR CONFERENCE ROOM E							Date Sampled: 12/10/25		
Matrix: Chips							LIMS Reference ID: CD64533-58		
Lead	<0.0064 % wt	0.0064 % wt	0.2574	12/12/25 CG	SW-846 3050B	12/12/25 CG	SW 846-7000B	1	
Sample Comments:									
Client Sample ID: L-59/WHITE CONCRETE E-HOME 1ST FLOOR CENTRAL CORRIDOR							Date Sampled: 12/10/25		
Matrix: Chips							LIMS Reference ID: CD64533-59		
Lead	0.15 % wt	0.0064 % wt	0.2539	12/12/25 CG	SW-846 3050B	12/12/25 CG	SW 846-7000B	1	
Sample Comments:									
Client Sample ID: L-60/WHITE CONCRETE E-HOM 1ST FLOOR SOUTHWEST WING							Date Sampled: 12/10/25		
Matrix: Chips							LIMS Reference ID: CD64533-60		
Lead	<0.0064 % wt	0.0064 % wt	0.2583	12/12/25 CG	SW-846 3050B	12/12/25 CG	SW 846-7000B	1	
Sample Comments:									
Client Sample ID: L-61/BROWN CONCRETE E-HOME 1ST FLOOR SOUTHWEST WING							Date Sampled: 12/10/25		
Matrix: Chips							LIMS Reference ID: CD64533-61		
Lead	<0.0084 % wt	0.0084 % wt	0.1898	12/12/25 CG	SW-846 3050B	12/12/25 CG	SW 846-7000B	1	
Sample Comments:									
Client Sample ID: L-62/GREEN DRYWALL E-HOME 1ST FLOOR SOUTHWEST WING							Date Sampled: 12/10/25		
Matrix: Chips							LIMS Reference ID: CD64533-62		
Lead	<0.0064 % wt	0.0064 % wt	0.2522	12/12/25 CG	SW-846 3050B	12/12/25 CG	SW 846-7000B	1	
Sample Comments:									
Client Sample ID: L-63/WHITE CONCRETE E-HOME BASEMENT SOUTHWEST WING							Date Sampled: 12/10/25		
Matrix: Chips							LIMS Reference ID: CD64533-63		
Lead	0.56 % wt	0.062 % wt	0.2566	12/12/25 CG	SW-846 3050B	12/12/25 CG	SW 846-7000B	10	
Sample Comments:									

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EMSL Customer ID: ATC55

Attention: Matthew Podjenski
 Atlas Technical [ATC55]
 11117 Mockingbird Drive
 Omaha, NE 68137
 (402) 697-9747
 Matthew.Podjenski@oneatlas.com

Project Name: 204BS09428-STATE OF IOWA-WOODWARD
 RESOURCE CENTER

Customer PO:
EMSL Sales Rep: Anthony DeRosa
Received: 12/11/2025 09:54
Reported: 12/15/2025 08:41

Analytical Results (Continued)

Analyte	Results	RL	Weight(g)	Prep Date & Tech	Prep Method	Analysis Date & Analyst	Analytical Method	Q	DF
Client Sample ID: L-64/WHITE CONCRETE E-HOME BASEMENT SOUTHWEST WING							Date Sampled: 12/10/25		
Matrix: Chips							LIMS Reference ID: CD64533-64		
Lead	0.0072 % wt	0.0064 % wt	0.2522	12/12/25 CG	SW-846 3050B	12/12/25 CG	SW 846-7000B	1	
Sample Comments:									
Client Sample ID: L-65/CREAM PLASTER HEMLOCK 3RD FLOOR							Date Sampled: 12/10/25		
Matrix: Chips							LIMS Reference ID: CD64533-65		
Lead	0.18 % wt	0.0064 % wt	0.2556	12/12/25 CG	SW-846 3050B	12/12/25 CG	SW 846-7000B	1	
Sample Comments:									
Client Sample ID: L-66/WHITE PLASTER HEMLOCK 3RD FLOOR STAIR LANDING							Date Sampled: 12/10/25		
Matrix: Chips							LIMS Reference ID: CD64533-66		
Lead	0.028 % wt	0.0064 % wt	0.2523	12/12/25 CG	SW-846 3050B	12/12/25 CG	SW 846-7000B	1	
Sample Comments:									
Client Sample ID: L-67/WHITE PLASTER HEMLOCK 2ND FLOOR WEST WING							Date Sampled: 12/10/25		
Matrix: Chips							LIMS Reference ID: CD64533-67		
Lead	<0.0064 % wt	0.0064 % wt	0.2557	12/12/25 CG	SW-846 3050B	12/12/25 CG	SW 846-7000B	1	
Sample Comments:									
Client Sample ID: L-68/BLUE PLASTER HEMLOCK 2ND FLOOR WEST WING							Date Sampled: 12/10/25		
Matrix: Chips							LIMS Reference ID: CD64533-68		
Lead	<0.0064 % wt	0.0064 % wt	0.2537	12/12/25 CG	SW-846 3050B	12/12/25 CG	SW 846-7000B	1	
Sample Comments:									
Client Sample ID: L-69/PEACH PLASTER HEMLOCK 2ND FLOOR WEST WING							Date Sampled: 12/10/25		
Matrix: Chips							LIMS Reference ID: CD64533-69		
Lead	<0.0064 % wt	0.0064 % wt	0.2518	12/12/25 CG	SW-846 3050B	12/12/25 CG	SW 846-7000B	1	
Sample Comments:									
Client Sample ID: L-70/CREAM PLASTER HEMLOCK 2ND FLOOR WEST WING							Date Sampled: 12/10/25		
Matrix: Chips							LIMS Reference ID: CD64533-70		
Lead	<0.0064 % wt	0.0064 % wt	0.2598	12/12/25 CG	SW-846 3050B	12/12/25 CG	SW 846-7000B	1	
Sample Comments:									
Client Sample ID: L-71/CREAM PLASTER HEMLOCK 2ND FLOOR NORTH WING							Date Sampled: 12/10/25		
Matrix: Chips							LIMS Reference ID: CD64533-71		
Lead	0.028 % wt	0.0064 % wt	0.2551	12/12/25 CG	SW-846 3050B	12/12/25 CG	SW 846-7000B	1	
Sample Comments:									
Client Sample ID: L-72/CREAM DRYWALL HEMLOCK 2ND FLOOR SOUTH (CENTRAL ROOM)							Date Sampled: 12/10/25		
Matrix: Chips							LIMS Reference ID: CD64533-72		
Lead	0.011 % wt	0.0064 % wt	0.2529	12/12/25 CG	SW-846 3050B	12/12/25 CG	SW 846-7000B	1	
Sample Comments:									

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Project Name: 204BS09428-STATE OF IOWA-WOODWARD
 RESOURCE CENTER

Customer PO:
EMSL Sales Rep: Anthony DeRosa
Received: 12/11/2025 09:54
Reported: 12/15/2025 08:41

Analytical Results (Continued)

Analyte	Results	RL	Weight(g)	Prep Date & Tech	Prep Method	Analysis Date & Analyst	Analytical Method	Q	DF
Client Sample ID: L-73/WHITE BRICK HEMLOCK 2ND FLOOR SOUTH/CENTRAL ROOM							Date Sampled: 12/10/25		
Matrix: Chips							LIMS Reference ID: CD64533-73		
Lead	0.063 % wt	0.0064 % wt	0.251	12/12/25 CG	SW-846 3050B	12/12/25 CG	SW 846-7000B	1	
Sample Comments:									
Client Sample ID: L-74/CREAM CONCRETE HEMLOCK 1ST FLOOR WEST WING							Date Sampled: 12/10/25		
Matrix: Chips							LIMS Reference ID: CD64533-74		
Lead	0.12 % wt	0.0064 % wt	0.2551	12/12/25 CG	SW-846 3050B	12/12/25 CG	SW 846-7000B	1	
Sample Comments:									
Client Sample ID: L-75/YELLOW CONCRETE HEMLOCK 1ST FLOOR WEST WING							Date Sampled: 12/10/25		
Matrix: Chips							LIMS Reference ID: CD64533-75		
Lead	0.21 % wt	0.0064 % wt	0.2533	12/12/25 CG	SW-846 3050B	12/12/25 CG	SW 846-7000B	1	
Sample Comments:									
Client Sample ID: L-76/BLUE CONCRETE HEMLOCK 1ST FLOOR CENTRAL WING							Date Sampled: 12/10/25		
Matrix: Chips							LIMS Reference ID: CD64533-76		
Lead	4.7 % wt	0.15 % wt	0.2583	12/12/25 CG	SW-846 3050B	12/12/25 CG	SW 846-7000B	25	
Sample Comments:									
Client Sample ID: L-77/WHITE BRICK, HEMLOCK 1ST FLOOR CENTRAL WING							Date Sampled: 12/10/25		
Matrix: Chips							LIMS Reference ID: CD64533-77		
Lead	0.055 % wt	0.0064 % wt	0.2557	12/12/25 CG	SW-846 3050B	12/12/25 CG	SW 846-7000B	1	
Sample Comments:									
Client Sample ID: L-78/DARK YELLOW CONCRETE HEMLOCK 1ST FLOOR EAST WING							Date Sampled: 12/10/25		
Matrix: Chips							LIMS Reference ID: CD64533-78		
Lead	<0.0064 % wt	0.0064 % wt	0.2535	12/12/25 CG	SW-846 3050B	12/12/25 CG	SW 846-7000B	1	
Sample Comments:									
Client Sample ID: L-79/WHITE CONCRETE HEMLOCK 1ST FLOOR EAST WING							Date Sampled: 12/10/25		
Matrix: Chips							LIMS Reference ID: CD64533-79		
Lead	0.18 % wt	0.0064 % wt	0.2593	12/12/25 CG	SW-846 3050B	12/12/25 CG	SW 846-7000B	1	
Sample Comments:									
Client Sample ID: L-80/CREAM CONCRETE HEMLOCK BASEMENT							Date Sampled: 12/10/25		
Matrix: Chips							LIMS Reference ID: CD64533-80		
Lead	0.24 % wt	0.0064 % wt	0.2568	12/12/25 CG	SW-846 3050B	12/12/25 CG	SW 846-7000B	1	
Sample Comments:									

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 Matthew.Podjenski@oneatlas.com

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Received: 12/11/2025 09:54
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Certified Analyses included in this Report

Analyte	Certifications
SW 846-7000B in Chips	
Lead	16-OHDOH,16-AIHA ELLAP

List of Certifications

Code	Description	Number	Expires
16-MO	Missouri Drinking Water	10180	03/31/2026
16-NYDOH	New York Potable Water, Metals Solid and Hazardous Waste - Asbestos	12130	04/01/2026
16-AIHA ELLAP	American Industrial Hygiene Association (AIHA LAP, LLC) - ELLAP	157245	08/01/2027
16-AIHA IHLAP	American Industrial Hygiene Association (AIHA LAP, LLC) - IHLAP	157245	08/01/2027
16-CA ELAP	California Metals in DW, Chemistry and Bulk Asbestos in Hazardous Waste	2575	06/30/2026
16-A2LA Food	A2LA Food Microbiology	2845.11	01/31/2026
16-A2LA Chemistry	A2LA Environmental and Chemistry	2845.25	11/30/2025
16-IN Metals/Asbestos	Indiana Lead and Metals and Asbestos in Drinking Water	C-49-09	12/31/2026
16-OHDOH	Ohio - Lead in Paint Chips, Wipes, Soil and Air	E10040	05/03/2026
16-FLDOH	Florida Asbestos and Metals in Drinking Water, PCBs	E871170	06/30/2026
16-NJDEP	New Jersey Metals, Organics and Inorganics in DW PCBs	IN002	06/30/2026
16-IN Colilert/HPC	Indiana Colilert and HPC	M-49-06	12/31/2026

Please see the specific Field of Testing (FOT) on www.emsl.com for a complete listing of parameters for which EMSL is certified.

Notes and Definitions

Item	Definition
Pb2	The MS recovery for Lead was outside of the method control limits due to matrix bias.
(Dig)	For metals analysis, sample was digested.
[2C]	Reported from the second channel in dual column analysis.
DA	Direct Analysis
DF	Dilution Factor
MDL	Method Detection Limit.
ND	Analyte was NOT DETECTED at or above the detection limit.
NR	Spike/Surrogate showed no recovery.
Q	Qualifier
RCS	Respirable Crystalline Silica
RL	Reporting Limit
Wet	Sample is not dry weight corrected.

Measurement of uncertainty and any applicable definitions of method modifications are available upon request. Per EPA NLLAP policy, sample results are not blank corrected.



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Sara Dille Laboratory Manager or other approved signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. QC sample results are within quality control criteria and met method specifications unless otherwise noted. All results for soil samples are reported on a dry weight basis, unless otherwise noted.

Analysis following EMSL SOP for the Determination of Environmental Lead by FLAA. The laboratory has a reporting limit of 0.0064% by wt., based upon a minimum sample weight of 0.25g submitted to the lab, and is not responsible for any result or reporting limit provided in mg/cm² since it is dependent upon an area value provided by non-lab personnel. A "<" (less than) result signifies that the analyte was not detected at or above the reporting limit. Measurement of uncertainty and definitions of modifications are available upon request. Results in this report are not blank corrected unless specified.



Lead Chain of Custody

EMSL Order Number / Lab Use Only

162564533

Cinnaminson, NJ 08077
PHONE: 1-800-220-3675
EMAIL: cs@emsl.com

EMSL ANALYTICAL, INC.
LABORATORY PRODUCTS TRAINING

If Bill-To is the same as Report-To leave this section blank. Third-party billing requires written authorization.

Customer Information and Billing Information section containing company name (Atlas), contact name (Matthew Podjenski), address (11117 Mockingbird Drive), and phone numbers.

Project Information section containing project name (204BS09428 - State of Iowa - Woodward Resource Center), project location (Iowa), and sampled by name (Chris Nicolet).

Turn-Around-Time (TAT) section with checkboxes for 3, 6, 24, 32, 48, 72, 96 hours, 1 week, and 2 weeks. 48 hours is selected.

Table with columns: MATRIX, METHOD, INSTRUMENT, REPORTING LIMIT, SELECTION. Rows include CHIPS, AIR, WIPE, TCLP, SPLP, TTLC, STLC, Soil, Wastewater, Drinking Water, TSP/SPM Filter, and Other.

Table with columns: Sample Number, Sample Location, Volume / Area, Date / Time Sampled. Content: See Attached.

Method of Shipment and Sample Condition Upon Receipt section, including signature and date of relinquishment (Chris Nicolet, 12/10/2025) and receipt (Matthew Newkirk, 12/11/25 @ 9:54 AM).

Controlled Document COC-25 Lead R22 03/28/2025 *6010C Available Upon Request

AGREE TO ELECTRONIC SIGNATURE (By checking, I consent to signing this Chain of Custody document by electronic signature.)

EMSL Analytical, Inc.'s Laboratory Terms and Conditions are incorporated into this Chain of Custody by reference in their entirety. Submission of samples to EMSL Analytical, Inc. constitutes acceptance and acknowledgment of all terms and conditions by Customer.

PAINT CHIP SAMPLE LOG SHEET

Page 1 of 8

11117 Mockingbird Drive
Omaha, NE 68137

Phone (402) 697-9747

Project Information

Client: State of Iowa	Project Description: Limited Pb & ASb	Project Manager: PT Inspector: CN
Date: 12/10/05	Site Location: Woodward Resource Center	ATLAS PROJECT NUMBER: 204BS09428

Sample #	Paint Color	Substrate	Sample Location	Quantity
L-1	Yellow	Plaster	Oak Hall - 3rd Floor Northwest Room	
L-2	White	Plaster	Oak Hall - 3rd Floor South stair Landing	
L-3	Brown	Plaster	Oak Hall - 3rd Floor Southwest Room	
L-4	Light Blue	Plaster	Oak Hall - 2nd Floor East Room	
L-5	Dark Green	Plaster	Oak Hall - 2nd Floor North Central Stair Landing	
L-6	Light Blue Plaster	Drywall	Oak Hall - 2nd South Corridors	
L-7	White	Drywall	Car wash - Mechanical Room	
L-8	Light Brown	Drywall	Car - Wash Storage	
L-9	White	Drywall	Laundry	
L-10	White	Brick	Laundry	

PAINT CHIP SAMPLE LOG SHEET

Page 2 of 811117 Mockingbird Drive
Omaha, NE 68137

Phone (402) 697-9747

Project Information

Client:	Project Description:	Project Manager: Inspector:
Date:	Site Location:	ATLAS PROJECT NUMBER: 204BS

Sample #	Paint Color	Substrate	Sample Location	Quantity
L-11	White	Plaster	Water treatment ^{1st Floor}	
L-12	White	Brick	Water treatment - ^{1st Floor}	
L-13	White	Concrete	Water treatment - ^{Basement}	
L-14	White	Drywall	Distribution - front office	
L-15	White	Brick	Supply Depot - Basement	
L-16	White	Plaster	Supply Depot ^{1st Floor}	
L-17	Teal	Concrete	Supply Depot ^{1st Floor}	
L-18	Lime Green	Concrete	Supply Depot ^{1st Floor}	
L-19	Blue - Gray	Concrete	Supply Depot ^{1st Floor}	
L-20	Brown	Plaster	Supply Depot - 2nd Floor	

PAINT CHIP SAMPLE LOG SHEET

Page 3 of 811117 Mockingbird Drive
Omaha, NE 68137

Phone (402) 697-9747

Project Information

Client:	Project Description:	Project Manager: Inspector:
Date:	Site Location:	ATLAS PROJECT NUMBER: 204BS

Sample #	Paint Color	Substrate	Sample Location	Quantity
L-21	Yellow	Plaster	Summit Depot - 2nd Floor	
L-22	White	Concrete	Larches / Basement	
L-23	White	Plaster	Larches 1st Floor	
L-24	Grey	Plaster	Larches 1st Floor	
L-25	Light Blue	Plaster	Larches 1st Floor	
L-26	Green	Plaster	Larches - 1st Floor	
L-27	Brown	Plaster	Larches - 2nd Floor	
L-28	Yellow	Plaster	Larches - 2nd Floor	
L-29	Blue Grey	Plaster	Larches - 2nd Floor	
L-30	White	Plaster	Larches - 2nd Floor	

PAINT CHIP SAMPLE LOG SHEET

Page 4 of 811117 Mockingbird Drive
Omaha, NE 68137

Phone (402) 697-9747

Project Information

Client:	Project Description:	Project Manager: Inspector:
Date:	Site Location:	ATLAS PROJECT NUMBER: 204BS

Sample #	Paint Color	Substrate	Sample Location	Quantity
L-31	Pink	Plaster	Larches - 2nd Floor	
L-32	Green	Plaster	Larches 2nd Floor	
L-33	White	Plaster	Larches 2nd Floor	
L-34	White	Plaster	Larches - 3rd Floor	
L-35	White	Brick	Maple - Basement	
L-36	White/ Cream	Plaster	Maple - 1st Floor	
L-37	White/ Cream	Plaster	Maple - 1st Floor	
L-38	Salmon	Plaster	Maple - 2nd Floor	
L-39	White	Plaster	Maple - 2nd Floor above Ceiling tiles	
L-40	Light Green	Plaster	Maple - 2nd Floor above Ceiling tile	

PAINT CHIP SAMPLE LOG SHEET

Page 5 of 811117 Mockingbird Drive
Omaha, NE 68137

Phone (402) 697-9747

Project Information

Client:	Project Description:	Project Manager: Inspector:
Date:	Site Location:	ATLAS PROJECT NUMBER: 204BS

Sample #	Paint Color	Substrate	Sample Location	Quantity
L-41	Light purple	Plaster	Maple - 2nd Floor East Wing	
L-42	Cream	Plaster	Maple - 2nd Floor East Wing	
L-43	Cream	Plaster	Maple - 3rd Floor walls	
L-44	White	Plaster	Maple 3rd Floor west stairwell	
L-45	Light Brown	Plaster	Maple 3rd Floor above ceiling tiles	
L-46	Burnt Orange	Plaster	Maple - 3rd Floor	
L-47	White	Plaster	E-Home 2nd Floor South west Wing	
L-48	White	Plaster	E-Home 2nd Floor Southwest wing	
L-49	Light Blue	Plaster	E-Home 2nd Floor Southwest Wing	
L-50	Pink	Concrete	E-Home 2nd Floor Central Corridor	

PAINT CHIP SAMPLE LOG SHEET

Page 6 of 811117 Mockingbird Drive
Omaha, NE 68137

Phone (402) 697-9747

Project Information

Client:	Project Description:	Project Manager: Inspector:
Date:	Site Location:	ATLAS PROJECT NUMBER: 204BS

Sample #	Paint Color	Substrate	Sample Location	Quantity
L-51	White	Concrete	E-Home 2nd Floor Central Corridor	
L-52	White	Concrete	E-Home 2nd Floor North East Wing	
L-53	White	Concrete	E-Home 2nd Floor North East Wing	
L-54	Brown	Drywall	E-Home 2nd Floor Central Corridor	
L-55	White	Concrete	E-Home 1st Floor North East Wing	
L-56	Blue	Concrete	E-Home 1st Floor North East Wing	
L-57	White	Concrete	E-Home 1st Floor North East Wing	
L-58	Cream	Plaster	E-Home 1st Floor Conference Room E	
L-59	White	Concrete	E-Home 1st Floor Central Corridor	
L-60	White	Concrete	E-Home -1st Floor South West wing	

PAINT CHIP SAMPLE LOG SHEET

Page 7 of 811117 Mockingbird Drive
Omaha, NE 68137

Phone (402) 697-9747

Project Information

Client:	Project Description:	Project Manager: Inspector:
Date:	Site Location:	ATLAS PROJECT NUMBER: 204BS

Sample #	Paint Color	Substrate	Sample Location	Quantity
L-61	Brown	Concrete	E-Home - 1st Floor South West Corridor	
L-62	Green	Concrete Drywall	E-Home 1st Floor South West Wing	
L-63	White	Concrete	E-Home Basement South West Wing	
L-64	White	Concrete Concrete	E-Home Basement South West Wing	
L-65	Cream	Plaster	Hemlock - 3rd Floor	
L-66	White	Plaster	Hemlock - 3rd Floor Stair Landing	
L-67	White	Plaster	Hemlock - 2nd Floor West Wing	
L-68	Blue	Plaster	Hemlock - 2nd Floor West Wing	
L-69	Peach	Plaster	Hemlock - 2nd Floor West Wing	
L-70	Cream	Plaster	Hemlock - 2nd Floor East West Wing	



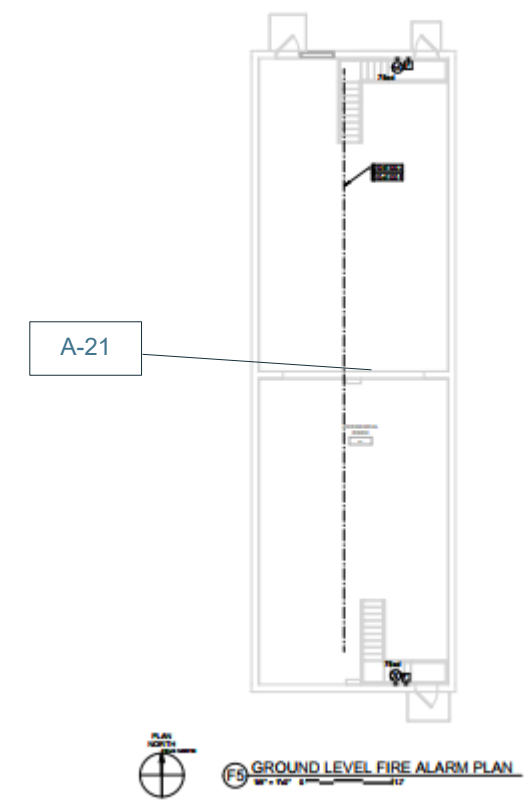
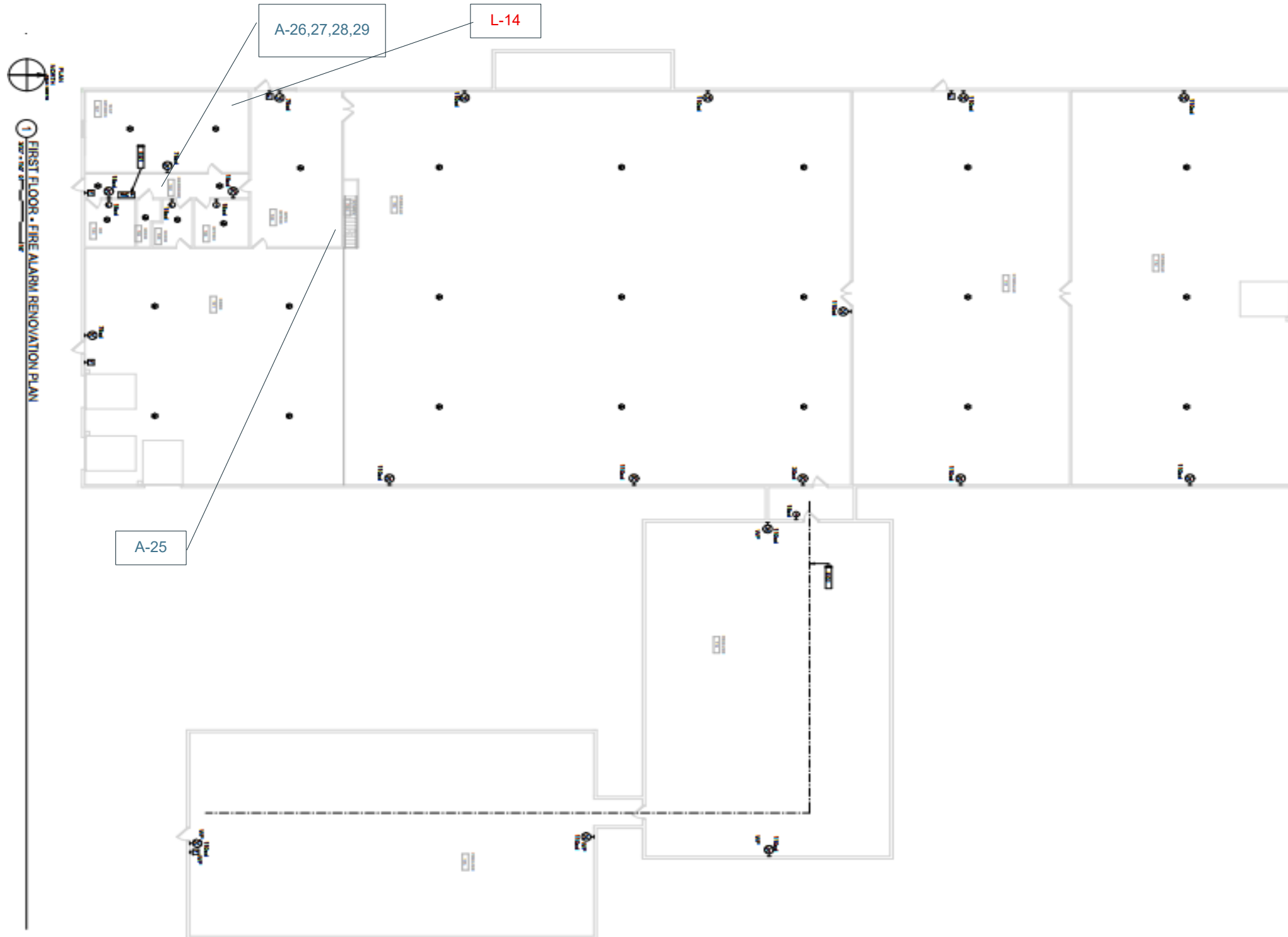
11117 Mockingbird Drive
 Omaha, NE 68137
 Phone (402) 697-9747

PAINT CHIP SAMPLE LOG SHEET

Client:	Project Description:	Project Manager: Inspector:
Date:	Site Location:	Atlas Project Number: 204BS

Sample #	Paint Color	Substrate	Material Description	Sample Location (Floor/Room/Location in Room)	Quantity
L71	Cream	Plaster	N/A	Hemlock - 2nd Floor North Wing	
L72	Cream	Drywall		Hemlock 2nd Floor South/Central Room	
L73	White	Brick		Hemlock - 2nd Floor South/Central Room	
L74	Cream	Concrete		Hemlock 1st Floor West Wing	
L75	Yellow	Concrete		Hemlock 1st Floor West Wing	
L76	Blue	Concrete		Hemlock 1st Floor Central wing	
L77	White	Brick		Hemlock 1st Floor central wing	
L78	Dark Yellow	Concrete		Hemlock 1st Floor East Wing	
L79	White	Concrete		Hemlock 1st floor East Wing	
L80	Cream	Concrete		Hemlock Basement	

APPENDIX C
DRAWINGS WITH SAMPLE LOCATIONS



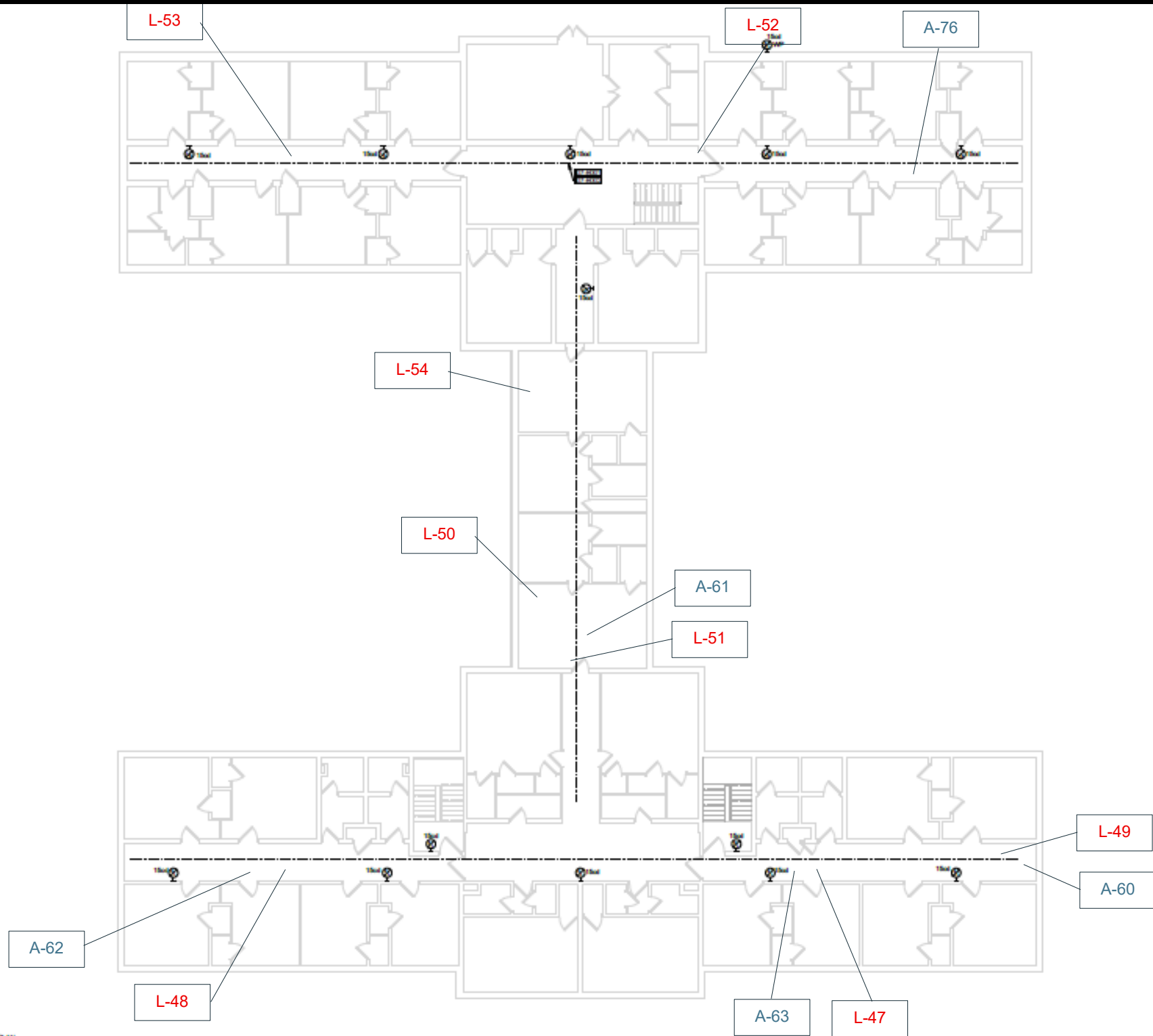
X-XX = Asbestos Sample Location
 X-XX = Lead Paint Sample Location

Project No. 204BS09428	Date: January 7, 2025
Project Manager: Phillip Thomas	
Name: Distribution and Chiller	

ATLAS
 11117 Mockingbird Drive
 Omaha, NE 68137
 PH. (402) 697-9747

Asbestos and Lead Paint Sample Locations

Distribution and Chiller
 1251 334th Street
 Woodward, IA 50276



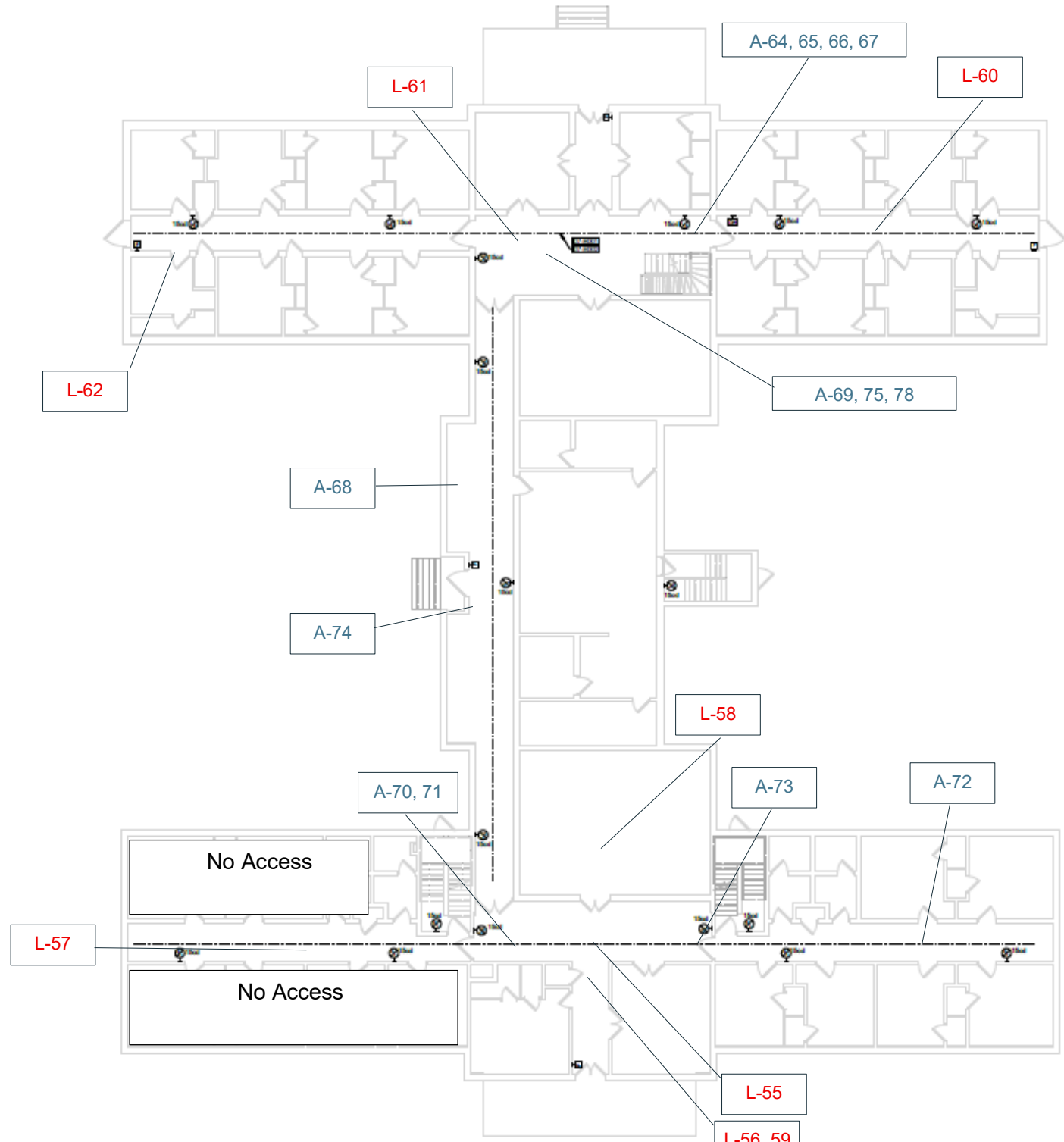
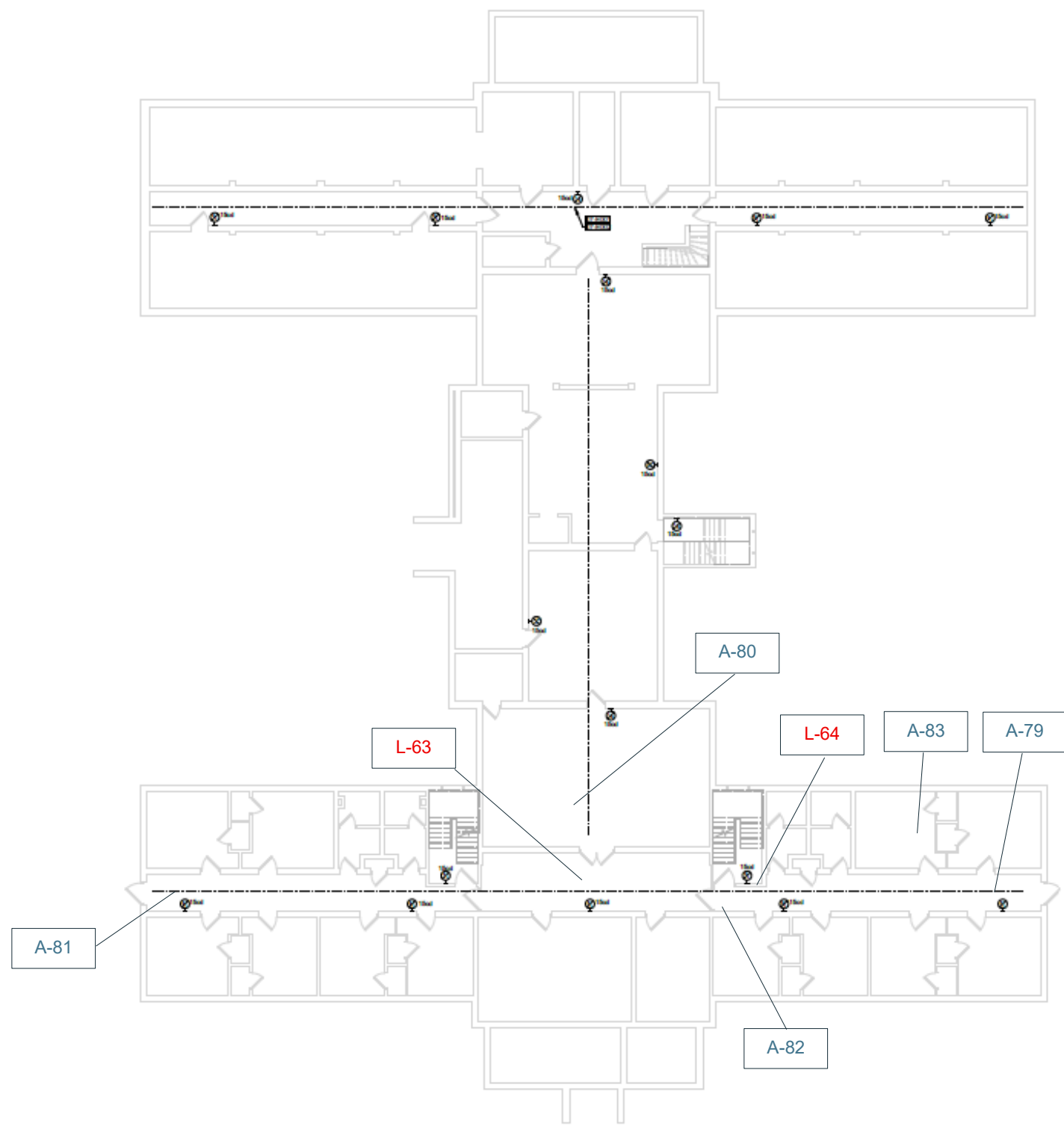
1 SECOND FLOOR - FIRE ALARM RENOVATION PLAN

X-XX = Asbestos Sample Location
 X-XX = Lead Paint Sample Location

Project No. 204BS09428	Date: January 7, 2025
Project Manager: Phillip Thomas	
Name: 2 nd Floor	

ATLAS
 11117 Mockingbird Drive
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 PH. (402) 697-9747

Asbestos and Lead Paint Sample Locations
 Employee Home
 1251 334th Street
 Woodward, IA 50276



PLAN NORTH
 1 BASEMENT LEVEL - FIRE ALARM RENOVATION PLAN

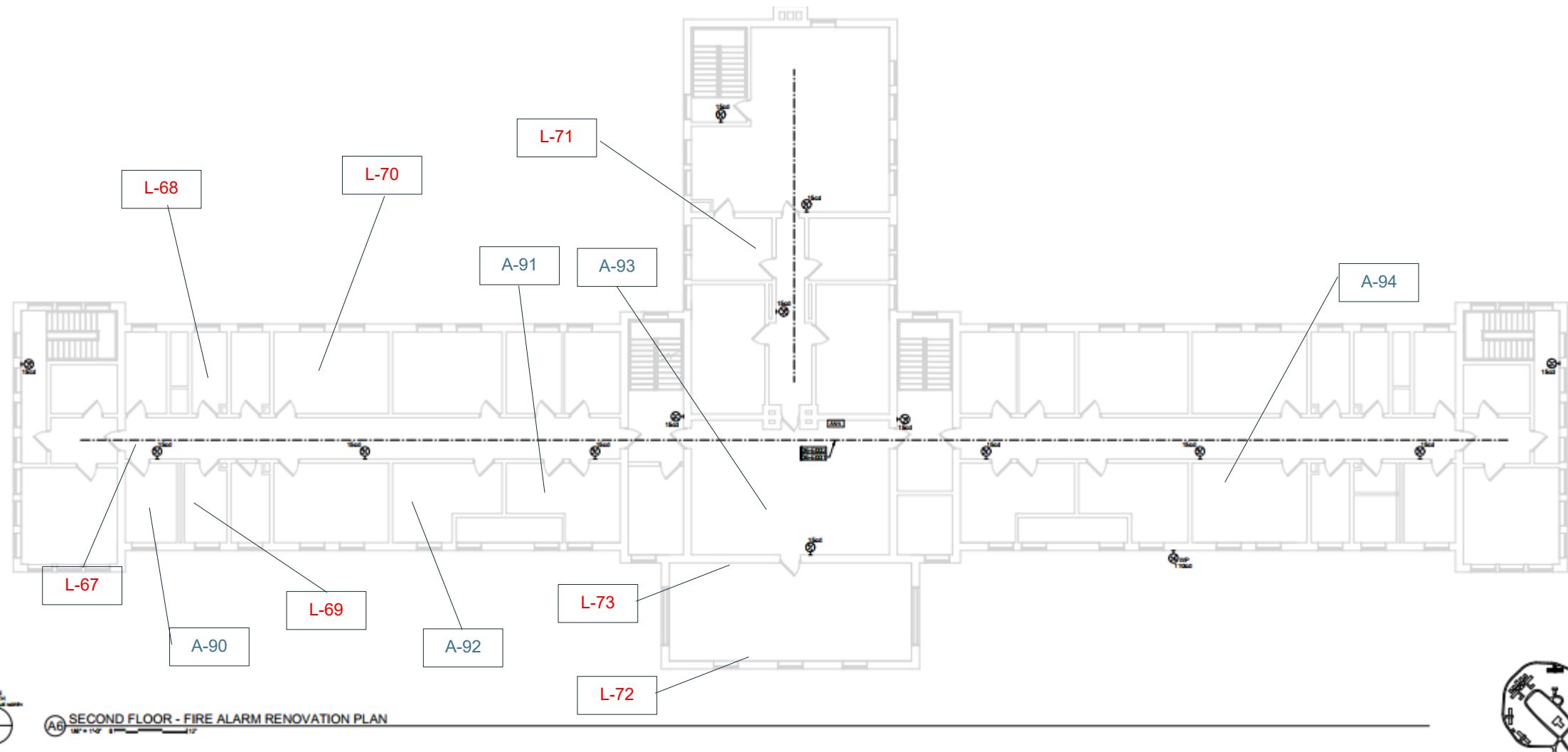
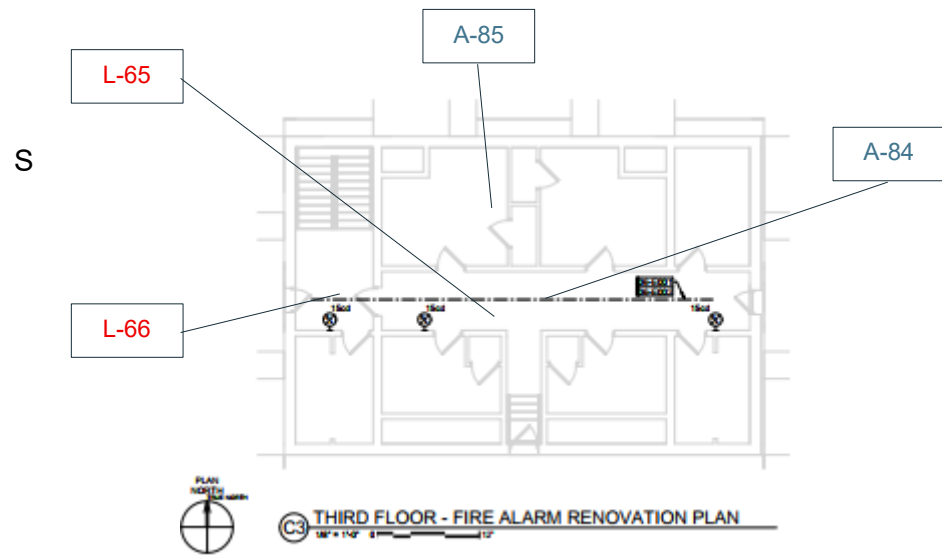
PLAN NORTH
 1 FIRST FLOOR - FIRE ALARM RENOVATION PLAN

X-XX = Asbestos Sample Location
 X-XX = Lead Paint Sample Location

Project No. 204BS09428	Date: January 7, 2025
Project Manager: Phillip Thomas	
Name: Basement and 1 st Floors	

ATLAS
 11117 Mockingbird Drive
 Omaha, NE 68137
 PH. (402) 697-9747

Asbestos and Lead Paint Sample Locations
Employee Home 1251 334 th Street Woodward, IA 50276



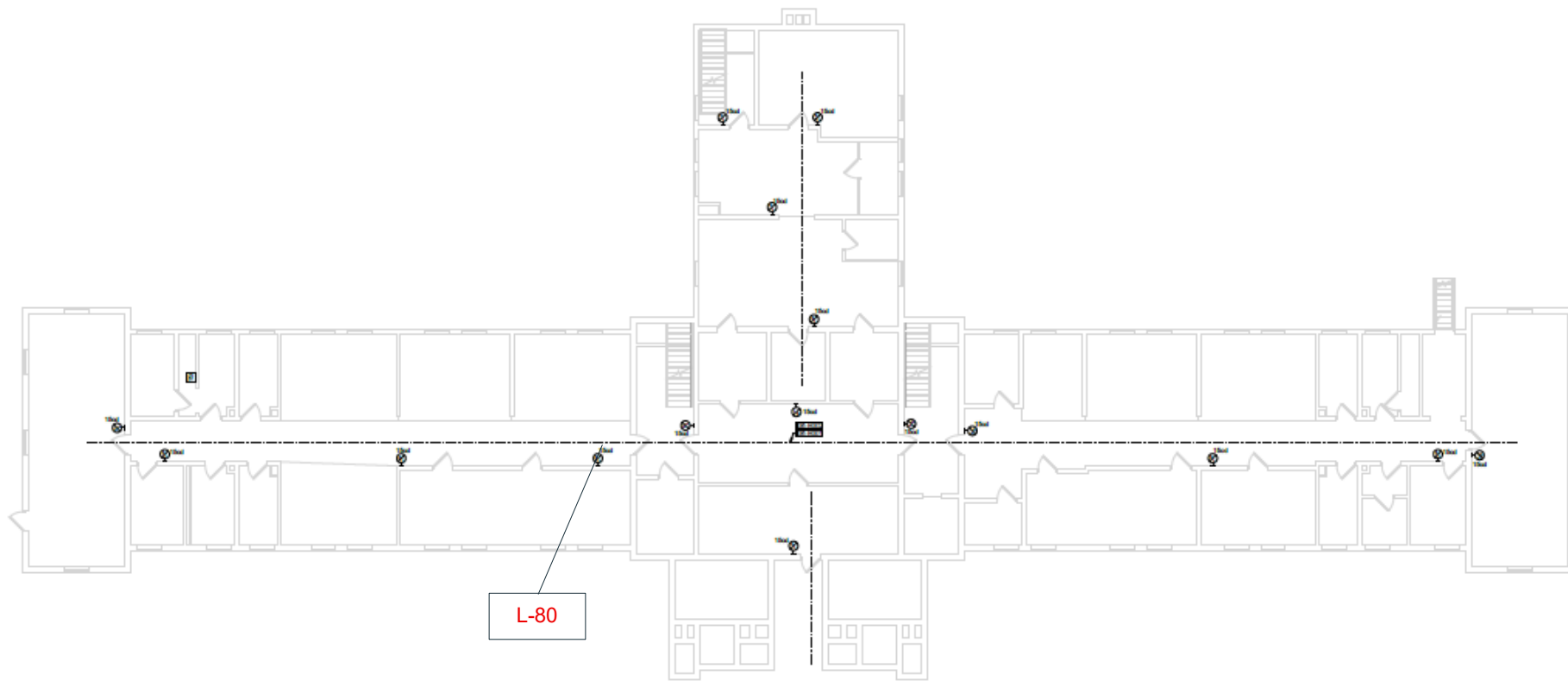
X-XX = Asbestos Sample Location
 X-XX = Lead Paint Sample Location

Project No. 204BS09428	Date: January 7, 2025
Project Manager: Phillip Thomas	
Name: 2 nd and 3 rd Floors	

ATLAS

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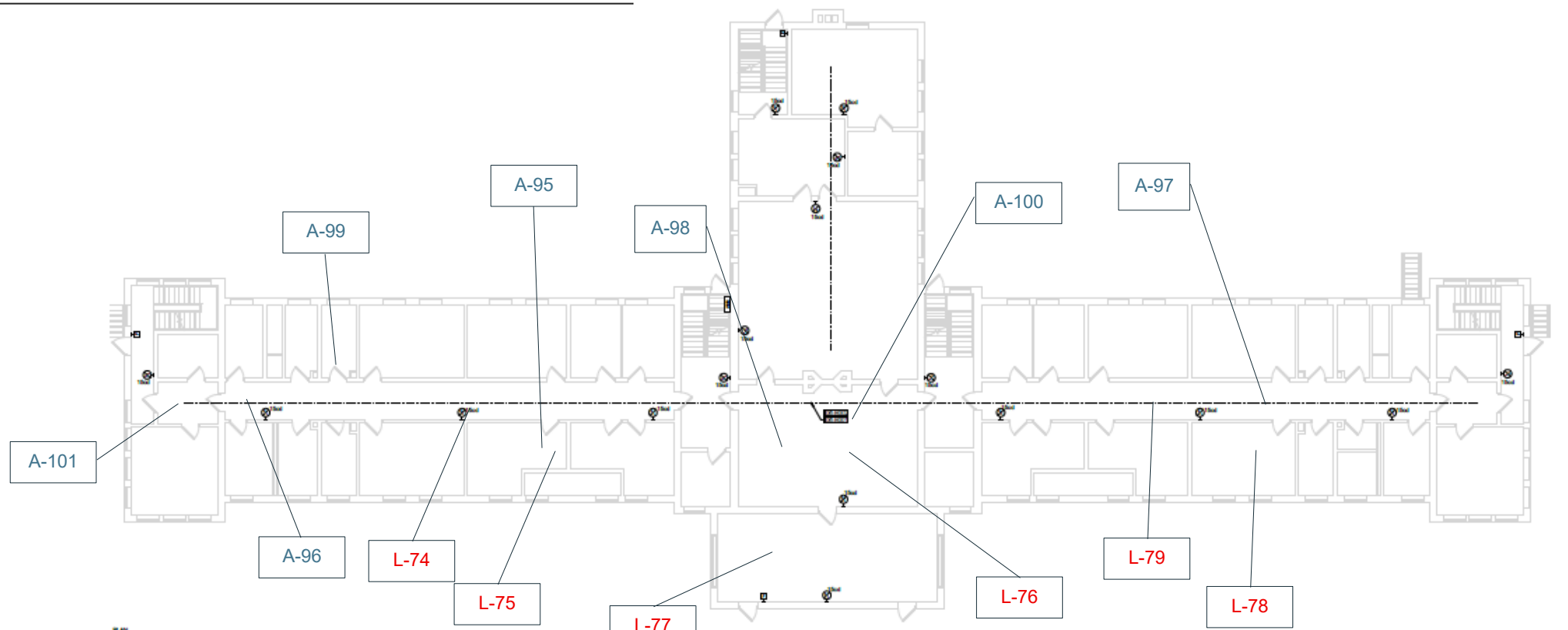
Asbestos and Lead Paint Sample Locations
Hemlock 1251 334 th Street Woodward, IA 50276



L-80



A5 BASEMENT LEVEL - FIRE ALARM RENOVATION PLAN



A5 FIRST FLOOR - FIRE ALARM RENOVATION PLAN

- X-XX = Asbestos Sample Location
- X-XX = Lead Paint Sample Location

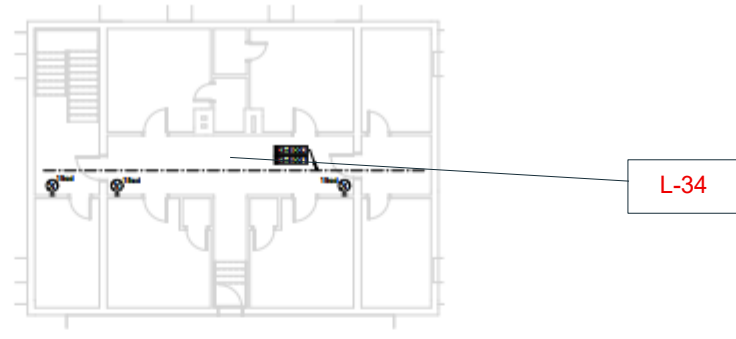
Project No. 204BS09428	Date: January 7, 2025
Project Manager: Phillip Thomas	
Name: Basement and 1 st Floors	



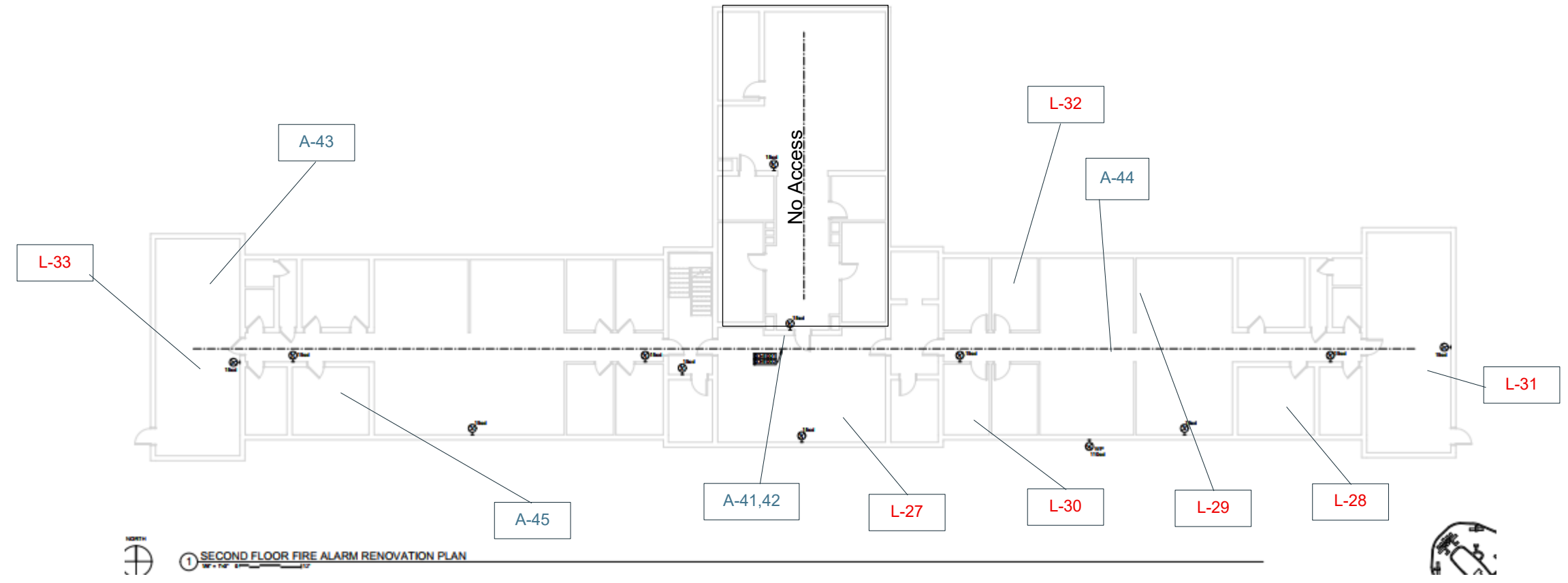
11117 Mockingbird Drive
Omaha, NE 68137
PH. (402) 697-9747

Asbestos and Lead Paint Sample Locations

Hemlock
1251 334th Street
Woodward, IA 50276



② THIRD FLOOR FIRE ALARM RENOVATION PLAN



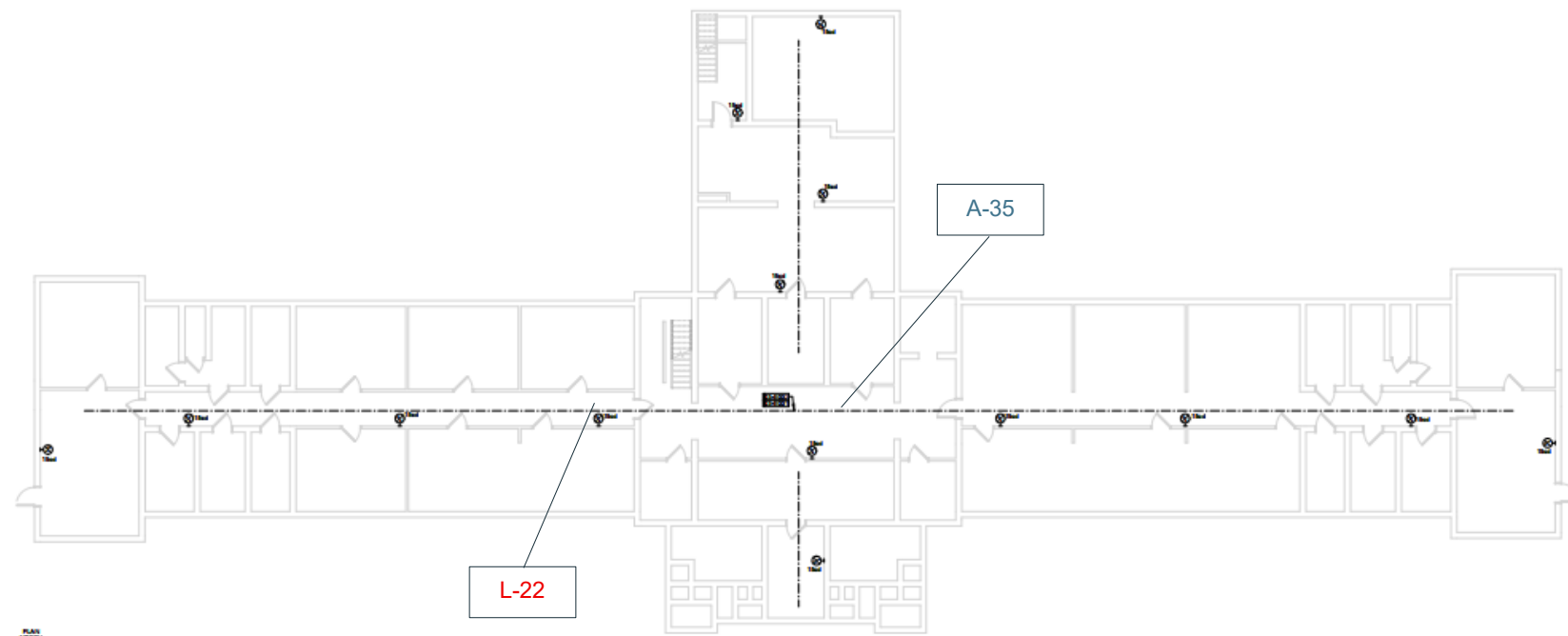
① SECOND FLOOR FIRE ALARM RENOVATION PLAN

X-XX = Asbestos Sample Location
 X-XX = Lead Paint Sample Location

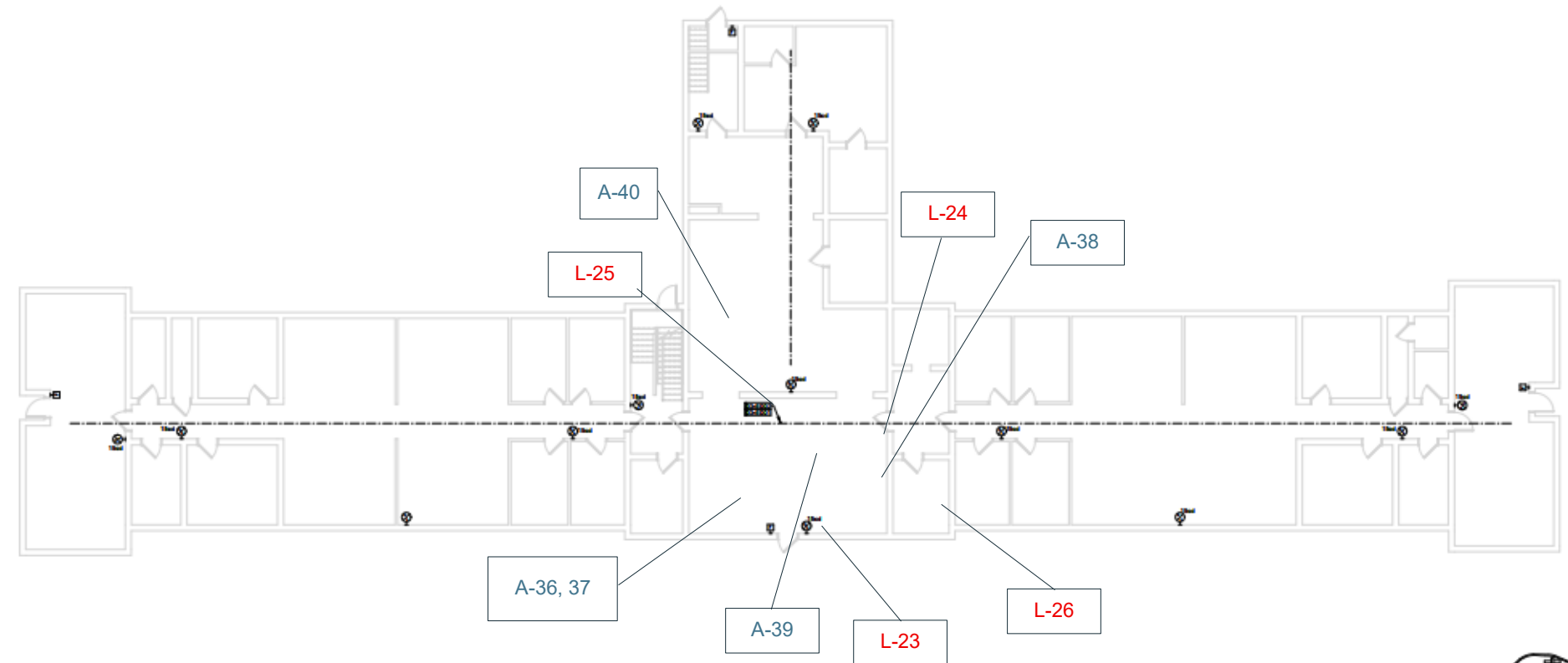
Project No. 204BS09428	Date: January 7, 2025
Project Manager: Phillip Thomas	
Name: 2nd and 3rd Floors	

ATLAS
 11117 Mockingbird Drive
 Omaha, NE 68137
 PH. (402) 697-9747

Asbestos and Lead Paint Sample Locations
Larches 1251 334 th Street Woodward, IA 50276



1 BASEMENT LEVEL FIRE ALARM RENOVATION PLAN



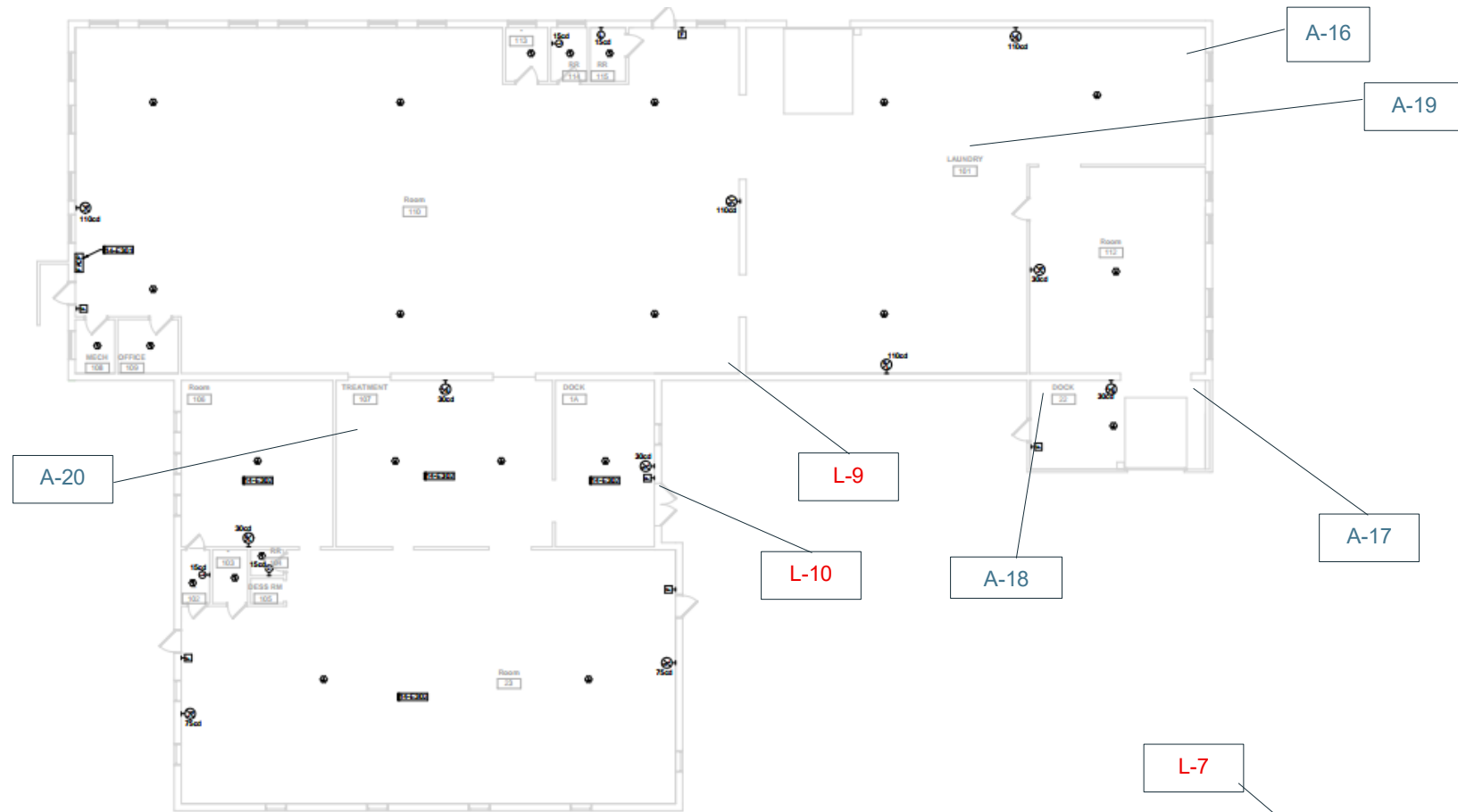
1 FIRST FLOOR FIRE ALARM RENOVATION PLAN

X-XX = Asbestos Sample Location
 X-XX = Lead Paint Sample Location

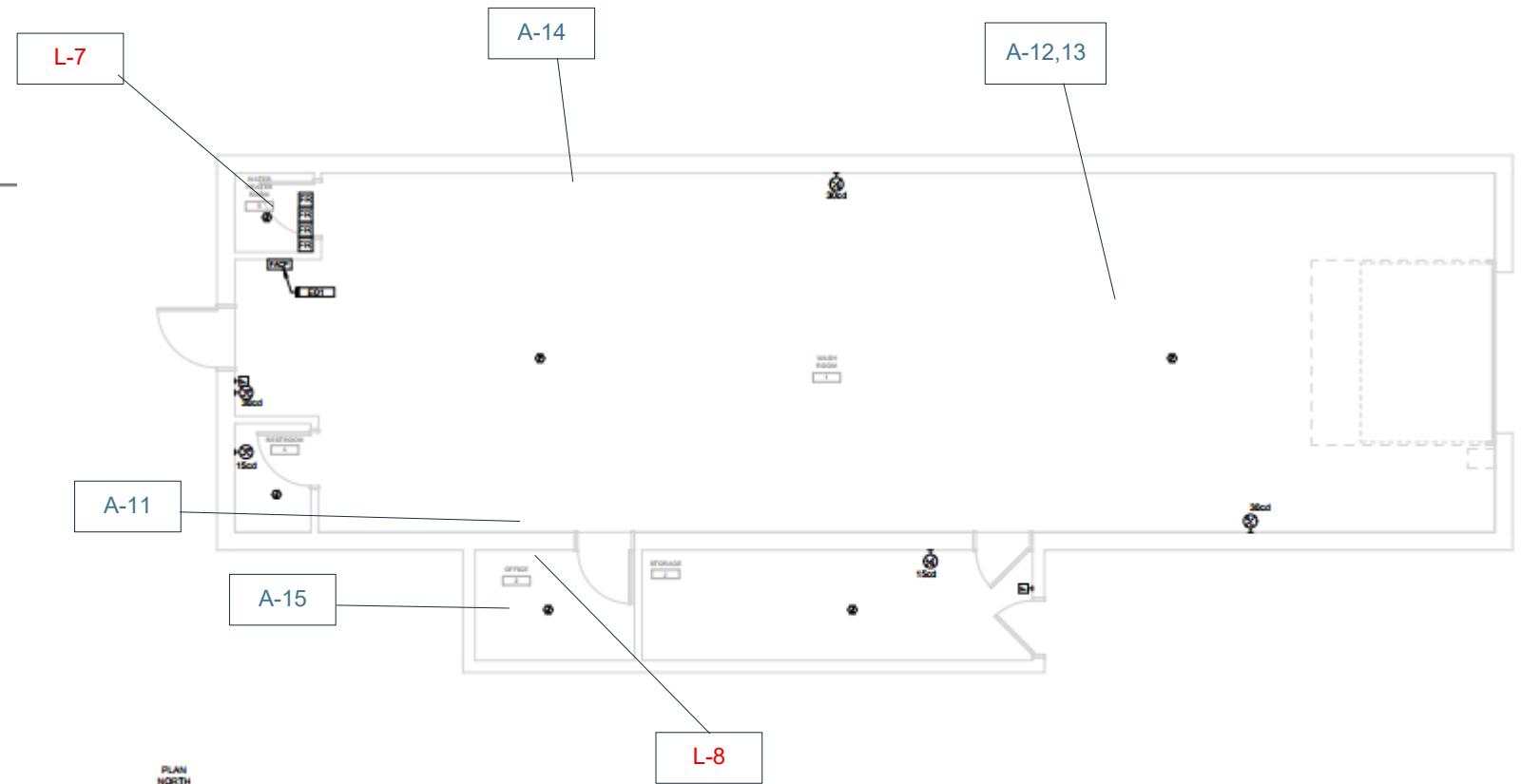
Project No. 204BS09428	Date: January 7, 2025
Project Manager: Phillip Thomas	
Name: Basement and 1 st Floors	

ATLAS
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Asbestos and Lead Paint Sample Locations
 Larches
 1251 334th Street
 Woodward, IA 50276



PLAN NORTH
 1 FIRST FLOOR - FIRE ALARM RENOVATION PLAN
 WF - 14' 0" 1/2"



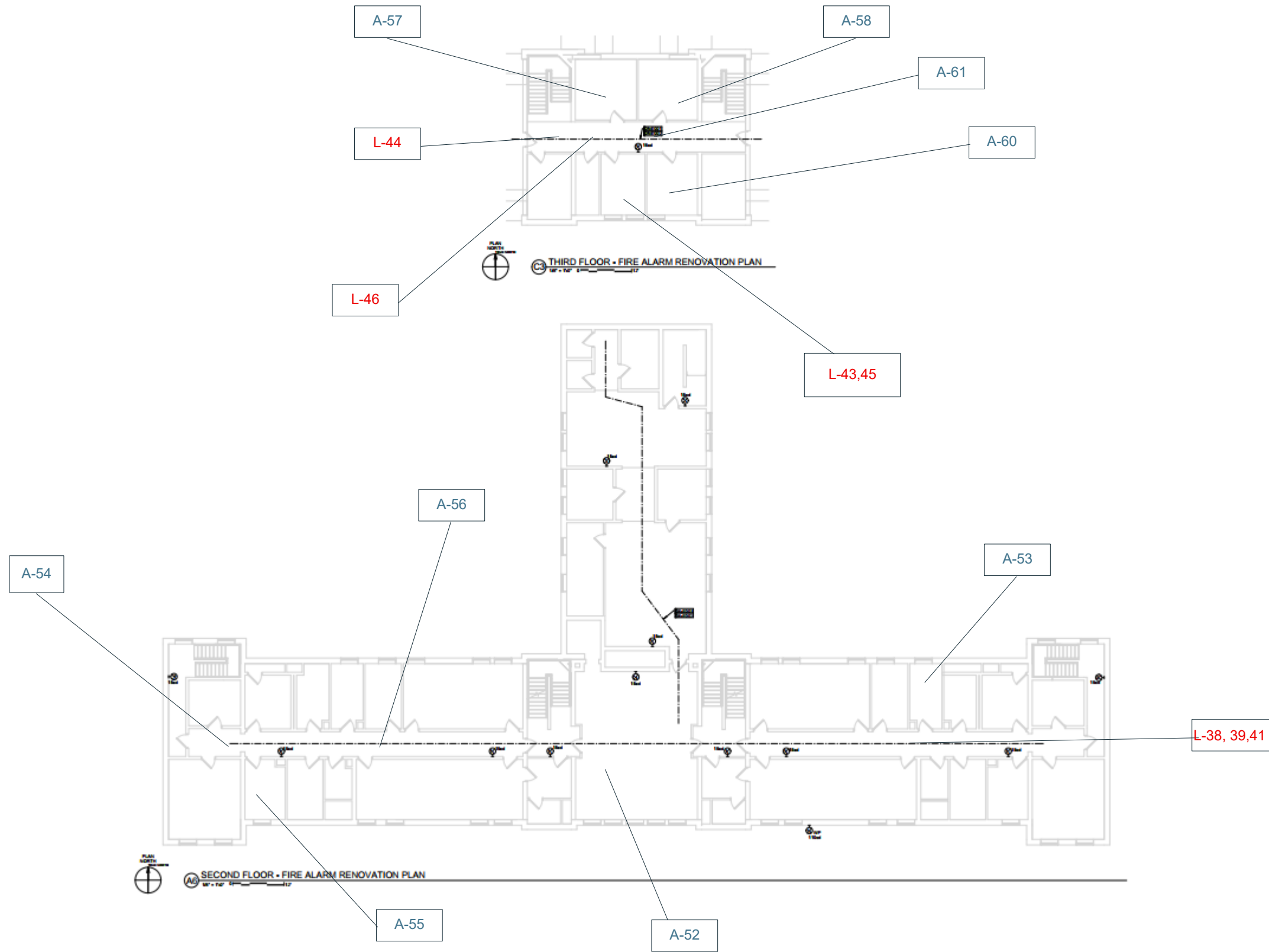
PLAN NORTH
 (B6) FIRST FLOOR - FIRE ALARM RENOVATION PLAN
 WF - 14' 0" 1/2"

X-XX = Asbestos Sample Location
 X-XX = Lead Paint Sample Location

Project No. 204BS09428	Date: January 7, 2025
Project Manager: Phillip Thomas	
Name: Laundry and Car Wash	

ATLAS
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 Omaha, NE 68137
 PH. (402) 697-9747

Asbestos and Lead Paint Sample Locations
 Laundry & Car Wash
 1251 334th Street
 Woodward, IA 50276



Project No. 204BS09428

Date: January 7, 2025

Project Manager: Phillip Thomas

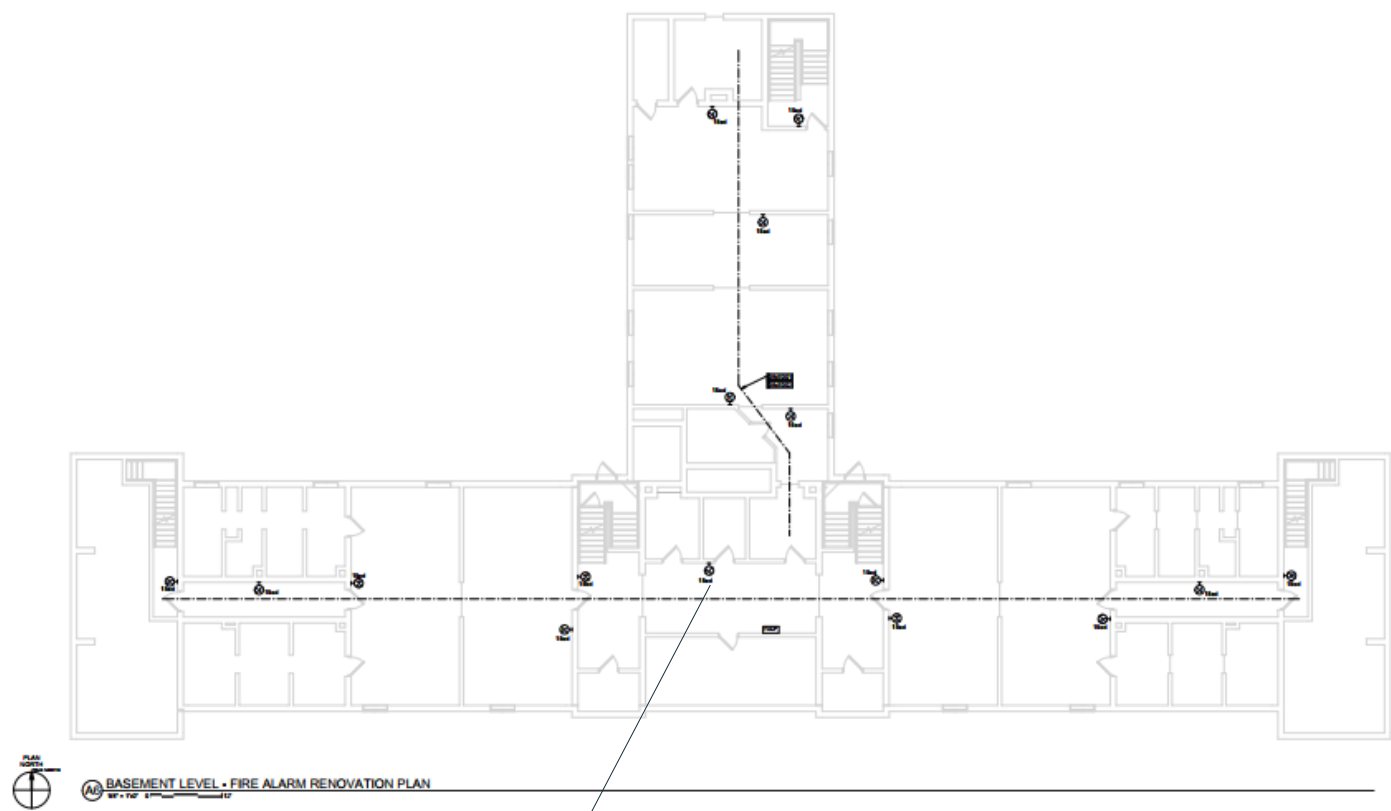
Name: Maple 2nd and 3rd Floor



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 Omaha, NE 68137
 PH. (402) 697-9747

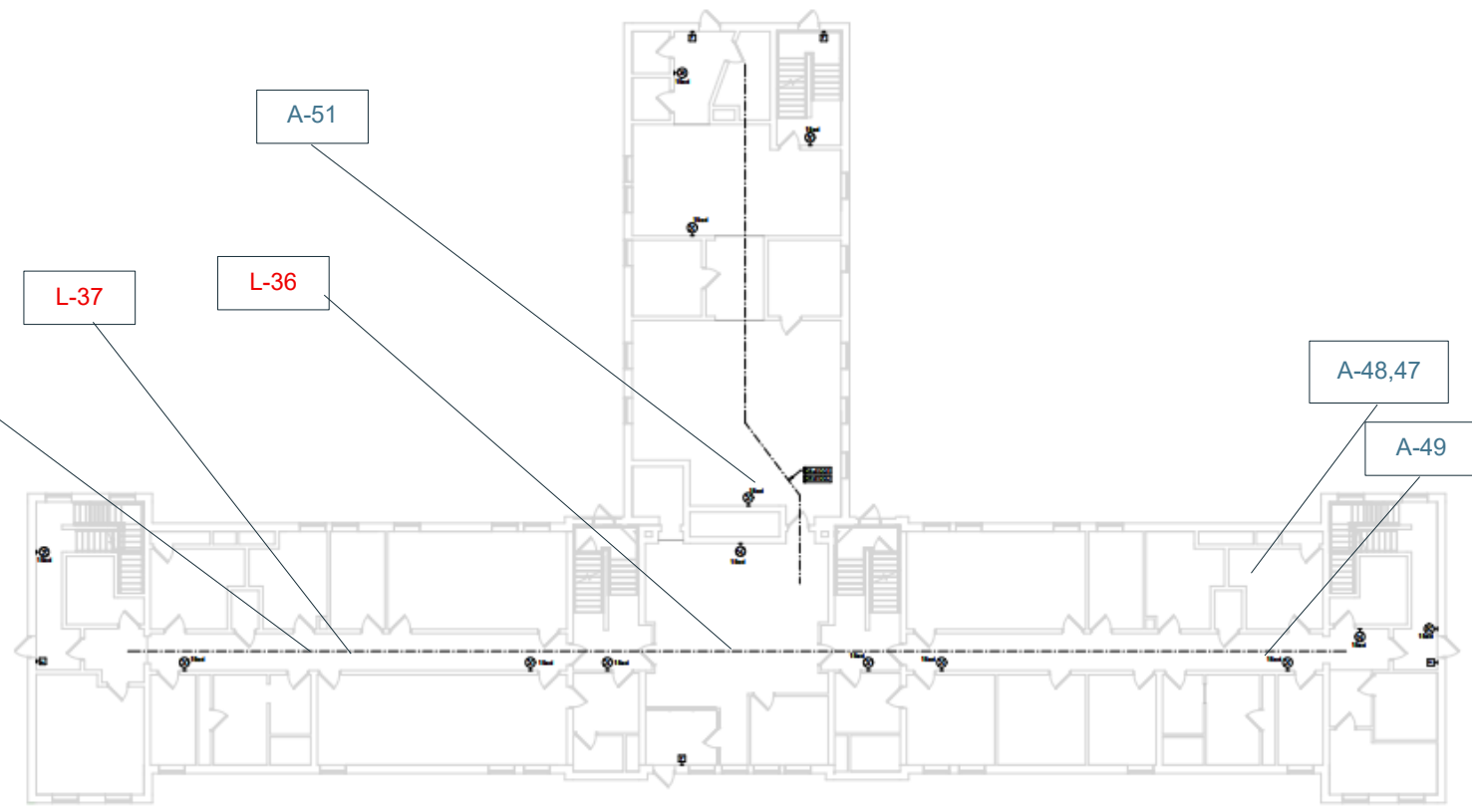
Asbestos and Lead Paint Sample Locations

Maple Lodge
 1251 334th Street
 Woodward, IA 50276



BASEMENT LEVEL - FIRE ALARM RENOVATION PLAN

L-35



FIRST FLOOR - FIRE ALARM RENOVATION PLAN

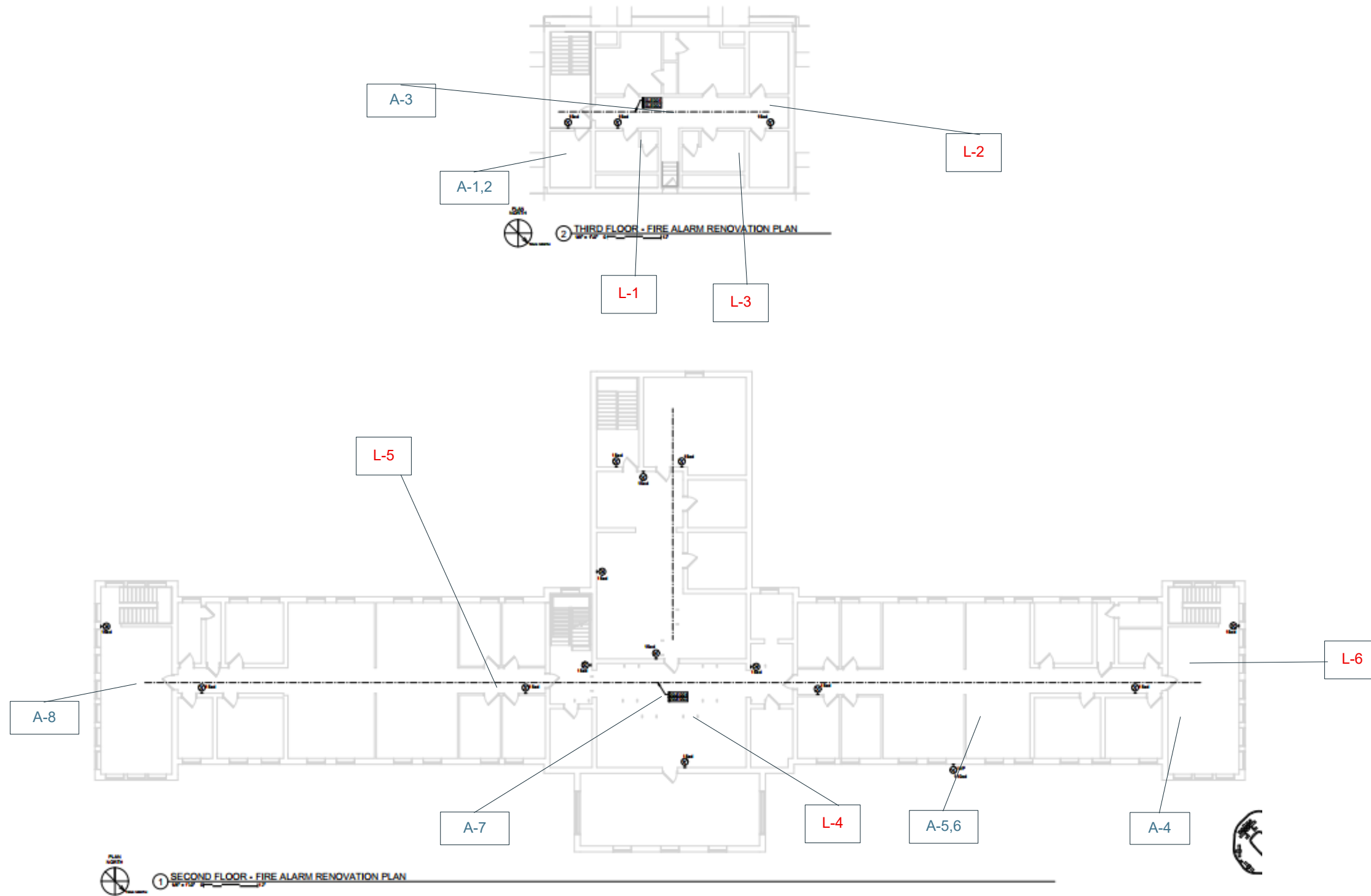
X-XX = Asbestos Sample Location
 X-XX = Lead Paint Sample Location

Project No. 204BS09428	Date: January 7, 2025
Project Manager: Phillip Thomas	
Name: Maple Lodge Basement and 1 st Floor	

ATLAS

11117 Mockingbird Drive
 Omaha, NE 68137
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Asbestos and Lead Paint Sample Locations
Maple Lodge 1251 334 th Street Woodward, IA 50276



X-XX = Asbestos Sample Location
 X-XX = Lead Paint Sample Location

Project No. 204BS09428	Date: January 7, 2025
Project Manager: Phillip Thomas	
Name: Oak Hall 2 nd and 3 rd Floor	

ATLAS

11117 Mockingbird Drive
 Omaha, NE 68137
 PH. (402) 697-9747

Asbestos and Lead Paint Sample Locations
Oak Hall 1251 334 th Street Woodward, IA 50276



① BASEMENT LEVEL - FIRE ALARM RENOVATION PLAN
12/15/24



① FIRST FLOOR - FIRE ALARM RENOVATION PLAN
12/15/24

X-XX = Asbestos Sample Location

X-XX = Lead Paint Sample Location

Project No. 204BS09428

Date: January 7, 2025

Project Manager: Phillip Thomas

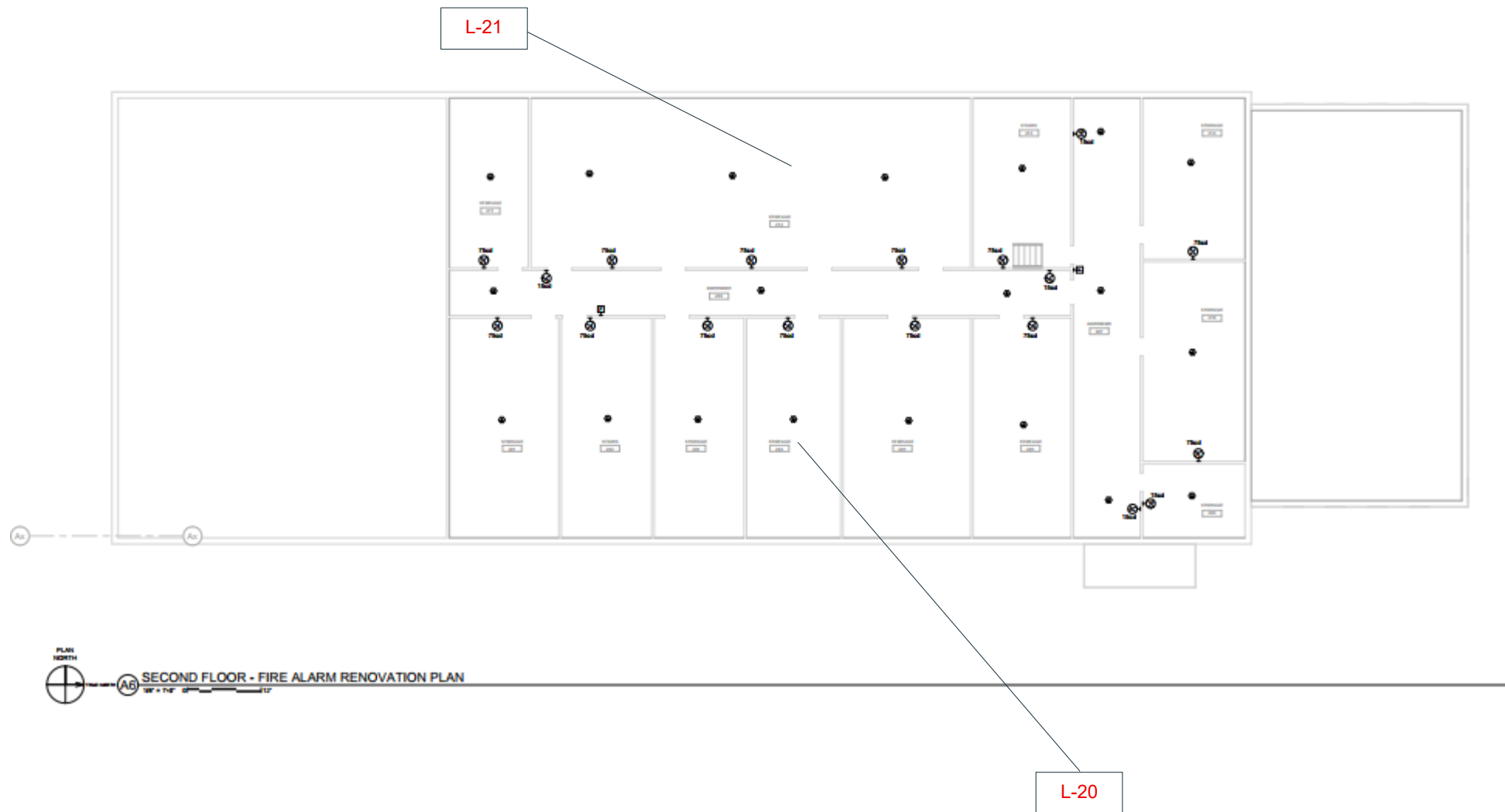
Name: Oak Hall Basement and 1st Floor



11117 Mockingbird Drive
Omaha, NE 68137
PH. (402) 697-9747

Asbestos and Lead Paint Sample Locations

Oak Hall
1251 334th Street
Woodward, IA 50276



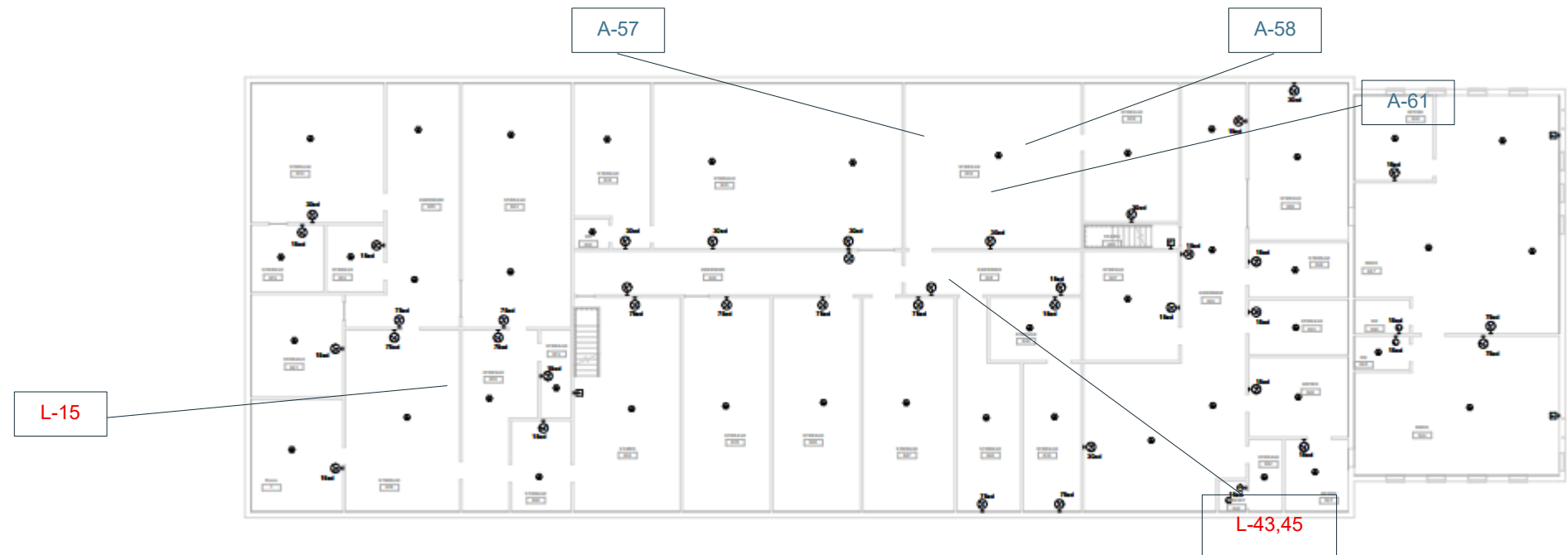
X-XX = Asbestos Sample Location
 X-XX = Lead Paint Sample Location

Project No. 204BS09428	Date: January 7, 2025
Project Manager: Phillip Thomas	
Name: Supply Depot 2 nd Floor	

ATLAS

11117 Mockingbird Drive
 Omaha, NE 68137
 PH. (402) 697-9747

Asbestos and Lead Paint Sample Locations
Supply Depot 1251 334 th Street Woodward, IA 50276



PLAN NORTH
 AS BASEMENT LEVEL - FIRE ALARM RENOVATION PLAN
 1/8" = 1'-0"



PLAN NORTH
 AS FIRST FLOOR - FIRE ALARM RENOVATION PLAN
 1/8" = 1'-0"

X-XX = Asbestos Sample Location
 X-XX = Lead Paint Sample Location

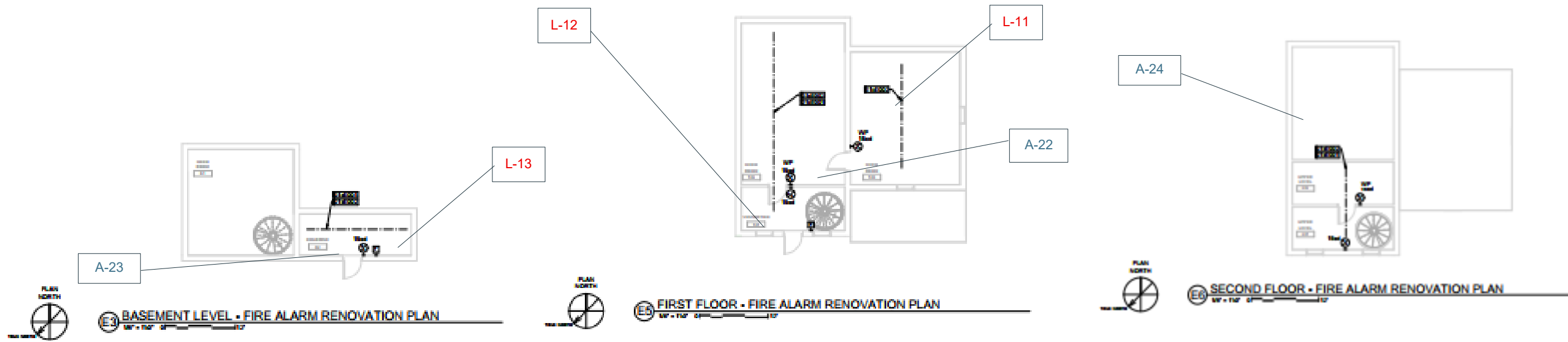
Project No. 204BS09428	Date: January 7, 2025
Project Manager: Phillip Thomas	
Name: Supply Depot Basement and 1 st Floor	



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 Omaha, NE 68137
 PH. (402) 697-9747

Asbestos and Lead Paint Sample Locations

Supply Depot
 1251 334th Street
 Woodward, IA 50276



X-XX = Asbestos Sample Location
 X-XX = Lead Paint Sample Location

Project No. 204BS09428	Date: January 7, 2025
Project Manager: Phillip Thomas	
Name: Water Treatment Basement, 1 st and 2 nd Floor	

ATLAS

11117 Mockingbird Drive
 Omaha, NE 68137
 PH. (402) 697-9747

Asbestos and Lead Paint Sample Locations
Water Treatment 1251 334 th Street Woodward, IA 50276

APPENDIX D
PHOTO LOG OF ACM AND LEAD-BASED PAINT

Asbestos and Lead-based Paint Containing Photo Log

Woodward Resource Center Fire Alarm Project #9279.40 ♦ Woodward, IA
Date Taken: December 8 to 10, 2025 ♦ Atlas Project No. 204BS09428



Photo #1 Sample A-7. Oak Hall, Asbestos Containing 9" x 9" Floor Tile and Black Mastic.



Photo #2 Sample A-8. Oak Hall, Asbestos Containing Vinyl Sheet Flooring and Black Mastic.



Photo #3 Sample A-21. Chiller, Asbestos Containing Black Tar Vapor Barrier.



Photo #4 Sample A-43. Larches, Asbestos Containing Vinyl Sheet Flooring.



Photo #5 Sample A-51. Maple Lodge, Asbestos Containing 9" x 9" Floor Tile and Black Mastic.



Photo #6 Sample A-59. Maple Lodge, Asbestos Containing 9" x 9" Floor Tile and Black Mastic.

Asbestos and Lead-based Paint Containing Photo Log

Woodward Resource Center Fire Alarm Project #9279.40 ♦ Woodward, IA
Date Taken: December 8 to 10, 2025 ♦ Atlas Project No. 204BS09428



Photo #7 Sample A-52. Maple Lodge, Asbestos Containing 9" x 9" Floor Tile and Black Mastic.



Photo #8 Sample A-64. Employee Home, Asbestos Containing 9" x 9" Floor Tile.



Photo #9 Sample A-66. Employee Home, Asbestos Containing 9" x 9" Floor Tile.



Photo #10 Sample A-67. Employee Home, Asbestos Containing 9" x 9" Floor Tile.



Photo #11 Sample A-68. Employee Home, Asbestos Containing 9" x 9" Floor Tile and Black Mastic.

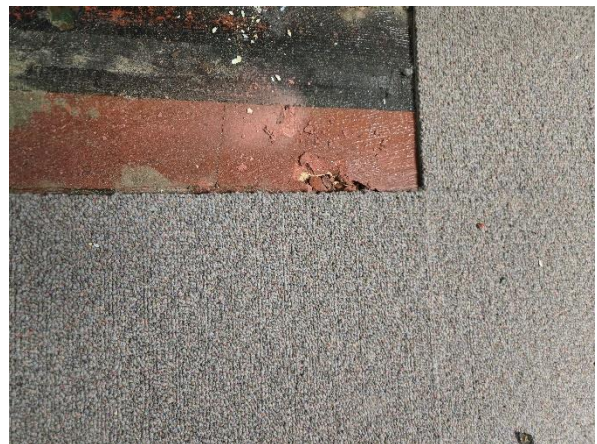


Photo #12 Sample A-70. Employee Home, Asbestos Containing Red Flooring.

Asbestos and Lead-based Paint Containing Photo Log

Woodward Resource Center Fire Alarm Project #9279.40 ♦ Woodward, IA
Date Taken: December 8 to 10, 2025 ♦ Atlas Project No. 204BS09428



Photo #13 Sample A-71. Employee Home, Asbestos Containing Black Flooring



Photo #14 Sample A-90. Hemlock, Asbestos Containing Vinyl Sheet Flooring.



Photo #15 Sample A-72. Employee Home, Asbestos Containing Vinyl Sheet Flooring.



Photo #16 Sample A-95. Hemlock, Asbestos Containing Vinyl Sheet Flooring.

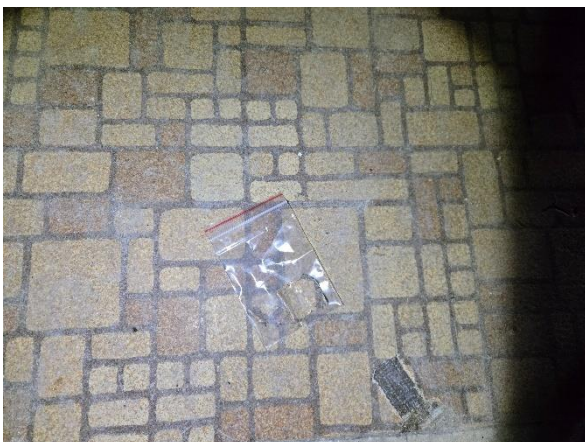


Photo #17 Sample A-92. Hemlock, Asbestos Containing Vinyl Sheet Flooring.



Photo #18 Sample A-65. Employee Home, Asbestos Containing 9" x 9" Floor Tile.

Asbestos and Lead-based Paint Containing Photo Log

Woodward Resource Center Fire Alarm Project #9279.40 ♦ Woodward, IA
Date Taken: December 8 to 10, 2025 ♦ Atlas Project No. 204BS09428



Photo #19 Sample A-102. Hemlock, Asbestos Containing Vinyl Sheet Floor and Black Mastic.

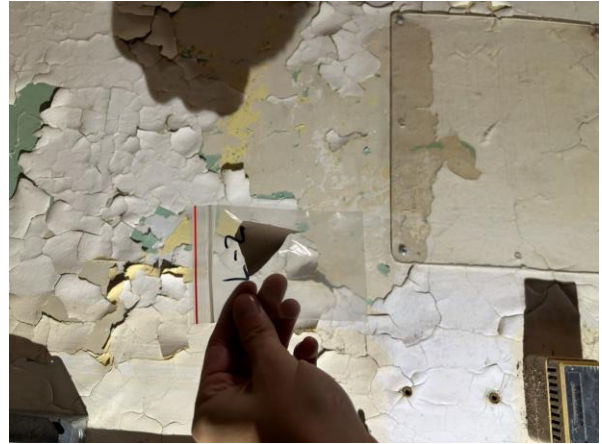


Photo #20 Sample L-2 – White Lead-based Paint on Plaster Ceiling in Oak Hall 3rd Floor South Stair Landing.



Photo #21 Sample L-4 – Blue Lead-based Paint on Plaster Ceiling in Oak Hall 2nd Floor East Room.



Photo #22 Sample L-5 – Green Lead-based Paint on Plaster Wall in Oak Hall 2nd Floor North Central Stem Landing.



Photo #23 Sample L-6 – Blue Lead-based Paint on Drywall Wall in Oak Hall 2nd Floor South Connector.



Photo #24 Sample L-16 – White Lead-based Paint on Plaster Wall in Supply Depot on 1st Floor.

Asbestos and Lead-based Paint Containing Photo Log

Woodward Resource Center Fire Alarm Project #9279.40 ♦ Woodward, IA
Date Taken: December 8 to 10, 2025 ♦ Atlas Project No. 204BS09428



Photo #25 Sample L-17 – Teal Lead-based Paint on Plaster Wall in Supply Depot 1st Floor.



Photo #26 Sample L-18 – Green Lead-based Paint on Plaster Wall in Supply Depot 1st Floor.



Photo #27 Sample L-19 – Grey Lead-based Paint on Plaster Ceiling in Supply Depot 1st Floor.



Photo #28 Sample L-21 – Yellow Lead-based Paint on Plaster Wall in Supply Depot 2nd Floor.



Photo #29 Sample L-25 – Blue Lead-based Paint on Plaster Wall in Larches 1st Floor.



Photo #30 Sample L-29 – Grey Lead-based Paint on Plaster Wall in Larches 2nd Floor.

Asbestos and Lead-based Paint Containing Photo Log

Woodward Resource Center Fire Alarm Project #9279.40 ♦ Woodward, IA
Date Taken: December 8 to 10, 2025 ♦ Atlas Project No. 204BS09428



Photo #31 Sample L-31 – Pink Lead-based Paint on Plaster Wall in Larches 2nd Floor.



Photo #32 Sample L-34 – White Lead-based Paint on Plaster Wall in Larches 3rd Floor.



Photo #33 Sample L-35 – White Lead-based Paint on Brick Ceiling in Maple Basement.



Photo #34 Sample L-43 – Cream Lead-based Paint on Plaster Wall in Maple 3rd Floor.



Photo #35 Sample L-44 – White Lead-based Paint on Plaster Wall in Maple 3rd Floor.



Photo #36 Sample L-45 – Brown Lead-based Paint on Plaster Ceiling in Maple 3rd Floor.

Asbestos and Lead-based Paint Containing Photo Log

Woodward Resource Center Fire Alarm Project #9279.40 ♦ Woodward, IA
Date Taken: December 8 to 10, 2025 ♦ Atlas Project No. 204BS09428



Photo #37 Sample L-63 – White Lead-based Paint on Concrete Wall in Employee Home Basement South Wing.



Photo #38 Sample L-76 – Blue Lead-based Paint on Concrete Wall in Hemlock 1st Floor Central Wing.

APPENDIX E
STAFF AND COMPANY ACCREDITATIONS

CHRISTOPHER NICOLET

DOB: 05-24-1995

Issued: 01-15-2025



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	25-12809	12-20-2025



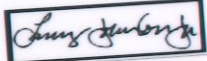
Asbestos

**Larry Johnson, Jr.
Labor Commissioner**

License Type	Number	Expires
INSPECTOR	25-13358	04-09-2026

IOWA

Asbestos


Larry Johnson, Jr.
Labor Commissioner

MATTHEW PODJENSKI

DOB: 04-02-1998

Issued: 05-05-2025



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.

Iowa Department of Public Health
Bureau of Environmental Health Services
Lead Professional Certification

ATC GROUP SERVICES, LLC

**4503 E 50TH STREET
DES MOINES, IA 50317**

**is certified as a lead professional firm under Iowa Administrative
Code 641 - Chapter 70**

Certification No: **LEAD-FIRM12417**

Issued: **September 06, 2023**



Expires: **September 05, 2026**

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SECTION 00 3143

PERMIT APPLICATION

PART 1 - GENERAL

1.01 SECTION INCLUDES

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

1.02 PERMIT APPLICATION INFORMATION

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

1.03 LICENSES, PERMITS, AND RELATED INSPECTIONS

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

PART 2 - PRODUCTS – NOT USED

PART 3 - EXECUTION – NOT USED

END OF SECTION

SECTION 00 4116

BID FORM

The Bid Form must be submitted online through the State's [IMPACS Electronic Procurement System](#).

RFB #927940-03

BID FORM for CONSTRUCTION CONTRACT
for
Woodward Resource Center
1251 334th Street, Woodward, Iowa 50276
Project 9279.40

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 December 12, 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 28-1

Description: Fire Alarm

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

_____ Dollars
(\$ _____).

UNIT PRICES:

UNIT 01

Description: Smoke Detector

_____ Dollars
(\$ _____).

UNIT PRICES:

UNIT 02

Description: Heat Detector

_____ Dollars
(\$ _____).

UNIT PRICES:

UNIT 03

Description: Fire Alarm Relay

_____ Dollars
(\$ _____).

UNIT PRICES:

UNIT 04

Description: Ceiling Mounted Speaker Strobe

_____ Dollars
(\$ _____).

UNIT PRICES:

UNIT 05

Description: Ceiling Mounted Strobe

_____ Dollars
(\$ _____).

UNIT PRICES:

UNIT 06

Description: Duct Smoke Detector

_____ 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

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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.
(to be completed by bidder)	
PAGE #	

You are requested to provide the information on this form showing your targeted Small Business enterprises contracts 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").

IMPORTANT: A vertical line in the margin indicates a change has been made to the original text. Prior to signing, recipients may wish to request from the party producing the document a "redlined" version indicating changes to the original text. Consultation with legal and insurance counsel and careful review of the entire document are strongly encouraged.
 ConsensusDOCS 262 • BID BOND Copyright © 2007, Revised 2009 and 2011, ConsensusDOCS LLC. AN INDIVIDUAL PURCHASE OF THIS DOCUMENT PERMITS THE USER TO PRINT ONE CONTRACT FOR ONE PROJECT ONLY. YOU MAY ONLY MAKE COPIES OF A COMPLETED DOCUMENT FOR DISTRIBUTION TO PARTIES IN DIRECT CONNECTION WITH THE SPECIFIC CONSTRUCTION PROJECT. ANY OTHER USES, INCLUDING COPYING THE DOCUMENT, ARE STRICTLY PROHIBITED.

By virtue of this Bid Bond (the "Bond"), the Constructor as Principal and _____ as Surety ("Surety"), are bound to the Owner as Oblige 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 Oblige shall accept the bid of the Constructor, the Constructor shall enter into an Agreement with the Oblige 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 Oblige the difference between the amount of Constructor's bid and the amount of such agreement the Oblige 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)

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

ConsensusDOCS 262 • BID BOND Copyright © 2007, Revised 2009 and 2011, ConsensusDOCS LLC, AN INDIVIDUAL PURCHASE OF THIS DOCUMENT PERMITS THE USER TO PRINT ONE CONTRACT FOR ONE PROJECT ONLY, YOU MAY ONLY MAKE COPIES OF A COMPLETED DOCUMENT FOR DISTRIBUTION TO PARTIES IN DIRECT CONNECTION WITH THE SPECIFIC CONSTRUCTION PROJECT, ANY OTHER USES, INCLUDING COPYING THE DOCUMENT, ARE STRICTLY PROHIBITED.

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

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

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



ARTICLE 1 AGREEMENT

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

OWNER

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

and the

TRADE CONTRACTOR

Contractor Name

Address

City, State, Zip

for work in connection with the following

PROJECT

XXXX.XX - Project Name

The CONSTRUCTION MANAGER is

Construction Manager Name

Address

City, State, Zip

The DESIGN PROFESSIONAL for the Project is

Designer Name

Address

City, State, Zip

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

ARTICLE 2 GENERAL PROVISIONS

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

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

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

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



treatment.

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

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

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

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

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

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

No exceptions

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

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

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

2.8 DEFINITIONS



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

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

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

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

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

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

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

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

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

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

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

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

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



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

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

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

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

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

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

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

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

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

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

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

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



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

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

ARTICLE 3 TRADE CONTRACTOR'S OBLIGATIONS

3.1 GENERAL RESPONSIBILITIES

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

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

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

3.2 COOPERATION WITH WORK OF OWNER AND OTHERS

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

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

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

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



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

3.3 RESPONSIBILITY FOR PERFORMANCE

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

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

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

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

3.4 CONSTRUCTION PERSONNEL AND SUPERVISION

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

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

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



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

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

3.5 MATERIALS FURNISHED BY THE OWNER OR OTHERS

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

3.6 TESTS AND INSPECTIONS

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

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

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

3.7 WARRANTY



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

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

3.8 CORRECTION OF TRADE CONTRACT WORK WITHIN ONE YEAR

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

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

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

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



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

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

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

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

3.9 CORRECTION OF COVERED TRADE CONTRACT WORK

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

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

3.10 SAFETY OF PERSONS AND PROPERTY

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

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

3.10.2.1 its employees and other persons at the Worksite;

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

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

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



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

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

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

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

3.11 EMERGENCIES

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

3.12 HAZARDOUS MATERIALS

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

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

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

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



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

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

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

3.12.7 MATERIALS BROUGHT TO THE WORKSITE

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

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

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

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

3.13 SUBMITTALS

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



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

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

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

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

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

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

(Check one only)

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

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

3.14 PROFESSIONAL SERVICES

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



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

3.15 WORKSITE CONDITIONS

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

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

3.16 PERMITS AND TAXES

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

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

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

3.16.3 (Deleted)

3.17 CUTTING, FITTING AND PATCHING

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

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

3.18 CLEANING UP

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



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

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

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

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

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

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

ARTICLE 4 OWNER'S RESPONSIBILITIES

4.1 INFORMATION SERVICES

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

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

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



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

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

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

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

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

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

4.3 Deleted

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



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

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

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

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

ARTICLE 5 SUBCONTRACTS

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

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

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

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

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



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

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

5.4 Deleted

5.5 CONTINGENT ASSIGNMENT OF SUBCONTRACTS

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

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

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

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

ARTICLE 6 TRADE CONTRACT TIME

6.1 PERFORMANCE OF THE TRADE CONTRACT WORK

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

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

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

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

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



6.3 DELAYS AND EXTENSIONS OF TIME

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

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

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

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

6.5 LIQUIDATED DAMAGES

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

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



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

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

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

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

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

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

ARTICLE 7 TRADE CONTRACT PRICE

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

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

7.2 ALLOWANCES

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



Work.

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

ARTICLE 8 CHANGES

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

8.1 TRADE CHANGE ORDER

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

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

8.2 TRADE CONTRACT INTERIM DIRECTED CHANGE

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

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

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



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

8.3 DETERMINATION OF COST

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

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

8.3.1.2 a mutually accepted, itemized lump sum;

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

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

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

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

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

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

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

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

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

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



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

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

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

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

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

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

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

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

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

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

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

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

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



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

ARTICLE 9 PAYMENT

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

9.2 PROGRESS PAYMENTS

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

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

9.2.3 CLAIM WAIVERS

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



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

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

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

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

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

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

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

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

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

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

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

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



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

9.6 SUBSTANTIAL COMPLETION

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

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

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

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

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

9.8 FINAL PAYMENT

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



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

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

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

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

9.8.2.4 certification (or other writing indicating) that insurance required by the Trade Contractor Agreement is and will remain 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 cancellation of coverage by the insurance company. The Trade Contractor shall maintain completed operations liability insurance for one year after acceptance of the Contract Documents, whichever is longer. Prior to commencement of services, the Trade Contractor shall furnish the Owner with certificates evidencing the required coverages. In addition, if any insurance policy required under subsection 10.2.1 is not to be immediately replaced without a lapse in coverage when it expires, exhausts its limits, or is to be, cancelled, the Trade Contractor shall give Owner prompt written notice upon actual or constructive knowledge of such condition.

10.2.5 ADDITIONAL LIABILITY COVERAGE

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

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

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



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

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

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

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

10.3 OWNER'S INSURANCE

10.3.1 Deleted.

10.3.2 Deleted.

10.4 PROPERTY INSURANCE

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

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



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

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

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

10.5 PROPERTY INSURANCE LOSS ADJUSTMENT

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

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

10.6 WAIVERS

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

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

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

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

10.8 BONDS Performance and Payment Bonds

are

are not

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



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

ARTICLE 11 SUSPENSION, NOTICE TO CURE AND TERMINATION OF AGREEMENT

11.1 SUSPENSION BY OWNER FOR CONVENIENCE

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

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

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

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

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

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

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



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

11.3 OWNER'S RIGHT TO TERMINATE FOR DEFAULT

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

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

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

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

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

11.4 TERMINATION BY OWNER FOR CONVENIENCE

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

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

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

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

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



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

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

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

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

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

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

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

11.5 TRADE CONTRACTOR'S RIGHT TO TERMINATE

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

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

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

11.5.1.3 suspension by the Owner for convenience pursuant to section 11.1

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

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

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

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



11.5.2.4 otherwise materially breaches this Agreement.

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

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

ARTICLE 12 DISPUTE MITIGATION AND RESOLUTION

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

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

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

(Designate only one.)

Project Neutral

Dispute Review Board

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

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



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

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

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

(Designate only one.)

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

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

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

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

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

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

ARTICLE 13 MISCELLANEOUS PROVISIONS

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

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

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



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

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

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

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

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

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

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

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



Contractor has questions regarding its meaning or application.

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

ARTICLE 14 TRADE CONTRACT DOCUMENTS

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

RFBXXXXXXXXX Bid Package X

14.2 INTERPRETATION OF TRADE CONTRACT DOCUMENTS

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

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

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

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

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

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

OWNER State of Iowa, Department of Administrative Services



Trade Contractor: *Contractor Name*

By:

(Authorized Representative)

Name:

Title:

Date:

Owner: State of Iowa - DAS

By:

(Authorized Representative)

Name:

Title:

Date:

END OF DOCUMENT.

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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,

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

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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)

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**CONSENSUSDOCS 261
PAYMENT BOND**

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

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

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

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

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

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

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

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Print Title: _____

Witness:

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

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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: Woodward Resource Center, 1251 334th Street, Woodward, IA 50276
- B. DAS Project #: 9279.40
- 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: Darren Milliken, Story Construction, 2810 Wakefield Circle, Ames, Iowa 50010

1.03 PROJECT SUMMARY

- A. The project includes installing new fire alarm in the following buildings: Administration, Larches, Hemlock, Employee Home, Maple Lodge, Laundry, Car Wash, Supply Depot, Oak Hall, Water Treatment, CDC Central Distribution, Westwood Storage Building, and the Chiller building.
- B. Target date to provide substantial completion is December 4, 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.

1.05 WORK HOUR RESTRICTIONS

- A. Work hours are from 07:00 AM to 05:00 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.

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.

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. All State properties are tobacco free. No smoking will be permitted or tolerated on campus unless in designated areas.
- D. You are permitted access only to the work site and no other area of the institution.
- E. No drugs, alcohol, or firearms are allowed on the work site.
- F. Do not leave money, drugs, alcohol, or firearms in your personal vehicle.
- G. Company and personal vehicles are to be parked and locked in designated or authorized area of the work.
- H. Secure all tools at the end of the day.
- I. Maintain control of all tools, supplies, and debris at all times during the work.

- J. 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.
- K. Do not give anything to residents or take anything from residents; if they offer, inform your supervisor.
- L. 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.
- M. 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.
- N. During an emergency, follow the instructions of the security staff.

1.09 BID PACKAGE INSTRUCTIONS

- A. **Bid Package #28-1 – Fire Alarm:** Trade Contractor shall include all of the following, but not limited to, as part of the contract:
 - 1. Includes all drawings titled WRC Fire Alarm Phase 4 (#9279.40) Bid Issuance #3
 - 2. Includes all specifications titled Woodward Resource Center Fire Alarm Phase 4 (9279.40) Bid Issuance #3
 - 3. Clarification: Contractor shall be lead-certified and all work done on areas with lead-containing or lead-based paint must be done by a lead-certified crew member.
- B. **Unit Price #01 – Smoke Detector:** Trade Contractor shall include all of the following, but not limited to, as part of the contract:
 - a. One unit to include: Cost for labor and material for device, 30' of conduit and 30' of fire alarm cable. Programming of device to also be included.
 - b. Unit prices include all necessary material, plus cost for delivery, installation, insurance, overhead, and profit.
 - c. Owner reserves the right to reject Contractor's measurements of work in place that involves use of established unit prices and to have this work measured, at the Owner's expense, by an independent surveyor acceptable to the Contractor.
- C. **Unit Price #02 – Heat Detector:** Trade Contractor shall include all of the following, but not limited to, as part of the contract:
 - a. One unit to include: Cost for labor and material for device, 30' of conduit and 30' of fire alarm cable. Programming of device to also be included.
 - b. Unit prices include all necessary material, plus cost for delivery, installation, insurance, overhead, and profit.
 - c. Owner reserves the right to reject Contractor's measurements of work in place that involves use of established unit prices and to have this work measured, at the Owner's expense, by an independent surveyor acceptable to the Contractor.
- D. **Unit Price #03 – Fire Alarm Relay:** Trade Contractor shall include all of the following, but not limited to, as part of the contract:
 - a. One unit to include: Cost for labor and material for device, 30' of conduit and 30' of fire alarm cable. Programming of device to also be included.
 - b. Unit prices include all necessary material, plus cost for delivery, installation, insurance, overhead, and profit.
 - c. Owner reserves the right to reject Contractor's measurements of work in place that involves use of established unit prices and to have this work measured, at the Owner's expense, by an independent surveyor acceptable to the Contractor.

- E. **Unit Price #04** – Ceiling Mounted Speaker Strobe: Trade Contractor shall include all of the following, but not limited to, as part of the contract:
- a. One unit to include: Cost for labor and material for device, 30' of conduit and 30' of fire alarm cable. Programming of device to also be included.
 - b. Unit prices include all necessary material, plus cost for delivery, installation, insurance, overhead, and profit.
 - c. Owner reserves the right to reject Contractor's measurements of work in place that involves use of established unit prices and to have this work measured, at the Owner's expense, by an independent surveyor acceptable to the Contractor.
- F. **Unit Price #05** – Ceiling Mounted Strobe: Trade Contractor shall include all of the following, but not limited to, as part of the contract:
- a. One unit to include: Cost for labor and material for device, 30' of conduit and 30' of fire alarm cable. Programming of device to also be included.
 - b. Unit prices include all necessary material, plus cost for delivery, installation, insurance, overhead, and profit.
 - c. Owner reserves the right to reject Contractor's measurements of work in place that involves use of established unit prices and to have this work measured, at the Owner's expense, by an independent surveyor acceptable to the Contractor.
- G. **Unit Price #06** – Duct Smoke Detector: Trade Contractor shall include all of the following, but not limited to, as part of the contract:
- a. One unit to include: Cost for labor and material for device, 30' of conduit and 30' of fire alarm cable. Programming of device to also be included.
 - b. Unit prices include all necessary material, plus cost for delivery, installation, insurance, overhead, and profit.
 - c. Owner reserves the right to reject Contractor's measurements of work in place that involves use of established unit prices and to have this work measured, at the Owner's expense, by an independent surveyor acceptable to the Contractor.
- H. **Work Performed by Owner:** WRC Staff and Construction Manager will perform the following work items:
1. Relocate all moveable furniture, fixtures and equipment (FF&E), including window treatments; and personal materials from each sequenced work area prior to demolition and construction activities and after new construction is completed.
 2. Perform fire watch when necessary.
 3. Temporary granular surface for parking and laydown area.
 4. Temporary fencing for laydown area.
 5. All painting required for the project.

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

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SUBSTITUTION REQUEST FORM

Project: _____ Substitution Request Number: _____

From: _____
To: _____ Date: _____

A/E Project Number: _____
Re: _____

Specification Title: _____ Description: _____
Section: _____ Page: _____ Article/Paragraph: _____

Proposed Substitution: _____
Manufacturer: _____ Address: _____ Phone: _____
Trade Name: _____ Model No.: _____

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

Differences between proposed substitution and specified product: _____

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

Reason for not providing specified item: _____

Similar Installation:
Project: _____ Architect: _____
Address: _____ Owner: _____
_____ Date Installed: _____

Proposed substitution affects other parts of Work: No Yes; explain _____

Supporting Data Attached: Drawings Product Data Samples Tests Reports _____

SUBSTITUTION REQUEST FORM

(Continued)

The Undersigned certifies:

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

Submitted by: _____

Signed by: _____

Firm: _____

Address: _____

Telephone: _____

Attachments: _____

A/E's REVIEW AND ACTION

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

Signed by: _____

Date: _____

Additional Comments: Contractor Subcontractor Supplier Manufacturer A/E _____

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 Contractor will coordinate preparation of the Schedule of Values with preparation of the Construction Manager's Construction Schedule.
 - 1. Correlate line items in the Schedule of Values with other required administrative forms and schedules, including Application for Payment forms with Continuation Sheets, Submittals Schedule, and Construction Manager's Construction Schedule.
 - 2. Submit original Schedule of Values in 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 3% of the value of the work performed. Upon substantial completion for the entire work, a sum sufficient to decrease the total retained to 3% 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 Procure:

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 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

Procure. As recommendations are modified by **Procure**, 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 **Procure** 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. **Procure** 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 **Procure** 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 **Procure** to the maximum extent possible. If a form does not exist in **Procure** 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 **Procure** (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 **Procure** 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 **Procure**.

1.06 CONNECTIVITY PROBLEMS

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

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SECTION 01 3300

SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.01 SECTION INCLUDES

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

PART 2 - PRODUCTS – NOT USED

PART 3 - EXECUTION

3.01 SUBMITTALS FOR REVIEW

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

3.02 SUBMITTALS FOR INFORMATION

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

3.03 SUBMITTAL PROCEDURES

- A. Submittals will be electronically submitted through 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. Temporary Sanitary Facilities
- C. Telephone Service
- D. Removal of Utilities, Facilities, and Controls
- E. Temporary Facilities
- F. Equipment
- G. Vehicular Access and Parking
- H. Traffic Regulation
- I. Barriers
- J. Waste Removal

1.02 TEMPORARY UTILITIES

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

1.03 TEMPORARY SANITARY FACILITIES

- A. Sanitary facilities shall be provided by the Construction Manager.
- B. Maintain daily in clean and sanitary condition.

1.04 TELEPHONE SERVICE

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

1.05 REMOVAL OF UTILITIES, FACILITIES AND CONTROLS

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

PART 2 - PRODUCTS

2.01 TEMPORARY FACILITIES

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

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 ENCLOSURES AND FENCING

- A. The construction manager will provide fencing and granular surfacing for the lay-down area.

3.05 WASTE REMOVAL

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

END OF SECTION

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

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SECTION 01 7700

CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.01 SECTION INCLUDES

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

PART 2 - PRODUCTS – NOT USED

PART 3 - EXECUTION

3.01 INSPECTIONS

- A. Ensure all state inspections have been completed by the authority having jurisdiction.
- B. Upload documentation of all test/inspections to 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 been inspected, and that work is completed in accordance with contract documents and ready for review
 - 2. Prepare a list of items to be completed and corrected (punch list), the value of items on the list, and reasons why the work has not been completed.
 - 3. Submit specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
 - 4. Make final changeover of permanent locks and deliver key to the owner. Advise owner's personnel of changeover in security provisions.
 - 5. Complete startup testing of systems.
 - 6. Submit test/adjust, balance records.
 - 7. Terminate and remove temporary facilities from project site, along with mockups, construction tools, and similar elements.

8. Advise owner of changeover in heat and other utilities.
9. Submit changeover information related to owner's occupancy, use, operation, and maintenance.
10. Complete final cleaning requirements, including touch up painting.
11. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.

3.03 PROJECT RECORD DOCUMENTS

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

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 | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A |
| Water Heater Inspection | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A |
| Energy Code Inspection | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A |
| Building Code Inspection | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A |
| Electrical Inspection | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A |
| Elevator Inspection | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A |
| Other: _____ | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> 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

1.1 SECTION INCLUDES

- A. Firestopping of joints and penetrations in fire-resistance-rated and smoke-resistant assemblies, whether indicated on drawings or not, and other openings indicated.

1.2 REFERENCE STANDARDS

- A. ASTM E814 - Standard Test Method for Fire Tests of Penetration Firestop Systems 2013a (Reapproved 2017).
- B. ASTM E1966 - Standard Test Method for Fire-Resistive Joint Systems 2015 (Reapproved 2019).
- C. ASTM E2307 - Standard Test Method for Determining Fire Resistance of Perimeter Fire Barriers Using Intermediate-Scale, Multi-story Test Apparatus 2020.
- D. 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 2013 (Reapproved 2017).
- E. ASTM G21 - Standard Practice for Determining Resistance of Synthetic Polymeric Materials to Fungi 2015, with Editorial Revision (2021).
- F. ITS (DIR) - Directory of Listed Products current edition.
- G. FM (AG) - FM Approval Guide current edition.
- H. UL 2079 - Standard for Tests for Fire Resistance of Building Joint Systems Current Edition, Including All Revisions.
- I. UL (FRD) - Fire Resistance Directory Current Edition.

1.3 SUBMITTALS

- A. See Division 01 for submittal procedures.
- B. Schedule of Firestopping: List each type of penetration, fire rating of the penetrated assembly, and firestopping test or design number.
- C. Product Data: Provide data on product characteristics, performance ratings, and limitations.

1.4 QUALITY ASSURANCE

- A. Fire Testing: Provide firestopping assemblies of designs that provide the scheduled fire ratings when tested in accordance with methods indicated.
 - 1. Listing in UL (FRD), FM (AG), or ITS (DIR) will be considered as constituting an acceptable test report.
 - 2. Valid evaluation report published by ICC Evaluation Service, Inc. (ICC-ES) at www.icc-es.org will be considered as constituting an acceptable test report.

1.5 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

2.1 MANUFACTURERS

- A. Firestopping Manufacturers:
 - 1. 3M Fire Protection Products: www.3m.com/firestop/#sle.
 - 2. Hilti, Inc: www.us.hilti.com/#sle.
 - 3. Nelson FireStop Products: www.nelsonfirestop.com/#sle.
 - 4. Architect/Engineer pre-approved equivalent.

2.2 MATERIALS

- A. Mold and Mildew Resistance: Provide firestopping materials with mold and mildew resistance rating of zero (0) in accordance with ASTM G21.
- 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.

2.3 FIRESTOPPING ASSEMBLY REQUIREMENTS

- A. Head-of-Wall (HW) Joint System Firestopping at Joints Between Fire-Rated Wall Assemblies and Non-Rated Horizontal Assemblies: Use system that has been tested according to ASTM E2837 to have fire resistance F Rating equal to required fire rating of wall assembly.
- B. Floor-to-Floor (FF), Floor-to-Wall (FW), Head-of-Wall (HW), and Wall-to-Wall (WW) Joints, Except Perimeter, Where Both Are Fire-Rated: Use system that has been tested according to ASTM E1966 or UL 2079 to have fire resistance F Rating equal to required fire rating of the assembly in which the joint occurs.
- C. Through Penetration Firestopping: Use system that has been tested according to ASTM E814 to have fire resistance F Rating equal to required fire rating of penetrated assembly.

PART 3 EXECUTION

3.1 EXAMINATION

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

3.2 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.

3.3 INSTALLATION

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

END OF SECTION

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**SECTION 26 0500
COMMON WORK RESULTS FOR ELECTRICAL**

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section. See Division 01 for submittal procedures, quality Requirements, alterations of work, and closeout requirements.

1.2 SUMMARY

- A. Section Includes:
 - 1. Electrical equipment coordination and installation.
 - 2. Sleeves for raceways and cables.
 - 3. Sleeve seals.
 - 4. Grout.

1.3 DEFINITIONS

- A. EPDM: Ethylene-propylene-diene terpolymer rubber.
- B. NBR: Acrylonitrile-butadiene rubber.

1.4 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. So connecting raceways, cables, wireways, cable trays, and busways will be clear of obstructions and of the working and access space of other equipment.
- B. Coordinate installation of required supporting devices and set sleeves in cast-in-place concrete, masonry walls, and other structural components as they are constructed.

PART 2 PRODUCTS

2.1 SLEEVES FOR RACEWAYS AND CABLES

- A. Steel Pipe Sleeves: ASTM A 53/A 53M, Type E, Grade B, Schedule 40, galvanized steel, plain ends.
- B. Cast-Iron Pipe Sleeves: Cast or fabricated "wall pipe," equivalent to ductile-iron pressure pipe, with plain ends and integral waterstop, unless otherwise indicated.
- C. Sleeves for Rectangular Openings: Galvanized sheet steel.
 - 1. Minimum Metal Thickness:
 - a. For sleeve cross-section rectangle perimeter less than 50 inches (1270 mm) and no side more than 16 inches (400 mm), thickness shall be 0.052 inch (1.3 mm).

- b. For sleeve cross-section rectangle perimeter equal to, or more than, 50 inches (1270 mm) and 1 or more sides equal to, or more than, 16 inches (400 mm), thickness shall be 0.138 inch (3.5 mm).

2.2 SLEEVE SEALS

- A. Description: Modular sealing device, designed for field assembly, to fill annular space between sleeve and raceway or cable.
 1. Sealing Elements: EPDM or NBR interlocking links shaped to fit surface of cable or conduit. Include type and number required for material and size of raceway or cable.
 2. Pressure Plates: Carbon steel. Include two for each sealing element.
 3. Connecting Bolts and Nuts: Carbon steel with corrosion-resistant coating of length required to secure pressure plates to sealing elements. Include one for each sealing element.

2.3 GROUT

- A. Nonmetallic, Shrinkage-Resistant Grout: ASTM C 1107, factory-packaged, nonmetallic aggregate grout, noncorrosive, nonstaining, mixed with water to consistency suitable for application and a 30-minute working time.

PART 3 EXECUTION

3.1 COMMON REQUIREMENTS FOR ELECTRICAL INSTALLATION

- A. Comply with NECA 1.
- B. Comply with applicable provisions of Occupational Safety and Health Act (OSHA), NFPA Standards and Pamphlets, NEIS Standards, and common work place practice.
- C. Headroom Maintenance: If mounting heights or other location criteria are not indicated, arrange and install components and equipment to provide maximum possible headroom consistent with these requirements.
- D. Equipment: Install to facilitate service, maintenance, and repair or replacement of components of both electrical equipment and other nearby installations. Connect in such a way as to facilitate future disconnecting with minimum interference with other items in the vicinity.

3.2 SLEEVE INSTALLATION FOR ELECTRICAL PENETRATIONS

- A. Electrical penetrations occur when raceways, cables, wireways, cable trays, or busways penetrate concrete slabs, concrete or masonry walls, or fire-rated floor and wall assemblies.
- B. Concrete Slabs and Walls: Install sleeves for penetrations unless core-drilled holes or formed openings are used. Install sleeves during erection of slabs and walls.
- C. Use pipe sleeves unless penetration arrangement requires rectangular sleeved opening.
- D. Fire-Rated Assemblies: Install sleeves for penetrations of fire-rated floor and wall assemblies unless openings compatible with firestop system used are fabricated during construction of floor or wall.
- E. Cut sleeves to length for mounting flush with both surfaces of walls.
- F. Extend sleeves installed in floors 2 inches (50 mm) above finished floor level.

- G. Size pipe sleeves to provide 1/4-inch (6.4-mm) annular clear space between sleeve and raceway or cable, unless indicated otherwise.
- H. Seal space outside of sleeves with grout for penetrations of concrete and masonry
 - 1. Promptly pack grout solidly between sleeve and wall so no voids remain. Tool exposed surfaces smooth; protect grout while curing.
- I. Interior Penetrations of Non-Fire-Rated Walls and Floors: Seal annular space between sleeve and raceway or cable, using joint sealant appropriate for size, depth, and location of joint.
- J. Fire-Rated-Assembly Penetrations: Maintain indicated fire rating of walls, partitions, ceilings, and floors at raceway and cable penetrations. Install sleeves and seal raceway and cable penetration sleeves with firestop materials. Comply with requirements in Division 07 Section "Firestopping."
- K. Roof-Penetration Sleeves: Seal penetration of individual raceways and cables with flexible boot-type flashing units applied in coordination with roofing work.
- L. Aboveground, Exterior-Wall Penetrations: Seal penetrations using cast-iron pipe sleeves and mechanical sleeve seals. Select sleeve size to allow for 1-inch (25-mm) annular clear space between pipe and sleeve for installing mechanical sleeve seals.
- M. Underground, Exterior-Wall Penetrations: Install cast-iron pipe sleeves. Size sleeves to allow for 1-inch (25-mm) annular clear space between raceway or cable and sleeve for installing mechanical sleeve seals.

3.3 SLEEVE-SEAL INSTALLATION

- A. Install to seal exterior wall penetrations.
- B. Use type and number of sealing elements recommended by manufacturer for raceway or cable material and size. Position raceway or cable in center of sleeve. Assemble mechanical sleeve seals and install in annular space between raceway or cable and sleeve. Tighten bolts against pressure plates that cause sealing elements to expand and make watertight seal.

3.4 FIRESTOPPING

- A. Apply firestopping to penetrations of fire-rated floor and wall assemblies for electrical installations to restore original fire-resistance rating of assembly. Firestopping materials and installation requirements are specified in Division 07 Section "Firestopping."

END OF SECTION

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**SECTION 26 0505
SELECTIVE DEMOLITION FOR ELECTRICAL**

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Electrical demolition.

PART 2 PRODUCTS

2.1 MATERIALS AND EQUIPMENT

- A. Materials and equipment for patching and extending work: As specified in individual sections.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify that abandoned wiring and equipment serve only abandoned facilities.
- B. Demolition drawings are based on casual field observation and existing record documents.
- C. Report discrepancies to Architect/Engineer before disturbing existing installation.
- D. Beginning of demolition means installer accepts existing conditions.

3.2 PREPARATION

- A. Disconnect electrical systems in walls, floors, and ceilings to be removed.
- B. Coordinate utility service outages with utility company.
- C. Provide temporary wiring and connections to maintain existing systems in service during construction. When work must be performed on energized equipment or circuits, use personnel experienced in such operations.
- D. Existing Electrical Service: Maintain existing system in service until new system is complete and ready for service. Disable system only to make switchovers and connections. Minimize outage duration.
 - 1. Obtain permission from Owner at least 72 hours before partially or completely disabling system.
 - 2. Make temporary connections to maintain service in areas adjacent to work area.

3.3 DEMOLITION AND EXTENSION OF EXISTING ELECTRICAL WORK

- A. Perform work for removal and disposal of equipment and materials containing toxic substances regulated under the Federal Toxic Substances Control Act (TSCA) in accordance with applicable federal, and state regulations. Applicable equipment and materials include, but are not limited to:
 - 1. PCB-containing electrical equipment, including transformers, capacitors, and switches.
 - 2. PCB- and DEHP-containing lighting ballasts.

3. Mercury-containing lamps and tubes, including fluorescent lamps, high intensity discharge (HID), arc lamps, ultra-violet, high pressure sodium, mercury vapor, ignitron tubes, neon, and incandescent.
 - B. Remove, relocate, and extend existing installations to accommodate new construction.
 - C. Remove abandoned wiring to source of supply.
 - D. Remove exposed abandoned conduit, including abandoned conduit above accessible ceiling finishes. Cut conduit flush with walls and floors, and patch surfaces.
 - E. Disconnect abandoned outlets and remove devices. Remove abandoned outlets if conduit servicing them is abandoned and removed. Provide blank cover for abandoned outlets that are not removed.
 - F. Disconnect and remove electrical devices and equipment serving utilization equipment that has been removed.
 - G. Disconnect and remove abandoned luminaires. Remove brackets, stems, hangers, and other accessories.
 - H. Repair adjacent construction and finishes damaged during demolition and extension work.
 - I. Maintain access to existing electrical installations that remain active. Modify installation or provide access panel as appropriate.
 - J. Extend existing installations using materials and methods compatible with existing electrical installations, or as specified.

3.4 CLEANING AND REPAIR

- A. Clean and repair existing materials and equipment that remain or that are to be reused.
- B. Panelboards: Clean exposed surfaces and check tightness of electrical connections. Replace damaged circuit breakers and provide closure plates for vacant positions. Provide typed circuit directory showing revised circuiting arrangement.

END OF SECTION

SECTION 26 0519
LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Single conductor building wire.
- B. Wiring connectors.
- C. Electrical tape.
- D. Wire pulling lubricant.
- E. Cable ties.

1.2 RELATED REQUIREMENTS

- A. Section 07 8400 - Firestopping.
- B. Section 26 0526 - Grounding and Bonding for Electrical Systems: Additional requirements for grounding conductors and grounding connectors.
- C. Section 26 0553 - Identification for Electrical Systems: Identification products and requirements.

1.3 REFERENCE STANDARDS

- A. ASTM B3 - Standard Specification for Soft or Annealed Copper Wire; 2013 (Reapproved 2024).
- B. ASTM B8 - Standard Specification for Concentric-Lay-Stranded Copper Conductors, Hard, Medium-Hard, or Soft; 2023.
- C. ASTM B33 - Standard Specification for Tin-Coated Soft or Annealed Copper Wire for Electrical Purposes; 2010, with Editorial Revision (2020).
- D. ASTM B787/B787M - Standard Specification for 19 Wire Combination Unilay-Stranded Copper Conductors for Subsequent Insulation; 2004 (Reapproved 2020).
- E. ASTM D3005 - Standard Specification for Low-Temperature Resistant Vinyl Chloride Plastic Pressure-Sensitive Electrical Insulating Tape; 2024.
- F. NECA 1 - Standard for Good Workmanship in Electrical Construction; 2023.
- G. NECA 120 - Standard for Installing Armored Cable (AC) and Type Metal-Clad (MC) Cable; 2018.
- H. NEMA WC 70 - Power Cables Rated 2000 Volts or Less for the Distribution of Electrical Energy; 2021.
- I. NETA ATS - Standard For Acceptance Testing Specifications For Electrical Power Equipment And Systems; 2021.
- J. NFPA 70 - National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
- K. UL 44 - Thermoset-Insulated Wires and Cables; Current Edition, Including All Revisions.
- L. UL 83 - Thermoplastic-Insulated Wires and Cables; Current Edition, Including All Revisions.
- M. UL 486A-486B - Wire Connectors; Current Edition, Including All Revisions.

- N. UL 486C - Splicing Wire Connectors; Current Edition, Including All Revisions.
- O. UL 486D - Sealed Wire Connector Systems; Current Edition, Including All Revisions.
- P. UL 510 - Polyvinyl Chloride, Polyethylene, and Rubber Insulating Tape; Current Edition, Including All Revisions.
- Q. UL 1569 - Metal-Clad Cables; Current Edition, Including All Revisions.

1.4 ADMINISTRATIVE REQUIREMENTS

- A. Coordination:
 - 1. Coordinate sizes of raceways, boxes, and equipment enclosures installed under other sections with the actual conductors to be installed, including adjustments for conductor sizes increased for voltage drop.
 - 2. Coordinate with electrical equipment installed under other sections to provide terminations suitable for use with the conductors to be installed.
 - 3. Notify Architect/Engineer of any conflicts with or deviations from the contract documents. Obtain direction before proceeding with work.

1.5 QUALITY ASSURANCE

- A. Conform to requirements of NFPA 70.
- B. Maintain at the project site a copy of each referenced document that prescribes execution requirements.
- C. Product Listing Organization Qualifications: An organization recognized by OSHA as a Nationally Recognized Testing Laboratory (NRTL) and acceptable to authorities having jurisdiction.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Receive, inspect, handle, and store conductors and cables in accordance with manufacturer's instructions.

1.7 FIELD CONDITIONS

- A. Do not install or otherwise handle thermoplastic-insulated conductors at temperatures lower than 14 degrees F (-10 degrees C), unless otherwise permitted by manufacturer's instructions. When installation below this temperature is unavoidable, notify Architect/Engineer and obtain direction before proceeding with work.

PART 2 PRODUCTS

2.1 CONDUCTOR AND CABLE APPLICATIONS

- A. Do not use conductors and cables for applications other than as permitted by NFPA 70 and product listing.
- B. Provide single conductor building wire installed in suitable raceway unless otherwise indicated, permitted, or required.
 - 1. Exceptions:

- a. Use manufactured wiring systems for branch circuits where concealed above accessible ceilings for lighting.
 - 1) Exception: Provide single conductor building wire in raceway for circuit homerun from distribution box to panelboard.
- C. Nonmetallic-sheathed cable is not permitted.
- D. Underground feeder and branch-circuit cable is not permitted.
- E. Metal-clad cable is permitted only as follows:
 - 1. Where not otherwise restricted, may be used:
 - a. Where concealed above accessible ceilings for final connections from junction boxes to luminaires.
 - b. Where concealed in hollow stud walls, above accessible ceilings, and under raised floors for branch circuits up to 20 A.
 - 1) Exception: Provide single conductor building wire in raceway for circuit homerun from first outlet to panelboard.
 - 2. In addition to other applicable restrictions, may not be used:
 - a. Where exposed to damage.
 - b. For damp, wet, or corrosive locations, unless provided with a PVC jacket listed as suitable for those locations.
 - c. For isolated ground circuits, unless provided with an additional isolated/insulated grounding conductor.

2.2 CONDUCTOR AND CABLE GENERAL REQUIREMENTS

- A. Provide products that comply with requirements of NFPA 70.
- B. Provide products listed, classified, and labeled as suitable for the purpose intended.
- C. Unless specifically indicated to be excluded, provide all required conduit, boxes, wiring, connectors, etc. as required for a complete operating system.
- D. Comply with NEMA WC 70.
- E. Thermoplastic-Insulated Conductors and Cables: Listed and labeled as complying with UL 83.
- F. Thermoset-Insulated Conductors and Cables: Listed and labeled as complying with UL 44.
- G. Conductors for Grounding and Bonding: Also comply with Section 26 0526.
- H. Conductor Material:
 - 1. Provide copper conductors except where aluminum conductors are specifically indicated or permitted for substitution. Conductor sizes indicated are based on copper unless specifically indicated as aluminum. Conductors designated with the abbreviation "AL" indicate aluminum.
 - a. Substitution of aluminum conductors for copper is permitted, when approved by Owner and authority having jurisdiction, only for the following:
 - 1) Services: Copper conductors size 1/0 AWG and larger.
 - 2) Feeders: Copper conductors size 1/0 AWG and larger.

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2. Copper Conductors: Soft drawn annealed, 98 percent conductivity, uncoated copper conductors complying with ASTM B3, ASTM B8, or ASTM B787/B787M unless otherwise indicated.
3. Tinned Copper Conductors: Comply with ASTM B33.
- I. Minimum Conductor Size:
 1. Branch Circuits: 12 AWG.
- J. Where conductor size is not indicated, size to comply with NFPA 70 but not less than applicable minimum size requirements specified.
- K. Conductor Color Coding:
 1. Color code conductors as indicated unless otherwise required by the authority having jurisdiction. Maintain consistent color coding throughout project.
 2. Color Coding Method: Integrally colored insulation.
 - a. Conductors size 4 AWG and larger may have black insulation color coded using vinyl color coding electrical tape.
 3. Color Code:
 - a. 480Y/277 V, 3 Phase, 4 Wire System:
 - 1) Phase A: Brown.
 - 2) Phase B: Orange.
 - 3) Phase C: Yellow.
 - 4) Neutral/Grounded: Gray.
 - b. 208Y/120 V, 3 Phase, 4 Wire System:
 - 1) Phase A: Black.
 - 2) Phase B: Red.
 - 3) Phase C: Blue.
 - 4) Neutral/Grounded: White.
 - c. Equipment Ground, All Systems: Green.

2.3 SINGLE CONDUCTOR BUILDING WIRE

- A. Manufacturers:
 1. Copper Building Wire:
 - a. Encore Wire Corporation: www.encorewire.com/#sle.
 - b. General Cable Technologies Corporation: www.generalcable.com/#sle.
 - c. Nexans Energy USA
 - d. The Okonite Company
 - e. Prysmian Power Cables and Systems[<>]: www.us.prysmian.com
 - f. Southwire Company: www.southwire.com/#sle.
 - g. Engineer pre-approved equivalent.
- B. Description: Single conductor insulated wire.

- C. Conductor Stranding:
 - 1. Feeders and Branch Circuits:
 - a. Size 10 AWG and Smaller: Solid.
 - b. Size 8 AWG and Larger: Stranded.
- D. Insulation Voltage Rating: 600 V.
- E. Insulation:
 - 1. Copper Building Wire: Type THHN/THWN-2, except as indicated below.

2.4 METAL-CLAD CABLE

- A. Description: NFPA 70, Type MC cable listed and labeled as complying with UL 1569, and listed for use in classified firestop systems to be used.
- B. Conductor Stranding:
 - 1. Size 10 AWG and Smaller: Solid.
 - 2. Size 8 AWG and Larger: Stranded.
- C. Insulation Voltage Rating: 600 V.
- D. Insulation: Type THHN, THHN/THWN, or THHN/THWN-2.
- E. Grounding: Full-size integral equipment grounding conductor.
- F. Armor: Steel, interlocked tape.
- G. Provide PVC jacket applied over cable armor where indicated or required for environment of installed location.

2.5 WIRING CONNECTORS

- A. Description: Wiring connectors appropriate for the application, suitable for use with the conductors to be connected, and listed as complying with UL 486A-486B or UL 486C as applicable.
- B. Connectors for Grounding and Bonding: Comply with Section 26 0526.
- C. Wiring Connectors for Splices and Taps:
 - 1. Copper Conductors Size 8 AWG and Smaller: Use twist-on insulated spring connectors.
 - 2. Copper Conductors Size 6 AWG and Larger: Use mechanical connectors or compression connectors.
- D. Wiring Connectors for Terminations:
 - 1. Provide terminal lugs for connecting conductors to equipment furnished with terminations designed for terminal lugs.
 - 2. Provide compression adapters for connecting conductors to equipment furnished with mechanical lugs when only compression connectors are specified.
 - 3. Where over-sized conductors are larger than the equipment terminations can accommodate, provide connectors suitable for reducing to appropriate size, but not less than required for the rating of the overcurrent protective device.
 - 4. Copper Conductors Size 8 AWG and Larger: Use mechanical connectors or compression connectors where connectors are required.

- E. Twist-on Insulated Spring Connectors: Rated 600 V, 221 degrees F (105 degrees C) for standard applications and 302 degrees F (150 degrees C) for high temperature applications; pre-filled with sealant and listed as complying with UL 486D for damp and wet locations.
- F. Mechanical Connectors: Provide bolted type or set-screw type.
- G. Compression Connectors: Provide circumferential type or hex type crimp configuration.
- H. Crimped Terminals: Nylon-insulated, with insulation grip and terminal configuration suitable for connection to be made.

2.6 WIRING ACCESSORIES

- A. Electrical Tape:
 - 1. Vinyl Color Coding Electrical Tape: Integrally colored to match color code indicated; listed as complying with UL 510; minimum thickness of 7 mil (0.18 mm); resistant to abrasion, corrosion, and sunlight; suitable for continuous temperature environment up to 221 degrees F (105 degrees C).
 - 2. Vinyl Insulating Electrical Tape: Complying with ASTM D3005 and listed as complying with UL 510; minimum thickness of 7 mil (0.18 mm); resistant to abrasion, corrosion, and sunlight; conformable for application down to 0 degrees F (-18 degrees C) and suitable for continuous temperature environment up to 221 degrees F (105 degrees C).
- B. Wire Pulling Lubricant: Listed; suitable for use with the conductors or cables to be installed and suitable for use at the installation temperature.
- C. Cable Ties: Material and tensile strength rating suitable for application.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify that interior of building has been protected from weather.
- B. Verify that work likely to damage wire and cable has been completed.
- C. Verify that raceways, boxes, and equipment enclosures are installed and are properly sized to accommodate conductors and cables in accordance with NFPA 70.
- D. Verify that field measurements are as indicated.
- E. Verify that conditions are satisfactory for installation prior to starting work.

3.2 PREPARATION

- A. Clean raceways thoroughly to remove foreign materials before installing conductors and cables.

3.3 INSTALLATION

- A. Circuiting Requirements:
 - 1. Unless dimensioned, circuit routing indicated is diagrammatic.
 - 2. When circuit destination is indicated without specific routing, determine exact routing required.
 - 3. Include circuit lengths required to install connected devices within 10 ft (3.0 m) of location indicated.

4. Maintain separation of Class 1, Class 2, and Class 3 remote-control, signaling, and power-limited circuits in accordance with NFPA 70.
 5. Maintain separation of wiring for emergency systems in accordance with NFPA 70.
 6. Circuiting Adjustments: Unless otherwise indicated, when branch circuits are indicated as separate, combining them together in a single raceway is permitted, under the following conditions:
 - a. Provide no more than six current-carrying conductors in a single raceway. Dedicated neutral conductors are considered current-carrying conductors.
 - b. Increase size of conductors as required to account for ampacity derating.
 - c. Size raceways, boxes, etc. to accommodate conductors.
 7. Common Neutrals: Unless otherwise indicated, sharing of neutral/grounded conductors among up to three single phase branch circuits of different phases installed in the same raceway is not permitted. Provide dedicated neutral/grounded conductor for each individual branch circuit.
- B. Install products in accordance with manufacturer's instructions.
- C. Perform work in accordance with NECA 1 (general workmanship).
- D. Install metal-clad cable (Type MC) in accordance with NECA 120.
- E. Installation in Raceway:
1. Tape ends of conductors and cables to prevent infiltration of moisture and other contaminants.
 2. Pull all conductors and cables together into raceway at same time.
 3. Do not damage conductors and cables or exceed manufacturer's recommended maximum pulling tension and sidewall pressure.
 4. Use suitable wire pulling lubricant where necessary, except when lubricant is not recommended by the manufacturer.
- F. Paralleled Conductors: Install conductors of the same length and terminate in the same manner.
- G. Secure and support conductors and cables in accordance with NFPA 70 using suitable supports and methods approved by the authority having jurisdiction. Provide independent support from building structure. Do not provide support from raceways, piping, ductwork, or other systems.
1. Installation Above Suspended Ceilings: Do not provide support from ceiling support system. Do not provide support from ceiling grid or allow conductors and cables to lay on ceiling tiles.
- H. Terminate cables using suitable fittings.
1. Metal-Clad Cable (Type MC):
 - a. Use listed fittings.
 - b. Cut cable armor only using specialized tools to prevent damaging conductors or insulation. Do not use hacksaw or wire cutters to cut armor.
- I. Install conductors with a minimum of 12 inches (300 mm) of slack at each outlet.

- J. Neatly train and bundle conductors inside boxes, wireways, panelboards and other equipment enclosures.
- K. Group or otherwise identify neutral/grounded conductors with associated ungrounded conductors inside enclosures in accordance with NFPA 70.
- L. Make wiring connections using specified wiring connectors.
 - 1. Make splices and taps only in accessible boxes. Do not pull splices into raceways or make splices in conduit bodies or wiring gutters.
 - 2. Remove appropriate amount of conductor insulation for making connections without cutting, nicking or damaging conductors.
 - 3. Do not remove conductor strands to facilitate insertion into connector.
 - 4. Clean contact surfaces on conductors and connectors to suitable remove corrosion, oxides, and other contaminates. Do not use wire brush on plated connector surfaces.
 - 5. Mechanical Connectors: Secure connections according to manufacturer's recommended torque settings.
 - 6. Compression Connectors: Secure connections using manufacturer's recommended tools and dies.
- M. Insulate splices and taps that are made with uninsulated connectors using methods suitable for the application, with insulation and mechanical strength at least equivalent to unspliced conductors.
- N. Insulate ends of spare conductors using vinyl insulating electrical tape.
- O. Field-Applied Color Coding: Where vinyl color coding electrical tape is used in lieu of integrally colored insulation as permitted in Part 2 under "Color Coding", apply half overlapping turns of tape at each termination and at each location conductors are accessible.
- P. Install firestopping to preserve fire resistance rating of partitions and other elements, using materials and methods specified in Section 07 8400.
- Q. Unless specifically indicated to be excluded, provide final connections to all equipment and devices, including those furnished by others, as required for a complete operating system.

3.4 FIELD QUALITY CONTROL

- A. See Division 01 for additional quality requirements.
- B. Inspect and test in accordance with NETA ATS, except Section 4.
- C. Perform inspections and tests listed in NETA ATS, Section 7.3.2. The insulation resistance test is required for all conductors. The resistance test for parallel conductors listed as optional is not required.
- D. Correct deficiencies and replace damaged or defective conductors and cables.

END OF SECTION

**SECTION 26 0526
GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS**

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Grounding and bonding requirements.
- B. Conductors for grounding and bonding.
- C. Connectors for grounding and bonding.
- D. Ground bars.

1.2 RELATED REQUIREMENTS

- A. Section 26 0519 - Low-Voltage Electrical Power Conductors and Cables: Additional requirements for conductors for grounding and bonding, including conductor color coding.
- B. Section 26 0553 - Identification for Electrical Systems: Identification products and requirements.

1.3 REFERENCE STANDARDS

- A. IEEE 81 - IEEE Guide for Measuring Earth Resistivity, Ground Impedance, and Earth Surface Potentials of a Grounding System; 2012.
- B. NECA 1 - Standard for Good Workmanship in Electrical Construction; 2023.
- C. NETA ATS - Standard For Acceptance Testing Specifications For Electrical Power Equipment And Systems; 2021.
- D. NFPA 70 - National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
- E. UL 467 - Grounding and Bonding Equipment; Current Edition, Including All Revisions.

1.4 ADMINISTRATIVE REQUIREMENTS

- A. Coordination:
 - 1. Verify exact locations of underground metal water service pipe entrances to building.
 - 2. Coordinate the work with other trades to provide steel reinforcement complying with specified requirements for concrete-encased electrode.
 - 3. Notify Architect/Engineer of any conflicts with or deviations from the contract documents. Obtain direction before proceeding with work.
- B. Sequencing:
 - 1. Do not install ground rod electrodes until final backfill and compaction is complete.

1.5 QUALITY ASSURANCE

- A. Conform to requirements of NFPA 70.
- B. Maintain at the project site a copy of each referenced document that prescribes execution requirements.

- C. Product Listing Organization Qualifications: An organization recognized by OSHA as a Nationally Recognized Testing Laboratory (NRTL) and acceptable to authorities having jurisdiction.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Receive, inspect, handle, and store products in accordance with manufacturer's instructions.

PART 2 PRODUCTS

2.1 GROUNDING AND BONDING REQUIREMENTS

- A. Do not use products for applications other than as permitted by NFPA 70 and product listing.
- B. Unless specifically indicated to be excluded, provide all required components, conductors, connectors, conduit, boxes, fittings, supports, accessories, etc. as necessary for a complete grounding and bonding system.
- C. Where conductor size is not indicated, size to comply with NFPA 70 but not less than applicable minimum size requirements specified.
- D. 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.
- E. 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.
 7. Provide bonding for interior metal piping systems in accordance with NFPA 70. This includes, but is not limited to:
 - a. Metal water piping where not already effectively bonded to metal underground water pipe used as grounding electrode.
 8. Provide bonding for interior metal air ducts.
 9. Provide bonding for metal building frame.
- F. Communications Systems Grounding and Bonding:
1. Provide intersystem bonding termination at service equipment or metering equipment enclosure and at disconnecting means for any additional buildings or structures in accordance with NFPA 70.
 2. Provide bonding jumper in raceway from intersystem bonding termination to each communications room or backboard and provide ground bar for termination.
 - a. Bonding Jumper Size: 6 AWG, unless otherwise indicated or required.
 - b. Raceway Size: 3/4 inch (21 mm) trade size unless otherwise indicated or required.
 - c. Ground Bar Size: 1/4 by 2 by 12 inches (6 by 50 by 300 mm) unless otherwise indicated or required.
 - d. Ground Bar Mounting Height: 18 inches (450 mm) above finished floor unless otherwise indicated.

2.2 GROUNDING AND BONDING COMPONENTS

- A. General Requirements:
1. Provide products listed, classified, and labeled as suitable for the purpose intended.
 2. Provide products listed and labeled as complying with UL 467 where applicable.
- B. Conductors for Grounding and Bonding, in Addition to Requirements of Section 26 0526:
1. Use insulated copper conductors unless otherwise indicated.
 - a. Exceptions:
 - 1) Use bare copper conductors where installed underground in direct contact with earth.
 - 2) Use bare copper conductors where directly encased in concrete (not in raceway).
- C. Connectors for Grounding and Bonding:
1. Description: Connectors appropriate for the application and suitable for the conductors and items to be connected; listed and labeled as complying with UL 467.
 2. Unless otherwise indicated, use exothermic welded connections or compression connectors for underground, concealed and other inaccessible connections.
 - a. Exceptions:

- 1) Use mechanical connectors for connections to electrodes at ground access wells.
3. Unless otherwise indicated, use mechanical connectors, compression connectors, or exothermic welded connections for accessible connections.
 - a. Exceptions:
 - 1) Use exothermic welded connections for connections to metal building frame.
- D. Ground Bars:
 1. Description: Copper rectangular ground bars with mounting brackets and insulators.
 2. Size: 12X4 unless otherwise indicated or required.
 3. Holes for Connections: As indicated or as required for connections to be made.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify that work likely to damage grounding and bonding system components has been completed.
- B. Verify that field measurements are as indicated.
- C. Verify that conditions are satisfactory for installation prior to starting work.

3.2 INSTALLATION

- A. Install products in accordance with manufacturer's instructions.
- B. Perform work in accordance with NECA 1 (general workmanship).
- C. Make grounding and bonding connections using specified connectors.
 1. Remove appropriate amount of conductor insulation for making connections without cutting, nicking or damaging conductors. Do not remove conductor strands to facilitate insertion into connector.
 2. Remove nonconductive paint, enamel, or similar coating at threads, contact points, and contact surfaces.
 3. 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.

3.3 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.

END OF SECTION

**SECTION 26 0533.13
CONDUIT FOR ELECTRICAL SYSTEMS**

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Galvanized steel rigid metal conduit (RMC).
- B. Intermediate metal conduit (IMC).
- C. Flexible metal conduit (FMC).
- D. Liquidtight flexible metal conduit (LFMC).
- E. Electrical metallic tubing (EMT).
- F. Rigid polyvinyl chloride (PVC) conduit.
- G. Conduit fittings.
- H. Accessories.

1.2 RELATED REQUIREMENTS

- A. Section 07 8400 - Firestopping.
- B. Section 26 0526 - Grounding and Bonding for Electrical Systems.
 - 1. Includes additional requirements for fittings for grounding and bonding.
- C. Section 26 0553 - Identification for Electrical Systems: Identification products and requirements.

1.3 REFERENCE STANDARDS

- A. ANSI C80.1 - American National Standard for Electrical Rigid Steel Conduit (ERSC); 2020.
- B. ANSI C80.3 - American National Standard for Electrical Metallic Tubing -- Steel (EMT-S); 2020.
- C. ANSI C80.6 - American National Standard for Electrical Intermediate Metal Conduit; 2018.
- D. NECA 1 - Standard for Good Workmanship in Electrical Construction; 2023.
- E. NECA 101 - Standard for Installing Steel Conduits (Rigid, IMC, EMT); 2020.
- F. NECA 111 - Standard for Installing Nonmetallic Raceways (RNC, ENT, LFNC); 2017.
- G. NEMA FB 1 - Fittings, Cast Metal Boxes, and Conduit Bodies for Conduit, Electrical Metallic Tubing, and Cable; 2014.
- H. NEMA TC 2 - Electrical Polyvinyl Chloride (PVC) Conduit; 2020.
- I. NEMA TC 3 - Polyvinyl Chloride (PVC) Fittings for Use with Rigid PVC Conduit and Tubing; 2021.
- J. NFPA 70 - National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
- K. UL 1 - Flexible Metal Conduit; Current Edition, Including All Revisions.
- L. UL 6 - Electrical Rigid Metal Conduit-Steel; Current Edition, Including All Revisions.
- M. UL 360 - Liquid-Tight Flexible Metal Conduit; Current Edition, Including All Revisions.

- N. UL 514B - Conduit, Tubing, and Cable Fittings; Current Edition, Including All Revisions.
- O. UL 651 - Schedule 40, 80, Type EB and A Rigid PVC Conduit and Fittings; Current Edition, Including All Revisions.
- P. UL 797 - Electrical Metallic Tubing-Steel; Current Edition, Including All Revisions.
- Q. UL 1242 - Electrical Intermediate Metal Conduit-Steel; Current Edition, Including All Revisions.

1.4 ADMINISTRATIVE REQUIREMENTS

A. Coordination:

1. Coordinate minimum sizes of conduits with the actual conductors to be installed, including adjustments for conductor sizes increased for voltage drop.
2. Coordinate the arrangement of conduits with structural members, ductwork, piping, equipment and other potential conflicts installed under other sections or by others.
3. Verify exact conduit termination locations required for boxes, enclosures, and equipment installed under other sections or by others.
4. Coordinate the work with other trades to provide roof penetrations that preserve the integrity of the roofing system and do not void the roof warranty.
5. Notify Architect/Engineer of any conflicts with or deviations from the contract documents. Obtain direction before proceeding with work.

B. Sequencing:

1. Do not begin installation of conductors and cables until installation of conduit is complete between outlet, junction and splicing points.

1.5 QUALITY ASSURANCE

A. Conform to requirements of NFPA 70.

B. Product Listing Organization Qualifications: An organization recognized by OSHA as a Nationally Recognized Testing Laboratory (NRTL) and acceptable to authorities having jurisdiction.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Receive, inspect, handle, and store conduit and fittings in accordance with manufacturer's instructions.

PART 2 PRODUCTS

2.1 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 galvanized steel rigid metal conduit, intermediate metal conduit (IMC), or rigid PVC conduit.
 2. Exterior, Direct-Buried: Use galvanized steel rigid metal conduit, intermediate metallic conduit (IMC), or rigid PVC conduit.
 3. Exterior, Embedded Within Concrete: Use galvanized steel rigid metal conduit, intermediate metallic conduit (IMC), or rigid PVC conduit.
 4. Where rigid polyvinyl (PVC) conduit is provided, transition to galvanized steel rigid metal conduit where emerging from underground.
 5. Where steel conduit is installed in direct contact with earth where soil has a resistivity of less than 2000 ohm-centimeters or is characterized as severely corrosive based on soils report or local experience, use corrosion protection tape to provide supplementary corrosion protection or use PVC-coated galvanized steel rigid metal conduit.
 6. Where steel conduit emerges from concrete into soil, use corrosion protection tape to provide supplementary corrosion protection for a minimum of 4 inches (100 mm) on either side of where conduit emerges or use PVC-coated galvanized steel rigid metal conduit.
- D. Embedded Within Concrete:
1. Within Slab on Grade: Not permitted.
 2. Within Slab Above Ground: Not permitted.
- E. Concealed Within Masonry Walls: Use galvanized steel rigid metal conduit, intermediate metal conduit (IMC), or electrical metallic tubing (EMT).
- F. Concealed Within Hollow Stud Walls: Use galvanized steel rigid metal conduit, intermediate metal conduit (IMC), or electrical metallic tubing (EMT).
- G. Concealed Above Accessible Ceilings: Use galvanized steel rigid metal conduit, intermediate metal conduit (IMC), or electrical metallic tubing (EMT).
- H. Interior, Damp or Wet Locations: Use galvanized steel rigid metal conduit.
- I. Exposed, Interior, Not Subject to Physical Damage: Use galvanized steel rigid metal conduit, intermediate metal conduit (IMC), or electrical metallic tubing (EMT).
- J. Exposed, Interior, Subject to Physical Damage: Use galvanized steel rigid metal conduit or intermediate metal conduit (IMC).
1. Locations subject to physical damage include, but are not limited to:
 - a. Where exposed below 8 feet (2.4 m), except within electrical and communication rooms or closets.
- K. Concealed, Exterior, Not Embedded in Concrete or in Contact With Earth: Use galvanized steel rigid metal conduit or intermediate metal conduit (IMC).
- L. Connections to Luminaires Above Accessible Ceilings: Use flexible metal conduit.
1. Maximum Length: 6 feet (1.8 m).
- M. Connections to Vibrating Equipment:
1. Dry Locations: Use flexible metal conduit.
 2. Damp, Wet, or Corrosive Locations: Use liquidtight flexible metal conduit.
 3. Maximum Length: 6 feet (1.8 m) unless otherwise indicated.
 4. Vibrating equipment includes, but is not limited to:
 - a. Transformers.

b. Motors.

N. Fished in Existing Walls, Where Necessary: Use flexible metal conduit.

2.2 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. Fittings for Grounding and Bonding: Also comply with Section 26 0526.
- C. Provide all conduit, fittings, supports, and accessories required for a complete raceway system.
- D. Provide products listed, classified, and labeled as suitable for the purpose intended.
- E. Minimum Conduit Size, Unless Otherwise Indicated:
 - 1. Branch Circuits: 3/4 inch (21 mm) trade size.
 - 2. Branch Circuit Homeruns: 3/4 inch (21 mm) trade size.
- F. Where conduit size is not indicated, size to comply with NFPA 70 but not less than applicable minimum size requirements specified.

2.3 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.

2.4 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.

2.5 FLEXIBLE METAL CONDUIT (FMC)

- A. Description: NFPA 70, Type FMC standard wall steel flexible metal conduit listed and labeled as complying with UL 1, and listed for use in classified firestop systems to be used.
- 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.

2.6 LIQUIDTIGHT FLEXIBLE METAL CONDUIT (LFMC)

- A. Description: NFPA 70, Type LFMC polyvinyl chloride (PVC) jacketed steel flexible metal conduit listed and labeled as complying with UL 360.
- 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.

2.7 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.
 3. Connectors and Couplings: Use compression (gland) type.
 - a. Do not use indenter type connectors and couplings.
 - b. Do not use set-screw type connectors and couplings.
 4. Damp or Wet Locations (where permitted): Use fittings listed for use in wet locations.
 5. Embedded Within Concrete (where permitted): Use fittings listed as concrete-tight. Fittings that require taping to be concrete-tight are not acceptable.

2.8 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.

2.9 ACCESSORIES

- A. Corrosion Protection Tape: PVC-based, minimum thickness of 20 mil (0.51 mm).
- B. Conduit Joint Compound: Corrosion-resistant, electrically conductive; suitable for use with the conduit to be installed.
- C. Solvent Cement for PVC Conduit and Fittings: As recommended by manufacturer of conduit and fittings to be installed.

- D. Pull Strings: Use nylon cord with average breaking strength of not less than 200 pound-force (890 N).
- E. Sealing Compound for Sealing Fittings: Listed for use with the particular fittings to be installed.
- F. Modular Seals for Conduit Penetrations: Rated for minimum of 40 psig; Suitable for the conduits to be installed.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify that field measurements are as indicated.
- B. Verify that mounting surfaces are ready to receive conduits.
- C. Verify that conditions are satisfactory for installation prior to starting work.

3.2 INSTALLATION

- A. Install products in accordance with manufacturer's instructions.
- B. Perform work in accordance with NECA 1 (general workmanship).
- C. Install galvanized steel rigid metal conduit (RMC) in accordance with NECA 101.
- D. Install intermediate metal conduit (IMC) in accordance with NECA 101.
- E. Install rigid polyvinyl chloride (PVC) conduit in accordance with NECA 111.
- F. Conduit Routing:
 - 1. Unless dimensioned, conduit routing indicated is diagrammatic.
 - 2. When conduit destination is indicated without specific routing, determine exact routing required.
 - 3. Conceal all conduits unless specifically indicated to be exposed.
 - 4. Conduits in the following areas may be exposed, unless otherwise indicated:
 - a. Electrical rooms.
 - b. Mechanical equipment rooms.
 - c. Within joists in areas with no ceiling.
 - 5. Unless otherwise approved, do not route conduits exposed:
 - a. Across floors.
 - b. Across roofs.
 - c. Across top of parapet walls.
 - d. Across building exterior surfaces.
 - 6. Conduits installed underground or embedded in concrete may be routed in the shortest possible manner unless otherwise indicated. Route all other conduits parallel or perpendicular to building structure and surfaces, following surface contours where practical.
 - 7. Arrange conduit to maintain adequate headroom, clearances, and access.

8. Arrange conduit to provide no more than the equivalent of four 90 degree bends between pull points.
 9. Arrange conduit to provide no more than 150 feet (46 m) between pull points.
 10. Route conduits above water and drain piping where possible.
 11. Arrange conduit to prevent moisture traps. Provide drain fittings at low points and at sealing fittings where moisture may collect.
 12. Maintain minimum clearance of 6 inches (150 mm) between conduits and piping for other systems.
 13. Maintain minimum clearance of 12 inches (300 mm) between conduits and hot surfaces. This includes, but is not limited to:
 - a. Heaters.
 - b. Hot water piping.
 - c. Flues.
 14. Group parallel conduits in the same area together on a common rack.
- G. 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.
 3. Installation Above Suspended Ceilings: Do not provide support from ceiling support system. Do not provide support from ceiling grid or allow conduits to lay on ceiling tiles.
 4. Use metal channel (strut) with accessory conduit clamps to support multiple parallel surface-mounted conduits.
 5. Use conduit clamp to support single conduit from beam clamp or threaded rod.
 6. Use trapeze hangers assembled from threaded rods and metal channel (strut) with accessory conduit clamps to support multiple parallel suspended conduits.
 7. Use of wire for support of conduits is not permitted.
 8. Where conduit support intervals specified in NFPA 70 and NECA standards differ, comply with the most stringent requirements.
- H. 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. Where spare conduits stub up through concrete floors and are not terminated in a box or enclosure, provide threaded couplings equipped with threaded plugs set flush with finished floor.

7. Provide insulating bushings or insulated throats at all conduit terminations to protect conductors.
 8. Secure joints and connections to provide maximum mechanical strength and electrical continuity.
- I. 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. Provide suitable modular seal where conduits penetrate exterior wall below grade.
 7. Where conduits penetrate waterproof membrane, seal as required to maintain integrity of membrane.
 8. 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.
 9. Install firestopping to preserve fire resistance rating of partitions and other elements, using materials and methods specified in Section 07 8400.
- J. Underground Installation:
1. Minimum Cover, Unless Otherwise Indicated or Required:
 - a. Underground, Exterior: 24 inches (610 mm).
 - 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 for service entrance where not concrete-encased.
- K. 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.
- L. 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.

- M. Provide pull string in all empty conduits and in conduits where conductors and cables are to be installed by others. Leave minimum slack of 12 inches (300 mm) at each end.
- N. Provide grounding and bonding in accordance with Section 26 0526.
- O. Identify conduits in accordance with Section 26 0553.

3.3 FIELD QUALITY CONTROL

- A. Repair cuts and abrasions in galvanized finishes using zinc-rich paint recommended by manufacturer. Replace components that exhibit signs of corrosion.
- B. Correct deficiencies and replace damaged or defective conduits.

3.4 CLEANING

- A. Clean interior of conduits to remove moisture and foreign matter.

3.5 PROTECTION

- A. Immediately after installation of conduit, use suitable manufactured plugs to provide protection from entry of moisture and foreign material and do not remove until ready for installation of conductors.

END OF SECTION

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SECTION 26 0533.16
BOXES FOR ELECTRICAL SYSTEMS

PART 1 GENERAL

1.1 SECTION INCLUDES

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

1.2 RELATED REQUIREMENTS

- A. Section 26 0553 - Identification for Electrical Systems: Identification products and requirements.
- B. Section 26 2726 - Wiring Devices:
 - 1. Wall plates.
 - 2. Additional requirements for locating boxes for wiring devices.

1.3 REFERENCE STANDARDS

- A. NECA 1 - Standard for Good Workmanship in Electrical Construction; 2023.
- B. NECA 130 - Standard for Installing and Maintaining Wiring Devices; 2016.
- C. NEMA FB 1 - Fittings, Cast Metal Boxes, and Conduit Bodies for Conduit, Electrical Metallic Tubing, and Cable; 2014.
- D. NEMA OS 1 - Sheet-Steel Outlet Boxes, Device Boxes, Covers, and Box Supports; 2013 (Reaffirmed 2020).
- E. NEMA EN 10250 - Enclosures for Electrical Equipment (1000 Volts Maximum); 2024.
- F. NFPA 70 - National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
- G. UL 50 - Enclosures for Electrical Equipment, Non-Environmental Considerations; Current Edition, Including All Revisions.
- H. UL 50E - Enclosures for Electrical Equipment, Environmental Considerations; Current Edition, Including All Revisions.
- I. UL 508A - Industrial Control Panels; Current Edition, Including All Revisions.
- J. UL 514A - Metallic Outlet Boxes; Current Edition, Including All Revisions.

1.4 ADMINISTRATIVE REQUIREMENTS

- A. Coordination:
 - 1. Coordinate the work with other trades to avoid placement of ductwork, piping, equipment, or other potential obstructions within the dedicated equipment spaces and working clearances for electrical equipment required by NFPA 70.
 - 2. Coordinate arrangement of electrical equipment with the dimensions and clearance requirements of the actual equipment to be installed.

3. Coordinate minimum sizes of boxes with the actual installed arrangement of conductors, clamps, support fittings, and devices, calculated according to NFPA 70.
4. Coordinate minimum sizes of pull boxes with the actual installed arrangement of connected conduits, calculated according to NFPA 70.
5. Coordinate the placement of boxes with millwork, furniture, devices, equipment, etc. installed under other sections or by others.
6. Coordinate the work with other trades to preserve insulation integrity.
7. Coordinate the work with other trades to provide walls suitable for installation of flush-mounted boxes where indicated.
8. Notify Architect/Engineer of any conflicts with or deviations from the contract documents. Obtain direction before proceeding with work.

1.5 QUALITY ASSURANCE

- A. Conform to requirements of NFPA 70.
- B. Maintain at the project site a copy of each referenced document that prescribes execution requirements.
- C. Product Listing Organization Qualifications: An organization recognized by OSHA as a Nationally Recognized Testing Laboratory (NRTL) and acceptable to authorities having jurisdiction.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Receive, inspect, handle, and store products in accordance with manufacturer's instructions.

PART 2 PRODUCTS

2.1 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 Supporting Luminaires and Ceiling Fans: Listed as suitable for the type and weight of load to be supported; furnished with fixture stud to accommodate mounting of luminaire where required.
 11. 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:
 - a. Indoor Clean, Dry Locations: Type 1, galvanized steel.
 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

3.1 EXAMINATION

- A. Verify that mounting surfaces are ready to receive boxes.
- B. Verify that conditions are satisfactory for installation prior to starting work.

3.2 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. Unless otherwise indicated, provide separate boxes for line voltage and low voltage systems.
- E. Flush-mount boxes in finished areas unless specifically indicated to be surface-mounted.
- F. Unless otherwise indicated, boxes may be surface-mounted where exposed conduits are indicated or permitted.
- G. Box Locations:
 1. Unless dimensioned, box locations indicated are approximate.
 2. Locate boxes as required for devices installed under other sections or by others.

- a. Switches, Receptacles, and Other Wiring Devices: Comply with Section 26 2726.
 3. Locate boxes so that wall plates do not span different building finishes.
 4. Locate boxes so that wall plates do not cross masonry joints.
 5. Unless otherwise indicated, where multiple outlet boxes are installed at the same location at different mounting heights, install along a common vertical center line.
 6. Do not install flush-mounted boxes on opposite sides of walls back-to-back. Provide minimum 6 inches (150 mm) horizontal separation unless otherwise indicated.
 7. Acoustic-Rated Walls: Do not install flush-mounted boxes on opposite sides of walls back-to-back; provide minimum 24 inches (610 mm) horizontal separation.
 8. Fire Resistance Rated Walls: Install flush-mounted boxes such that the required fire resistance will not be reduced.
 - a. Do not install flush-mounted boxes on opposite sides of walls back-to-back; provide minimum 24 inches (610 mm) separation where wall is constructed with individual noncommunicating stud cavities or protect both boxes with listed putty pads.
 - b. Do not install flush-mounted boxes with area larger than 16 square inches (0.0103 sq m) or such that the total aggregate area of openings exceeds 100 square inches (0.0645 sq m) for any 100 square feet (9.29 sq m) of wall area.
 9. Locate junction and pull boxes in the following areas, unless otherwise indicated or approved by the Architect:
 - a. Concealed above accessible suspended ceilings.
 - b. Within joists in areas with no ceiling.
 - c. Electrical rooms.
 - d. Mechanical equipment rooms.
- H. 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.
 3. Installation Above Suspended Ceilings: Do not provide support from ceiling grid or ceiling support system.
- I. Install boxes plumb and level.
- J. Flush-Mounted Boxes:
1. Install boxes in noncombustible materials such as concrete, tile, gypsum, plaster, etc. so that front edge of box or associated raised cover is not set back from finished surface more than 1/4 inch (6 mm) or does not project beyond finished surface.
 2. Install boxes in combustible materials such as wood so that front edge of box or associated raised cover is flush with finished surface.

- 3. Repair rough openings around boxes in noncombustible materials such as concrete, tile, gypsum, plaster, etc. so that there are no gaps or open spaces greater than 1/8 inch (3 mm) at the edge of the box.
 - K. Install boxes as required to preserve insulation integrity.
 - L. Install permanent barrier between ganged wiring devices when voltage between adjacent devices exceeds 300 V.
 - M. Install firestopping to preserve fire resistance rating of partitions and other elements, using materials and methods specified in Section 07 8400.
 - N. Close unused box openings.
 - O. Install blank wall plates on junction boxes and on outlet boxes with no devices or equipment installed or designated for future use.
 - P. Provide grounding and bonding in accordance with Section 26 0526.
 - Q. Identify boxes in accordance with Section 26 0553.
- 3.3 CLEANING
- A. Clean interior of boxes to remove dirt, debris, plaster and other foreign material.
- 3.4 PROTECTION
- A. Immediately after installation, protect boxes from entry of moisture and foreign material until ready for installation of conductors.

END OF SECTION

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**SECTION 26 0553
IDENTIFICATION FOR ELECTRICAL SYSTEMS**

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Electrical identification requirements.
- B. Identification nameplates and labels.
- C. Wire and cable markers.
- D. Voltage markers.
- E. Underground warning tape.
- F. Warning signs and labels.

1.2 RELATED REQUIREMENTS

- A. Section 26 0519 - Low-Voltage Electrical Power Conductors and Cables: Color coding for power conductors and cables 600 V and less; vinyl color coding electrical tape.

1.3 REFERENCE STANDARDS

- A. ANSI Z535.2 - American National Standard for Environmental and Facility Safety Signs; 2023.
- B. ANSI Z535.4 - American National Standard for Product Safety Signs and Labels; 2023.
- C. NFPA 70 - National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
- D. NFPA 70E - Standard for Electrical Safety in the Workplace; 2024.
- E. UL 969 - Marking and Labeling Systems; Current Edition, Including All Revisions.

1.4 ADMINISTRATIVE REQUIREMENTS

- A. Coordination:
 - 1. Verify final designations for equipment, systems, and components to be identified prior to fabrication of identification products.
- B. Sequencing:
 - 1. Do not conceal items to be identified, in locations such as above suspended ceilings, until identification products have been installed.
 - 2. Do not install identification products until final surface finishes and painting are complete.

1.5 QUALITY ASSURANCE

- A. Conform to requirements of NFPA 70.

1.6 FIELD CONDITIONS

- A. Do not install adhesive products when ambient temperature is lower than recommended by manufacturer.

PART 2 PRODUCTS

2.1 IDENTIFICATION REQUIREMENTS

A. Identification for Equipment:

1. Use identification nameplate to identify each piece of electrical distribution and control equipment and associated sections, compartments, and components.
 - a. Panelboards:
 - 1) Identify power source and circuit number. Include location.
 - 2) Use typewritten circuit directory to identify load(s) served for panelboards with a door. Identify spares and spaces using pencil.
 - 3) For power panelboards without a door, use identification nameplate to identify load(s) served for each branch device. Do not identify spares and spaces.
 - b. Enclosed switches, circuit breakers, and motor controllers:
 - 1) Identify voltage and phase.
 - 2) Identify power source and circuit number. Include location.
 - 3) Identify load(s) served. Include location.
2. Use identification nameplate to identify equipment utilizing series ratings, where permitted, in accordance with NFPA 70.
3. Use identification nameplate to identify disconnect location for equipment with remote disconnecting means.
4. Use identification label on inside of door at each fused switch to identify required NEMA fuse class and size.
5. Available Fault Current Documentation: Use identification label to identify the available fault current and date calculations were performed at locations requiring documentation by NFPA 70 including but not limited to the following.
 - a. Service equipment.
 - b. Industrial control panels.
 - c. Motor control centers.
 - d. Elevator control panels.
 - e. Industrial machinery.
6. Arc Flash Hazard Warning Labels: Use warning labels to identify arc flash hazards for electrical equipment, such as switchboards, panelboards, industrial control panels, meter socket enclosures, and motor control centers that are likely to require examination, adjustment, servicing, or maintenance while energized.
7. Use warning signs to identify electrical hazards for entrances to all rooms and other guarded locations that contain exposed live parts operating at 600 V nominal or less with the word message "DANGER; Electrical hazard; Authorized personnel only" or approved equivalent.
8. Use warning labels to identify electrical hazards for equipment, compartments, and enclosures containing exposed live parts or exposed conductors operating at over 600 V nominal with the word message "DANGER; HIGH VOLTAGE; KEEP OUT".

9. Use warning labels, identification nameplates, or identification labels to identify electrical hazards for equipment where multiple power sources are present with the word message "DANGER; Hazardous voltage; Multiple power sources may be present; Disconnect all electric power including remote disconnects before servicing" or approved equivalent.
- 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.
 3. Use wire and cable markers to identify circuit number or other designation indicated for power, control, and instrumentation conductors and cables at the following locations:
 - a. At each source and load connection.
 - b. Within boxes when more than one circuit is present.
 - c. Within equipment enclosures when conductors and cables enter or leave the enclosure.
 4. Use wire and cable markers to identify connected grounding electrode system components for grounding electrode conductors.
 5. Use underground warning tape to identify direct buried cables.
- C. Identification for Raceways:
1. Use voltage markers or color-coded bands to identify systems other than normal power system for accessible conduits at maximum intervals of 20 feet (6.1 m).
 - a. Color-Coded Bands: Use field-painting or vinyl color coding electrical tape to mark bands 3 inches (76 mm) wide.
 - 1) Color Code:
 - (a) Fire Alarm System: Red.
 - 2) Vinyl Color Coding Electrical Tape: Comply with Section 26 0519.
 2. Use identification labels or plastic marker tags to identify circuits enclosed for accessible conduits at wall penetrations, at floor penetrations, at roof penetrations, and at equipment terminations when source is not within sight.
 3. Use identification labels or plastic marker tags to identify spare conduits at each end. Identify purpose and termination location.
 4. Use underground warning tape to identify underground raceways.
 5. Use voltage markers to identify highest voltage present for wireways at maximum intervals of 20 feet (6.1 m).
- D. Identification for Boxes:
1. Use voltage markers to identify highest voltage present.
 2. Use identification labels to identify circuits enclosed.
 3. Use warning labels to identify electrical hazards for boxes containing exposed live parts or exposed conductors operating at over 600 V nominal with the word message "DANGER; HIGH VOLTAGE; KEEP OUT".
- E. Identification for Devices:

1. Use identification label to identify fire alarm system devices.
 - a. For devices concealed above suspended ceilings, provide additional identification on ceiling tile below device location.
2. Use identification label or engraved wallplate to identify serving branch circuit for all receptacles.
 - a. For receptacles in public areas or in areas as directed by Architect, provide identification on inside surface of wallplate.
3. Use identification label or engraved wallplate to identify load controlled for wall-mounted control devices controlling loads that are not visible from the control location and for multiple wall-mounted control devices installed at one location.
4. Use identification label to identify receptacles protected by upstream GFI protection, where permitted.

2.2 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.
 - a. Exception: Provide minimum thickness of 1/8 inch (3 mm) when any dimension is greater than 4 inches (100 mm).
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.
- D. Format for General Information and Operating Instructions:
1. Minimum Size: 1 inch (25 mm) by 2.5 inches (64 mm).
 2. Legend: Include information or instructions indicated or as required for proper and safe operation and maintenance.
 3. Text: All capitalized unless otherwise indicated.
 4. Minimum Text Height: 1/4 inch (6 mm).
 5. Color: Black text on white background unless otherwise indicated.
- E. Format for Receptacle Identification:
1. Minimum Size: 3/8 inch (10 mm) by 1.5 inches (38 mm).
 2. Legend: Power source and circuit number or other designation indicated.
 - a. Include voltage and phase for other than 120 V, single phase circuits.
 3. Text: All capitalized unless otherwise indicated.
 4. Minimum Text Height: 3/16 inch (5 mm).
 5. Color: Black text on clear background.
- F. Format for Fire Alarm Device Identification:
1. Minimum Size: 3/8 inch (10 mm) by 1.5 inches (38 mm).
 2. Legend: Designation indicated and device zone or address.
 3. Text: All capitalized unless otherwise indicated.
 4. Minimum Text Height: 3/16 inch (5 mm).
 5. Color: Red text on white background.

2.3 WIRE AND CABLE MARKERS

- A. Markers for Conductors and Cables: Use wrap-around self-adhesive vinyl cloth, wrap-around self-adhesive vinyl self-laminating, heat-shrink sleeve, plastic sleeve, plastic clip-on, or vinyl split sleeve type markers suitable for the conductor or cable to be identified.
- B. Markers for Conductor and Cable Bundles: Use plastic marker tags secured by nylon cable ties.
- C. Legend: Power source and circuit number or other designation indicated.
- D. Text: Use factory pre-printed or machine-printed text, all capitalized unless otherwise indicated.
 1. Do not use handwritten text.
- E. Minimum Text Height: 1/8 inch (3 mm).
- F. Color: Black text on white background unless otherwise indicated.

2.4 VOLTAGE MARKERS

- A. Markers for Conduits: Use factory pre-printed self-adhesive vinyl, self-adhesive vinyl cloth, or vinyl snap-around type markers.
- B. Markers for Boxes and Equipment Enclosures: Use factory pre-printed self-adhesive vinyl or self-adhesive vinyl cloth type markers.
- C. Minimum Size:
 - 1. Markers for Conduits: As recommended by manufacturer for conduit size to be identified.
 - 2. Markers for Pull Boxes: 1 1/8 by 4 1/2 inches (29 by 110 mm).
 - 3. Markers for Junction Boxes: 1/2 by 2 1/4 inches (13 by 57 mm).
- D. Legend:
 - 1. Markers for Voltage Identification: Highest voltage present.
 - 2. Markers for System Identification:
- E. Color: Black text on orange background unless otherwise indicated.

2.5 UNDERGROUND WARNING TAPE

- A. Materials: Use foil-backed detectable type polyethylene tape suitable for direct burial, unless otherwise indicated.
- B. Foil-backed Detectable Type Tape: 6 inches (152 mm) wide, with minimum thickness of 5 mil (0.1 mm), unless otherwise required for proper detection.
- C. Legend: Type of service, continuously repeated over full length of tape.
- D. Color:
 - 1. Tape for Buried Power Lines: Black text on red background.

2.6 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.
 - b. Outdoor Locations: Use factory pre-printed rigid aluminum 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.
 - a. Do not use labels designed to be completed using handwritten text.
 - b. Provide polyester overlamine to protect handwritten text.

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

3.1 PREPARATION

- A. Clean surfaces to receive adhesive products according to manufacturer's instructions.

3.2 INSTALLATION

- A. Install products in accordance with manufacturer's instructions.
- B. Install identification products to be plainly visible for examination, adjustment, servicing, and maintenance. Unless otherwise indicated, locate products as follows:
 1. Surface-Mounted Equipment: Enclosure front.
 2. Flush-Mounted Equipment: Inside of equipment door.
 3. Free-Standing Equipment: Enclosure front; also enclosure rear for equipment with rear access.
 4. Elevated Equipment: Legible from the floor or working platform.
 5. Branch Devices: Adjacent to device.
 6. Interior Components: Legible from the point of access.
 7. Conduits: Legible from the floor.
 8. Boxes: Outside face of cover.
 9. Conductors and Cables: Legible from the point of access.
 10. Devices: Outside face of cover.
- C. Install identification products centered, level, and parallel with lines of item being identified.
- D. Secure nameplates to exterior surfaces of enclosures using stainless steel screws and to interior surfaces using self-adhesive backing or epoxy cement.
- E. Install self-adhesive labels and markers to achieve maximum adhesion, with no bubbles or wrinkles and edges properly sealed.
- F. Install underground warning tape above buried lines with one tape per trench at 3 inches (75 mm) below finished grade.
- G. Secure rigid signs using stainless steel screws.
- H. Mark all handwritten text, where permitted, to be neat and legible.

3.3 FIELD QUALITY CONTROL

- A. Replace self-adhesive labels and markers that exhibit bubbles, wrinkles, curling or other signs of improper adhesion.

END OF SECTION

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**SECTION 28 0513
CONDUCTORS AND CABLES FOR ELECTRONIC SAFETY AND SECURITY**

PART 1 GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section Includes:
 - 1. Low-voltage control cabling.
 - 2. Control-circuit conductors.
 - 3. Fire alarm wire and cable.
 - 4. Identification products.

1.3 DELIVERY, STORAGE, AND HANDLING

- A. Test cables upon receipt at Project site.

1.4 FIELD CONDITIONS

- A. Do not install conductors and cables that are wet, moisture damaged, or mold damaged.
 - 1. Indications that wire and cables are wet or moisture damaged include, but are not limited to, discoloration and sagging of factory packing materials.
- B. Environmental Limitations: Do not deliver or install UTP, optical fiber, and coaxial cables and connecting materials until wet work in spaces is complete and dry, and temporary HVAC system is operating and maintaining ambient temperature and humidity conditions at occupancy levels during the remainder of the construction period.

PART 2 PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Surface-Burning Characteristics: Comply with ASTM E 84; testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.
 - 1. Flame-Spread Index: 25 or less.
 - 2. Smoke-Developed Index: 50 or less.
- B. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

2.2 LOW-VOLTAGE CONTROL CABLE

- A. Plenum-Rated, Paired Cable: NFPA 70, Type CMP.
 - 1. One pair, twisted, No. 16 AWG, stranded (19x29) tinned copper conductors.
 - 2. PVC insulation.
 - 3. Unshielded.

4. PVC jacket.
5. Flame Resistance: Comply with NFPA 262.

2.3 CONTROL-CIRCUIT CONDUCTORS

- A. Class 1 Control Circuits: Stranded copper, Type THHN-THWN, complying with UL 83, in raceway.
- B. Class 2 Control Circuits: Stranded copper, Type THHN-THWN, complying with UL 83, in raceway.
- C. Class 3 Remote-Control and Signal Circuits: Stranded copper, Type TW or TF, complying with UL 83.

2.4 FIRE ALARM WIRE AND CABLE

- A. Manufacturers: Subject to compliance with requirements, provide products by the following:
 1. Belden
 2. Draka Cableteq USA.
 3. General Cable - Carol Brand.
 4. Genesis Cable Products; Honeywell International, Inc.
 5. Rockbestos-Suprenant Cable Corp.
 6. West Penn.
 7. Engineer pre-approved equal.
- B. General Wire and Cable Requirements: NRTL listed and labeled as complying with NFPA 70, Article 760.
- C. Signaling Line Circuits: Twisted, shielded pair, No. 18 AWG.
- D. Non-Power-Limited Circuits: Solid-copper conductors with 600-V rated, 75 deg C, color-coded insulation.
 1. Line-Voltage Circuits: No. 12 AWG, minimum.
 2. Multiconductor Armored Cable: NFPA 70, Type MC, copper conductors, Type TFN/THHN conductor insulation, copper drain wire, copper armor with red identifier stripe, NRTL listed for fire alarm and cable tray installation, plenum rated, and complying with requirements in UL 2196 for a 2-hour rating.

2.5 IDENTIFICATION PRODUCTS

- A. Comply with requirements in Section 26 0553 "Identification for Electrical Systems."

2.6 SOURCE QUALITY CONTROL

- A. Cable will be considered defective if it does not pass tests and inspections.
- B. Prepare test and inspection reports.

PART 3 EXECUTION

3.1 WIRING METHOD

- A. Install wiring in metal pathways and wireways.

1. Minimum conduit size shall be 3/4 inch (21 mm). Control and data transmission wiring shall not share conduit with other building wiring systems.
- B. Install cable, concealed in accessible ceilings, walls, and floors when possible.
- C. Wiring within Enclosures:
 1. Bundle, lace, and train conductors to terminal points with no excess and without exceeding manufacturer's limitations on bending radii.
 2. Install lacing bars and distribution spools.
 3. Separate power-limited and non-power-limited conductors as recommended in writing by manufacturer.
 4. Install conductors parallel with or at right angles to sides and back of enclosure.
 5. Connect conductors that are terminated, spliced, or interrupted in any enclosure associated with intrusion system to terminal blocks.
 6. Mark each terminal according to system's wiring diagrams.
 7. Make all connections with approved crimp-on terminal spade lugs, pressure-type terminal blocks, or plug connectors.

3.2 INSTALLATION OF CONDUCTORS AND CABLES

- A. Comply with NECA 1.
- B. Conductors: Size according to system manufacturer's written instructions unless otherwise indicated.
- C. General Requirements for Cabling:
 1. Terminate all conductors; no cable shall contain unterminated elements. Make terminations only at indicated outlets, terminals, and cross-connect and patch panels.
 2. Cables may not be spliced. Secure and support cables at intervals not exceeding 30 inches (760 mm) and not more than 6 inches (150 mm) from cabinets, boxes, fittings, outlets, racks, frames, and terminals.
 3. Bundle, lace, and train conductors to terminal points without exceeding manufacturer's limitations on bending radii, but not less than radii specified in BICSI ITSIM, "Cabling Termination Practices" Chapter. Install lacing bars and distribution spools.
 4. Do not install bruised, kinked, scored, deformed, or abraded cable. Do not splice cable between termination, tap, or junction points. Remove and discard cable if damaged during installation and replace it with new cable.
 5. Pulling Cable: Comply with BICSI ITSIM, Ch. 4, "Pulling Cable." Monitor cable pull tensions.

3.3 FIRE ALARM WIRING INSTALLATION

- A. Comply with NECA 1 and NFPA 72.
- B. Wiring Method: Install wiring in metal raceway according to Section 28 0528 "Pathways for Electronic Safety and Security."
 1. Install plenum cable in environmental air spaces, including plenum ceilings.
- C. Wiring Method:
 1. Cables and raceways used for fire alarm circuits, and equipment control wiring associated with the fire alarm system, may not contain any other wire or cable.

- 2. Signaling Line Circuits: Power-limited fire alarm cables shall not be installed in the same cable or raceway as signaling line circuits.
 - D. Wiring within Enclosures: Separate power-limited and non-power-limited conductors as recommended by manufacturer. Install conductors parallel with or at right angles to sides and back of the enclosure. Bundle, lace, and train conductors to terminal points with no excess. Connect conductors that are terminated, spliced, or interrupted in any enclosure associated with the fire alarm system to terminal blocks. Mark each terminal according to the system's wiring diagrams. Make all connections with approved crimp-on terminal spade lugs, pressure-type terminal blocks, or plug connectors.
 - E. Color-Coding: Color-code fire alarm conductors differently from the normal building power wiring. Use one color-code for alarm circuit wiring and another for supervisory circuits. Color-code audible alarm-indicating circuits differently from alarm-initiating circuits. Use different colors for visible alarm-indicating devices. Paint fire alarm system junction boxes and covers red.
 - F. Wiring to Remote Alarm Transmitting Device: 1-inch (25-mm) conduit between the fire alarm control panel and the transmitter. Install number of conductors and electrical supervision for connecting wiring as needed to suit monitoring function.
- 3.4 POWER AND CONTROL-CIRCUIT CONDUCTORS
- A. 120-V Power Wiring: Install according to Section 26 0519 "Low-Voltage Electrical Power Conductors and Cables" unless otherwise indicated.
- 3.5 CONNECTIONS
- A. Comply with requirements in Section 283111 "Digital, Addressable Fire-Alarm System for connecting, terminating, and identifying wires and cables.
- 3.6 FIRESTOPPING
- A. Comply with requirements in Section 07 8400 "Firestopping."
- 3.7 GROUNDING
- A. For low-voltage wiring and cabling, comply with requirements in Section 260526 "Grounding and Bonding for Electrical Systems."
- 3.8 IDENTIFICATION
- A. Identify system components, wiring, and cabling complying with TIA/EIA-606-A. Comply with requirements for identification specified in Section 26 0553 "Identification for Electrical Systems."
- 3.9 FIELD QUALITY CONTROL
- A. Perform the following tests and inspections:
 - 1. Visually inspect cable placement, cable termination, grounding and bonding, equipment and patch cords, and labeling of all components.
 - B. Document data for each measurement. Print data for submittals in a summary report that is formatted using Table 10.1 in BICSI TDMM as a guide, or transfer the data from the instrument to the computer, save as text files, print, and submit.
 - C. End-to-end cabling will be considered defective if it does not pass tests and inspections.

D. Prepare test and inspection reports.

END OF SECTION

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**SECTION 28 0528
PATHWAYS FOR ELECTRONIC SAFETY AND SECURITY**

PART 1 GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section Includes:
 - 1. Metal conduits, tubing, and fittings.
 - 2. Boxes, enclosures, and cabinets.

PART 2 PRODUCTS

2.1 METAL CONDUITS, TUBING, AND FITTINGS

- A. General Requirements for Metal Conduits and Fittings:
 - 1. Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
- B. GRC: Comply with ANSI C80.1 and UL 6.
- C. IMC: Comply with ANSI C80.6 and UL 1242.
- D. EMT: Comply with ANSI C80.3 and UL 797.
- E. LFMC: Flexible steel conduit with PVC jacket and complying with UL 360.
- F. Fittings for Metal Conduit: Comply with NEMA FB 1 and UL 514B.
 - 1. Fittings for EMT:
 - a. Material: Steel or die cast.
 - b. Type: Setscrew or compression.
 - 2. Expansion Fittings: PVC or steel to match conduit type, complying with UL 467, rated for environmental conditions where installed, and including flexible external bonding jumper.
- G. Joint Compound for IMC, GRC, or ARC: Approved, as defined in NFPA 70, by authorities having jurisdiction for use in conduit assemblies, and compounded for use to lubricate and protect threaded conduit joints from corrosion and to enhance their conductivity.

2.2 BOXES, ENCLOSURES, AND CABINETS

- A. Manufacturers: Subject to compliance with requirements, provide products by the following:
 - 1. Engineer Pre-Approved Equivalent.
- B. General Requirements for Boxes, Enclosures, and Cabinets:
 - 1. Boxes, enclosures and cabinets installed in wet locations shall be listed for use in wet locations.
- C. Sheet-Metal Outlet and Device Boxes: Comply with NEMA OS 1 and UL 514A.

- D. Cast-Metal Outlet and Device Boxes: Comply with NEMA FB 1, ferrous alloy, Type FD, with gasketed cover.
- E. Box extensions used to accommodate new building finishes shall be of same material as recessed box.
- F. Small Sheet Metal Pull and Junction Boxes: NEMA OS 1.
- G. Cast-Metal Access, Pull, and Junction Boxes: Comply with NEMA FB 1 and UL 1773, cast aluminum with gasketed cover.
- H. Device Box Dimensions: 4-inches square by 2-1/8 inches deep (100 mm square by 60 mm deep).
- I. Gangable boxes are prohibited.
- J. Hinged-Cover Enclosures: Comply with UL 50 and NEMA 250, Type 1 with continuous-hinge cover with flush latch unless otherwise indicated.
 - 1. Metal Enclosures: Steel, finished inside and out with manufacturer's standard enamel.
 - 2. Interior Panels: Steel; all sides finished with manufacturer's standard enamel.
- K. Cabinets:
 - 1. NEMA 250, Type 1, galvanized-steel box with removable interior panel and removable front, finished inside and out with manufacturer's standard enamel.
 - 2. Hinged door in front cover with flush latch and concealed hinge.
 - 3. Key latch to match panelboards.
 - 4. Metal barriers to separate wiring of different systems and voltage.
 - 5. Accessory feet where required for freestanding equipment.

PART 3 EXECUTION

3.1 PATHWAY APPLICATION

- A. Outdoors: Apply pathway products as specified below unless otherwise indicated:
 - 1. Exposed Conduit: GRC.
 - 2. Concealed Conduit, Aboveground: IMC.
 - 3. Underground Conduit: RNC, Type EPC-80-PVC, direct buried.
 - 4. Connection to Vibrating Equipment (Including Transformers and Hydraulic, Pneumatic, Electric Solenoid, or Motor-Driven Equipment): LFMC.
 - 5. Boxes and Enclosures, Aboveground: NEMA 250, Type 3R.
- B. Indoors: Apply pathway products as specified below unless otherwise indicated:
 - 1. Exposed, Not Subject to Physical Damage: EMT.
 - 2. Exposed, Not Subject to Severe Physical Damage: EMT.
 - 3. Exposed and Subject to Severe Physical Damage: GRC. Pathway locations include the following:
 - a. Corridors used for traffic of mechanized carts, forklifts, and pallet-handling units.
 - b. Mechanical rooms.

4. Concealed in Ceilings and Interior Walls and Partitions: EMT.
 5. Connection to Vibrating Equipment (Including Transformers and Hydraulic, Pneumatic, Electric-Solenoid, or Motor-Driven Equipment): FMC, except use LFMC in damp or wet locations.
 6. Damp or Wet Locations: GRC.
 7. Boxes and Enclosures: NEMA 250, Type 1, except use NEMA 250, Type 4 stainless steel in institutional and commercial kitchens and damp or wet locations.
- C. Minimum Pathway Size Indoor: 3/4-inch (21-mm) trade size. Minimum size for optical-fiber cables is 1 inch (27 mm).
- D. Minimum Pathway Size Outdoor: 1-inch (27-mm) trade size. Minimum size for optical-fiber cables is 1 inch (27 mm)
- E. Pathway Fittings: Compatible with pathways and suitable for use and location.
1. Rigid and Intermediate Steel Conduit: Use threaded rigid steel conduit fittings unless otherwise indicated. Comply with NEMA FB 2.10.
 2. PVC Externally Coated, Rigid Steel Conduits: Use only fittings listed for use with this type of conduit. Patch and seal all joints, nicks, and scrapes in PVC coating after installing conduits and fittings. Use sealant recommended by fitting manufacturer and apply in thickness and number of coats recommended by manufacturer.
 3. EMT: Use setscrew or compression, cast-metal fittings. Comply with NEMA FB 2.10.
 4. Flexible Conduit: Use only fittings listed for use with flexible conduit. Comply with NEMA FB 2.20.

3.2 INSTALLATION

- A. Comply with NECA 1, NECA 101, and TIA-569-B for installation requirements except where requirements on Drawings or in this article are stricter. Comply with NECA 102 for aluminum pathways. Comply with NFPA 70 limitations for types of pathways allowed in specific occupancies and number of floors.
- B. Keep pathways at least 6 inches (150 mm) away from parallel runs of flues and steam or hot-water pipes. Install horizontal pathway runs above water and steam piping.
- C. Complete pathway installation before starting conductor installation.
- D. Arrange stub-ups so curved portions of bends are not visible above finished slab.
- E. Install no more than the equivalent of three 90-degree bends in any conduit run except for communications wiring conduits for which only two 90-degree bends are allowed. Support within 12 inches (300 mm) of changes in direction.
- F. Conceal conduit and EMT within finished walls, ceilings, and floors unless otherwise indicated. Install conduits parallel or perpendicular to building lines.
- G. Support conduit within 12 inches (300 mm) of enclosures to which attached.
- H. Stub-ups to Above Accessible Ceilings:
 1. Use EMT, IMC, or RMC for pathways.
 2. Use a conduit bushing or insulated fitting to terminate stub-ups not terminated in hubs or in an enclosure.

- I. Threaded Conduit Joints, Exposed to Wet, Damp, Corrosive, or Outdoor Conditions: Apply listed compound to threads of pathway and fittings before making up joints. Follow compound manufacturer's written instructions.
- J. Terminate threaded conduits into threaded hubs or with locknuts on inside and outside of boxes or cabinets. Install insulated bushings on conduits terminated with locknuts.
- K. Install pathways square to the enclosure and terminate at enclosures with locknuts. Install locknuts hand tight plus 1/4 turn more.
- L. Do not rely on locknuts to penetrate nonconductive coatings on enclosures. Remove coatings in the locknut area prior to conduit assembly to assure a continuous ground path.
- M. Cut conduit perpendicular to the length. For conduits of 2-inch (53-mm) trade size and larger, use roll cutter or a guide to ensure cut is straight and perpendicular to the length.
- N. Install pull wires in empty pathways. Use polypropylene or monofilament plastic line with not less than 200-lb (90-kg) tensile strength. Leave at least 12 inches (300 mm) of slack at each end of pull wire. Cap underground pathways designated as spare above grade alongside pathways in use.
- O. Install pathway sealing fittings at accessible locations according to NFPA 70 and fill them with listed sealing compound. For concealed pathways, install each fitting in a flush steel box with a blank cover plate having a finish similar to that of adjacent plates or surfaces. Install pathway sealing fittings according to NFPA 70.
- P. Install devices to seal pathway interiors at accessible locations. Locate seals so no fittings or boxes are between the seal and the following changes of environments. Seal the interior of all pathways at the following points:
 - 1. Where an underground service pathway enters a building or structure.
 - 2. Where otherwise required by NFPA 70.
- Q. Flexible Conduit Connections: Comply with NEMA RV 3. Use maximum of 72 inches (1830 mm) of flexible conduit for equipment subject to vibration, noise transmission, or movement; and for transformers and motors.
 - 1. Use LFMC in damp or wet locations subject to severe physical damage.
- R. Mount boxes at heights indicated on Drawings. If mounting heights of boxes are not individually indicated, give priority to ADA requirements. Install boxes with height measured to center of box unless otherwise indicated.
- S. Recessed Boxes in Masonry Walls: Saw-cut opening for box in center of cell of masonry block, and install box flush with surface of wall. Prepare block surface to provide a flat surface for a raintight connection between box and cover plate or supported equipment and box.
- T. Horizontally separate boxes mounted on opposite sides of walls so they are not in the same vertical channel.
- U. Support boxes of three gangs or more from more than one side by spanning two framing members or mounting on brackets specifically designed for the purpose.
- V. Fasten junction and pull boxes to or support from building structure. Do not support boxes by conduits.

3.3 FIRESTOPPING

- A. Install firestopping at penetrations of fire-rated floor and wall assemblies. Comply with requirements in Section 07 8400 "Firestopping."

3.4 PROTECTION

A. Protect coatings, finishes, and cabinets from damage and deterioration.

1. Repair damage to galvanized finishes with zinc-rich paint recommended by manufacturer.

END OF SECTION

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**SECTION 28 3111
DIGITAL, ADDRESSABLE FIRE-ALARM SYSTEM**

SOFTPART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section. See Division 01 for submittal procedures, quality requirements, alterations of work, and closeout requirements.

1.2 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. Remote annunciator.
 - 7. Addressable interface device.
 - 8. Digital alarm communicator transmitter.

1.3 DEFINITIONS

- A. LED: Light-emitting diode.
- B. NICET: National Institute for Certification in Engineering Technologies.

1.4 SYSTEM DESCRIPTION

- A. Noncoded addressable system, with automatic sensitivity control of certain smoke detectors and multiplexed signal transmission, dedicated to fire-alarm service only.

1.5 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Shop Drawings: For fire-alarm system. Include plans, elevations, sections, details, and attachments to other work.
 - 1. Comply with recommendations in the "Documentation" Section of the "Fundamentals of Fire Alarm Systems" Chapter in NFPA 72.
 - 2. Include voltage drop calculations for notification appliance circuits.
 - 3. Include battery-size calculations.
 - 4. Include performance parameters and installation details for each detector, verifying that each detector is listed for complete range of air velocity, temperature, and humidity possible when air-handling system is operating.

5. Include plans, sections, and elevations of heating, ventilating, and air-conditioning ducts, drawn to scale and coordinating installation of duct smoke detectors and access to them. Show critical dimensions that relate to placement and support of sampling tubes, detector housing, and remote status and alarm indicators. Locate detectors according to manufacturer's written recommendations.
- 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 under the supervision of persons with the following qualifications:
 - a. NICET-certified fire-alarm technician, Level IV minimum.
- 1.6 INFORMATIONAL SUBMITTALS
- A. Field quality-control reports.
- 1.7 CLOSEOUT SUBMITTALS
- A. Operation and Maintenance Data: For fire-alarm systems and components to include in emergency, operation, and maintenance manuals. Include the following:
1. Comply with the "Records" Section of the "Inspection, Testing and Maintenance" Chapter in NFPA 72.
 2. Provide "Record of Completion Documents" according to NFPA 72 article "Permanent Records" in the "Records" Section of the "Inspection, Testing and Maintenance" Chapter.
 3. Record copy of site-specific software.
 4. Provide "Maintenance, Inspection and Testing Records" according to NFPA 72 article of the same name and include the following:
 - a. Frequency of testing of installed components.
 - b. Frequency of inspection of installed components.
 - c. Requirements and recommendations related to results of maintenance.
 - d. Manufacturer's user training manuals.
 5. Manufacturer's required maintenance related to system warranty requirements.
 6. Abbreviated operating instructions for mounting at fire-alarm control 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.
- 1.8 QUALITY ASSURANCE
- A. Installer Qualifications: Personnel shall be trained and certified by manufacturer for installation of units required for this Project. Firm providing contract maintenance service as a regular part of their business.

- B. Designer Qualifications: NICET Level III or IV (3 or 4) certified fire alarm technician or registered fire protection engineer, employed by fire alarm control panel manufacturer, Contractor, or installer, with experience designing fire alarm systems in the jurisdictional area of the authorities having jurisdiction.
- C. Source Limitations for Fire-Alarm System and Components: Obtain fire-alarm system from single source from single manufacturer. Components shall be compatible with, and operate as, an extension of existing system.
- D. 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.
- E. Product Listing Organization Qualifications: An organization recognized by OSHA as a Nationally Recognized Testing Laboratory (NRTL) and acceptable to authorities having jurisdiction.
- F. NFPA Certification: Obtain certification according to NFPA 72 by an NRTL.

1.9 SOFTWARE SERVICE AGREEMENT

- A. Comply with UL 864.
- B. Technical Support: Beginning with Substantial Completion, provide software support for two years.
- C. Upgrade Service: Update software to latest version at Project completion. Install and program software upgrades that become available within two years from date of Substantial Completion. Upgrading software shall include operating system. Upgrade shall include new or revised licenses for use of software.
 - 1. Provide 30 days' notice to Owner to allow scheduling and access to system and to allow Owner to upgrade computer equipment if necessary.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. Siemens Building Technologies, Inc.; Fire Safety Division.
 - 2. Or engineer pre-approved equivalent.

2.2 SYSTEMS OPERATIONAL DESCRIPTION

- A. Fire-alarm signal initiation shall be by one or more of the following devices:
 - 1. Manual stations.
 - 2. Heat detectors.
 - 3. Smoke detectors.
 - 4. Duct smoke detectors.
 - 5. Automatic sprinkler system water flow.
 - 6. Heat detectors in elevator shaft and pit.
- B. Fire-alarm signal shall initiate the following actions:

1. Continuously operate alarm notification appliances.
 2. Identify alarm at fire-alarm control unit and remote annunciators.
 3. Transmit an alarm signal to the remote alarm receiving station.
 4. Activate voice/alarm communication system.
 5. Switch heating, ventilating, and air-conditioning equipment controls to fire-alarm mode.
 6. 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.
- 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 primary power at fire-alarm control unit.
 4. Ground or a single break in fire-alarm control unit internal circuits.
 5. Abnormal ac voltage at fire-alarm control unit.
 6. Break in standby battery circuitry.
 7. Failure of battery charging.
 8. Abnormal position of any switch at fire-alarm control unit or annunciator.
 9. Fire-pump power failure, including a dead-phase or phase-reversal condition.
- E. System Trouble and Supervisory Signal Actions: annunciate at fire-alarm control unit and remote annunciators . Record the event in system memory.
- F. System Trouble and Supervisory Signals Actions: annunciate at fire-alarm control unit and remote control units. Record the event in system memory.

2.3 FIRE-ALARM CONTROL UNIT

- A. General Requirements for Fire-Alarm Control Unit:
1. Field-programmable, microprocessor-based, modular, power-limited design with electronic modules, complying with UL 864 and listed and labeled by an NRTL.
 - a. System software and programs shall be held in flash electrically erasable programmable read-only memory (EEPROM), 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
 2. Addressable initiation devices that communicate device identity and status.
- B. Alphanumeric Display and System Controls: Arranged for interface between human operator at fire-alarm control unit and addressable system components including annunciation and supervision. Display alarm, supervisory, and component status messages and the programming and control menu.
1. Annunciator and Display: Liquid-crystal type, 3 line(s) of 80 characters, minimum.

2. Keypad: Arranged to permit entry and execution of programming, display, and control commands.
- C. Circuits:
1. Initiating Device, Notification Appliance, and Signaling Line Circuits: NFPA 72, Class A.
 - a. Initiating Device Circuits: Style D.
 - b. Notification Appliance Circuits: Style Z.
 - c. Signaling Line Circuits: Style 2.
 - d. Install no more than 50 addressable devices on each signaling line circuit.
- D. Notification Appliance Circuit: Operation shall sound in a temporal pattern.
- E. Elevator Recall:
1. Smoke detectors at the following locations shall initiate automatic elevator recall.
 - a. Elevator lobby detectors except the lobby detector on the designated floor.
 - b. Smoke detector in elevator machine room.
 2. Elevator lobby detectors located on the designated recall floors shall be programmed to move the cars to the alternate recall floor.
 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.
- 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.
- 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. Indicated 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 and be listed by an NRTL.
 - a. Allow the application of and evacuation signal to indicated number of zones and, at same time, allow voice paging to the other zones selectively or in any combination.
 - b. Standard digitally recorded messages for "Evacuation" and "All Clear."
 - c. 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 various voice/alarm speaker zones and the status of firefighters' two-way telephone communication zones.
 3. Preamplifiers, amplifiers, and tone generators shall automatically transfer to backup units, on primary equipment failure.
- J. 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 signals shall be powered by 24-V dc source.
- K. Secondary Power: 24-V dc supply system with batteries, automatic battery charger, and automatic transfer switch.
1. Batteries: Sealed lead calcium.
- L. 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.

2.4 MANUAL FIRE-ALARM BOXES

- A. 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, breaking-glass or plastic-rod 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.

2.5 SYSTEM SMOKE DETECTORS

- A. General Requirements for System Smoke Detectors:
1. Comply with UL 268; operating at 24-V dc, nominal.
 2. Detectors shall be four-wire type.
 3. Integral Addressable Module: Arranged to communicate detector status (normal, alarm, or trouble) to fire-alarm control unit.
 4. 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.
 5. Self-Restoring: Detectors do not require resetting or readjustment after actuation to restore them to normal operation.
 6. Integral Visual-Indicating Light: LED type indicating detector has operated.
 7. Remote Control: Unless otherwise indicated, detectors shall be analog-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. Provide multiple levels of detection sensitivity for each sensor.
- B. 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.

2. An operator at fire-alarm control unit, having the designated access level, shall be able to manually access the following for each detector:
 - a. Primary status.
 - b. Device type.
- C. 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. An operator at fire-alarm control unit, having the designated access level, shall be able to manually access the following for each detector:
 - a. Primary status.
 - b. Device type.
 3. Each sensor shall have multiple levels of detection sensitivity.
 4. Sampling Tubes: Design and dimensions as recommended by manufacturer for specific duct size, air velocity, and installation conditions where applied.
 5. Relay Fan Shutdown: Rated to interrupt fan motor-control circuit.

2.6 HEAT DETECTORS

- A. General Requirements for Heat Detectors: Comply with UL 521.
- B. Heat Detector, Combination Type: Actuated by either a fixed temperature of 135 deg F (57 deg C) or a rate of rise that exceeds 15 deg F (8 deg C) per minute unless otherwise indicated.
 1. Mounting: Twist-lock base interchangeable with smoke-detector bases.
- 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.
- D. Continuous Linear Heat-Detector System:
 1. Detector Cable: Rated detection temperature 221 deg F (105 deg C). NRTL listed for "regular" service and a standard environment. Cable includes two steel actuator wires twisted together with spring pressure, wrapped with protective tape, and finished with PVC outer sheath. Each actuator wire is insulated with heat-sensitive material that reacts with heat to allow the cable twist pressure to short-circuit wires at the location of elevated temperature.
 2. Control Unit: Two-zone or multizone unit as indicated. Provide same system power supply, supervision, and alarm features as specified for fire-alarm control unit.
 3. Signals to Fire-Alarm Control Unit: Any type of local system trouble shall be reported to fire-alarm control unit as a composite "trouble" signal. Alarms on each detection zone shall be individually reported to central fire-alarm control unit as separately identified zones.

2.7 NOTIFICATION APPLIANCES

- A. 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.

- B. Visible Notification Appliances: Xenon strobe lights comply 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, red.
- C. Voice/Tone Notification Appliances:
 - 1. Appliances shall comply with UL 1480 and shall be listed and labeled by an NRTL.
 - 2. High-Range Units: Rated 2 to 15 W.
 - 3. Low-Range Units: Rated 1 to 2 W.
 - 4. Mounting: Flush.
 - 5. Matching Transformers: Tap range matched to acoustical environment of speaker location.
- D. Voice/Tone Notification Speaker Cluster
 - 1. Comply with UL 1480.
 - 2. Integral matching transformer with adjustable wattage tap selector
 - 3. Cluster configuration shall include two, three, or four 15 W loudspeakers as indicated on the plans. Speakers shall be swivel mounted for adjustability.
 - 4. High intensity 115/177 cd strobe, selectable in the field.
 - 5. Ceiling mounted.

2.8 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.

2.9 ADDRESSABLE INTERFACE DEVICE

- A. Description: Microelectronic monitor module, NRTL listed for use in providing a system address for alarm-initiating devices for wired applications with normally open contacts.

2.10 DIGITAL ALARM COMMUNICATOR TRANSMITTER

- A. Digital alarm communicator transmitter shall be acceptable to the remote central station and shall comply with UL 632 and be listed and labeled by an NRTL.

- B. 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 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.
- C. 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.
- D. 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 or loss of power.
 - 5. Communication bus failure.
- E. Secondary Power: Integral rechargeable battery and automatic charger.
- F. Self-Test: Conducted automatically every 24 hours with report transmitted to central station.

2.11 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 manufacturer of device.
 - 2. Finish: Paint of color to match the protected device.

PART 3 EXECUTION

3.1 EQUIPMENT INSTALLATION

- A. Comply with NFPA 72 for installation of fire-alarm equipment.
- B. Equipment Mounting: Install fire-alarm control unit on concrete base with tops of cabinets not more than 72 inches (1830 mm) above the finished floor.
 - 1. Install dowel rods to connect concrete base to concrete floor. Unless otherwise indicated, install dowel rods on 18-inch (450-mm) centers around the full perimeter of concrete base.
 - 2. Place and secure anchorage devices. Use setting drawings, templates, diagrams, instructions, and directions furnished with items to be embedded.
 - 3. Install anchor bolts to elevations required for proper attachment to supported equipment.
- C. Smoke- or Heat-Detector Spacing:

1. Comply with NFPA 72, "Smoke-Sensing Fire Detectors" Section in the "Initiating Devices" Chapter, for smoke-detector spacing.
 2. Smooth ceiling spacing shall not exceed 30 feet (9 m).
 3. HVAC: Locate detectors not closer than 3 feet (1 m) from air-supply diffuser or return-air opening.
 4. Lighting Fixtures: Locate detectors not closer than 12 inches (300 mm) from any part of a lighting fixture.
- D. Duct Smoke Detectors: Comply with NFPA 72 and IMC. Install sampling tubes so they extend the full width of duct.
- E. Remote Status and Alarm Indicators: Install near each smoke detector and each sprinkler water-flow switch and valve-tamper switch that is not readily visible from normal viewing position.
- F. 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.
- G. Visible Alarm-Indicating Devices: Install adjacent to each alarm bell or alarm horn and at least 6 inches (150 mm) below the ceiling.
- H. Device Location-Indicating Lights: Locate in public space near the device they monitor.
- I. Fire-Alarm Control Unit: Surface mounted, with tops of cabinets not more than 72 inches (1830 mm) above the finished floor.
- J. Annunciator: Install with top of panel not more than 72 inches (1830 mm) above the finished floor.

3.2 CONNECTIONS

- A. Make addressable connections with a supervised interface device to the following devices and systems. Install the interface device less than 3 feet (1 m) from the device controlled. Make an addressable confirmation connection when such feedback is available at the device or system being controlled.
1. Supervisory connections at valve supervisory switches.

3.3 IDENTIFICATION

- A. Identify system components, wiring, cabling, and terminals. Comply with requirements for identification specified in Section 26 0553 "Identification for Electrical Systems."
- B. Install framed instructions in a location visible from fire-alarm control unit.

3.4 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.

3.5 FIELD QUALITY CONTROL

- A. Field tests shall be witnessed by authorities having jurisdiction.
- B. Manufacturer's Field Service: Engage a factory-authorized service representative to inspect, test, and adjust components, assemblies, and equipment installations, including connections.
- C. Perform tests and inspections.

1. Manufacturer's Field Service: Engage a factory-authorized service representative to inspect components, assemblies, and equipment installations, including connections, and to assist in testing.
- D. Tests and Inspections:
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 NFPA 72 in its "Completion Documents, Preparation" Table in the "Documentation" Section of the "Fundamentals of Fire Alarm Systems" Chapter.
 2. System Testing: Comply with "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 visible appliances for the public operating mode according to manufacturer's written instructions.
 5. Factory-authorized service representative shall prepare the "Fire Alarm System Record of Completion" in the "Documentation" Section of the "Fundamentals of Fire Alarm Systems" Chapter in NFPA 72 and the "Inspection and Testing Form" in the "Records" Section of the "Inspection, Testing and Maintenance" Chapter in NFPA 72.
- E. Reacceptance Testing: Perform reacceptance testing to verify the proper operation of added or replaced devices and appliances.
- F. Fire-alarm system will be considered defective if it does not pass tests and inspections.
- G. Prepare test and inspection reports.
- 3.6 DEMONSTRATION
- A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain fire-alarm system.

END OF SECTION

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