PROJECT MANUAL

PROJECT NAME:

DOC IMCC Admin Bldg Water Mitigation

PROJECT ADDRESS:
2700 Coral Ridge Ave
Coralville, Iowa 52241

PROJECT DATE: November 18, 2026

-

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

OWNER PROJECT NUMBER: 9542.00

OWNER REQUEST FOR BID NUMBER: RFB 954200-01

-

CONSTRUCTION MANAGER:
The Samuels Group
2929 Westown Parkway Suite 200,
West Des Moines, Iowa 50266

CONSTRUCTION MANAGER PROJECT NUMBER: 7908

-

ARCHITECT:
Shive Hattery
2839 Northgate Drive
Iowa City, Iowa 52245

ARCHITECT PROJECT NUMBER: 2260015580

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SECTION 00 0105

Seals Page

	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. Signature: Kevin Buell Date: 11/18/2026 Name: Kevin Buell Iowa License Number: 27651 My license renewal date is December 31, 2027 Divisions covered by this seal: 07, 31, 32, 33

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END OF SECTION

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B.	C001	Existing Conditions Plan
C.	C101	Erosion and Sediment Control Plan
D.	C201	Site Access Plan
E.	C301	Site Preparation and Demolition Plan
F.	C401	Site Utility Plan
G.	C501	Construction Details
H.	C601	Site Restoration Plan
I.	C701	Site Grading Plan

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SECTION 00 0116

BID SUBMITTAL CHECKLIST

PART 1 - **GENERAL**

1.01 **BID SUBMITTAL CHECKLIST**

A. The Bidder is responsible for seeing 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 #954200-01

The Iowa Department of Administrative Services will be receiving bids to mitigate the water infiltration into the basement of the IMCC Administration Building through the installation of new storm sewer, foundation drain tile and building waterproofing at Iowa Medical Classification Center (IMCC), 2700 Coral Ridge Ave., Coralville, Iowa 52241.

The Iowa Department of Administrative Services anticipates construction to begin on April 1, 2027, and end on June 14, 2027.

Bids must be received no later than **2:00 pm, Tuesday, December 22, 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: Microsoft Teams Meeting
https://teams.microsoft.com/meet/2815683871048493?p=eC3VEzcSsK4wmLFPxD
and teleconference number 1-469-998-6043 Pin: 166 748 17# at 3:00 pm on December 22, 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 2:00 pm, December 11, 2026, to the Issuing Officer.

Bidding documents may stipulate a specific product. Substitute product will be considered if a written request is received by 2:00 pm, December 11, 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 Wednesday, December 9, 2026, at 10:00 am at Iowa Medical Classification Center at 2700 Coral Ridge Ave., Coralville, Iowa 52241. This meeting is not mandatory but is highly recommended.

Bidding Documents, including drawing sheets bearing the project name IMCC Admin Bldg Water Mitigation, Dated 11/18/26 and the Project Manual prepared by Shive Hattery dated 11/18/26, may be obtained from Beeline & Blue by visiting www.beelineandblue.com or by calling (515) 244-1611 on Monday, November 23, 2026.

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

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SECTION 00 2113

INSTRUCTIONS TO BIDDERS

RFB #954200-01

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Project Description
B. Owner
C. State Agency Representatives and Contacts
D. Proposal Form and Submissions
E. Taxes
F. Alternate Bids
G. Drawings
H. Bid Security
I. Due Date and Time for Receipt of Bids
J. Commencement and Completion Date
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

Project Description: To mitigate the water infiltration into the basement of the IMCC Administration Building through the installation of new storm sewer, foundation drain tile and building waterproofing.

1.03 OWNER

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@das.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@das.iowa.gov

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

D. CONSTRUCTION MANAGER CONTACT: Brian Polzin, Samuels Group, 2929 Westown Parkway Suite 200, West Des Moines, IA 50266, Phone: 515-218-0227; email: bpolzin@samuelsgroup.net

E. DESIGN PROFESSIONAL CONTACT: Kevin Buell, Shive Hattery, 2839 Northgate Drive, Iowa City, IA 52245, Phone: 319-471-5330; email: kbuell@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)
5) Certification of Site Visit (To be uploaded online if Pre-Bid is Mandatory)
C. Include the amount for performing all work described in the drawings and specifications for Base Bid and for each Alternate Bid requested.
D. Acknowledge receipt of all Addenda issued, where so indicated on the Bid Form
E. All required information to be submitted, by an officer of the company having authority to bind the company in a contract.
F. Commencement of the work of the contract shall begin with the Contractor's receipt of a fully executed contract (signed by both parties).
G. The Owner reserves the right to award a contract for Base Bid only, or for Base Bid in combination with any, or all, identified Alternate Bids. The Owner reserves the right to award a contract for individual Bid Packages, or any combination of Bid Packages. Each Bidder must comply with all of the General Requirements of the project and any requirements of the Project manual that apply to their scope of work.
H. The company's Federal I.D. Number and the Iowa Contractors Registration Number shall be included in the Bid Form.
I. Unless indicated otherwise, the Bid shall be for a single responsibility contract for all work as indicated on the Drawings and specified in the Project Manual, and shall be a lump sum amount. If no change in the Base Bid amount is required with respect to consideration of a particular Alternate Bid, enter "No Change" in the blank for that Alternate Bid.

J. Where so requested, provide Unit Prices for the designated types of work and in the units specified, in which the Unit Prices would be used as adjustments to the quantities described in the instructions as the basis for the Base Bid and any Alternate Bid work. A Unit Price would be applicable in the event the Owner should request additional work of that type beyond the extent and quantity that has been established as the scope of the work by graphic delineation and notations on the Drawings, or by otherwise stipulating in the Bidding Documents a numerical quantity of the work, for the Bidder's use in determining the lump sum bid amount for the Base Bid and any requested Alternate Bid containing such work. The Unit Prices shall also be used to adjust the Contract Amount for actual quantities of work involved when the work subject to Unit Price adjustment differs by being less in quantity than that contemplated by the original scope of work for the respective Base Bid or Alternate Bid.

K. Completed State of Iowa Nondiscrimination Clause information and Subcontractor Targeted Small Business Enterprise Pre-Bid Contact Information, included in these Bidding Documents, are to accompany the Bid submission. Bidders shall comply with all affirmative action/equal opportunity provisions of State and Federal laws. The Owner seeks to provide opportunities for Targeted Small Businesses in accordance with the provisions of Chapter 73 of the Code of Iowa.

L. All Bid information is to be submitted online. Any required Bid Security shall be provided, in the form and amount specified elsewhere in these Instructions to Bidders, at the time of submission of the Bid. When a site visit is mandatory as specified elsewhere in these Instructions to Bidders, and a Certificate of Site Visit is required to be submitted with the Bid as evidence of such visit having occurred for purposes of observing the conditions of the site and the work proposed therein, the Certificate shall be uploaded with the bid submission.

3.02 TAXES

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

3.03 ALTERNATE BIDS

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

3.04 DRAWINGS AND PROJECT MANUAL

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

3.05 BID SECURITY

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

3.06 DUE DATE AND TIME FOR RECEIPT OF BIDS

A. Properly completed Bids shall be submitted online through IMPACS Electronic Procurement System, no later than the time and date specified in the Notice to Bidder or any extension thereof made by Addendum. Written, emailed, oral or telephonic Bids are invalid, and will not receive consideration. The Bidder shall assume full responsibility for the timely online submission of the Bid. Late bids will not be accepted.

3.07 COMMENCEMENT AND COMPLETION DATES

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

3.08 SITE VISIT

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

3.09 PRE-BID MEETING

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

3.010 QUESTIONS

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

3.011 ADDENDA AND INTERPRETATIONS OF THE CONTRACT DOCUMENTS

A. Any person contemplating submitting a proposal for the proposed Contract, who is in doubt as to the true meaning of any part of the Bidding Documents, shall submit a written request for an interpretation thereof. The person submitting a request will be responsible for its prompt delivery. Every

request for such interpretation should reference the Bid Number specified in the Bidding Documents, and shall be made in writing (email preferred). Questions shall be submitted to the previously identified Purchasing Agent for the Department of Administrative Services. To be given consideration, requests shall be received as specified in the Notice to Bidders or any extension thereof made by Addendum. Replies, which revise or correct the Bidding Documents, or provide necessary clarifications, will be issued in the form of a written Addendum to the Bidding Documents. Interpretations, corrections or changes of the Bidding Documents made in any other manner will not be binding, and Bidders shall not rely upon such interpretations, corrections, or changes. The Bidder is to include any resultant cost changes in the Bid Sum. Addenda will be posted electronically at the respective bid site where the bid is initially posted. Acknowledgment by the Bidder of each issued Addendum shall be noted in the location so indicated on the Bid. All Addenda issued shall become part of the Contract Documents.

3.012 SUBSTITUTIONS

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

3.013 OBLIGATION OF BIDDER

A. It shall be the responsibility of each Bidder contemplating the submission of a Bid for the proposed Contract to fully acquaint himself/herself with conditions at the work site, project requirements, and to become acquainted thoroughly with the work, and all conditions that may be related to it. No considerations or revision in the contract price or scope of the project will be considered by the Owner for any item that could have been revealed by a thorough on-site inspection and examination.

B. By submission of a Bid, it shall be understood that the Bidder assures that he/she has reviewed and is thoroughly familiar with the project requirements, contract conditions and supplementary conditions, the drawings, specifications, addenda, and that the bidder is aware of the conditions existing at the site that may relate to the work of this project. Failure of any Bidder to examine any form, document, or other instrument shall in no way relieve the Bidder from any obligation in respect to his/her Bid.

3.014 PUBLIC RECORDS AND REQUESTS FOR CONFIDENTIAL TREATMENT

A. The Agency’s release of public records is governed by Iowa Code chapter 22. Contractors are encouraged to familiarize themselves with Chapter 22 before submitting a Proposal. The Agency will copy and produce public records upon request as required to comply with Chapter 22 and will treat all information submitted by a Contractor as non-confidential records unless Contractor requests specific parts of the Proposal be treated as confidential at the time of the submission as set forth herein AND the information is confidential under Iowa or other applicable law.

B. A Contractor requesting confidential treatment of specific information must: (1) fully complete Form 22 (Available at https://das.iowa.gov/sites/default/files/procurement/pdf/Form%2022-ConfidentialityRequest-RFB.pdf), (2) identify the request in the transmittal letter with the Contractor’s Proposal, (3) conspicuously mark the outside of its Proposal as containing confidential information, (4) mark each page upon which confidential information appears, and (5) submit a “Public Copy” from which the confidential information has been excised.

C. Form 22 will not be considered fully complete unless, for each confidentiality request, the Contractor: (1) enumerates the specific grounds in Iowa Code chapter 22 or other applicable law that supports treatment of the material as confidential, (2) justifies why the material should be maintained in confidence, (3) explains why disclosure of the material would not be in the best interest of the public, and (4) sets forth the name, address, telephone, and e-mail for the person authorized by Contractor to respond to inquiries by the Agency concerning the confidential status of such material.

D. The Public Copy from which confidential information has been excised is in addition to the number of copies requested in Section 3 of this RFP. The confidential material must be excised in such a way as to allow the public to determine the general nature of the material removed and to retain as much of the Proposal as possible.

E. **Failure to request information be treated as confidential as specified herein shall relieve Agency and State personnel from any responsibility for maintaining the information in confidence. Contractors may not request confidential treatment with respect to pricing information and transmittal letters. A contractor's request for confidentiality that does not comply with this section or a contractor's request for confidentiality on information or material that cannot be held in confidence as set forth herein are grounds for rejecting contractor's Proposal as non-responsive. Requests to maintain an entire Proposal as confidential will be rejected as non-responsive.**

F. If Agency receives a request for information that Contractor has marked as confidential and if a judicial or administrative proceeding is initiated to compel the release of such material, Contractor shall, at its sole expense, appear in such action and defend its request for confidentiality. If Contractor fails to do so, Agency may release the information or material with or without providing advance notice to Contractor and with or without affording Contractor the opportunity to obtain an order restraining its release from a court possessing competent jurisdiction. Additionally, if Contractor fails to comply with the request process set forth herein, if Contractor's request for confidentiality is unreasonable, or if Contractor rescinds its request for confidential treatment, Agency may release such information or material with or without providing advance notice to Contractor and with or without affording Contractor the opportunity to obtain an order restraining its release from a court possessing competent jurisdiction.

3.015 WITHDRAWAL OF BID

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

3.016 BID OPENING

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

3.017 BASIS OF BIDS

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

B. In accordance with Iowa law, Section 8A.311: A bidder, to be considered for an award of a state construction contract, shall disclose to the state agency awarding the contract the names of all subcontractors and suppliers who will work on the project being bid, within forty-eight (48) hours after the published date and time by which bids must be submitted. A bidder shall not replace a subcontractor or supplier disclosed without the approval of the state agency awarding the contract.

1. A bidder, prior to an award or who is awarded a state construction contract, shall disclose all of the following, as applicable:

a. If a subcontractor or supplier disclosed (under the preceding) by a bidder is replaced, the reason for replacement and the name of the new subcontractor or supplier;

b. If the cost of work to be done by a subcontractor or supplier is changed or if the replacement of a subcontractor or supplier results in a change in the cost, the amount of the change in cost.
c. Any reduction in subcontractor or supplier price as a result of the change, if the change is approved by the Owner, shall be deducted from the Trade Contract via a deductive Change Order. Any such changes, if approved by the Owner, which result in an increase in the Trade Contract Price shall be borne by the Trade Contractor.
C. The Bidder is specifically advised that any person, firm or other party to whom it is proposed to award a subcontract under this contract must:
1. Be registered in the State of Iowa and have an Iowa Contractor's Registration number, and
2. Be acceptable to the Owner.

3.018 INFORMALITIES/ REJECTION OF BIDS

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

3.019 CONSIDERATION OF BIDS

A. It is the intent of the Department of Administrative Services to award a Contract to the lowest responsible Bidder, provided the Bid has been submitted in accordance with the requirements of the Bidding Documents and is determined to be compliant with all Bidding Requirements, and does not exceed the funds available for construction.
B. Bidder is to bid on each Alternate Bid requested. Failure to do so may result in disqualification of the bid. The Department of Administrative Services reserves the right to accept any, or no, Alternate Bid. Alternate Bids may be considered in any order or combination, and the low successful Bidder will be determined on the basis of the sum of the Base Bid and the Alternate(s) accepted at the time of the Contract award.
C. In evaluating Bids, any proposal offered by a Bidder for an alternate design, or for materials other than those shown or specified for the Base Bid or for Alternate Bid construction under the proposed Construction Documents or called for by any issued Addenda to those Construction Documents, will not be considered in determining the low successful Bidder. However, the Department of Administrative Services reserves the right to consider any such Bidder-proposed (Contractor's Alternate) alternate designs or materials with the low successful Bidder, after the low successful Bidder is determined in the manner described above (A and B).
D. Notice of Intent to Award the Bid(s) will be sent to all Respondents submitting a timely Bid and may be posted at the website shown on the RFB cover sheet. Negotiation and execution of the Contract(s) shall be completed no later than fifteen (15) days from the date of the Notice of Intent to Award or such other time as designated by Agency. If the successful Bidder fails to negotiate and deliver an executed Contract, including all required documents such as payment and performance bonds and insurance certificate, by that date, the Agency, in its sole discretion, may cancel the award and award the Contract to the remaining Bidder the Agency believes will provide the best value to the State.

3.020 PREFERENCE

A. By virtue of statutory authority, a preference shall be given to Iowa domestic labor, products produced and provisions grown within the state of Iowa, in accordance with the provisions of Chapter 73, Code of Iowa and any amendments thereto.
B. Enforcement of reciprocal resident bidder preference and resident labor force preference codified at Iowa Code Section 73A.21.
1. NOTICE: Failure on the part of the bidder to carefully read the following paragraphs and to provide the information requested below may make the bidder's bid materially nonresponsive and therefore ineligible for contract award. Violations of Iowa Code Section 73A.2l may, among other things, result in civil penalties

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

3.021 QUALIFICATIONS

A. In accordance with Iowa Code 26.9(2) and 26.16, no potential bidder shall be required to provide confidential or proprietary information or meet any class requirements as a precondition to submitting a responsive bid. However, as noted in Iowa Code 26.9(2), the lowest responsive bidder may be required to provide additional information to verify responsibility prior to and as a condition of obtaining final award of the contract. Any qualification requirements contained in any bid document indicates only preferred qualifications, not a precondition to bid, and the lowest responsive bidder’s qualifications will be evaluated individually based on all information provided.
B. The Owner may make such investigations as he or she deems necessary to determine the ability of the awarded Bidder to perform the required work, and the awarded Bidder shall furnish to the Owner all such information and data for this purpose. The Owner reserves the right to rescind any awarded Bid if the evidence submitted by, or in investigation of, such Bidder fails to satisfy the Owner that the Bidder is properly qualified to carry-out the obligations of the Contract and to complete the Work contemplated therein.
C. The Contractor shall possess an employer account number or special contractor number issued by the Department of Workforce Development pursuant to chapter 96, the Iowa employment security law. This is also a requirement for registration with DIAL.
D. Non-resident corporations submitting bids must be in compliance with Section 490.1501 of the Code of Iowa and legally authorized thereby to carry-on such business in the State of Iowa as is required by the Contract Documents.
E. An out-of-state Bidder, if awarded a contract, will be required to submit evidence of authorization to do business in the State of Iowa.

3.022 INSURANCE

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

3.023 FORM OF AGREEMENT BETWEEN OWNER AND CONTRACTOR

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

3.024 EXECUTION OF CONTRACT

A. Contract documents shall mean and include the following:
1. Contract: ConsensusDOCS 802
2. Performance and Payment Bonds
3. Project Manual
4. Drawings
5. Numbered Addenda issued after initial publication of Bid Documents
6. Numbered Modifications (Change Orders) issued after Contract is signed

3.025 LAWS AND REGULATIONS

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

3.026 CONTRACT DOCUMENTS AND ORDER OF PRECEDENCE

A. Where an irreconcilable conflict exists among Applicable Legal Requirements, this Contract, the specifications in the Materials and the Drawings, the earliest item mentioned in this sentence involving a

conflict shall control over any later mentioned item or items subject to such conflict unless doing so would result in reducing the Bidder's duty of care or obligations under this Contract, in which case the terms resulting in the highest requirements for Bidder performance shall control.

3.027 CONDITIONS OF THE WORK

A. Each bidder must fully inform him/herself of the conditions under which the work is to be performed at the site of the work, the obstacles which may be encountered, and all other relevant matters concerning the work to be performed. Failure to do so will not relieve a successful bidder of the obligation to furnish all material and labor necessary to carry out the provisions of the contract. When a site visit is required by provisions located elsewhere in these Instructions to Bidders, as a site tour in conjunction with a mandatory Pre-Bid Meeting, it shall be the Bidder's responsibility to fulfill this obligation as a condition of bidding the Work described in the Bidding Documents.

B. No allowance will be made for any additional compensation by reason of any matter or condition with which the bidder might have fully informed him/herself, but failed to do so prior to bidding. Insofar as possible, the Contractor and all subcontractors shall employ such methods or means in carrying out the work so as not to cause any interruption of, or interference with, the work of any other subcontractor or trade.

3.028 SUBCONTRACTS

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

END OF SECTION

SECTION 00 2113.01

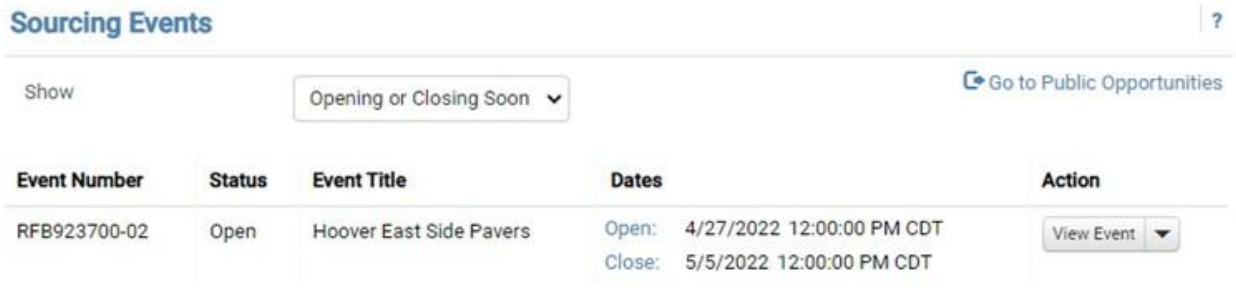
IMPACS Public Construction Bidders User Guide

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

Bidders must be registered in IMPACS to submit a Bid.

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

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



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

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

Prerequisites - Bidder must complete all prerequisites.

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

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

Questions - Bidder must complete all questions.

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

SECTION 00 2113.02

SAMPLE

ACORD

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

COVERAGES CERTIFICATE NUMBER: REVISION NUMBER:

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

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS Minimum	
* A	COMMERCIAL GENERAL LIABILITY CLAIMS-MADE [X] OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: POLICY [X] PRO-JECT [ ] LOC OTHER:	X	X	#TBD- CGL	3/1/17	3/1/18	EACH OCCURRENCE	$ 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 - COMP/OP AGG	$ 1,000,000
								$
B	AUTOMOBILE LIABILITY [X] ANY AUTO ALL OWNED AUTOS HIRED AUTOS SCHEDULED AUTOS 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)	amount varies based on paragraph 10.2.2 of the ConsensusDocs 602 contract
							PROPERTY DAMAGE (Per accident)	$
								$
C	UMBRELLA LIAB [X] OCCUR EXCESS LIAB [ ] 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? Y / N [ ] (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	N / A	X	#TBD-WC	3/1/17	3/1/18	[X] PER STATUTE [ ] OTH-ER	
							E.L. EACH ACCIDENT	$ 500,000
							E.L. DISEASE - EA EMPLOYEE	$ 500,000
							E.L. DISEASE - POLICY LIMIT	$ 500,000
* E	Owners Contrators Protective Liability			#TBD-OCP	3/1/17	3/1/18	*Limits equal to CGL (or) as required by owner (Note- Would be either CGL or OCP, not both)	

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

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

Project XXXX.XX (Number varies by project)

CERTIFICATE HOLDER	CANCELLATION
Iowa Department of Administrative Services (DAS) 109 SE 13th Street Des Moines, IA 50319	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS. AUTHORIZED REPRESENTATIVE Signature

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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 – 12/23/2026
B. Anticipated Date of Commencement – 1/18/2027
C. Substantial Completion by – 6/14/2027

PART 2 - PRODUCTS – NOT USED

PART 3 - EXECUTION – NOT USED

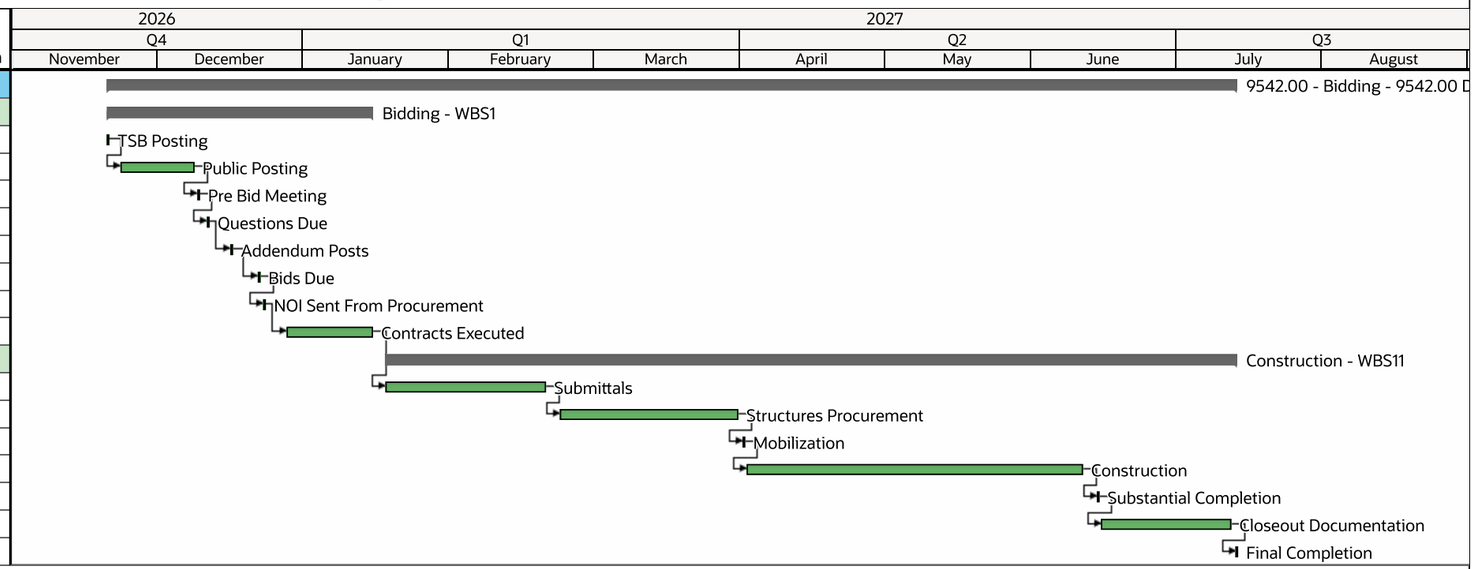
END OF SECTION

Iowa Department of Administrative Services

DAS 9542.00 DOC IMCC Admin Bldg. Water Mitigation

Samuels Group
Design
Construct
Furnish

Name	Planned Duration	Start	Finish
9542.00 - Bidding - 9542.00 DOC I...	0d	20-Nov-26	13-Jul-27
Bidding - WBS1	0d	20-Nov-26	15-Jan-27
TSB Posting	1d	20-Nov-26	20-Nov-26
Public Posting	10d	23-Nov-26	08-Dec-26
Pre Bid Meeting	1d	09-Dec-26	09-Dec-26
Questions Due	1d	11-Dec-26	11-Dec-26
Addendum Posts	1d	16-Dec-26	16-Dec-26
Bids Due	1d	22-Dec-26	22-Dec-26
NOI Sent From Procurement	1d	23-Dec-26	23-Dec-26
Contracts Executed	15d	28-Dec-26	15-Jan-27
Construction - WBS11	0d	18-Jan-27	13-Jul-27
Submittals	25d	18-Jan-27	19-Feb-27
Structures Procurement	28d	22-Feb-27	31-Mar-27
Mobilization	1d	01-Apr-27	01-Apr-27
Construction	51d	02-Apr-27	11-Jun-27
Substantial Completion	1d	14-Jun-27	14-Jun-27
Closeout Documentation	20d	15-Jun-27	12-Jul-27
Final Completion	1d	13-Jul-27	13-Jul-27



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. State Building Code Energy Review: The energy code review and inspections for this project have been applied for by the Architect. Please contact your inspector prior to construction and occupancy.
C. Other Applicable inspections: Trade Contractor is responsible for any other applicable project specific permits and inspections.

1.03 LICENSES, PERMITS, AND RELATED INSPECTIONS

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

PART 2 - PRODUCTS – NOT USED

PART 3 - EXECUTION – NOT USED

END OF SECTION

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SECTION 00 4116

BID FORM

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

RFB #954200-01

BID FORM for CONSTRUCTION CONTRACT
for
Iowa Medical Classification Center
2700 Coral Ridge Ave., Coralville, Iowa
Project 9542.00

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

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

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

Authorized Representative:
The undersigned Bidder, in response to your Request for Bid for construction of the above project, having examined the Drawings, Specifications, and other Bidding Documents dated November 18, 2026, and Addenda issued and acknowledged below as received and being familiar with all the conditions surrounding the construction of the proposed project including the availability of materials and labor, hereby proposes to furnish all labor, materials, equipment and supplies to perform all work to construct the project in strict accordance with the proposed Contract Documents, within the time and at the prices stated below. Prices are to cover all expenses incurred in performing the work required under the proposed Contract Documents, of which this bid is a part.

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

Number _____ _____ _____ _____ _____

Dated _____ _____ _____ _____ _____

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

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

BID PACKAGES:

BP 01 – General Construction Prime Contractor

Description: to mitigate the water infiltration into the basement of the IMCC Administration Building through the installation of new storm sewer, foundation drain tile and building waterproofing

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

_____

_____ Dollars

($_____).

UNIT PRICES:

UNIT 01

Description: Over Excavation & Structural Fill:

- Over excavation to correct discovered poor subsoil conditions during excavations.
- Imported structural earth fill to replace the over-excavated areas required to be removed.
- Unit price shall include both the over-excavation & provision of new imported structural fill, on a cubic yard (CY) basis.
- Refer to Section 31 2316.29 for materials to be used in this scope of work to be included in the unit price.

_____

Dollars
_____ per CY

($/CY_____).

Bidder hereby certifies that:

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

7. Bidder agrees that if written notice of acceptance of this bid is mailed, emailed, or delivered to the undersigned within thirty (30) days after the date in which bids are due, or at any time thereafter before it is withdrawn, the undersigned will sign and return the Contract Agreement, prepared in accord with the Bidding Documents and this bid as accepted; and will also provide proof of insurance coverage and required surety bonds.
8. Bidder understands that the Owner reserves the right to reject any and all bids, and to waive irregularities or informalities and enter into a contract for the work, as the Owner deems to be in the best interest of the State.
9. Bidder understands that the Owner reserves the right to accept any, or no, Alternate Bid, if requested, and that the Alternate Bids may be considered in any order or combination, and the low Bidder shall be determined on the basis of the sum of the base bid and any Alternate(s) accepted.

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

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

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

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

☐ Resident Bidder

Name of Resident Bidder: _____

By: _____
Authorized Agent and Signatory of Resident Bidder

OR:

☐ Nonresident Bidder

Name of Nonresident Bidder: _____

Name of State or Foreign Country of Nonresident Bidder: _____

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

_____
_____
_____

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

By: _____
Authorized Agent and Signatory of Nonresident Bidder

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

Legal Name of Firm: _____

Date: _____

Signature of Bidder: _____

Title: _____

Typed Name of Signatory: _____

Email: _____

Business Address:

_____
_____
_____

Telephone Number: _____ Fax Number: _____

Federal Tax Identification Number: _____

Iowa Contractor Registration Number: _____

Bidder Safety Manager Name:_____

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

Foreign Country of Bidder's residence, _____, is _____ %.

END OF SECTION

SECTION 00 4116.01

NON-DISCRIMINATION CLAUSE

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

PART 1 - GENERAL

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

1.01 NONDISCRIMINATION CLAUSE

A. The contractor, subcontractor, vendor and supplier of goods and services will not discriminate against an employee or applicant for employment because of race, creed, color, sex, national origin, ancestry, religion, economic status, age, disability, political opinion, or affiliations of an applicant or employee based upon the nature of the job occupation. The contractor, subcontractor, vendor and supplier will develop an Affirmative Action Program to insure that applicants are employed and that employees are treated during employment without regard to their race, creed, color, sex, national origin, ancestry, religion, economic status, age, disability, political opinions or affiliations. Such action shall include, but not be limited to the following:
   1. Employment.
   2. Upgrading.
   3. Demotion or transfer.
   4. Recruitment and advertising.
   5. Layoff or termination.
   6. Rates of pay or other forms of compensation.
   7. Selection for training, including apprenticeship.

B. The contractor, subcontractor, vendor and supplier of goods and services will, in all solicitations or advertisements for employees, state that all qualified applicants will receive consideration for employment without regard to race, creed, color, sex, national origin, ancestry, religion, economic status, age, disability, political opinion or affiliations.

C. The contractor, subcontractor, vendor and supplier or their collective bargaining representative will send to each labor union or representative or workers with which they have a collective bargaining agreement or other contract or understanding, a notice advising the said labor union or workers' representative of the contractor's commitments under this section.

D. The contractor, subcontractor, vendor and supplier of goods and services will comply with all published rules, regulations, directives and orders of the State of Iowa Affirmative Action Program Contract Compliance Provisions.

E. The contractor, subcontractor, vendor and supplier of goods and services will furnish and file compliance reports within such time and upon such forms as provided by the Equal Employment Opportunity Officer, said forms may elicit information as to the policies, procedures, patterns, and practices of each subcontractor as state as the contractor themselves and said contractor, subcontractor, vendor and supplier will permit access to their employment books, records and accounts to the State's Equal Employment Opportunity Officer, for the purpose of investigation to ascertain compliance with this Contract and with rules regulations of the State's Affirmative Action Program.

F. In the event of the contractor's noncompliance with the nondiscrimination clauses of this Contract or with any of such rules, regulations and orders; this Contract may be canceled,

terminated or suspended in whole or in part and the Contractor may be declared ineligible for further contracts in accordance with procedures authorized by the State of Iowa.

G. The contractor, subcontractor, vendor and supplier of goods and services will include, or incorporate by reference, the provisions of the nondiscrimination clause in every contract, subcontract or purchase order unless exempted by the rules, regulations or orders of the State's Affirmative Action Program, and will provide in every subcontract or purchase order that said provisions will be binding upon each contractor, subcontractor or seller.

H. The parties agree to comply with "Compliance with the Law; Nondiscrimination in Employment" of the current Terms and Conditions at the award of this contract. Current Terms and Conditions may be found on the following web site and are, by this reference, made a part of this Agreement. https://das.iowa.gov/procurement/terms-and-conditions

I. We certify and recognize that we are morally and legally committed to nondiscrimination in employment. Any person who applies for employment with our company will not be discriminated against because of race, creed, color, sex, national origin, ancestry, religion, economic status, age or disabilities, unless disabilities are based upon the nature of the job occupation.

PART 2 - PRODUCTS – NOT USED

PART 3 - EXECUTION – NOT USED

END OF SECTION

SECTION 00 4116.02

TARGETED SMALL BUSINESS INFORMATION

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

PART 1 - GENERAL

1.01 TARGETED SMALL BUSINESS INFORMATION

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

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

PART 2 - PRODUCTS – NOT USED

PART 3 - EXECUTION – NOT USED

END OF SECTION

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

CONTRACTOR	BID NO.	PAGE #

(to be completed by bidder)

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

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

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

Total dollar amount proposed to be subcontracted to TSB on this project $ _____

List items to be subcontracted. *(If more space is needed, use reverse side.)*

SECTION 00 4313

BID SECURITY FORMS

PART 1 - GENERAL

1.01 BID SECURITY FORMS

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

PART 2 - PRODUCTS – NOT USED

PART 3 - EXECUTION – NOT USED

END OF SECTION



CONSENSUSDOCS 262

BID BOND

(AMENDED BY STATE OF IOWA)

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

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

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

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

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 Obligee in the maximum amount _____, Dollars ($_____) (the "Bond Sum"). The Constructor and Surety hereby bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, as provided herein.

1. If the Obligee shall accept the bid of the Constructor, the Constructor shall enter into an Agreement with the Obligee in accordance with the terms of such Bid.

2. Constructor shall procure such bond or bonds as are specified in the Contract Documents for the faithful performance of the Work and for the prompt payment of labor and materials furnished in the performance of the Work.

3. If the Constructor fails to enter such Agreement and give such bonds, the Constructor shall pay to the Obligee the difference between the amount of Constructor's bid and the amount of such agreement the Obligee in good faith executes with another Party to perform the Work covered by Constructor's Bid, not to exceed the Bond Sum stated above.

4. If the Constructor shall fulfill its obligation under Articles 1 through 3, then this obligation shall be null and void; otherwise it shall remain in full force and effect.

This Bond is entered into as of _____ (date)

SURETY: _____ (seal)

BY: .....

Print Name: _____

Print Title: _____ (Attach Power of Attorney)

Witness: .....

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

Constructor: _____ (seal)

BY: .....

Print Name: _____

Print Title: _____

Witness: .....

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

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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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.

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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

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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

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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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

ARTICLE 3 TRADE CONTRACTOR'S OBLIGATIONS

3.1 GENERAL RESPONSIBILITIES

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

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

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

3.2 COOPERATION WITH WORK OF OWNER AND OTHERS

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

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

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

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

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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

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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

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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

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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

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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

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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

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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

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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

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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

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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.

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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

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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.

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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

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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

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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

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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

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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

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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.

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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

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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.

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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,

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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

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

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

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

10.2.1.3 Business Automobile Liability Insurance

a. $1,000,000 Each Accident

10.2.1.4 Commercial General Liability Insurance

a. $1,000,000 Each Occurrence b. $2,000,000 General Aggregate c. $1,000,000 Products/Completed Operations Aggregate d. $1,000,000 Personal and Advertising Injury Limit

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

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

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

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

10.2.5 ADDITIONAL LIABILITY COVERAGE

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

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

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

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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

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

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

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

10.5 PROPERTY INSURANCE LOSS ADJUSTMENT

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

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

10.6 WAIVERS

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

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

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

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

10.8 BONDS Performance and Payment Bonds

☒ are

☐ are not

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

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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

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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

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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

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11.5.2.4 otherwise materially breaches this Agreement.

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

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

ARTICLE 12 DISPUTE MITIGATION AND RESOLUTION

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

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

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

(Designate only one.)

[X] Project Neutral

[ ] Dispute Review Board

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

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

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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.

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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

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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

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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)

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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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: Iowa Medical Classification Center (IMCC), 2700 Coral Ridge Ave., Coralville, Iowa 52241.
B. DAS Project #: 9542.00
C. Owner: State of Iowa, Department of Administrative Services, Hoover State Office Building, Level 3, 1305 East Walnut Street, Des Moines, IA 50319
D. Owner's Representative: Jennifer Kleene, Iowa Department of Administrative Services, 109 SE 13th Street, Des Moines, IA 50319
E. Construction Manager: Brian Polzin, Samuels Group, 2929 Westown Parkway, West Des Moines, IA 50266

1.03 PROJECT SUMMARY

A. The project includes, mitigate the water infiltration into the basement of the IMCC Administration Building through the installation of new storm sewer, foundation drain tile, and building waterproofing.
B. Target date to provide substantial completion is June 14, 2027.

1.04 BID SCOPE SUMMARY

A. Scope Applicable to All Bid Packages:
   1. The Contractor's Work includes all labor, supervision, materials, equipment, services, supplies, tools, facilities, transportation, hoisting, storage, receiving, licenses, inspections, certifications, overhead, profit, or other items required or reasonably inferable to properly and timely perform and complete all work and services to be performed by the Contractor pursuant to this Agreement. Unless specifically stated otherwise, incidental work required to accomplish the work of this Bid Package shall be included the bid. This would include, but not be limited to, temporary facilities, protection of the work, security of equipment, materials, and work in progress, etc. Contractor's Work shall be performed in accordance with the Drawings, Specification Divisions 00 and 01, and Specification sections applicable to each Contractor's scope.
   2. Contractor is responsible for all labor and equipment to unload, account for all material delivered, stock, and delivery for this scope of work. Storage and delivery of materials and equipment at the Site shall be permitted only to the extent approved in advance by the Construction Manager, and if anything so stored obstructs the progress of any portion

of the work, it shall be promptly removed or relocated by the Contractor without reimbursement.

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

1.05 WORK HOUR RESTRICTIONS

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

1.06 CONTRACTOR USE OF SITE AND PREMISES

A. Construction Operations: Limited to areas noted on Drawings.
B. Provide access to and from site as required by law and Owner:
   1. Emergency Building Exits During Construction: Keep all exits required by code open during construction period; provide temporary exit signs if exit routes are temporarily altered.
   2. Do not obstruct roadways, sidewalks, or other public ways without permission of Owner and permit if required.
C. Facility will be occupied at all times during duration of work. Contractor personnel shall conduct themselves in an agreeable manner at all times. Failure to do so may result in removal from the work site.
D. Coordinate schedule of work with facility and construction manager. Work areas shall be scheduled at a minimum of seven days in advance.
E. Coordinate with the facility for location of material storage. Contractor is responsible for securing and protection of all stored materials.

1.07 OWNER OCCUPANCY

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

1.08 RULES FOR CONSTRUCTION WORKERS

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

1.09 BID PACKAGE INSTRUCTIONS

A. **Bid Package #01** – General Construction Prime Contractor: Trade Contractor shall include all of the following, but not limited to, as part of the contract:
   1. The scope of the project is to mitigate the water infiltration into the basement of the IMCC Administration Building through the installation of new storm sewer, foundation drain tile and building waterproofing.
   2. Includes ALL specifications and addenda.
   3. Includes ALL drawing sheets:
   4. Includes cleanup of the work area at a minimum daily. Contractor to provide cleanup of the work area at minimum daily.
   5. Includes scheduling of all deliveries of materials to the project site. Includes all labor and equipment to load and unload materials to the construction site.
   6. Includes all costs for removal and disposal of demolished equipment and materials.

B. **Unit Price #01** – Over Excavation & Structural Fill: Trade Contractor shall include all of the following, but not limited to, as part of the contract:
   1. Over excavation to correct discovered poor subsoil conditions during excavations.
   2. Imported structural earth fill to replace the over-excavated areas required to be removed.
   3. Unit price shall include both the over-excavation & provision of new imported structural fill, on a cubic yard (CY) basis.
   4. Refer to Section 31 2316.29 for materials to be used in this scope of work to be included in the unit price.
   5. Unit prices include all necessary material, plus cost for delivery, installation, insurance, overhead, and profit.
   6. 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. **Work Performed by Owner:** IMCC 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.

D. **Owner Furnished Products:** IMCC will provide the following materials for installation by the contractor:
   1. None

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

SUBSTITUTION REQUEST FORM

Project: _____ Substitution Request Number: _____

_____ From: _____

To: _____ Date: _____

_____ A/E Project Number: _____

Re: _____

Specification Title: _____ Description: _____

Section: _____ Page: _____ Article/Paragraph: _____

Proposed Substitution: _____

Manufacturer: _____ Address: _____ Phone: _____

Trade Name: _____ Model No.: _____

_____ _____ _____

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

Differences between proposed substitution and specified product: _____

_____

_____

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

Reason for not providing specified item: _____

_____

Similar Installation:

Project: _____ Architect: _____

Address: _____ Owner: _____

_____ Date Installed: _____

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

_____

Supporting Data Attached: ☐ Drawings ☐ Product Data ☐ Samples ☐ Tests ☐ Reports ☐ _____

SUBSTITUTION REQUEST FORM

(Continued)

The Undersigned certifies:

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

Submitted by: _____

Signed by: _____

Firm: _____

Address: _____

_____

Telephone: _____

Attachments: _____

_____

_____

_____

A/E's REVIEW AND ACTION

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

Signed by: Date:

Additional Comments: ☐ Contractor ☐ Subcontractor ☐ Supplier ☐ Manufacturer ☐ A/E ☐ _____

_____

_____

_____

_____

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SECTION 01 2600

CONTRACT MODIFICATION PROCEDURES

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Change procedures

1.02 CHANGE PROCEDURES

A. The Design Professional will advise of minor changes in the work not involving an adjustment to Contract Sum/Price or contract time as authorized.
B. The Construction Manager may issue a Proposal Request that includes a detailed description of a proposed change with supplementary or revised drawings and specifications and a change in contract time for executing the change as provided by the Design Professional. The Trade Contractor will prepare and submit an estimate within 7 calendar days. Estimates shall be provided for the project at no cost, regardless of acceptance or rejection of proposal.
C. The Trade Contractor may propose changes by submitting a Request for Information to the Construction Manager, describing the proposed change and its full effect on the work. Include a statement describing the reason for the change, and the effect on the Contract Sum/Price and contract time with full documentation and a statement describing the effect on work by separate or other contractors. Document any requested substitutions in accordance with the specifications. Construction Manager will forward the Request for Information on to the Design Professional for their official response.
D. Stipulated Sum/Price Change Order: Based on executed Change Order and contractor's fixed price quotation.
E. Unit Price Change Order: The change order will be executed on a fixed unit price basis for pre-determined unit prices and quantities. Changes in contract price or contract time will be computed as specified for time and material change orders.
F. Time and Material Change Order: The change order will be executed on a not to exceed basis. Design professional and Construction Manager will determine the not to exceed estimated cost based on contractor’s proposal for hourly rates and material costs. Maintain detailed records of work done on time and material basis. Time and Material tickets must be submitted daily to the Construction Manager for verification. Provide full information required for evaluation of proposed changes, and to substantiate costs for changes in the work. Submit itemized account and supporting data after completion of change. A final deductive change order will be issued to reconcile final cost to the initial change order.
G. Change Order Forms: The Master Change Event Pricing Form (provided in 01 2600.01) must be utilized for all change orders. Failure to provide a fully filled out State of Iowa Master Change Event Pricing Form in a timely manner for all change events may be considered a delay to the project. No change will be approved or reviewed without the Master Change Event Pricing Form having been filled out and submitted. The formal adoption of the change order into the contract will be executed utilizing CONSENSUSDOC Forms provided by the Owner.
H.
I. Execution of Change Orders: The Construction Manager will issue change orders for signature of parties as provided in the Conditions of the Contract.
J. 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. Deductive change orders, regardless of size or condition, shall operate with the same mark-ups. Any deductive scope item will include 15% for direct work and 5% for subcontract work passed onto the owner by the prime contractor.

K. 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.

L. **Please refer to Article 8 of CONSENSUSDOCS 802- STANDARD FORM OF 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 2600.01

MASTER CHANGE EVENT PRICING FORM AND PROCEDURES

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Initial Establishment of Master Change Event Pricing Form
B. Utilization of Master Change Event Pricing Form
C. Master Change Event Pricing Form Sections Explained
D. Sample Master Change Event Pricing Form

1.02 INITIAL ESTABLISHMENT OF MASTER CHANGE EVENT PRICING FORM

A. Provide the following information within 5 days of the notice of intent to award to establish the metrics of the Master Change Event Pricing form:
    a. Positions and their Labor Rates that would apply to this project
    b. If applicable, provide per diem rate. May require adherence with SAE guidelines.
    c. Bond Rate %.
        i. Prime Contractor to provide backup from surety to substantiate provided rate.
    d. Rental Equipment anticipated to be utilized on project along with associated rates and metric of billing (i.e. hourly, daily, weekly, monthly, etc.)

1.03 UTILIZATION OF MASTER CHANGE EVENT PRICING FORM

A. Submit each request for adjustment to Contract Sum and/or Contract Time using the Owner's Master Change Event Pricing Form. Complete all applicable fields and provide supporting documentation required by this Section. A submission that does not include the required cost breakdown and supporting documentation may be returned as incomplete without review.
B. Detailed information breaking down all labor activities and material items must be provided to provide a clear and full identification of all materials and scopes being added. In the event that the individual value breakouts are unable to be provided, it may be accepted to receive a lump sum value that is substantiated by the supplier invoice with material list. It would still be expected that the relative install labor be applied to the individual material items to ensure a full accounting of the value of the labor being requested in the change.
C. Prime Contractor may include their own form along with this form, but Prime Contractor’s form may not be submitted in place of a fully filled out Master Change Event Pricing Form.
D. **Contractor Markup:** Allowable markup for Contractor self-performed Work shall be limited to the percentages indicated in Section 01 2600, the Contract Documents and the Master Change Event Pricing Form. Unless expressly identified otherwise in the Contract Documents, such markup constitutes full compensation for overhead and profit applicable to the changed Work. Costs included within overhead, such as insurance, shall not be separately itemized or added to the Change Proposal.
E. **Supporting Documentation:** Provide documentation sufficient to substantiate quantities, unit costs, labor hours, labor classifications, equipment usage, subcontractor costs, and other costs included in the proposed adjustment. Supporting documentation may include supplier quotations, invoices, subcontractor proposals, quantity takeoffs, time records, equipment records, and other documentation requested by Owner or Construction Manager. Pricing shall clearly distinguish between added and deleted Work.
F. **Deductive Changes:** Determine deductive adjustments using the same pricing methodology applicable to additive changes. Apply applicable overhead and profit percentages to the value of deleted Work in the same manner as such percentages would have applied had the Work been performed, unless otherwise provided by the Contract Documents.

1.04 MASTER CHANGE EVENT PRICING FORM SECTIONS EXPLAINED

A. COVER SHEET
   1. Contractor shall enter information for the following fields:
      a. Project Name
      b. Date
      c. Scope Change Reference
      d. Dated
      e. State of Iowa Project #
      f. COR#
      g. Change Order Description
   2. This page is the automatic summation document for all following tabs
   3. The price is automatically calculated from the “TOTAL” line from the “COST BREAKDOWN” tab.
   4. Contractor shall enter the number of additional days that the Prime Contractor is requesting, due to the referenced change, in the fillable box above the signature line next to, “Calendar days extension of Contract time is requested.”
      a. If an adjustment to Contract Time is requested, identify the number of calendar days requested and provide supporting documentation demonstrating the effect of the changed Work on the current accepted Project Schedule. A request for additional Contract Time shall identify the affected activity or activities and explain the basis for the requested extension. Failure to identify a requested Contract Time adjustment with the Change Proposal constitutes the Contractor's representation that the proposed change can be performed without adjustment to Contract Time, except for impacts that could not reasonably have been known at the time of submission.
      b. This line item establishes a Prime Contractor’s requested additional/deducted time. At no time does requesting additional/reduced time guarantee time will be added in the final change agreement.
   5. Authorized representative from Prime Contractor must sign and date.

B. COST BREAKDOWN
   1. Materials
      a. These values pull from “TAKE OFF SHEET”
      b. Consumables, when applicable, are limited to 3%.
   2. Labor
      a. Once positions and labor rates are provided by Prime Contractor to the Owner/CM utilizing the “Rate Establishment Form” at beginning of project, these lines will be filled out and locked. The summation of hours per position/classification will be filled into these lines by submitting prime contractor.
      b. Labor rates established on the Rate Establishment Form shall remain in effect for duration of the project unless an adjustment is specifically authorized by the Owner. Labor hours shall represent the reasonable hours necessary to perform the changed Work and shall be identified by labor classification and activity. Labor rates shall be the fully baked billable rates and should include all direct labor costs, payroll taxes, benefits, insurance. The overhead and profit should not be included in the rate as that is added in the mark-up section. All potential positions that could be billed for the project, staffed by the prime contractor, should be accounted for with applicable billable rate information. Overhead roles (accounting, reception, human resources, etc.) are not acceptable billable positions in change work.
   3. Subtotal Extra Work Cost
      a. This is an automatically calculated value based on the total added materials, labor and rental equipment.
      b. This subtotal will then have 10% overhead and a 5% profit added.

4. Subcontracted Scopes
    a. Name of subcontractor(s) with added/deleted work associated with change event will be listed here. This should include the name of the subcontractor along with the scope of work they will perform for the change. The value of the subcontracted scope (substantiated by vendor invoice/proposal) will be placed in the 3rd column of the associated line.
    b. The total of the subcontracts will have a 5% fee calculation added as the established allowable mark-up.
5. Subtotal Cost:
    a. This adds all material, labor, rental equipment, subcontractors and mark-up.
    b. Additionally, based on the Bond Rate % provided at the beginning of the project, the subtotal of all costs will be calculated against that rate to account for the cost of covering the additional/removed scope.
    c. The final “TOTAL” line is the summation of all costs. This line feeds to the Cover Page.

C. TAKE OFF SHEET
1. List of all added material and scope with associated line-item material cost and labor activity values.
2. Material must be broken down as much as possible to identify each line-item pricing value.
    a. Lump sum estimates will be rejected unless it is shown that no other available breakdown is possible to provide.
3. Editable Excel version of this form will be made available in Procore to allow for additional lines to be added.
    a. If additional lines are needed, simply click the green “ADD 5 ROWS” button. This will add 5 more fillable rows that fill to the material cost total. Up to 980 lines can be added to the existing 20.
4. TOTALS
    a. Materials Total will provide an automatic sum value of all added/deleted materials.
        1) This feeds to the Material subtotal in the “Cost Breakdown” tab.
    b. Labor Hours total is the summation of all added/deleted install labor. Prime contractor responsible for breaking down those hours by role on the “Cost Breakdown” tab.

D. EQUIPMENT
1. This tab provides a list of all rental equipment added/deleted due to proposed change.
    a. Values and rate calculation metric will be established based on “Rate Establishment Form” at beginning of project.

1.05 SAMPLE RATE ESTABLISHMENT FORM

A. Reference on following pages

State of Iowa - Rate Establishment Form

Please fill out the below rates and information. All information will be carried over into the change order documents. These rates and information will not be able to be changed once established in the contract.

LABOR RATES

POSITION	Straight Time Rate	Overtime Rate	Double Time Rate
Journeyman	$ -	$ -	$ -
Apprentice	$ -	$ -	$ -
Foreman	$ -	$ -	$ -
Equipment Operator	$ -	$ -	$ -
Technician	$ -	$ -	$ -
Superintendent	$ -	$ -	$ -
Project Engineer	$ -	$ -	$ -
Project Manager	$ -	$ -	$ -
Equipment Operator	$ -	$ -	$ -
Welder	$ -	$ -	$ -
	$ -	$ -	$ -
	$ -	$ -	$ -
	$ -	$ -	$ -
	$ -	$ -	$ -
	$ -	$ -	$ -
	$ -	$ -	$ -
	$ -	$ -	$ -
	$ -	$ -	$ -
	$ -	$ -	$ -
	$ -	$ -	$ -
Per Diem (When Applicable)	$ -	$ -	$ -

BOND RATE

Bond Rate for current Project = 0.00%

Please provide sunshine letter from surety as backup

RENTAL EQUIPMENT RATES

ADDED/DELETED RENTAL EQUIPMENT (AS IT APPLIES TO SELF PERFORM WORK ONLY)	Hourly Rate	Daily Rate	Weekly Rate	Monthly Rate	Pick Up/Drop Off
Scissor Lift	$0.00	$0.00	$0.00	$0.00	$0.00
Boom Lift	$0.00	$0.00	$0.00	$0.00	$0.00
Fork Lift	$0.00	$0.00	$0.00	$0.00	$0.00
Scaffolding	$0.00	$0.00	$0.00	$0.00	$0.00
Backhoe	$0.00	$0.00	$0.00	$0.00	$0.00
Cutting Tools	$0.00	$0.00	$0.00	$0.00	$0.00
Welding Tools	$0.00	$0.00	$0.00	$0.00	$0.00
Excavator/Earth Moving Equipment	$0.00	$0.00	$0.00	$0.00	$0.00
Drum Roller/Asphalt Roller	$0.00	$0.00	$0.00	$0.00	$0.00
Concrete Mixer	$0.00	$0.00	$0.00	$0.00	$0.00
Concrete Pump Truck	$0.00	$0.00	$0.00	$0.00	$0.00
Generator	$0.00	$0.00	$0.00	$0.00	$0.00
Water Truck	$0.00	$0.00	$0.00	$0.00	$0.00
Temp Conditioning Equipment	$0.00	$0.00	$0.00	$0.00	$0.00
	$0.00	$0.00	$0.00	$0.00	$0.00
	$0.00	$0.00	$0.00	$0.00	$0.00
	$0.00	$0.00	$0.00	$0.00	$0.00
	$0.00	$0.00	$0.00	$0.00	$0.00
	$0.00	$0.00	$0.00	$0.00	$0.00
	$0.00	$0.00	$0.00	$0.00	$0.00
	$0.00	$0.00	$0.00	$0.00	$0.00
	$0.00	$0.00	$0.00	$0.00	$0.00
	$0.00	$0.00	$0.00	$0.00	$0.00
	$0.00	$0.00	$0.00	$0.00	$0.00
	$0.00	$0.00	$0.00	$0.00	$0.00
	$0.00	$0.00	$0.00	$0.00	$0.00
	$0.00	$0.00	$0.00	$0.00	$0.00
	$0.00	$0.00	$0.00	$0.00	$0.00
	$0.00	$0.00	$0.00	$0.00	$0.00
	$0.00	$0.00	$0.00	$0.00	$0.00
	$0.00	$0.00	$0.00	$0.00	$0.00
	$0.00	$0.00	$0.00	$0.00	$0.00
	$0.00	$0.00	$0.00	$0.00	$0.00
	$0.00	$0.00	$0.00	$0.00	$0.00
	$0.00	$0.00	$0.00	$0.00	$0.00
	$0.00	$0.00	$0.00	$0.00	$0.00
	$0.00	$0.00	$0.00	$0.00	$0.00
	$0.00	$0.00	$0.00	$0.00	$0.00
	$0.00	$0.00	$0.00	$0.00	$0.00

1.06 SAMPLE MASTER CHANGE ORDER FORM

COVER PAGE:

DESIGN & CONSTRUCTION RESOURCES BUREAU

FROM:	Contractor Name Address City, State, Zip Project Lead Contact Info
Project Name:	
Scope Change Reference:	
State of Iowa Project #	

Date:	11/9/2026
COR #	
Date of Change Documents:	

Change Order SOW Desciption:	(Provide a brief description of the added/deleted scope of work cause by this change event)

In Compliance with the terms of our contract agreement, Contractor seeks the following change

PROPOSED ADDITION/DEDUCTION TO CONTRACT AMOUNT=	$0

This quotation includes the following conditions:

Change Order Pricing to be valid for 60 days from date of issuance.

Mark-Up is limited to 15% on direct sourced material and self performed work. Mark-Up of any and all subcontracted scopes is limited to 5%

Coordination of scopes with supporting trades is included and all reasonably assumed work to align with supporting trades is included in proposed pricing.

0	Calendar days extension of Contract time is requested.

Complete pricing breakdown for associated work to the above reference change event is attached for review.

AUTHORIZED SIGNER'S NAME	DATE OF SIGNATURE

By the above signature, I hereby certify that all statements contained herein are true and correct to the best of my knowledge and belief. I further certify that the claim for additional work is factual, complete, and has not been altered or manipulated in any manner. All costs, values, and supporting data presented are accurate representations of the actual costs incurred, and have not been modified, adjusted, or misrepresented in any way.

COST BREAKDOWN:

DESIGN & CONSTRUCTION RESOURCES BUREAU

Project Name:	0
State of Iowa Project Number:	0
Date: 11/9/2026	Contractor COR #: 0

MATERIALS COSTS

TOTAL MATERIALS:	$ -

SELF-PERFORM LABOR

POSITION	QTY OF HOURS	Straight Time Rate	QTY OF HOURS	Overtime Rate	QTY OF HOURS	Double Time Rate
	- Hours @	$ -	- Hours @	$ -	- Hours @	$ -
	- Hours @	$ -	- Hours @	$ -	- Hours @	$ -
	- Hours @	$ -	- Hours @	$ -	- Hours @	$ -
	- Hours @	$ -	- Hours @	$ -	- Hours @	$ -
	- Hours @	$ -	- Hours @	$ -	- Hours @	$ -
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	- Hours @	$ -	- Hours @	$ -	- Hours @	$ -
	- Hours @	$ -	- Hours @	$ -	- Hours @	$ -
	- Hours @	$ -	- Hours @	$ -	- Hours @	$ -
	- Hours @	$ -	- Hours @	$ -	- Hours @	$ -
Per Diem (Only When Applicable)	- Hours @	$ -				

TOTAL LABOR COST:	$ -
EQUIPMENT RENTAL:	$ -
SUBTOTAL EXTRA WORK COST	$ -
OVERHEAD @ 10%	$ -
FEE @ 5%	$ -

SUBCONTRACTED SCOPES - PROVIDE BACKUP SCOPE & PRICING DOCUMENTS

NAME OF SUBCONTRACTED ENTITY:	SCOPE OF WORK PERFORMED	
(Insert contractor name)	(Insert Scope of Work Performed in This Change Event)	$ -
(Insert contractor name)	(Insert Scope of Work Performed in This Change Event)	$ -
(Insert contractor name)	(Insert Scope of Work Performed in This Change Event)	$ -
(Insert contractor name)	(Insert Scope of Work Performed in This Change Event)	$ -
(Insert contractor name)	(Insert Scope of Work Performed in This Change Event)	$ -
(Insert contractor name)	(Insert Scope of Work Performed in This Change Event)	$ -

TOTAL SUBCONTRACTS:	$ -
FEE @ 5%	$ -
SUBTOTAL COST:	**$0**

BOND	Contractor Rate Identified as:	0%	$0.00
TOTAL VALUE OF CHANGE WORK:			**$0**

TAKE OFF SHEET:

DESIGN & CONSTRUCTION RESOURCES BUREAU

PROJECT NAME:	0
Sol PROJECT #:	0
DATE:	11/9/2026
Contractor COR #:	0

ITEM	QTY	Unit of Measure	DESCRIPTION OF ADDED/DELTED WORK (SELF PERFORMED WORK ONLY)	MATERIAL UNIT	COST
			ADD 5 ROWS / REMOVE 5 ROWS		
1				$ -	$0.00
2				$ -	$0.00
3				$ -	$0.00
4				$ -	$0.00
5				$ -	$0.00
6				$ -	$0.00
7				$ -	$0.00
8				$ -	$0.00
9				$ -	$0.00
10				$ -	$0.00
11				$ -	$0.00
12				$ -	$0.00
13				$ -	$0.00
14				$ -	$0.00
15				$ -	$0.00
16				$ -	$0.00
17				$ -	$0.00
18				$ -	$0.00
19				$ -	$0.00
20				$ -	$0.00

MATERIAL COST TOTAL:	$0.00

EQUIPMENT:

DESIGN & CONSTRUCTION RESOURCES BUREAU

PROJECT NAME:	0
DATE OF CHANGE REQUEST:	11/9/2026
STATE OF IOWA PROJECT #:	0
CONTRACTOR COR#:	0
REFERENCE:	0

ITEM No.	QTY OF TIME	UNIT OF MEASURE	PU/DO Events	ADDED/DELETED RENTAL EQUIPMENT (AS IT APPLIES TO SELF PERFORM WORK ONLY)	Hourly Rate	Daily Rate	Weekly Rate	Monthly Rate	Pick-Up Drop-Off	COST
1	0.00		0		$0.00	$0.00	$0.00	$0.00	$0.00	$ -
2	0.00		0		$0.00	$0.00	$0.00	$0.00	$0.00	$ -
3	0.00		0		$0.00	$0.00	$0.00	$0.00	$0.00	$ -
4	0.00		0		$0.00	$0.00	$0.00	$0.00	$0.00	$ -
5	0.00		0		$0.00	$0.00	$0.00	$0.00	$0.00	$ -
6	0.00		0		$0.00	$0.00	$0.00	$0.00	$0.00	$ -
7	0.00		0		$0.00	$0.00	$0.00	$0.00	$0.00	$ -
8	0.00		0		$0.00	$0.00	$0.00	$0.00	$0.00	$ -
9	0.00		0		$0.00	$0.00	$0.00	$0.00	$0.00	$ -
10	0.00		0		$0.00	$0.00	$0.00	$0.00	$0.00	$ -
11	0.00		0		$0.00	$0.00	$0.00	$0.00	$0.00	$ -
12	0.00		0		$0.00	$0.00	$0.00	$0.00	$0.00	$ -
13	0.00		0		$0.00	$0.00	$0.00	$0.00	$0.00	$ -
14	0.00		0		$0.00	$0.00	$0.00	$0.00	$0.00	$ -
15	0.00		0		$0.00	$0.00	$0.00	$0.00	$0.00	$ -
16	0.00		0		$0.00	$0.00	$0.00	$0.00	$0.00	$ -
17	0.00		0		$0.00	$0.00	$0.00	$0.00	$0.00	$ -
18	0.00		0		$0.00	$0.00	$0.00	$0.00	$0.00	$ -
19	0.00		0		$0.00	$0.00	$0.00	$0.00	$0.00	$ -
20	0.00		0		$0.00	$0.00	$0.00	$0.00	$0.00	$ -
21	0.00		0		$0.00	$0.00	$0.00	$0.00	$0.00	$ -
22	0.00		0		$0.00	$0.00	$0.00	$0.00	$0.00	$ -
23	0.00		0		$0.00	$0.00	$0.00	$0.00	$0.00	$ -
24	0.00		0		$0.00	$0.00	$0.00	$0.00	$0.00	$ -
25	0.00		0		$0.00	$0.00	$0.00	$0.00	$0.00	$ -
26	0.00		0		$0.00	$0.00	$0.00	$0.00	$0.00	$ -
27	0.00		0		$0.00	$0.00	$0.00	$0.00	$0.00	$ -

RENTAL EQUIPMENT TOTAL	$ -

PART 2 - PRODUCTS – NOT USED

PART 3 - EXECUTION – NOT USED

END OF SECTION

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SECTION 01 2900

PAYMENT PROCEDURES

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Schedule of values
B. Application for payment

1.02 SCHEDULE OF VALUES

A. Coordination: Trade Contactor will coordinate preparation of the Schedule of Values with preparation of the Construction Manager's Construction Schedule.
   1. Correlate line items in the Schedule of Values with other required administrative forms and schedules, including Application for Payment forms with Continuation Sheets, Submittals Schedule, and Construction Manager's Construction Schedule.
   2. Submit original Schedule of Values in Procore within 14 days after date of Owner-Trade Contractor Agreement. Schedule of Values must be approved by Owner prior to submission for first application for payment.
B. Format: Utilize the Table of Contents of this project manual. Identify each line item with number and title of the major specification section. Each major specification section should be further itemized by materials cost, labor cost and subcontractor cost for each building separately for the base bid and all accepted alternates. Identify site mobilization, bonds and insurance and include a line item for closeout paperwork for a value of no less than 1% of the total contract value or $1,000, whichever is greater.
   1. Identification: Include the following Project identification on the Schedule of Values:
      a. Project name and location.
      b. Name and address of Owner, Trade Contractor, Construction Manager and Design Team.
      c. DAS Project Number.
      d. Date of Submittal.
   2. Revise the Schedule of Values to list approved Change Orders with each Application for Payment.

1.03 APPLICATIONS FOR PAYMENT

A. Each Application for Payment shall be consistent with previous applications for payments as certified by the Design Professional and paid for by Owner.
   1. Application for Payment at time of Substantial Completion and final Application for Payment involve additional requirements.
B. Payment Application Times: The date for each progress payment is indicated in the Agreement between Owner and Contractor. The period of construction work covered by each Application for Payment is the period indicated in the Agreement. Progress payments shall be submitted to the Construction Manager. Any request for payment for work completed prior to June 30th of any year needs to be submitted by July 15th of the same calendar year.
C. Payment Application Forms: Use the Procore-generator invoice, or an equivalent approved by the owner as the form for the Application for Payment.
D. Include “PAYMENT WAIVER FORM” as per section 01-2900.01 with all progress payment applications.
   1. Both the “Conditional Waiver and Release Upon Progress Payment” and the “Contractor’s Affidavit of Payment of Debts and Claims” must be fully filled out and signed with notarization as required on the form. Failure to have these fully completed, signed and notarized will result in payment application being rejected.
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. 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.

G. 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.

H. 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. Signed and notarized PAYMENT WAIVER FORM – FINAL
      a. Both the “Conditional Waiver and Release Upon Final Payment” and the “Contractor’s Final Affidavit of Payment of Debts and Claims” must be fully filled out and signed with notarization as required on the form. Failure to have these fully completed, signed and notarized will result in payment application being rejected.
   5. AIA Document G706, “Contractor's Affidavit of Payment of Debts and Claims.”
   6. AIA Document G706A, “Contractor's Affidavit of Release of Liens.”
   7. AIA Document G707, “Consent of Surety to Final Payment.”
   8. Letter of Notification to all sub-contractors and suppliers of application for release of retainage.
   9. Evidence that claims have been settled.

I. 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 2900.01

PAYMENT WAIVER FORMS AND PROCEDURES

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Filling out the Waiver Forms
B. Sample Forms

1.02 FILLING OUT THE WAIVER FORMS

A. Conditional Waiver and Release Upon Progress Payment
   1. Fill out all lines of information to accurately identify:
      a. Project name
      b. Contractor information
      c. Pay application number
      d. Amount of progress payment
      e. Date of form being submitted
   2. Additionally fill in the amount of payment being requested in section 1 of page 1 as well as the payment through date in section 1 of page 1.
   3. Approved signatory of Prime Contractor must provide:
      a. Signature
      b. Name and Title of Prime Contractor Signatory
      c. Date of Signature at the bottom of page 1.
B. Contractor's Affidavit of Payment of Debts and Claims
   1. Fill out all lines of information to accurately identify:
      a. Project name
      b. Pay application number
      c. Progress billing period ending date
   2. Additionally fill in the name of the prime contractor requesting payment in section 1 of page 1 as well as the payment through date in section 1 of page 1.
   3. Section 2 of page 1 is reserved for identification of subcontractors and suppliers of whom you have not settled all debts owed, as it relates to the project, through the correlating billing period. In this section, each identified subcontractor/supplier must have the following information provided:
      a. Name of the entity that has not been paid.
      b. Amount still owed to the entity to bring them to current of the end of billing period being requested
      c. Reason for the non-payment and status of anything holding up said payment.
   4. Approved signatory of Prime Contractor, along with certified notary, must provide:
      a. Notarized Signature
      b. Name and Title of Prime Contractor Signatory
      c. Date of Signature at the bottom of page 1.
      d. Notary Stamp and information
         1) Waivers submitted without notarization will be deemed incomplete and will not be accepted or processed for payment.
C. Conditional Waiver and Release Upon Final Payment
   1. Fill out all lines of information to accurately identify:
      a. Project name
      b. Contractor information
      c. Pay application number
      d. Amount of progress payment
      e. Date of form being submitted

2. Additionally, fill in the amount of payment being requested in section 1 of page 1 as well as the payment through date in section 1 of page 1.
3. Approved signatory of Prime Contractor must provide:
    a. Signature
    b. Name and Title of Prime Contractor Signatory
    c. Date of Signature at the bottom of page 1.

D. Contractor's Final Affidavit of Payment of Debts and Claims
1. Fill out all lines of information to accurately identify:
    a. Project name
    b. Pay application number
    c. Progress billing period ending date
2. Additionally fill in the name of the prime contractor requesting payment in section 1 of page 1 as well as the payment through date in section 1 of page 1.
3. Section 2 of page 1 is reserved for identification of subcontractors and suppliers of whom you have not settled all debts owed, as it relates to the project, through the correlating billing period. This section is for partial release of retainage only; no unpaid items will be accepted on the final affidavits. In this section, each identified subcontractor/supplier must have the following information provided:
    a. Name of the entity that has not been paid.
    b. Amount still owed to the entity to bring them to current of the end of billing period being requested
    c. Reason for the non-payment and status of anything holding up said payment.
4. Approved signatory of Prime Contractor, along with certified notary, must provide:
    a. Notarized Signature
    b. Name and Title of Prime Contractor Signatory
    c. Date of Signature at the bottom of page 1.
    d. Notary Stamp and information
        1) Waivers submitted without notarization will be deemed incomplete and will not be accepted or processed for payment.

1.03 SAMPLE FORM

1. See next page.

PAYMENT WAIVER FORM

Conditional Waiver and Release Upon Progress Payment

Project: _____
Contractor/Subcontractor: _____
Invoice/Pay Application No.: _____
Amount of Progress Payment: $_____
Date: _____

The undersigned hereby acknowledges having received and reviewed the referenced progress payment request and agrees as follows:

1. Upon the Owner's payment of $_____ to the undersigned for work, labor, services, and/or materials furnished through ___/___/_____, the undersigned *conditionally* waives and releases all rights to make a payment bond claim under applicable Iowa public contract law *only for the amount actually paid* through this progress billing.

2. This waiver and release is *strictly conditional* upon receipt and clearance of funds for the specified amount. If payment is not received and cleared in the undersigned's account, this waiver and release is void and of no effect.

3. The undersigned expressly reserves all rights to additional payment beyond the amount actually received that remains unpaid on this pay application.

This form does not waive rights as to retainage, disputed items, or amounts not yet billed.

Contractor/Subcontractor Signature: _____

Printed Name/Title: _____

Date: _____

Contractor's Affidavit of Payment of Debts and Claims

State of Iowa
Project: _____
Pay Application No.: _____
Progress Billing Period Ending: ___/___/_____

The undersigned, being duly sworn, deposes and states:

1. I am the authorized representative of _____ (Prime Contractor) and have personal knowledge of all payments made and obligations incurred by the Prime Contractor for work, labor, material, equipment and services furnished in connection with the Project through ___/___/_____.

2. All subcontractors, suppliers, laborers, and other entities that provided work, labor, materials, equipment, or services to the Project for which payment is due through this billing period have been paid in full for amounts invoiced and due, except as listed below:

NAME OF ENTITY	AMOUNT UNPAID	REASON/STATUS

3. No payment claims, stop notices, or bond claims are pending against this Project for amounts covered by this progress billing, except as noted above.

I certify under penalty of perjury under the laws of the State of Iowa that the foregoing is true and correct.

Signature: _____
Printed Name/Title: _____
Date: ___/___/_____

Subscribed and sworn to before me this ___ day of _____, 20___.

Notary Public for the State of Iowa
My Commission Expires: _____

PAYMENT WAIVER FORM - FINAL

Conditional Waiver and Release Upon Final Payment

Project: _____
Contractor/Subcontractor: _____
Invoice/Pay Application No.: _____
Amount of Progress Payment: $_____
Date: _____

The undersigned hereby acknowledges having submitted the referenced final payment request and agrees as follows:

1. Upon the Owner's payment of $_____ to the undersigned for all work, labor, services, and/or materials furnished in connection with the Project through ___/___/_____, the undersigned conditionally waives and releases all rights to make a payment bond claim under applicable Iowa public contract law for amounts included in the final payment and actually received.

2. This waiver and release is strictly conditional upon receipt and clearance of the full final payment stated above. If the full final payment is not received and cleared in the undersigned's account, this waiver and release is void and of no effect.

3. Upon receipt and clearance of the full final payment, the undersigned acknowledges that all amounts due to it for the Project, including retainage and all approved change orders, have been paid in full, except only those claims or disputed amounts specifically identified below.

EXCEPTIONS / RESERVED CLAIMS (write "None" if none):

_____
_____

4. Except for the items expressly identified above, upon receipt and clearance of the full final payment, the undersigned waives and releases all payment claims and payment bond claims arising from labor, services, equipment, or materials furnished by the undersigned for the Project through the date stated above.

5. This waiver is limited to payment rights and payment bond claims. It does not waive contractual obligations, warranties, correction obligations, indemnity obligations, latent-defect responsibilities, or other obligations that survive final payment under the Contract Documents.

Contractor/Subcontractor Signature: _____

Printed Name/Title: _____

Date: _____

State of Iowa
Project: _____
Pay Application No.: _____
Progress Billing Period Ending: ___/___/_____

The undersigned, being duly sworn, deposes and states:

1. I am the authorized representative of _____ (Prime Contractor) and have personal knowledge of all payments made and obligations incurred by the Prime Contractor for work, labor, material, equipment and services furnished in connection with the Project through ___/___/_____.

2. Except for the amounts specifically listed below, all subcontractors, suppliers, laborers, and other entities that provided work, labor, materials, equipment, or services to the Project have been paid in full for all amounts invoiced and due, including amounts associated with retainage and approved change orders.

NAME OF ENTITY	AMOUNT UNPAID	REASON/STATUS

3. Except as listed above, there are no unpaid obligations to subcontractors, suppliers, laborers, or other entities for work, labor, materials, equipment, or services furnished in connection with the Project.

4. To the best of my knowledge, no payment claims or bond claims are pending against the Project for amounts arising from the Prime Contractor's work, except as specifically identified above.

5. The Prime Contractor acknowledges its continuing obligation to promptly pay any amounts listed above when due and to satisfy all payment obligations associated with the Project.

I certify under penalty of perjury under the laws of the State of Iowa that the foregoing is true and correct.

Signature: _____
Printed Name/Title: _____
Date: ___/___/_____

Subscribed and sworn to before me this ___ day of _____, 20___.

Notary Public for the State of Iowa
My Commission Expires: _____

PART 2 - PRODUCTS – NOT USED

PART 3 - EXECUTION – NOT USED

END OF SECTION

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SECTION 01 3100.01

WEB BASED CONSTRUCTION MANAGEMENT

PART 1 - GENERAL

1.01 DESCRIPTION

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

1.02 USER ACCESS LIMITATIONS

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

1.03 AUTOMATED SYSTEM NOTIFICATION AND AUDIT LOG TRACKING

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

1.04 SUBMITTALS

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

1.05 COMPUTER REQUIREMENTS

A. The Contractor shall use computer hardware and software that meets the requirements of the **Procore** system as recommended by **Procore Technologies, Inc.** to access and utilize

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

B. The Contractor shall be responsible for the validity of their information placed in **Procore** and for the abilities of their personnel. Accepted users shall be knowledgeable in the use of computers, including Internet Browsers, email programs, cad drawing applications, and Adobe Portable Document Format (PDF) document distribution program. The Contractor shall utilize the existing forms in **Procore** to the maximum extent possible. If a form does not exist in **Procore** the Contractor must include a form of their own or provided by the Owner representative as an attachment to a submittal. Adobe PDF documents will be created through electronic conversion rather than optically scanned whenever possible. The Contractor is responsible for the training of their personnel in the use of **Procore** (outside what is provided by the owner) and the other programs indicated above as needed.

C. User Access Administration: Provide a list of Contractor's key **Procore** personnel for the Owner's Representative acceptance. Contractor is responsible for adding and removing users from the system. The Owners Representative reserves the right to perform a security check on all potential users. The Contractor will be allowed to add additional personnel and sub-contractors to **Procore.**

1.06 CONNECTIVITY PROBLEMS

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

1.07 TRAINING

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

PART 2 - PRODUCTS

2.01 DESCRIPTION

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

PART 3 - EXECUTION

3.01 PROCORE UTILIZATION

A. **Procore** shall be utilized in connection with submittal preparation and information management required by Sections:
1. PROJECT MANAGEMENT AND COORDINATION
2. CONSTRUCTION PROGRESS DOCUMENTATION
3. SUBMITTAL PROCEDURES
4. QUALITY REQUIREMENTS
5. Other Division One sections.
6. Requirements of this section are in addition to requirements of all other sections of the specifications.

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

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

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

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

F. Administrative Submittals
1. All correspondence and pre-construction submittals shall be submitted using **Procore**. Examples of administrative submittals include, but are not limited to:
2. Digging permits and notices for excavation.
3. List of product substitutions
4. List of contact personnel.
5. Notices for roadway interruption, work outside regular hours, and utility cut overs.
6. Requests for Information (RFI).
7. Construction progress Schedules and associated reports and updates.
    a. Each schedule submittal specified in CONSTRUCTION PROGRESS DOCUMENTATION shall be submitted as a native backed-up file (.PRX or .STX) of the scheduling program being used. The schedule will also be posted as a PDF

file in the format.

8. Plans for safety, demolition, environmental protection, and similar activities.
9. Quality Control Plan(s), Testing Plan and Log, Quality Control Reports, Production Reports, Quality Control Specialist Reports, Preparatory Phase Checklist, Initial Phase Checklist, Field Test reports, Summary reports, Rework Items List, etc.
10. Meeting minutes for quality control meetings, progress meetings, pre-installation meetings, etc.
11. Any general correspondence submitted.

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

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

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

END OF SECTION

SECTION 01 3100.02

SIGNATORY FORM

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Procedures & Requirements
B. Sample Form

1.02 PROCEDURES & REQUIREMENTS

A. The Signatory form is used to identify who are the assigned representatives for the company and what their signatory levels are.
B. The following are the expected “appropriate” signatory levels per role/person:
   1. Contract – This needs to be signed by a Project Executive or higher.
   2. Change Orders to Contract – These can be executed by the Project Manager up to $250,000. Above that threshold a Project Executive or higher must execute.
   3. Owner Change Directives – Must be signed by the Project Executive.
   4. Subcontracts – Can be signed by the Project Manager up to $50,000. Anything above the threshold must be signed by a Project Executive.
   5. Purchase Orders – Can be signed by the Project Manager up to $50,000. Anything above the threshold must be signed by a Project Executive.
   6. Pay Applications – Can be signed/approved by the Project Manager.
   7. Schedule Updates – Can be signed/approved by the Project Manager.
   8. RFI’s – Can be signed/approved by the Project Manager or Superintendent.
   9. Submittal’s – Can be signed/approved by the Project Manager or Superintendent.
   10. Claim/Delay Notices – Must be signed by Project Executive or higher.
C. Filling out the Signatory Form:
   1. Header information will be filled out by the CM/Owner
   2. Section 1 – Authorized Representatives:
      a. Input the names, positions, company, email and phone of each individual the company has assigned to facilitate the project.
   3. Section 2 – Signature Authority Matrix:
      a. This section is for information only and can only be edited by the owner.
   4. Section 3 – Binding Authority Statement:
      a. Enter company name for which individuals identified in section 1 represent.
   5. Section 4 – Delegation and Revocation:
      a. Filled out by CM/Owner
      b. Typically, will be selected as “Project Completion” and “Written Revocation”
   6. Section 5 - Certification:
      a. Filled out and signed by an officer of the company.
D. Signatory Form Requirements:
   1. Must be provided to the CM/Owner, no later than 5 working days after the issuance of the NOI.
   2. Failure to provide a fully filled out form may result in disqualification of contractor’s bid submission.

PART 2 - SAMPLE FORM (See following Pages)

A. Last Page left intentionally Blank

Construction Project Signatory Authorization Form

Project Authorization Matrix

Project Name: _____
Project Number: _____
Owner/Agency: _____
Prime Contractor / CM / Entity: _____
Effective Date: _____

Purpose

This form establishes the authorized representatives and signature authority levels for the above-referenced project. Only individuals listed herein are authorized to execute, approve, or otherwise bind the organization for project-related actions within the authority limits identified.

---

1. Authorized Representatives

Name	Title	Organization	Email	Phone

---

2. Signature Authority Matrix

Action / Document Type	Authorized Individual(s)	Authority Limit	Secondary Approval Required
Contract Execution	Project Executive	Unlimited	No
Change Orders	Project Manager	Up to $250,000	Required above limit
Owner Change Directives	Project Executive	Unlimited	No
Subcontracts	Project Manager	Up to $50,000	Yes above threshold
Purchase Orders	Project Manager	Up to $50,000	Yes above threshold
Pay Applications	Project Manager	Unlimited	No
Schedule Updates	Project Manager	Unlimited	No
RFIs	Superintendent / PM	Unlimited	No
Submittals	Superintendent / PM	Unlimited	No
Claims / Delay Notices	Project Executive	Unlimited	Legal Review Required

---

3. Binding Authority Statement

The individuals identified above are authorized to act on behalf of **[Company Name]** for matters associated with the referenced project, subject to any monetary limitations identified in this authorization. No other employee, consultant, subcontractor, or representative shall possess authority to bind the organization unless subsequently authorized in writing.

Any modification to this authorization shall be made by written amendment and distributed to all project stakeholders.

---

4. Delegation and Revocation

This authorization remains in effect until:

☐ Project Completion
☐ Written Revocation
☐ Superseded Authorization Dated: _____

---

5. Certification

I certify that the individuals listed above are authorized to execute project-related actions on behalf of the organization as described herein.

Authorized Corporate Officer / Agency Representative

Name: _____

Title: _____

Signature: _____

Date: _____

END OF SECTION

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SECTION 01 3100.03

SUBCONTRACTOR AND SUPPLIER IDENTIFICATION FORM

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Procedures & Requirements
B. Sample Form

1.02 PROCEDURES & REQUIREMENTS

A. The Subcontractor and Supplier Identification form is used to identify who your assigned subcontractors and suppliers will be for the project.
B. Here is a breakdown of how to fill out “PRIME CONTRACTOR” info section:
   1. RFB# – This should be the number assigned to the RFB in which you are providing a proposal of services for.
   2. Bid Package Number – Identifies the bid package for which your list applies to.
      a. If you are awarded multiple bid packages, you will need to provide a form separate for each awarded bid package. If CM/Owner elects to award all bid packages in a singular contract, then only one form will be required.
   3. Prime Contractor – This will be the awarded contractors name for whom the Subcontractor and Supplier Identification List applies to.
   4. Iowa Contractor Registration # – Must be Current.
   5. Federal ID # – Must be Current.
   6. Street Address: Current legal address for which prime contractor operates out of.
      a. Includes City, State & Zip
   7. Office Phone #: Current main office line for Prime Contractor
   8. Fax #: Current main fax line for Prime Contractor (if applicable)
   9. Project Executive: Assigned Project Executive or executive level representative for Prime Contractor.
      a. Must Match Signatory Form
      b. Provide Cell Phone Number and Email Address where this person can best be reached.
   10. Project Manager: Assigned Project Management representative for Prime Contractor.
      a. Must Match Signatory Form
      b. Provide Cell Phone Number and Email Address where this person can best be reached.
   11. Superintendent: Assigned Superintendent for Prime Contractor.
      a. Must Match Signatory Form
      b. Provide Cell Phone Number and Email Address where this person can best be reached.
   12. Safety Representative: Assigned Certified Safety representative for Prime Contractor.
      a. Must Match Signatory Form
      b. Provide Cell Phone Number and Email Address where this person can best be reached.
   13. Primary Emergency Contact: This should be the individual that the CM or the owner can reach out to first, in the event of an emergency
      a. Provide Cell Phone Number where this person can best be reached.
   14. Secondary Emergency Contact: This should be the 2nd in line individual that the CM or the owner can reach out to, in the event of an emergency
      a. Provide Cell Phone Number where this person can best be reached.
C. The following are instructions for filling out the “Subcontractor/Supplier” Sections:

1. Section and Description: Enter the spec section(s) that this sub or supplier will be working on/providing materials for. Additionally provide a brief description of what they are performing/providing.
2. Iowa Contractor Registration # – Must be Current.
3. Federal ID # – Must be Current.
4. Street Address: Current legal address for which subcontractor/supplier operates out of.
   a. Includes City, State & Zip
5. Office Phone #: Current main office line for subcontractor/supplier.
6. Emergency Contact: This should be the individual that the CM or the owner can reach out to first, in the event of an emergency
   a. Provide Cell Phone Number where this person can best be reached.
7. Primary Contact: Provide the name and title of the main POC for this Subcontractor/supplier.
   a. Provide Phone # and email address where this person can best be reached.
8. Work to be performed section:
   a. Place a checkmark in the box next to the scope of work the subcontractor/supplier is facilitating. Multiple selections can be made for an individual entity if they are performing/providing multiple scopes.
   b. If this is a supplier, check the box next to “Supplier Only” and list the materials being provided by said supplier.
9. *Repeat steps 1-8 for all remaining Subcontractor/suppliers on the project assigned to responsible Prime Contractor.

D. Subcontractor and Supplier Identification Form Requirements:
1. Must be provided to the CM/Owner, no later than 5 working days after the issuance of the NOI.
2. Failure to provide a fully filled out form may result in disqualification of contractors bid submission.

1.03 SAMPLE FORM (See following pages)

A. Last page will be “END OF SECTION” of front end section 01 3100.03

PART 2 - PRODUCTS – NOT USED

PART 3 - EXECUTION – NOT USED

END OF SECTION

IOWA | Department of Administrative Services
DESIGN & CONSTRUCTION RESOURCES BUREAU

SUBCONTRACTOR AND SUPPLIER IDENTIFICATION FORM

Instructions:
Upon completion of filling in the applicable fields, return this form to the Issuing Officer within 5 working days of the issuance of the Notice of Intent to Award.

Iowa Sales Tax Exception Certificates will be prepared by the Owner for the Contractor and Subcontractor(s) listed on this form. Include parties who will be purchasing material for this project. The Owner will generate the Certificate(s). The Certificate(s) will be sent to the Prime Contractor for distribution.

PRIME CONTRACTOR:

RFB #	
Bid Package Number	
Prime Contractor	
Iowa Contractor Registration #	
Federal ID #	
Street Address	
City, State, Zip	
Office Phone #	
Fax #	
Project Executive	
Project Executive Mobile Phone #	
Project Executive Email Address	
Project Manager	
Project Manager Mobile Phone #	
Project Manager Email Address	
Superintendent	
Superintendent Mobile Phone #	
Superintendent Email Address	
Site Phone #	
Safety Representative	
Safety Representative Phone #	
Primary Emergency Contact	
Primary Emergency Contact Phone #	
Secondary Emergency Contact	
Secondary Emergency Contact Phone #	

Mark here if no subcontractors will be used: ☐

Subcontractor/Supplier	
Section and Description	
Iowa Contractor Registration #	
Federal ID #	
Street Address	
City, State, Zip Code	
Office Phone #	
Emergency Contact	
Primary Contact, Name and Title	
Primary Contact Phone #	
Primary Contact Email	

Work to be performed:

- ☐ Access Control
- ☐ Brickwork/Masonry
- ☐ Carpentry/Millwork
- ☐ Concrete
- ☐ Drywall/Plaster
- ☐ Electrical
- ☐ Electrical - Fire Alarm
- ☐ Electrical - Telecom
- ☐ Elevator
- ☐ Excavation – Grading
- ☐ Excavation – Grading (Utilities)
- ☐ Fire Protection
- ☐ Flooring
- ☐ Heavy Construction
- ☐ HVAC – Controls
- ☐ HVAC – Ductwork
- ☐ HVAC – Hydronic
- ☐ Landscaping
- ☐ Painting
- ☐ Paving
- ☐ Plumbing
- ☐ Roofing
- ☐ Siding/Sheetmetal
- ☐ Steel/Metals
- ☐ Windows/Curtainwall
- ☐ Wrecking/Demolition
- ☐ Other (Specify)_____
- ☐ Supplier Only (list items)

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SECTION 01 3100

PROJECT MANAGEMENT AND COORDINATION

PART 1 - GENERAL

1.01 SECTION INCLUDES

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

1.02 COORDINATION

A. Coordinate scheduling, submittals, and work of the various sections of the project manual to ensure efficient and orderly sequence of installation of interdependent construction elements.
   1. Schedule construction operations in sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
   2. Coordinate installation of different components with other contractors to ensure maximum accessibility for required maintenance, service, and repair.
   3. Make adequate provisions to accommodate items scheduled for later installation.

B. Administrative procedures: The Trade Contractor will coordinate scheduling and timing of required administrative procedures with other construction activities to avoid conflicts and ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:
   1. Preparation of Trade Contractor's Construction Schedule.
   2. Provide updated information for Construction Manager's Construction Schedule.
   3. Preparation of Schedule of Values.
   4. Delivery and processing of submittals.
   5. Progress meetings.
   6. Pre-installation conferences.
   7. Project closeout activities

C. Verify utility requirements and characteristics of operating equipment are compatible with building utilities. Coordinate work of various sections having interdependent responsibilities for installing, connecting to, and placing in service, such equipment.

D. Coordinate space requirements, supports, and installation of mechanical and electrical work, which are indicated diagrammatically on drawings. Follow routing shown for pipes, ducts, and conduit, as closely as practicable; place runs parallel with lines of building. Utilize spaces efficiently to maximize accessibility for other installations, for maintenance, and for repairs.

E. In finished areas except as otherwise indicated conceal pipes and wiring within the construction. Coordinate locations of piping with finish elements.

F. Coordinate completion and cleanup of work of separate sections in preparation for Substantial Completion.

G. After owner occupancy of premises, coordinate access to site for correction of defective work and work not in accordance with Contract Documents, to minimize disruption of owner's activities.

H. During construction coordinate use of site and facilities through Construction Manager.

I. Comply with Construction Manager and Owner's procedures for intra-project communications; submittals, reports and records, schedules, coordination drawings, and recommendations; and resolution of ambiguities and conflicts.

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

PART 2 - PRODUCTS – NOT USED

PART 3 - EXECUTION

3.01 PRE-CONSTRUCTION MEETING

A. The Construction Manager and Owner will schedule a meeting after Notice of Award.

B. Required: Design Professional, Owner, Construction Manager, Trade Contractor and any Sub Contractors.

C. Agenda:
   1. Execution of Owner-Contractor Agreement.
   2. Submission of executed bonds and insurance certificates.
   3. Distribution of Contract Documents.
   4. Submission of list of subcontractors, list of products, schedule of values, and progress schedule.
   5. Designation of personnel representing the parties in Contract.
   6. Procedures and processing of field decisions, submittals, substitutions, applications for payments, proposal request, change orders, RFIs and contract closeout procedures
   7. Tentative construction schedule.
   8. Critical work sequencing and long-lead items.
   9. Procedures for testing and inspecting.
   10. Preparation of Record Documents.
   11. Safety Procedures.
   12. Owner's requirements.
   13. Security and housekeeping procedures.
   14. Background Checks.
   15. Responsibility for temporary facilities and controls.
   16. Construction waste management.
   17. Logistics (use of premise, parking, work restrictions, maintain egress, etc.)

D. The Construction Manager is to record minutes and distribute copies within two days after meeting to participants, with one copy to owner, participants, and those affected by decisions made.

3.02 PROGRESS MEETINGS

A. The Construction Manager shall schedule and administer meetings throughout progress of the work at bi-weekly intervals.

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

3.03 COORDINATION MEETINGS

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

3.04 REQUESTS FOR INTERPRETATION (RFIs)

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

2. Requests for approval of substitutions.
3. Requests for coordination information already indicated in the Contract Documents.
4. Requests for adjustments in the Contract Time or the Contract Sum.
5. Requests for interpretation of Design Professional's actions on submittals.
6. Incomplete RFIs or RFIs with numerous errors.
7. Design Professional's action may include a request for additional information, in which case Design Professional's time for response will start again.

D. Design Professional's action on RFIs that may result in a change to the Contract Time or the Contract Sum/Price.
   1. If Trade Contractor believes the RFI response warrants change in the Contract Time or the Contract Sum, notify Construction Manager in writing within ten (10) days of receipt of the RFI response.

E. On receipt of Design Professional's response in Procore, review the response and notify Design Professional within seven (7) days if Trade Contractor disagrees with response.

3.05 BACKGROUND CHECKS

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

3.06 UTILITY LOCATES/GROUND PENETRATIONS

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

END OF SECTION

SECTION 01 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. Enclosures and Fencing
K. Waste Removal

1.02 TEMPORARY UTILITIES

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

1.03 TEMPORARY SANITARY FACILITIES

A. Provide and maintain required facilities and enclosures. Provide at time of project mobilization.
B. Maintain daily in clean and sanitary condition.

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. Provide temporary enclosure and fences as necessary to protect the public and secure the site.
B. Provide security and facilities to protect work, existing facilities, and Owner's operations from unauthorized entry, vandalism, or theft.

3.05 WASTE REMOVAL

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

END OF SECTION

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

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

3.03 PROJECT RECORD DOCUMENTS

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

3.04 WARRANTIES

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

3.05 OPERATIONS AND MAINTENANCE MANUALS

A. Format: Submit operations and maintenance manuals in the following format:
   1. Portable Document Format (PDF) electronic file. Assemble each manual into a composite electronically indexed file. Submit on digital media acceptable to Owner and upload to Procore.
      a. Name each indexed document file in composite electronic index with applicable item name. Include a complete electronically linked operation and maintenance directory.

2. Assemble with data arranged in the same sequence as, and identified by the specification sections. Where systems involve more than one specification section, provide separate index for each system.
3. Include project directory listing title and address of project, names, addresses, and telephone numbers of Architect, Consultants, Contractor and subcontractors, with names of responsible parties.
4. Include Table of Contents listing every item separated by index and specification section.

B. Source Data: For each product or system, list names, addresses, and telephone numbers of subcontractors and suppliers, including local source of supplies and replacement parts.

C. Product Data: Mark each sheet to clearly identify specific products and component parts, and data applicable to installation. Delete inapplicable information.

D. Drawings: Supplement product data to illustrate relations of component parts of equipment and systems, to show control and flow diagrams. Do not use project record documents as maintenance drawings.

E. Typed Text: As required to supplement product data. Provide logical sequence of instructions for each procedure, incorporating manufacturer's instructions.

3.06 OPERATIONS AND MAINTENANCE DATA FOR MATERIALS AND FINISHES

A. For each product, applied material, and finish:
1. Product data, with catalog number, size, composition, and color and texture designations.
2. Information for re-ordering custom manufactured products.

B. Instructions for Care and Maintenance: Manufacturer's recommendations for cleaning agents and methods, precautions against detrimental cleaning agents and methods, and recommended schedule for cleaning and maintenance.

C. Moisture protection and weather-exposed products: Include product data listing applicable reference standards, chemical composition, and details of installation. Provide recommendations for inspections, maintenance, and repair.

D. Additional information as specified in individual product specification sections.

E. Where additional instructions are required, beyond the manufacturer's standard printed instructions, have instructions prepared by personnel experienced in the operation and maintenance of the specified products.

3.07 OPERATION AND MAINTENANCE DATA FOR EQUIPMENT AND SYSTEMS

A. For each item of equipment and each system:
1. Description of unit or system, and component parts
2. Identify function, normal operating characteristics, and limiting conditions
3. Include performance curves, with engineering data and tests
4. Complete nomenclature and model number of replacement parts.

B. Where additional instructions are required, beyond the manufacturer's standard printed instructions, have instructions prepared by personnel experienced in the operation and maintenance of the specified products.

C. Panelboard Circuit Directories: Provide electrical service characteristics, controls, and communications; typed.

D. Include color coded wiring diagrams as installed.

E. Operating procedures: Include start-up, break-in, and routine normal operating instructions and sequences. Include regulation, control, stopping, shut-down, and emergency instructions. Include summer, winter, and any special operating instructions.

F. Maintenance requirements: Include routine procedure and guide for preventative maintenance and troubleshooting; disassembly, repair, and reassembly instructions; and alignment, adjusting, balancing, and checking instructions.

G. Provide servicing and lubrication schedule and list of lubricants required.

H. Include manufacturer's printed operation and maintenance instructions.

I. Include sequence of operation by controls manufacturer.

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

3.08 TRAINING

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

3.09 FINAL COMPLETION

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

END OF SECTION

Substantial Completion Project Checklist

Date: _____

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

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

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

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

❑ **Occupancy Permit if applicable**

❑ **Test and Balance has been performed**

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

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

_____

_____

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

Final Completion Project Checklist

Date: _____

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

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

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

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

Who is in possession of the O & M Manuals? _____

Has all training been completed? ❑ **Yes** ❑ **No**

Have all as-built drawings been scanned and uploaded into Procore? ❑ **Yes** ❑ **No**

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

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

Have all punch list 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**

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SECTION 07 1113
BITUMINOUS DAMPPROOFING

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Bituminous dampproofing.

B. Protection boards.

C. Drainage panels.

1.2 REFERENCE STANDARDS

A. ASTM D41/D41M - Standard Specification for Asphalt Primer Used in Roofing, Dampproofing, and Waterproofing; 2011 (Reapproved 2023).

B. ASTM D43/D43M - Standard Specification for Coal Tar Primer Used in Roofing, Dampproofing, and Waterproofing; 2000 (Reapproved 2024).

C. ASTM D449/D449M - Standard Specification for Asphalt Used in Dampproofing and Waterproofing; 2003 (Reapproved 2021).

D. NRCA (WM) - The NRCA Waterproofing Manual; 2021.

1.3 SUBMITTALS

A. Product Data: Provide properties of primer, bitumen, and mastics.

B. Manufacturer's Installation Instructions: Indicate special procedures and perimeter conditions requiring special attention.

1.4 QUALITY ASSURANCE

A. Installer Qualifications: Approved by manufacturer.

1.5 FIELD CONDITIONS

A. Maintain ambient temperatures above 40 degrees F (5 degrees C) for 24 hours before and during application until dampproofing has cured.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Karnak Corporation: www.karnakcorp.com/#sle.

B. W. R. Meadows, Inc: www.wrmeadows.com/#sle.

C. Tremco: https://www.tremcosealants.com/

D. AVM Industries Inc: https://avmindustries.com/

SECTION 07 1113
BITUMINOUS DAMPPROOFING

E. Henry: https://www.henry.com/

F. Source Limitations: Furnish products obtained from single supplier or engineer pre-approved equivalent.

2.2 BITUMINOUS DAMPPROOFING

A. Bituminous Dampproofing: Cold-applied water-based emulsion; asphalt with mineral colloid or chemical emulsifying agent; with or without fiber reinforcement; asbestos-free; suitable for application on vertical and horizontal surfaces.
   1. Asphalt-Base Emulsion for Metal Protective Coating: ASTM D1187/D1187M, Type I - Continuous water exposure within few days after drying; Type II - Continuous weather exposure after drying.
   2. Emulsified Asphalt for Roofing Protective Coating: ASTM D1227/D1227M, Type II, Class 1 - Mineral colloid emulsifying agents with non-asbestos fibers; Type III, Class 1 - Mineral colloid emulsifying agents without fibrous reinforcement.
   3. VOC Content: Not more than permitted by local, State, and federal regulations.
   4. Applied Thickness: 1/16 inch (1.5 mm); 1/8 inch (3 mm), minimum, wet film.
   5. Products:
      a. Karnak Corporation; 220 Fibered Emulsion Dampproofing; www.karnakcorp.com/#sle.
      b. W. R. Meadows, Inc; Sealmastic Emulsion; Sealmastic Emulsion Type I (spray-grade); Sealmastic Emulsion Type II (brush/spray-grade); Sealmastic Emulsion Type III (trowel-grade); www.wrmeadows.com/#sle.

B. Bituminous Dampproofing: Cold-applied, spray-grade; asphalt base, volatile petroleum solvents, and other content, suitable for application by spray, brush, roller, or squeegee; asbestos-free; suitable for application on vertical and horizontal surfaces.
   1. Composition: ASTM D4479/D4479M Type I, minimum, asbestos free.
   2. VOC Content: Not more than permitted by local, State, and federal regulations.
   3. Applied Thickness: 1/16 inch (1.5 mm), minimum, wet film.
   4. Products:
      a. W. R. Meadows, Inc; Sealmastic Spray-Mastic
      b. Henry; HE series Foundation Coating
      c. Tremco, Foundation Waterproofing
      d. AVM Industries

C. Primers, Mastics, and Related Materials: Type as recommended by dampproofing manufacturer

2.3 BITUMEN MATERIALS

A. Hot Asphaltic Type:
   1. Asphalt: ASTM D449/D449M, Type I; Type II; Type III.
   2. Primer: ASTM D41/D41M, compatible with substrate.
   3. Asphalt Roof Cement: ASTM D4586/D4586M, Type I, asbestos-free.
   4. Asphalt Roof Cement: ASTM D4586/D4586M, Type II, asbestos-free.

B. Coal Tar Type:
   1. Coal Tar Pitch: ASTM D450/D450M, Type II.
   2. Primer: ASTM D43/D43M, coal tar type.

SECTION 07 1113
BITUMINOUS DAMPPROOFING

3. Sealing Mastic: ASTM D5643/D5643M, coal tar roof cement, asbestos-free.

C. Cold Asphaltic Type:
1. Emulsified Asphalt: ASTM D1227/D1227M, with fiber reinforcement other than asbestos, Type II, Class 1 or 2; unreinforced, Type III, Class 1 or 2.
2. Asphalt Primer: ASTM D41/D41M, compatible with substrate.

2.4 ACCESSORIES

A. Drainage Panel: 1/4-inch (6 mm); 3/8-inch (9 mm); formed plastic; molded flexible rubber; hollowed sandwich; embossed with cover sheet; embossed without cover sheet.

B. Protection Board: Rigid insulation; see Section 07 2100; Type recommended by waterproofing manufacturer.

C. Protection Board: 1/8-inch (3 mm); 1/4-inch (6 mm); 1/2-inch (13 mm); thick biodegradable hardboard; polystyrene foam sheet; asphalt wood fiberboard; bitumen impregnated glass fiberboard.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify existing conditions are acceptable prior to starting this work.

B. Verify substrate surfaces are durable, free of matter detrimental to adhesion or application of dampproofing system.

C. Verify that items penetrating surfaces to receive dampproofing are securely installed.

3.2 PREPARATION

A. Protect adjacent surfaces not designated to receive dampproofing.

B. Clean and prepare surfaces to receive dampproofing in accordance with manufacturer's instructions.

C. Do not apply dampproofing to surfaces unacceptable to manufacturer.

D. Apply mastic to seal penetrations, small cracks, or minor honeycombs in substrate.

3.3 APPLICATION

A. Foundation Walls; Apply two coats of asphalt.

B. Foundation Walls; Basement Walls; Patch disturbed areas of existing dampproofing with two additional coats of dampproofing of the same generic type.

C. Perform this work in accordance with manufacturer's instructions; NRCA (WM) applicable requirements.

SECTION 07 1113
BITUMINOUS DAMPPROOFING

D. Prime surfaces in accordance with manufacturer's instructions; NRCA (WM) applicable requirements.

E. Prime surfaces at a rate approved by manufacturer for application indicated; of 2 gal/100 sq ft (of 0.81 L/sq m); and allow primer to dry thoroughly.

F. Apply bitumen with mop; with roller; by spray application; by trowel.

G. Apply bitumen at a temperature limited by equiviscous temperature (EVT) plus or minus 25 degrees F (14 degrees C); do not exceed finish blowing temperature for four hours.

H. Apply bitumen in one coat; continuous and uniform, at a rate of 25 sq ft/gal (0.6 sq m/L) per coat.

I. Apply from 2 inches (50 mm); below finish grade elevation down to top of footings.

J. Seal items watertight with mastic, that project through dampproofing surface.

K. Immediately backfill against dampproofing to protect from damage.

L. Place drainage panel directly over dampproofing, butt joints, and position to ensure downward drainage.

M. Place protection board directly over dampproofing, butt joints, and adhere to tacky dampproofing.

N. Place protection board over drainage panel, butt joints, and adhere with mastic.

O. Scribe and cut boards around projections, penetrations, and interruptions.

END OF SECTION

SECTION 07 2100
THERMAL INSULATION

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Board insulation at perimeter foundation wall.

1.2 RELATED REQUIREMENTS

A. Section 07 1113 – Bituminous Dampproofing.

1.3 REFERENCE STANDARDS

A. ASTM C165 - Standard Test Method for Measuring Compressive Properties of Thermal Insulations; 2023.

B. ASTM C578 - Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation; 2023.

1.4 SUBMITTALS

A. Product Data: Provide data on product characteristics and performance criteria.

B. Manufacturer's Installation Instructions: Include information on special environmental conditions required for installation and installation techniques.

1.5 FIELD CONDITIONS

A. Do not install insulation adhesives when temperature or weather conditions are detrimental to successful installation.

PART 2 PRODUCTS

2.1 APPLICATIONS

A. Insulation at Perimeter of Foundation: Extruded polystyrene (XPS) board.

2.2 FOAM BOARD INSULATION MATERIALS

A. Extruded Polystyrene (XPS) Board Insulation: Comply with ASTM C578 with natural skin surfaces.
   1. Type and Compressive Resistance: Type IV, 25 psi (173 kPa)
   2. Board Edges: Square.
   3. Products:
      a. Owens Corning Corporation FOAMULAR Type 250 Extruded Polystyrene (XPS) Insulation or engineer pre-approved equivalent.

2.3 ACCESSORIES

A. Tape: Type recommended by insulation manufacturer for application.

B. Adhesive: Type recommended by insulation manufacturer for application.

SECTION 07 2100
THERMAL INSULATION

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify that substrate, adjacent materials, and insulation materials are dry and that substrates are ready to receive insulation and adhesive.

B. Verify substrate surfaces are flat, free of honeycomb, irregularities, materials or substances that may impede adhesive bond.

3.2 BOARD INSTALLATION AT FOUNDATION PERIMETER

A. Adhere a 6 inches (152 mm) wide strip of polyethylene sheet over construction joints with double beads of adhesive each side of joint.
   1. Tape seal joints.
   2. Extend sheet full height of joint.

B. Apply adhesive to back of boards:
   1. Three continuous beads per board length.
   2. Full bed 1/8 inch (3.2 mm) thick.

C. Install boards vertically on foundation perimeter.
   1. Place boards to maximize adhesive contact.
   2. Install in running bond pattern.
   3. Butt edges and ends tightly to adjacent boards and to protrusions.

D. Extend boards over expansion joints, unbonded to foundation on one side of joint.

E. Cut and fit insulation tightly to protrusions or interruptions to the insulation plane.

F. Immediately following application of board insulation, place protective boards over exposed insulation surfaces.
   1. Apply adhesive in five continuous beads per board length.
   2. Install boards vertically from base of foundation to top of insulation.
   3. Butt boards tightly, with joints staggered from insulation joints.

3.3 FIELD QUALITY CONTROL

A. Owner’s Representative shall observe completed installation of protection board prior to concealment. Contractor to provide notification at least 24 hours prior to completion of work to schedule review.

3.4 PROTECTION

A. Do not permit installed insulation to be damaged prior to its concealment.

END OF SECTION

SECTION 31 2213
EARTHWORK AND ROUGH GRADING

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Provide labor, materials, equipment, and supervision necessary to complete the following:
   1. Remove topsoil and stockpile on site for later use.
   2. Grade subsoil and reform to grades, contours, and levels.
   3. Rough grade for roadways, walks, curbs, gutters, parking areas, and landscaped areas.
   4. Scarifying and recompaction.
   5. Import and compaction of fill materials and disposal of excess material required to bring the final grade into conformance with the lines and grades indicated on the Drawings.
   6. This section pertains to areas outside the building structural excavation and backfill limits.

1.2 EXISTING CONDITIONS

A. Known underground, surface and aerial utility lines, and buried objects are indicated on the Drawings.

1.3 PROTECTION

A. Existing Utilities
   1. Iowa One Call shall be notified for utility locates 48 hours prior to any digging. All locates shall be “Joint Locates.”

B. Protect benchmarks and existing structures, fences, roads, sidewalks, paving, and curbs against damage from equipment and vehicular traffic.

C. Protect aerial, surface, or underground utility lines or appurtenances which are to remain.

D. Repair damage.

1.4 REFERENCES

A. Definitions
   1. Excavation consists of the removal of material encountered to subgrade elevations and the reuse or disposal of materials removed.
   2. Subgrade: The uppermost surface of an excavation or the top surface of a fill or backfill immediately below subbase, drainage fill, or topsoil materials.
   3. Borrow: Soil material obtained off-site when sufficient approved soil material is not available from excavations.
   4. Subbase Course: The layer placed between the subgrade and base course in a paving system or the layer placed between the subgrade and surface of a pavement or walk.
   5. Base Course: The layer placed between the subbase and surface pavement in a paving system.

SECTION 31 2213
EARTHWORK AND ROUGH GRADING

6. Drainage Fill: Course of washed granular material supporting slab-on-grade placed to cut off upward capillary flow of pore water.
7. Unauthorized excavation consists of removing materials beyond indicated subgrade elevations or dimensions without direction by the Owner's Representative. Unauthorized excavation, as well as remedial work directed by the Owner's Representative, shall be at the Contractor's expense.
8. Structures: Buildings, footings, foundations, retaining walls, slabs, tanks, curbs, mechanical and electrical appurtenances, or other man-made stationary features constructed above or below ground surface.
9. Utilities include on-site underground pipe, conduits, ducts, and cables, as well as underground services within building lines.

1.5 SITE COMPACTION TESTING

A. Testing of compacted fill materials and soil evaluations will be performed by a Testing Agency retained by the Owner.

B. The Contractor shall notify the Testing Agency no less than 48 hours prior to when each section of work is ready for on-site testing. Do not proceed with additional portions of work until results have been verified.

C. If, during progress of work, tests indicated that compacted materials do not meet specified requirements, remove defective work, replace and retest at no cost to Owner.

D. Ensure compacted fills are tested before proceeding with placement of surface materials.

E. Refer to paragraph 3.5 for compaction requirements.

1.6 SUBMITTALS

A. Submit to testing agency minimum ten-pound (4.5kg) samples of each type of fill material to be used if requested by the testing agency. Provide samples to appointed testing laboratory, packed tightly in containers to prevent contamination. If recent test results are available for fill materials to be used, disregard samples submission and submit such test results to the testing laboratory. Such test results are to clearly indicate types of materials and composition, hardness, compactibility, and suitability for proposed usage.

1.7 JOB CONDITIONS

A. Construction Limits
1. All construction activities will be contained within construction boundaries indicated on the Drawings. Specified excavation requirements, precautions, and protective systems shall be observed at all times.

B. Protection
1. Protect materials of this section before, during, and after installation and protect all objects designated to remain. This includes erosion control.

2. In the event of damage, immediately make all repairs and replacements necessary to the approval of the Owner's Representative and at no additional cost to the Owner.

C. Adjustment of Utilities
1. Adjust all new and existing valve boxes, hydrants, castings, pull boxes, etc. to match finished grade elevations indicated on the Drawings. All rim elevations within paved areas shall be adjusted to match finished paving.
2. All adjustment rings for manholes or intakes shall be concrete.
3. Owner shall be notified a minimum of 24-hours prior to the establishment of the rough grade to allow the opportunity for hand holes, valve covers, manholes, and other surface fixtures to be located and reviewed.

PART 2 PRODUCTS

2.1 FILL MATERIALS

A. All fill materials shall be subject to approval of the Testing Agency.

B. Fill Material within 4' of Finished Grade: Excavated or borrowed material free from roots, broken concrete, broken asphalt, rocks larger than 3" in size, and building debris that meets compaction requirements.

C. Fill Material below 4' of Finished Grade: All fill material shall be soil or soil rock mixture which is free from organic matter and other deleterious substance. It shall contain no rocks or lumps over 6" (150mm) in greatest dimension and not more than 15% of the rocks or lumps shall be larger than 2-1/2" (63mm) in greatest dimension and shall meet compaction requirements.

D. Additional Fill Material: AASHTO Designation M145, soil classification group.

PART 3 EXECUTION

3.1 SAFETY

A. The Contractor is required to understand and implement all OSHA requirements for earthwork activities.

3.2 GENERAL

A. Familiarization
1. Prior to all work of this section, become thoroughly familiar with the site, the site conditions, and all portions of the work falling within this section.
2. Establish and identify required lines, levels, contours, and datum.
3. Maintain benchmarks, monuments, and other reference points. Re-establish if disturbed or destroyed, at no cost to Owner.
4. Before start of grading, establish the location and extent of utilities in the work areas. Notify utilities to remove and relocate lines which are in the way of construction.

SECTION 31 2213
EARTHWORK AND ROUGH GRADING

B. Backfilling Prior to Approvals
   1. Do not allow or cause any of the work performed or installed to be covered up or enclosed by work of this section prior to all required inspections, tests, and approvals.
   2. Should any of the work be so enclosed or covered up before it has been approved, uncover all such work at no additional cost to the Owner.

C. Before excavation has begun, strip and stockpile all existing topsoil.

3.3 TOPSOIL EXCAVATION

A. Remove topsoil of horticultural value from areas to be excavated, regraded and paved, and stockpile on site in designated areas indicated on the Drawings.

B. Do not permit topsoil to be mixed with subsoil.

C. Do not strip topsoil when wet.

D. Do not stockpile topsoil to depths exceeding 10'-0". Do not drive heavy equipment over stockpiled topsoil.

3.4 EXCAVATION

A. Depressions Resulting from Removal of Obstruction
   1. Where depressions result from, or have resulted from, the removal of surface or subsurface obstructions, open the depression to equipment working width and remove all debris and soft material as directed by the Owner's Representative.

B. Other Areas
   1. Excavate to grades shown on the Drawings.
   2. Where excavation grades are not shown on the Drawings, excavate as required to accommodate the installation.

C. Overexcavation
   1. Backfill and compact all overexcavated areas as specified for fill (Article 3.5) at no additional cost to the Owner.

3.5 FILLING

A. Fill areas to contours and elevations with unfrozen materials.

B. Compaction:
   1. Granular Fill: Place and compact materials in continuous layers not exceeding 8" (200mm) in compacted depth, per ASTM 0698 at frequency of one test per 500 square feet.
      a. Under pavement and undercut structures, compact backfill to 98% of maximum Standard Proctor Density.

2. Subsoil Fill: Place and compact material in continuous layers not exceeding 8" (200mm) in compacted depth, compacted to 95% of maximum Standard Proctor Density unless otherwise shown on the Drawings, per ASTM D698 at frequency of one test per 500 square yards.
   a. Under landscaped and lawn areas from below uncompacted backfill to 30” below finished surface elevation, compact suitable excavated material to 90% of maximum Standard Proctor Density.
   b. Under landscaped and lawn areas, provide 6” of uncompacted suitable excavated material under topsoil or planting soil.

C. Maintain optimum moisture content of fill materials to attain required compaction density. The geotechnical report offers a range of desirable moisture content for compaction. In general, low-plasticity cohesive soils shall be within -2% and +3% of optimum moisture content. Granular materials shall be within -3% and +3% of optimum moisture content. If on-site native or imported materials cannot be conditioned to suitable moisture content because of a lack of suitable drying weather, sufficient space on site for soil conditioning or any other reason, the Contractor shall import suitable material at no additional cost to the Owner.

D. Slope grade away from building minimum 2 in. (50mm) in 10 ft. (3m) unless otherwise noted.

E. Make grade changes gradual. Blend slope into level areas.

F. Remove surplus fill materials from site.

G. Bench fill material on all existing grades steeper than 4H:1V.

3.6 EXCESS WATER CONTROL

A. Unfavorable Weather
   1. Do not place, spread, or roll any fill material during unfavorable weather conditions.
   2. Do not resume operations until moisture content and fill density are satisfactory.

B. Flooding
   1. Provide dikes or channels to prevent flooding of subgrade; promptly remove all water collecting in depressions.

C. Softened Subgrade
   1. Where soil has been softened or eroded by flooding or placement during unfavorable weather, remove all damaged areas and recompact as specified for fill and compaction below.

D. Dewatering
   1. Provide and maintain at all times during construction ample means and devices with which to promptly remove and dispose of all water from every source entering the excavations or other parts of the work.
   2. Dewater by means that will ensure dry excavations and the preservation of the final lines and grades of bottoms of excavations.

SECTION 31 2213
EARTHWORK AND ROUGH GRADING

E. Drainage
1. The Contractor shall use all means necessary to maintain positive drainage on site during and after completion of construction. Provide all temporary grading and drainage measures required to prevent ponding on subgrades and to prevent discharge of site drainage to surrounding properties.

3.7 WASTE EXCAVATION

A. Excess material waste or unsuitable materials will be removed from the site and legally disposed of by the Contractor at no additional cost to the Owner. There shall be no disposal of such materials on the project site.

3.8 TOLERANCES

A. Top Surface of Subgrade: Plus or minus 0.1 foot (30mm).

3.9 FIELD QUALITY CONTROL

A. Field inspection and testing will be performed.

B. Tests and analysis of fill material will be performed in accordance with ASTM D698.

C. Compaction testing will be performed in accordance with ASTM D698.

D. If tests indicate work does not meet specified requirements, remove work, replace, and retest at no cost to Owner. The Contractor shall coordinate with the Testing Agency when non-compliant work is ready for re-testing. The Contractor shall be responsible for all costs related to re-testing.

END OF SECTION

SECTION 31 2316.13
TRENCH EXCAVATION AND BACKFILL

PART 1 GENERAL

1.1 SECTION INCLUDES

A. This section encompasses the work required for excavation of trenches, appurtenances, bedding, overexcavation of unsuitable material, and backfilling for the installation of utilities.

B. Definitions
1. Maximum Density: Maximum dry weight in pounds per cubic foot (kilogram per cubic meter) of a specific material, as determined by ASTM D698, Standard Proctor Density.
2. Optimum Moisture: Percentage of water at maximum density.
3. Rubble: Buried concrete foundations, beams, walls, and other material which requires blasting or jackhammering for its practical and effective removal.
4. Earth Excavation: Earth excavation will include all material not otherwise classified. Decomposed or disintegrated shale which can be effectively plowed, spaded, or removed with power drive excavation equipment, and gravel base will be classified as earth excavation.
5. Overexcavation of Unsuitable Material: Overexcavation of unsuitable material is the removal of material that is too soft to provide adequate support as determined by the Owner's Quality Control Special Inspection and Testing Company for pipe being placed in the bottom of the trench.
6. Granular Material Backfill and Bedding: Shall consist of coarse sand, crushed rock or gravel, and shall be free from dust, clay, organics, and other undesirable materials.
7. Payment Line: Used for overexcavation of unsuitable material. The payment line shall be considered the bottom of the bedding material or a line 6" (150mm) below and parallel to a line parallel to the pipe flow line, whichever is lower. Width of overexcavation shall be outside diameter of the pipe being placed plus 24" (600mm).
8. Suitable Native Backfill: Excavated material free from roots, broken concrete, broken asphalt, rocks larger than 3" in size, and building debris or AASHTO Designation M145, soil classification group. Soils must reach suitable moisture content (refer to paragraph 3.06C) without impacting project schedule and meet compaction requirements (refer to paragraph 3.05G).

1.2 SUBMITTALS

A. Submit gradation for bedding and backfill materials. Label gradations for each utility type and material use.

B. Submit to testing agency 10-lb. samples of each bedding and backfill material to be used, packed tightly in containers to prevent contamination, if requested by the testing agency. If recent test results are available for fill materials to be used, disregard samples submission and submit such test results to the testing agency. Such test results are to clearly indicate types of materials and composition, hardness, compactability, and suitability for proposed usage.

C. Shoring/sheeting design.

SECTION 31 2316.13
TRENCH EXCAVATION AND BACKFILL

1.3 JOB CONDITIONS

A. Length of Open Trench
1. The maximum length of open trench shall be 200' (60m) in public right-of-way and 100' (30m) max. elsewhere.
2. The Contractor shall not leave open trench unattended without fencing.

B. Protection of Existing Underground Utilities
1. Iowa One Call shall be notified for utility locates 48 hours prior to any digging. All locates shall be “Joint Locates.”
2. The location of existing utilities are shown on the plans based upon information and data supplied to the Owner or Design Professional by the owner of the utility. The utilities are shown on the plans for information only and are not guaranteed to be either complete or accurate. It is the Contractor's responsibility to contact all utilities and obtain utility staking prior to construction.
3. Any damage caused to existing utilities shall be reported to the utility and repaired in accordance with the utilities' standards.
4. The cost of repairs to damaged utilities shall be borne by the Contractor.
5. If utility service must be interrupted to complete a construction operation, it shall be the Contractor's responsibility to obtain permission from the utility. The Owner shall be given at least 14 calendar days advance notice of the time of interruption and the expected duration of the interruption.
6. If a non-scheduled interruption of utility service results from accidental damage, the Contractor shall take immediate steps as necessary to notify the utility and restore service. The Contractor's personnel shall not leave the site until the interruption has been restored.
7. All existing utilities crossing through the excavation trench shall be shored/supported as required to protect the utility. All shoring/support systems are subject to approval by the Owner. The Contractor shall be responsible for repairing all damage to utilities caused by construction activities.

C. Scheduling
1. Cleanup shall be performed promptly following utility installation backfill.
2. Repair of trench settlement shall be performed promptly.

D. Erosion/Sedimentation Control
1. The Contractor shall comply with Plans, Specifications, and all applicable Federal, State, or Local erosion control regulations.
2. The Contractor shall perform regular maintenance of all erosion/sedimentation control devices until time of final acceptance.

E. Maintenance
1. The Contractor is responsible for repair of any trench settlement up to the level of the adjacent grade that occurs during construction, as well as during the warranty period. This shall include restoration of the finish surface as appropriate.

F. Removal of Existing Abandoned Utilities in Conflict with Work
1. If abandoned utilities are found in conflict with the work, notify the Owner for direction.

SECTION 31 2316.13
TRENCH EXCAVATION AND BACKFILL

PART 2 PRODUCTS

2.1 MATERIALS

A. Backfill
1. See details in Plans.
2. All Class A Roadstone shall be pre-wetted to within ±3% of optimum moisture content before delivery to project site.

B. Trench Stabilization
1. Notify the Owner’s Construction Representative if unsuitable soils are encountered.

C. Bedding
1. See details in Plans.

D. Excavatable Flowable Fill (Controlled Low Strength Material)
1. Where compaction activities cannot take place, low strength flowable fill shall be used. Flowable fill shall have a max. compressive strength not to exceed 90 psi.

E. Warning Tape
1. All underground utilities shall be installed with non-detectable polyethylene warning tape indicating the utility type. Tape shall be ShieldTec Underground Marking Tape by Empire or equivalent and installed as per the manufacturer's instructions.

PART 3 EXECUTION

3.1 GENERAL

A. Restore obstructions removed to accommodate construction equipment or to facilitate excavation.

B. Pile excavated material suitable for backfill in an orderly manner a sufficient distance from the edge of excavation to avoid rollbacks, slides, or cave-ins.

C. Excavate by open-cut method for utilities and structures except as noted on Plans.

D. The Contractor shall be responsible for providing barricades and protection around excavation and work areas.

E. The Contractor shall be responsible for removing and replacing fences that are disturbed by construction operations. Materials shall be new and type shall match existing.

3.2 SHEETING, SHORING, AND BRACING

A. Construct sheeting, shoring, and bracing required to hold walls of excavation and to provide safety for workers. Install sheeting, shoring, and bracing to protect existing utilities and structures and to provide dry conditions during construction installations.

B. Sheeting may be wood or steel.

C. Wood Sheeting Driven below Level of Pipe: Leave in place to a level of 5' (1.5m) below finish grade.

D. Pull all sheeting.

E. When moveable trench box is used below spring line of pipe, it shall be lifted prior to any forward movement to avoid pipe displacement.

F. Sheeting, shoring, and bracing shall not be paid for as a separate pay item, but shall be considered incidental to the project.

G. Sheeting and shoring shall be in accordance with OSHA and other applicable governmental regulations. The Contractor shall be solely responsible for complying with the regulations.

H. Provide the Owner's Representative with shop drawings of proposed sheeting or shoring, signed and sealed by a registered professional engineer licensed to practice in the state which the project is in.

3.3 PREPARATION

A. Clearing
1. Remove vegetative material and obstructions as necessary for construction.
2. Material removed shall be disposed of properly by the Contractor off the project site.
3. Remove topsoil from site.

3.4 PERFORMANCE

A. General
1. General: Surplus and rejected unsuitable excavated material becomes property of the Contractor for disposal.
2. Refer to Section 33 0510 – Site Preparation for Buried Utilities.

B. Excavation For Structures
1. Topsoil shall be removed from the site and stockpiled for later distribution on the finished grade.
2. Rubble or rock shall be removed to 1' (300mm) below the bottom of the foundation and 1' (300mm) horizontally from any vertical surface.
3. Subgrade: The subgrade below each major portion of a utility structure shall be inspected by the Testing Agency prior to placing stone backfill or placing reinforcing bars.

C. Trench Excavation
1. Excavated material shall be stored in such a manner as to avoid property damage. If damage does result, it shall be repaired at the Contractor's expense.
2. The base of the trench shall be excavated so as to provide a uniform and continuous bearing and support on solid and undisturbed material.

3. The minimum trench width shall be sufficient to allow space for jointing and bedding. The maximum allowable trench width at a point 12" (300mm) above the top of the pipe (pipe envelope) shall be as follows: 30" (750mm) for pipes 6-10" (150-250mm) in diameter. For pipes 12" (300mm) in diameter or larger, the maximum trench width shall be the outside diameter plus 24" (600mm). For elliptical pipes, it shall be the outside dimension at the spring line plus 24" (600mm).
4. If rubble or rock is encountered, the trench shall be excavated to provide clearance of at least 6" (150mm) below and 12" (300mm) on each side of the utility line and fittings.
5. Overexcavation of Unsuitable Material: When the Contractor encounters material that is not suitable for supporting the pipe line or structure being constructed, the Contractor shall notify the Owner's Representative and Testing Agency to obtain written instructions on how to proceed. Material removed prior to written authorization of the Owner's Representative will not be eligible for payment. The overexcavation will be backfilled to the payment line with granular material. Overexcavation quantity shall be confirmed and documented by the Owner's Independent Special Inspections and Testing Agency. Refer to Section 31 2316.29 – *Overexcavation and Backfill for Unsuitable Pipe Bedding Materials*.

D. Bedding
1. Sanitary sewer pipe shall be provided with compacted sand bedding having a minimum thickness of 4" (100mm) or 1/4th of the inside pipe diameter plus pipe wall thickness, whichever is greater.

E. Dewatering
1. Excavation, installation of bedding, pipes, structures, and backfilling shall be done in dry conditions. If the subgrade is saturated or standing water exists, the work area shall be dewatered prior to installation or backfilling operations.
2. The Contractor shall make provisions to handle water encountered during construction. The Contractor shall notify the Owner of the proposed method of dewatering.
3. The Contractor shall prevent surface water from flowing into the excavated area. Stream flow shall be diverted around or pumped past the area of construction. Water accumulating in the area of construction shall be removed.
4. Do not pump water onto adjacent property without approval of the Owner's Representative and adjacent property owner.

F. Backfill for Structures
1. Contractor shall contact the Testing Agency not less than two (2) business days prior to backfilling for testing.
2. Backfill shall not be placed adjacent to concrete structures until the concrete has achieved at least 75% of its design strength.
3. Backfill simultaneously on all sides of structures; protect structures from damage at all times.
4. Place and compact fill materials in continuous layers not exceeding six inches loose depth. Use a method so as not to disturb or damage structure waterproofing.
5. Compact backfill areas to 98% of maximum Standard Proctor Density (ASTM D4253) for granular material and sand backfill.

6. Contractor shall notify Testing Agency to conduct visual inspections of backfill and compaction of porous backfill such as Iowa DOT Gradation 12A 29 material.

G. Trench Backfill
1. Trenches shall not be backfilled until all required tests are completed and the utility systems, as installed, conform to requirements specified by the Contract Documents.
2. Contractor shall contact the Testing Agency not less than two (2) business days prior to backfilling for testing.
3. Install warning tape 12" - 18" above all underground utilities.
4. Trenches shall be backfilled by the Contractor only after the locations of connections and appurtenances have been recorded by the Contractor on the plan set to be submitted to the Owner's Representative with other construction record information.
5. Backfill in the pipe envelope (top of bedding to a point 12" (300mm) above the pipe) shall be hand placed. Material shall be of even consistency and free of clumps and boulders, finely divided, and shall be compacted to 90% maximum Standard Proctor Density. Material within the pipe envelope shall be the same as specified for trench backfill, unless noted otherwise on the Plans.
6. Backfill simultaneously on both sides of pipe to prevent displacement.
7. Place backfill into the trench at an angle so that impact on installed pipe is minimized.
8. Install a minimum cushion of 3' (850mm) of backfill above pipe envelope before using heavy compacting equipment. If pipe is damaged, replace the section of damaged pipe and provide additional depth of cushion.
9. Backfill Above the Pipe Envelope
   a. Under pavement and undercut structures, compact backfill to 98% of maximum Standard Proctor Density.
   b. Under landscaped and lawn areas from 30” below finished grade to top of pipe envelope, compact suitable excavated material to 95% standard proctor density.
   c. Under landscaped and lawn areas from below uncompacted backfill to 30” below finished surface elevation, compact suitable excavated material to 90% of maximum Standard Proctor Density.
   d. Under landscaped and lawn areas, provide 6” of uncompacted suitable excavated material under topsoil or planting soil.

3.5 WASTE EXCAVATION

A. Excess material, waste or unsuitable materials shall be removed from the site and legally disposed of by the Contractor at no additional cost to the Owner. Excess material, waste, or unsuitable materials may be disposed of at Owner’s on-site dump site, or a separate location secured by the contractor.

3.6 FIELD QUALITY CONTROL

A. The Contractor shall furnish and provide equipment and personnel to provide access for the Owner's Representative to any test location and test depth that is necessary, in the Owner's Representative's opinion, to properly evaluate compactive effort.

SECTION 31 2316.13
TRENCH EXCAVATION AND BACKFILL

B. If specified compaction rates are not attained, the Owner's Representative may require the Contractor to utilize different compaction methods or lift thickness.

C. Compaction Testing
1. The moisture density relation to be used in establishing compaction will be ASTM D698 (Standard Proctor) or ASTM D4253 (Relative Density).
2. Compactive effort may be evaluated by the use of any of the following standard test methods:
a. ASTM D-6938 (nuclear)
b. Other ASTM test methods may be used with approval by the Design Professional.

3. Compaction Testing Frequency shall be based on the following:
a. 1 test per 100 linear feet (30.5m) per 8" (200mm) lift.

END OF SECTION

SECTION 31 2316.13
TRENCH EXCAVATION AND BACKFILL

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SECTION 31 2316.16
STRUCTURAL EXCAVATION FOR MINOR STRUCTURES

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Provide labor, materials, equipment, and supervision necessary to complete the following:
   1. Excavate for structure and remove subsoil from site.
   2. Cap off and seal discontinued utility services and remove portions of lines within excavated areas.
   3. Shore and brace excavations as required.
   4. Place and compact fills to rough grade elevations.
   5. Dewater excavations.

1.2 SITE COMPACTION TESTING

A. Testing of compacted fill materials will be performed by an independent testing agency hired and paid for by the Owner. Testing will be performed so as to least encumber the performance of work.

B. When work of this Section or portions of work are completed, notify the testing laboratory to perform density tests. Do not proceed with additional portions of work until results have been verified.

C. If, during progress of work, tests indicated that compacted materials do not meet specified requirements, remove defective work, replace and retest at no cost to Owner.

D. Ensure compacted fills are tested before proceeding with placement of surface materials.

1.3 SUBMITTALS

A. Submit gradation for backfill material.

B. Submit to testing agency minimum ten-pound (4.5kg) samples of each type of fill material to be used, if requested by testing agency. Provide samples to appointed testing laboratory, packed tightly in containers to prevent contamination. If recent test results are available for fill materials to be used, disregard samples submission and submit such test results to the testing laboratory. Such test results are to clearly indicate types of materials and composition, hardness, compactability, and suitability for proposed usage.

1.4 PROTECTION

A. Iowa One Call shall be notified for utility locates 48 hours prior to digging. All locates shall be “Joint Locates.”

B. Protect trees, shrubs and lawns, areas to receive planting, rock outcropping, and other features remaining as part of final landscaping.

SECTION 31 2316.16
STRUCTURAL EXCAVATION FOR MINOR STRUCTURES

C. Protect benchmarks and existing structures, roads, sidewalks, paving, and curbs against damage from equipment and vehicular or foot traffic.

D. Protect excavations by shoring, bracing, sheet piling, underpinning, or other methods, as required to prevent cave-ins or loose dirt from falling into excavations.

E. Underpin adjacent structure(s) which may be damaged by excavation work, including service lines and pipe chases.

F. Notify Owner's Representative and Owner’s Quality Control Special Inspection and Testing Company of unexpected subsurface conditions and discontinue work in area until Owner's Representative provides notification to resume work.

G. Grade around excavations to prevent surface water runoff into excavated areas.

PART 2 PRODUCTS

2.1 FILL MATERIALS

A. Granular Fill
1. Graded per Iowa DOT Gradation 29.
2. Sand backfill to be used only if specifically called out in Drawings or authorized by the Owner's Representative. Sand must be clean natural river or bank sand from a local source; free from silt, clay, loam, friable or soluble materials, or organic matter.
3. Owner's Representative approved gravel or sand from a local source. (Provide submittal for each.)
4. Granular materials shall be pre-wetted to within ±3% of optimum moisture content prior to being delivered to the project site.

B. Subsoil: Excavated or off-site materials free from roots, broken concrete, broken asphalt, rocks larger than three inches (75mm) in size, and building debris.

C. Fill Under Landscaped Areas: Free from alkali, salt, and petroleum products. Use subsoil excavated from site only if conforming to specified requirements.

PART 3 EXECUTION

3.1 PREPARATION AND LAYOUT

A. Establish extent of excavation by area and elevation; designate and identify datum elevation.

B. Set required lines and levels.

C. Maintain benchmarks, monuments, and other referenced points.

3.2 UTILITIES

A. Before starting excavation, establish location and extent of underground utilities occurring in work area.

B. Notify utility companies to remove and relocate lines that are in the way of excavation.

C. Maintain, reroute, or extend as required, existing utility lines to remain which pass through work area.

D. Pay costs for this work, except those covered by utility companies.

E. Protect utility services uncovered by excavation.

F. Remove abandoned utility service lines from areas of excavation; cap, plug, or seal such lines and identify at grade.

G. It is the Contractor's responsibility to accurately locate and record abandoned and active utility lines, rerouted or extended, on Project Record Documents.

3.3 EXCAVATION

A. Excavate subsoil in accordance with lines and levels required for construction of the work, including space for forms, bracing and shoring, foundation drainage system, applying dampproofing, and to permit inspection.

B. Do additional excavation only by written authorization of Owner's Representative.

C. Machine slope banks.

D. Hand trim excavations and leave free from loose or organic matter.

E. When complete, verify soil bearing capacities, depths, and dimensions. Contractor shall contact the Testing Agency not less than two (2) business days prior to when subbase is ready for testing.

F. Correct unauthorized excavation as directed, at no cost to the Owner.

G. Fill over excavated areas under structure bearing surfaces with backfill as specified for foundations.

H. Excavations are not to interfere with normal 45 degree bearing splay of any foundation.

I. Remove excavated material from site to Owner’s on-site dump site, or a separate location secured by the contractor.

J. Removal of boulders or buried rock in excess of 1/2 cubic yard (.4m^3) may be authorized as an extra; other work is deemed to be within the scope of this section.

K. If necessary to excavate through roots, perform work by hand and cut roots with a sharp ax.

SECTION 31 2316.16
STRUCTURAL EXCAVATION FOR MINOR STRUCTURES

3.4 BACKFILLING

A. Contractor shall contact the Testing Agency not less than two (2) business days prior to backfilling for testing.

B. Do not backfill over existing subgrade surfaces that are porous, wet, or spongy.

C. Compact existing subgrade surfaces if densities are not equivalent to that required for backfill materials.

D. Cut out soft areas of existing subgrade. Backfill with sand and compact to required density.

E. Backfill areas to grades, contours, levels, and elevations.

F. Backfill systematically and as early as possible to allow maximum time for natural settlement and compaction.

G. Backfill shall not be placed adjacent to concrete structures until the concrete has achieved at least 75% of its design strength.

H. Place and compact fill materials in continuous layers not exceeding six inches (150mm) loose depth. Use a method so as not to disturb or damage structure waterproofing.

I. Maintain optimum moisture content of backfill materials to attain required compaction density.

J. Backfill simultaneously on each side of foundation walls to equalize soil pressures.

K. Where temporary unbalanced pressures are liable to develop on walls before floor slabs are placed, erect necessary shoring to counteract imbalance.

L. Filter fabric is required between backfill of porous rock and native soil.

3.5 FILL TYPES AND COMPACTION

A. Exterior side of foundation walls: Subsoil fill to top of subgrade elevation. Compact to 98% of maximum Standard Proctor Density per ASTM D698 at frequency of one test per 100 linear feet.

B. Contractor shall notify Testing Agency to conduct visual inspections of backfill and compaction of porous material such as Gradation 29 material.

C. Stabilizing base course under concrete slabs within building area:
   1. Four inches (100mm) of gravel fill topped with two inches (50mm) of sand fill to underside of slabs. Compact to 98% of maximum Standard Procter Density per ASTM D698 at frequency of one test per 100 square yards.

SECTION 31 2316.16
STRUCTURAL EXCAVATION FOR MINOR STRUCTURES

D. Fill under landscaped areas:
   1. Under landscaped and lawn areas from 12” (300mm) below finished surface elevation to 30” (750mm) below finished surface elevation, compact suitable excavated material to 90% of maximum Standard Proctor Density. Compact fill below 30” from surface to 95% of maximum Standard Proctor Density.
   2. Within the top 12” (300mm) of landscaped and lawn areas, the backfill shall be soil equivalent to the stockpiled topsoil. The surface shall be left rounded neatly 2-4” (50-100mm) above the finished surface.
   3. Test Frequency: one test per every 100 square yards.

3.6 WASTE EXCAVATION

A. Excess material, waste or unsuitable materials shall be removed from the site and legally disposed of by the Contractor at no additional cost to the Owner. Excess material, waste, or unsuitable materials may be disposed of at Owner’s on-site dump site, or a separate location secured by the contractor.

END OF SECTION

SECTION 31 2316.16
STRUCTURAL EXCAVATION FOR MINOR STRUCTURES

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SECTION 31 2316.29
OVEREXCAVATION AND BACKFILL FOR UNSUITABLE PIPE BEDDING MATERIAL

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Removal of unsuitable materials from pipe bedding in trenches, and replacing with compacted stone. Unsuitable materials include, but are not limited to:
   1. Rubbish or other items uncovered in the excavation.
   2. Any material which the Owner's Representative deems unsuitable for the proposed construction.

1.2 SUBMITTALS

A. Rock gradation.

B. Manufacturer's catalog data for stabilization geotextile.

C. Submit to testing agency minimum ten-pound (4.5kg) samples of each type of fill material to be used. Provide samples to appointed testing laboratory, packed tightly in containers to prevent contamination.

D. If recent test results are available for fill materials to be used, disregard samples submission and submit such test results to the testing laboratory. Such test results are to clearly indicate types of materials and composition, hardness, compactibility, and suitability for proposed usage.

PART 2 PRODUCTS

2.1 MATERIALS

A. Backfill for overexcavated areas: 1" Clean ballast meeting the following gradation:

Sieve Size	1-1/2"	1"	3/4"	1/2"	3/8"	No. 4	No. 8
% Passing	100	95		25-60		0-10	0-5

B. Stabilization Geotextile: Geotex 200ST or engineer pre-approved equivalent.

PART 3 EXECUTION

3.1 EXCAVATION

A. Remove and dispose of unsuitable material to neat lines as directed by the Testing Agency.

3.2 BACKFILL

A. Deposit backfill material in layers not exceeding six inches compacted thickness to the bottom of the pipe bedding envelope.

B. Thoroughly compact lifts with a vibratory compaction methods. Testing Agency shall witness and approve all compaction.

SECTION 31 2316.29
OVEREXCAVATION AND BACKFILL FOR UNSUITABLE PIPE BEDDING MATERIAL

C. Depth of backfill shall be determined based on site conditions and is subject to approval by the Testing Agency.

D. The need for or quantity of and number of layers of geotextile will be based on site conditions and manufacturer's recommendations and is subject to approval by the Testing Agency.

3.3 WASTE EXCAVATION

A. Excess material, waste or unsuitable materials shall be removed from the site and legally disposed of by the Contractor at no additional cost to the Owner. Excess material, waste, or unsuitable materials may be disposed of at Owner’s on-site dump site, or a separate location secured by the contractor.

END OF SECTION

SECTION 32 1116.16
AGGREGATE SUBBASE COURSES

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Granular subbase to be placed under paved areas.

1.2 SUBMITTALS

A. Submit rock gradation.

B. Submit to testing agency minimum ten-pound (4.5kg) samples of each type of fill material to be used. Provide samples to appointed testing laboratory, packed tightly in containers to prevent contamination.

C. If recent test results are available for fill materials to be used, disregard samples submission and submit such test results to the testing laboratory. Such test results are to clearly indicate types of materials and composition, hardness, compactibility, and suitability for proposed usage.

PART 2 PRODUCTS

2.1 GRANULAR SUBBASE

A. Abrasion: Less than 45, AASHTO T96

B. Mud Balls: 4% maximum

C. Gradation:

IDOT Gradation No. 14; 10% fines for normal pavement

Sieve Size	Percent Passing
1.5 in.	100%
0.75 in.	70-90%
No. 8	10-40%
No. 200	3-10%

PART 3 EXECUTION

3.1 PREPARATION

A. For areas too small for a tandem dump truck to access, nuclear density testing of soil subgrade will be required. Density testing can be waived at the testing agency’s discretion.

3.2 GRANULAR SUBBASE

A. Check subgrade for conformity with elevations and sections immediately before placing aggregate subbase material. Subgrade shall have been prepared in accordance with Section 31 2213 - Earthwork and Rough Grading.

SECTION 32 1116.16
AGGREGATE SUBBASE COURSES

B. Refer to Plan Details for subbase cross-section.

C. Granular subbase material shall be uniformly moist prior to, and during compaction. Material shall be pre-wetted to within ±3% of optimum moisture content prior to being delivered to the project site.

D. Place subbase material in compacted layers not more than 6 in. (150mm) thick to within ±1 in. (25mm) tolerance of top of finished subbase elevation.

E. Spread, shape, and compact all aggregate base material deposited on the subgrade during the same day.

F. Compact material to not less than 98% of maximum standard proctor density: ASTM D698.

3.3 IN-PLACE FIELD DENSITY TESTS

A. All testing will be provided by Owner.

B. Minimum field density testing requirement is one test per 2,000 square feet (185.5m^2) per lift.

END OF SECTION

SECTION 32 1313
CONCRETE PAVING

PART 1 GENERAL

1.1 SECTION INCLUDES

A. PCC Pavement

1.2 SUBMITTALS

A. Paving mix design for each different source of aggregate to be used. Mix designs shall be approved by the Iowa Department of Transportation or an independent testing laboratory.

B. Manufacturer's certification according to Table 7010.02.

C. Closeout Submittals:
   1. Ready-mix delivery tickets, ASTM C94.

1.3 PRODUCT DELIVERY, STORAGE, AND HANDLING

A. Aggregate Storage: Comply with Iowa DOT Article 2301.02, C.

B. Cement and Fly Ash: Comply with Iowa DOT Article 2301.02, C.

C. Admixtures: Store in suitable weather tight enclosures which will preserve quality.

D. Reinforcing Steel: Store off ground on timbers or other supports.

PART 2 PRODUCTS

2.1 MATERIALS

A. Cement: Meet the requirements of Iowa DOT Section 4101 and Materials I.M. 401, including Type I and Type II cements and blended hydraulic cements Type 1P, Type 1S, and Type 1L.

B. Supplementary Cementitious Materials (SCM):
   1. Fly Ash: Comply with Iowa DOT Section 4108.
   2. Ground Granulated Blast Furnace Slag (GGBFS): Comply with Iowa DOT Section 4108.
   3. Limestone: Comply with Iowa DOT Materials I.M. 401.

C. Fine Aggregate for Concrete:
   1. Meet the requirements of Iowa DOT Section 4110 and Materials I.M. 409, Source Approvals for Aggregates.

SECTION 32 1313
CONCRETE PAVING

2. Comply with the following gradation

Sieve Size	Percent Passing
3/8”	100
No. 4	90 to 100
No. 8	70 to 100
No. 30	10 to 60
No. 200	0 to 1.5
Iowa DOT Article 4109.02, Gradation No. 1 in the Aggregate Gradation Table.	

D. Coarse Aggregate for Concrete:
1. Crushed stone particles with Class 2 durability complying with Iowa DOT Section 4115 and Materials I.M. 409, Source Approvals for Aggregates.
2. Comply with one of the following gradations:

Sieve Size	Gradation No. 3 Percent Passing	Gradation No. 4 Percent Passing	Gradation No. 5 Percent Passing
1 1/2”	100	100	-----
1”	95 to 100	50 to 100	100
3/4”	-----	30 to 100	90 to 100
1/2”	25 to 60	20 to 75	-----
3/8”	-----	5 to 55	20 to 55
No. 4	0 to 10	0 to 10	0 to 10
No. 8	0 to 5	0 to 5	0 to 5
No. 200	0 to 1.5	0 to 1.5	0 to 1.5
Iowa DOT Article 4109.02, Gradation No. 3, 4, and 5 in the Aggregate Gradation Table.			

3. The Design Professional may authorize a change in gradation, subject to materials available locally at the time of construction.

E. Water Requirements: Comply with Iowa DOT Section 4102. Potable water obtained from a municipal supply, suitable for drinking, may be accepted without testing.

F. Admixtures: Meet the requirements for the liquid admixtures shown below. Other admixtures may be used subject to the approval of the Design Professional.
1. Air Entrainment Admixture: Comply with Iowa DOT Section 4103.
2. Retarding and Water Reducing Admixtures: Comply with Iowa DOT Section 4103.
3. Accelerating admixtures (calcium chloride): Comply with Iowa DOT Article 2529.02.

G. Bars: Comply with Iowa DOT Section 4151 for tie bars and dowel bars. Meet the tie bar requirements for bar mats. All bars and tie wires must be epoxy coated.

H. Joint Fillers and Sealers:
1. Joint Sealers: Comply with Iowa DOT Article 4136.02.

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CONCRETE PAVING

2. Preformed Expansion Joint Fillers and Sealers: Use the following types of preformed materials for filling expansion joints that comply with Iowa DOT Article 4136.03. When the type is not specified, use a resilient filler.
   a. Resilient filler
   b. Flexible foam expansion joint filler
   c. Tire buffings expansion joint filler
   d. Elastomeric joint seals

I. Liquid Curing Compound: Comply with Iowa DOT Section 4105.

J. Covering:
1. Burlap: Comply with Iowa DOT Section 4104.
2. Plastic Film: Comply with Iowa DOT Section 4106.
3. Insulating Cover: Comply with Iowa DOT Section 4106.

2.2 CONCRETE MIXES

A. Mix Design:
1. Comply with Iowa DOT Class C meeting the requirements of Materials I.M. 529. If higher durability mixes are specified, use C-SUD or CV-SUD mixes.
2. Ensure compatibility of all material combinations. If the concrete materials are not producing a workable concrete mixture, a change in the material may be required. Changes will be at no additional cost to the Owner.
3. Seven-day compressive strength of moist-cured laboratory samples: 2,400 psi min. (16,462 kPa). See table for minimum compressive strength to reach prior to opening to traffic.
4. Twenty-eight day compressive strength of moist-cured laboratory samples: 4,000 psi min.(27,436 kPa).

B. Consistency and Workability:
1. Slump:
   a. Use an amount of mixing water that will produce workable concrete of uniform consistency. Unless specifically modified by the Design Professional, ensure slump, measured according to Iowa DOT Materials I.M. 317, is no less than 1/2 inch or no more than 2 1/2 inches for machine finish and no less than 1/2 inch and no more than 4 inches for hand finish.
   b. If it is not possible to produce concrete having the required consistency without exceeding the maximum allowable water to cement ratio specified, the cement content may be increased or water reducing admixture may be added. Obtain the Design Professional’s approval. Do not exceed the maximum water to cement ratio. Additional cement or water reducer will be added with no additional cost to the Owner.
   c. The basic absolute volume of water per unit volume of concrete is based on average conditions. If material characteristics require that the total quantity of water used to secure the required consistency reduces the batch yield (computed on the basis of absolute volumes of the batch quantities used) by more than 2.0%, the Design Professional may adjust the proportions to correct the yield. This adjustment will not be a basis for adjustment of the contract unit price.

2. Air Content: Use an approved air entraining agent.
   a. For machine-placed pavement, use a target air content of 8% with a tolerance of plus or minus 2% when measured on the grade just prior to consolidation, as determined by Iowa DOT Materials I.M. 318. The target air content may be adjusted by the Design Professional based on random tests of the consolidated concrete behind the paving machine. These additional tests will be used to consider the need for a target value change and will not be used in the acceptance decision.
   b. For hand-placed pavement, use a target content for hand finish of 7% with a tolerance of plus or minus 1.5% when measured on the grade and just prior to consolidation, as determined by Iowa DOT Materials I.M. 318.

C. Use of Fly Ash and Ground Granulated Blast Furnace Slag (GGBFS) as Supplementary Cementitious Materials:
   1. Mix proportions for the various mixes using fly ash and GGBFS are included in Iowa DOT Materials I.M. 529. The maximum allowable fly ash substitution rate is 20%. Do not use a GGBFS substitution rate of more than 35% by weight (mass). The total supplementary cementitious material substitution rate is not to exceed 40%.
   2. If C-SUD or CV-SUD mixes are specified, the maximum allowable Class F fly ash substitution rate is 25% and the maximum Class C fly ash substitution rate is 35%. The maximum combination rate is 20% Class C fly ash and 20% GGBFS.
   3. When Type IP or IS cement is used in the concrete mixture, only fly ash substitution will be allowed. Between October 16 and March 15, supplementary cementitious materials will be allowed only when maturity method is used to determine time of opening. Transport, store, haul, and batch fly ash and GGBFS in such a manner to keep it dry.

PART 3 EXECUTION

3.1 EQUIPMENT

A. Batching and Mixing Equipment:
   1. General:
      a. Weighing and Proportioning Equipment: Comply with Iowa DOT Article 2001.20.
      b. Mixing Equipment: Comply with Iowa DOT Article 2001.21.
      c. Material Bins: Involves any structure in which materials are stored. Each part of any bin, including foundations and supports, must be adequate to withstand any stress to which it might be subjected to while in use.

   2. Batching:
      a. Ensure the batching plant is Iowa DOT calibrated and approved. Provide copy of current calibrations and approvals.
      b. Coordinate the batch plant operation and batch trucks with the paving operation in order to ensure a steady supply of materials.

c. Operate the batch plant and trucks to minimize dust, noise, or truck nuisances.

3. Mixing:
   a. Ready Mixed Concrete:
      1) Ensure the concrete is uniform in composition and consistency. If non-uniform, concrete producers must take corrective action.
      2) Ready mixed concrete is defined as concrete proportioned in a central plant and mixed in a stationary mixer for transportation in trucks without agitation, proportioned at a central plant, and only partially mixed in a stationary mixer for transportation and finish mixing in a transit mixer, or proportioned at a central plant, and then mixed in a transit mixer prior to or during transit.
      3) When necessary to add additional mixing water at the site of placement, mix the batch at least an additional 30 revolutions of the drum at mixing speed.
      4) Ensure each vehicle in which concrete will be delivered is capable of discharging concrete having a slump not over 2 inches at an overall rate for its entire load of not less than 1.25 cubic yards per minute. Ensure the concrete is delivered at a rate sufficient to maintain a sustained rate of progress of not less than 100 feet per hour for the width and depth of pavement to be placed.

   b. All Methods: Identify each truck load by a plant charge ticket showing plant name, contractor, project data, quantity, class, time batched, and water added at site.

B. Concrete Placement Equipment:
   1. General:
      a. In handling concrete from the mixer to the place of deposit, take care to avoid segregation.
      b. When concrete is deposited through a chute, slope the chute to allow concrete to flow slowly without segregation. Place the delivery point of the chute as close as possible to the point of deposit. Keep chutes and spouts clean. Thoroughly flush them with water before and after each run. Discharge the water outside the paving area in an approved concrete washout area.
      c. Provide alternate plan for concrete delivery in event of equipment failure.
      d. Take concrete samples from material placed on the subgrade or subbase.

   2. Concrete Transfer Equipment:
      a. Utilize placers, conveyors, buckets, or buggies designed specifically for transporting concrete.
      b. Do not allow concrete to free fall into or out of transfer equipment.
      c. Meet the requirements of Section 7010, 2.02, B, 2 for air entrainment of the concrete mix and testing for compliance.

3. Concrete Pumps:
   a. Do not pump concrete through aluminum conduit or tubing.
   b. Use the concrete pump to deliver the material as close to horizontal as possible, keep restrictions and drops to a minimum, and avoid free fall.
   c. Meet the requirements of Section 7010, 2.02, B, 2 for air entrainment of the concrete mix and testing for compliance.
   d. Sample the first load after pumping a minimum of 3 cubic yards. Sample after each significant change in boom angle.
   e. Sample before and after the pump to determine if any changes in the slump and other significant mixture characteristics occur.
   f. When sampling at the end of the placement line, take care to ensure that the sample is representative of the concrete being placed from the pipeline. Note: Changes to the placement rate or boom configuration can result in changes in the concrete properties. Typically, the vertical position of the boom results in the greatest potential for air loss while the horizontal position of the boom has the least potential. Location of pumping equipment should be determined so that it is possible to maintain a consistent, low boom angle as much as possible during placement.
   g. If air test shows that air entrainment is outside of the allowed range, follow procedure as outlined in Section 3.7.E.
   h. Leaks in the line or pump hydraulics, which would allow air to be added to the concrete, are prohibited.

C. Consolidating and Finishing Equipment:

1. Vibrators for Hand Methods: Use a vibration rate between 3,500 to 6,000 vibrations per minute, and use an amplitude sufficient to be perceptible on the surface of the concrete more than 12 inches from the vibrating unit.
2. Hand Finishing Equipment: Provide all finishing tools necessary for proper finishing of the concrete including straightedges for checking and correcting finished concrete surfaces.
3. Forms:
   a. Rigid Forms: Steel, minimum thickness of 5 gage, height at least equal to design thickness of pavement with base width at least 6 inches.
      1) Minimum section length of 10 feet, joint connections designed to allow horizontal and vertical adjustment with locking device to hold abutting sections firmly in alignment.
      2) Bracing, support, and staking must prevent deflection or movement of forms.

   b. Flexible Forms: Use steel or wood flexible forms for curves with a radius less than 100 feet.
      1) Bracing, support, and staking must prevent deflection or movement of forms.
      2) Ensure that forms used to shape back of curbs at returns have height at least equal to design thickness of pavement and curb height.

3) Forms must be free from scale and surface irregularities.

4. Curing Equipment: Use pressure sprayer capable of applying a continuous uniform film of curing compound. Use equipment with a shield if wind conditions do not allow proper coverage
5. Concrete Saws: Use power operated concrete saws capable of cutting hardened concrete neatly.
6. Joint Sealing Equipment: Use equipment capable of cleaning the joint and heating and installing sealant in joints according to manufacturer's recommendations.

3.2 PAVEMENT CONSTRUCTION

A. Removal of Pavement:
1. Sawcut pavement to full depth at the edges of removal. A second saw cut, 2 inches inside the initial saw cut, may be required to prevent damage to adjacent pavement.
2. Do not damage pavement that is to remain. Do not use heavy equipment adjacent to new concrete until the opening strength is achieved.

B. Final Subgrade/Subbase Preparation:
1. General:
a. Per Plan.

2. Subgrade and Subbase Loading:
a. Concrete trucks may drive over the subbase as long as this does not rut, pump or tear the finished rock surface. The Contractor shall provide other means of concrete placement if this causes any damage to the subbase.
b. Enter and exit from side streets to minimize repetitive loading on the subgrade or subbase by concrete trucks.
c. Do not allow loads in excess of the legal axle load on the completed subgrade or subbase.
d. Partially loaded trucks may be required.
e. If subgrade or subbase failure occurs, coordinate the repair with the Owner.

3. Paving Suspended:
a. Suspend the paving operation where subgrade or subbase stability has been lost.
b. Do not place concrete on a subgrade or subbase that has become unstable, bears ruts or tire marks of equipment, or that is excessively softened by rain until such subgrade or subbase has been reconsolidated and reshaped to correct the objectionable condition.

4. Maintenance of Subgrade or Subbase: Maintain the completed subgrade or subbase during subsequent construction activities.

C. Surface Fixture Adjustment:
1. Adjust manhole frames and other fixtures within area to be paved to conform to finished surface. Comply with Section 33 4100 for manhole adjustments.

2. Clean outside of fixture to depth of pavement before concrete placement.
3. Construct boxouts where allowed for later adjustment of fixtures.

D. Setting of Forms: When forms are used, meet the following requirements.
1. Ensure forms have sufficient strength to support paving operations being used.
2. Set base of forms at or below subgrade elevation with top of forms at pavement surface elevation. With Design Professional approval, extra height forms may be used to shape the back of integral curb and edge of pavement; set base at or below subgrade elevation with top of form at top of curb elevation.
3. Place and secure forms to required grade and alignment. Do not vary the top face of the form from a true plane by more than 1/8 inch in 10 feet, and do not vary the vertical face from a true plane by more than 1/4 inch in 10 feet.
4. If the soil supporting the forms is softened by rain or standing water so that the forms are inadequately supported, or if voids occur under the forms, remove forms. Rework subgrade to proper elevation and density, and reinstall forms.
5. Ensure forms are free of latent concrete and coated with release agent before concrete is placed.

E. Bar and Reinforcement Placement: Ensure bars are clean, straight, free from distortion and rust, and are firmly secured in position as specified in the contract documents. Place all bars in approved storage to prevent damage; do not distribute along the work site except as needed to avoid delay in paving.
1. Tie Bars:
a. Place bars prior to vibration. For slip form paving, tie bars may be installed after vibration, provided the concrete is consolidated around the bars. Bars may be supported by approved chairs or may be placed in position by a machine or method approved by the Design Professional.
b. Use approved continuous bolsters with runners to support reinforcement for bridge approach sections. Place the supports transversely across the approach and space them longitudinally no greater than 4 feet. For double reinforced approach sections the top layer of reinforcing may be chaired off the bottom layer of reinforcing using approved continuous high chairs with runners, provided they are positioned directly above the continuous bolsters with runners supporting the bottom layer of reinforcing. Hold epoxy coated reinforcing steel in place with epoxy or plastic coated bar supports and epoxy or plastic coated tie wires.

2. Tie Bars and Dowel Bars in Existing Pavement:
a. When anchoring in existing concrete, use a grout system according to the manufacturer's instructions. Obtain the Design Professional’s approval for the grout system.
b. For horizontal installations, use either a pressure injection system with mechanical proportioning and mixing, or use encapsulated chemical anchors. Install as follows:

1) Ensure drilled holes to receive the grout match the dimensions and spacing specified in the contract documents. When not specified in the contract documents, the maximum nominal diameter of the hole must be 1/8 inch larger than the outside diameter of the dowel or bar, or as recommended by the manufacturer. Drill holes for tie bars and dowel bars into the face of the existing pavement at midpoint. To ensure proper horizontal alignment, do not allow any hole misalignments to exceed 1/4 inch in the vertical or horizontal plane. Clean the hole with compressed air immediately prior to placing the grout.
2) Use a polymer grout to secure the dowels in the existing pavement. Inject the grout into the rear of the hole with pressure. Use sufficient grout so that when the bar to be grouted is placed in position, excess grout will be forced out the front of the hole. Rotate the bar during the insertion process to ensure complete coating with the grouting material. Hand proportioning and mixing is not allowed.
3) If using grout with approved encapsulated anchors, install according to the manufacturer’s recommendations.
4) Use horizontal installation procedures for vertical or angled installations; however, pourable grouts may be used. Pourable grouts must be mechanically mixed.

F. Concrete Pavement Placement:
1. All pavement shall be placed such that the surface has positive drainage. It is the Contractor's responsibility to check grades after forms are set to verify positive drainage prior to pouring concrete. Contractor shall notify Owner's Representative if any potential drainage issues exist. Owner's Representative will direct the Contractor how to modify grades and proceed. Any areas of concrete that do not drain shall be removed and replaced in full panels until positive drainage can be obtained. Any costs associated with replacing panels to obtain positive drainage shall be paid for by the Contractor.
2. Place, consolidate, and finish the concrete to the full depth and width conforming to the specified crown and cross-section in a single operation.
3. Keep a uniform pile of concrete in front of the paving machine, up to a maximum of 6 to 8 inches above the design surface elevation. Distribute and spread the concrete as soon as placed. A mechanical concrete spreader may be used.
4. Deposit the concrete upon the in-place bars keeping segregation to a minimum.
5. Use shovels, not rakes, to do necessary hand spreading and spading.
6. Do not allow the edges of pavement, including all longitudinal construction joints, to deviate from the line shown on the plans by more than 1/2 inch at any point.
7. If the paving machine operates on adjacent pavement, protect pavement from damage.
8. When placing by hand methods, consolidate the concrete by using vibrating units. Use a definite system or pattern in the operation of the vibrator so the full width of concrete in each linear foot of lane will receive adequate and uniform consolidation. The system and methods of vibrating is subject to

approval of the Design Professional. Do not use vibrating equipment as a tool for moving concrete laterally.

G. Finishing:
1. Grade and Crown: Promptly after concrete has been placed and vibrated, strike off the surface to the true section by the screed. Finish the surface true to crown and grade.
2. Watering the Surface: The practice of lubricating the pavement surface by sprinkling water by spray, brush, or other methods to afford greater ease in finishing operation is not allowed.
3. Floats: Finish surface with wood or magnesium floats; finish from both sides simultaneously if pavement is placed to full width with one pass of paving machine.
4. Straightedging:
   a. After the longitudinal floating has been completed and the excess water has been removed, and while the concrete is still plastic, test the pavement surface for trueness.
   b. Immediately fill any depressions found with freshly mixed concrete, struck off, consolidated, and refinished.
   c. Check surface longitudinally while concrete is still plastic; correct any surface deviations greater than 1/8 inch in 10 feet.

5. Surface Treatment:
   a. Drag Surface Treatment: Unless otherwise specified, texture the finished surface with an artificial turf or burlap drag treatment.
      1) Pull the artificial turf or burlap drag longitudinally over the finished surface to produce a tight, uniform, textured surface, and round the edges in a workmanlike manner.
      2) Remove the artificial turf or burlap drag from the pavement surface at regular intervals and clean with water to remove accumulated concrete from the fabric in order to maintain a consistent finished texture.
      3) When the desired texture is not attained, the Design Professional may require the final finish be a broom finish.

      4) Transverse:
         a) If transverse surface tining is required or allowed, use a machine with a wire broom or comb. For small or irregular areas, or during equipment breakdown, hand methods may be used. Use a broom or comb with a single row of tines 1/8 inch (+/- 1/64 inch) in width and randomly spaced from 3/8 inch to 1 5/8 inch with no more than 50% of the spacing exceeding 1 inch. The depth of the grooves must be a minimum of 1/8 inch to a maximum of approximately 3/16 inch in the plastic concrete.
         b) Conduct this operation at such time and in such manner that the desired surface texture will be achieved while minimizing displacement of the larger aggregate particles and before the surface permanently sets.

c) Where abutting pavement is to be placed, the tining should extend as close to the edge as possible without damaging the edge.
d) If abutting pavement is not to be placed, do not tine the 6 inch area nearest the edge or 1 foot from the face of the curb.

6. Edge Finish: Before the concrete has taken its initial set, finish all edges of the pavement with an 1/8 inch radius edging tool.

H. Surface Curing:
1. Apply liquid curing compound in a fine spray to form a continuous, uniform film on the horizontal surface and vertical edges of pavement, curbs, and back of curbs immediately after surface moisture has disappeared, but no later than 30 minutes after finishing. With approval of the Design Professional, the timing of cure application may be adjusted due to varying weather conditions and concrete mix properties to ensure acceptable macrotexture is achieved.
   a. Use a white pigment liquid curing compound for concrete not receiving an asphalt overlay. When specified in the contract documents, use a linseed oil solution.
   b. Use a dark-colored curing compound for concrete receiving an asphalt overlay.

2. Apply compound with power sprayer; rate of application not less than 15 square yards per gallon (0.067 gallon per square yard); do not dilute compound. For concrete receiving an asphalt overlay, use a minimum rate for dark-colored cure of 12.5 square yards per gallon (0.08 gallon per square yards).
3. Ensure liquid curing materials are well agitated in the supply drum or tank immediately before transfer to the sprayer. Keep curing materials well agitated during application.
4. Hand operated sprayers may be used for small and irregular areas.
5. If forms are used, apply to pavement edges and back of curbs within 30 minutes after forms are removed.
6. If, due to other operations, the coating is damaged within 72 hours after being applied, immediately re-coat the affected areas. Coating of the sawed surface with curing compound will not be allowed on joints that are to be sealed. When pavement is opened to traffic prior to 72 hours after application of the curing coating, a re-coating will not be required.

I. Construction of Joints:
1. General:
   a. Construct joints of the type, dimensions, and at the locations specified in the contract documents.
   b. Place longitudinal joints coincident with or parallel to the pavement centerline.
   c. Place all transverse joints at right angles to the centerline and extend the full width of the pavement.

d. Place all joints perpendicular to the finished grade of the pavement and do not allow the alignment across the joint to vary from a straight line by more than 1 inch.
e. Exercise care in placing, consolidating, and finishing the concrete at all joints.

2. Saw Joints:
   a. Mark joint locations with a string line before sawing.
   b. Begin transverse joint sawing as soon as the concrete has hardened sufficiently to allow sawing without raveling or moving of aggregate. Saw joints before uncontrolled cracking takes place.
   c. Saw all joints in a single cutting operation for a specific joint. Make saw cuts true to line and to the dimensions specified in the contract documents.
   d. Discontinue sawing a joint if a crack develops ahead of the saw.
   e. Saw joints within 24 hours of the concrete being placed.
   f. If necessary, continue the sawing operations both day and night.
   g. The concrete must be capable of supporting the sawing operations to allow the use of an early green concrete saw.
   h. Repair or replace pavement with uncontrolled or random cracking at no additional cost to the Owner. Use repair methods approved by the Design Professional. Repair or replace at the direction of the Design Professional.
   i. Use wet sawing for dust control.

3. Construction Joints:
   a. Place longitudinal and transverse construction joints where specified in the contract documents, at boxouts, and at headers.
   b. Locate and place forms for boxouts on grade prior to paving.
   c. If concrete placement is delayed for more than 30 minutes or at the end of each day, construct a Days Work (DW) or a Rigid Tie (RT) transverse construction joint within 5 feet of a planned transverse contraction joint.
   d. Finish the edges of the pavement at construction joints with a 1/8 inch radius edging tool.

4. Expansion Joints:
   a. Install expansion joints as specified in the contract documents.
   b. Prevent movement of or damage to joint assembly when placing concrete; set joint material low enough to clear the finish machine.
   c. Construct double width expansion joint in curb over expansion joint in pavement. The backside of the joint must be clear of concrete.
   d. Align the expansion joint straight and true. After the mechanical finishing equipment has passed over the joint, check the joint for movement. If movement in excess of 1/2 inch has occurred, immediately correct the installation to its intended position.
   e. If joint fillers are assembled in sections, or if joints as a whole are constructed in sections, do not allow offsets between adjacent fillers.
   f. Where more than one section is used in a joint, securely lace or clip the sections together.

g. Supplemental vibration equipment is required for proper consolidation of the concrete.
h. After the surface finishing has been completed, finish the edge of the joint with a 1/8 inch edging tool.

5. Joint Sealing:
   a. Timing:
      1) Unless otherwise allowed or approved by the Design Professional, before any portion of the pavement is opened to the Contractor's equipment or to general traffic, clean and seal joints that require sealing.
      2) The Design Professional may limit the wheel loads and axle loads of equipment operating on the pavement during this operation, if prior to the age and strength specified in Part 3.06, Use of Pavement. Additional tests to determine the pavement strength may be required.

   b. Cleaning:
      1) For those joints that are not to be sealed, cleaning is not required.
      2) Within 3 hours after a joint has been wet sawed to the finished dimension, flush the wet sawing residue away from the sawed faces using a high pressure water blast operating with a minimum pressure of 1,000 pounds per square inch. Within 3 hours after a joint has been dry sawed to the finished dimension, blow the dry sawing residue from the joint using air compressors that provide moisture and oil free compressed air.
      3) Immediately prior to installation of sealant, clean joints with an air blast. Do not perform sealing until visual examination verifies the joint surfaces appear dry, in addition to being clear of dust and contamination.

   c. Sealing:
      1) Prepare and install joint sealer in the joint and to the proper level specified in the contract documents and as recommended by the manufacturer.
      2) Heat hot-poured sealers in a thermostatically controlled heating kettle; heat the material to the temperature required for use, but not above that recommended by the manufacturer. After sealing, remove excess sealer from the pavement surface.
      3) Seal joints the same day they are cleaned. Apply sealant only when the joint surfaces appear dry by visual examination.
      4) Place joint sealer only when the pavement and ambient air temperatures are 40°F or above. When near this minimum, additional air blasting or drying time, or both, may be necessary to ensure a satisfactory bond to the joint faces. When this sealer cannot be properly placed due to late fall work, submit a joint construction plan and sealing details to the Design Professional for approval before commencing

paving. Delay the cleaning, sealing, and, if required, resawing of joints until the following spring. This delay requires the Design Professional's approval.

5) When surface correction is required, repair seals damaged from the corrective work. Joint preparation, cleaning, and sealing may be delayed until after corrective work, provided the pavement is not opened to traffic before corrective work is performed.

J. Pavement Backfill: Following slipform paving operations, place backfill material along the pavement within 48 hours of pavement attaining opening strength or as directed by the Design Professional to prevent flow of water and any subsequent damage caused by undermining of the pavement. Prior to placement of full backfill material, construct check dams or other protection as appropriate to ensure no damage to the subgrade and/or subbase occurs.

K. Form Removal:

1. Timing:
   a. Remove forms after the initial set of the concrete has taken place.
   b. Remove stakes and forms with care to prevent cracking, spalling, or over stressing concrete. If damage does occur, repairs will be made as required by the Design Professional.

2. Honeycomb Repair:
   a. When the forms are removed, fill honeycombs with mortar composed of 1 part cement and 2 parts fine aggregate by weight.
   b. If the honeycombing is to the degree and nature that it is considered by the Design Professional as defective work, remove and replace at no additional cost to the Owner.

3. Paving Protection: In the area adjacent to the curbs and pavement edge, immediately place backfill after the forms are removed. Construct dams or other protection to ensure that no saturation or erosion of the subgrade under or near the pavement occurs. This may include check dams, pumping, etc.

3.3 PAVEMENT PROTECTION

A. Weather Conditions: Do not place concrete when stormy or inclement weather or temperature prevents good workmanship. Temperature restrictions and protection requirements may be modified by the Design Professional under unusual conditions.

1. Cold Weather:
   a. Paving: Do not place aggregates containing frozen lumps, and do not place concrete on a frozen subgrade or subbase. Take all necessary actions to prevent the pavement from freezing.
      1) Concrete mixing and placement may be started, if weather conditions are favorable, when the air temperature is at least 34ºF and rising. At the time of placement, concrete must have a temperature of at least 40ºF.
      2) Stop mixing and placing when the air temperature is 38ºF or less and falling or if the temperature stops rising and does not reach 38ºF.

b. Protection: Prior to applying protection, cure all concrete pavement and curb/gutters, including exposed edges of the pavement and curb. In addition, protect concrete less than 36 hours old as follows:

Night Temperature Forecast	**Type of Protection***
35°F to 32°F	One layer of burlap for concrete.
31°F to 25°F	Two layers of burlap or one layer of plastic on one layer of burlap
Below 25°F	Four layers of burlap between layers of 4 mil plastic or equivalent commercial insulating material approved by the Engineer

*Keep protection in place until one of the following conditions is met:

1) The pavement is 5 calendar days old.
2) Opening strength is attained.
3) Forecasted low temperatures exceed 35°F for the next 48 hours.
4) Forecasted high temperatures exceed 55°F for the next 24 hours and subgrade temperatures are above 40°F.
   a) Shut down paving operations in time to comply with protection requirements outlined above. During cold weather, allow more time for finishing and protection. Perform all finishing and covering operations prior to darkness. Temperature restrictions and protection requirements may be modified by the Design Professional.
   b) Equivalent commercial insulating material approved by the Engineer may be used. This material must be waterproof and have a minimum R value of 1.0. If initial set has not yet occurred, place a layer of burlap on top of concrete prior to placing insulating blankets.
   c) Use a method of protection and materials that will maintain the concrete temperature above 40°F.

2. Hot Weather: When climatic or other conditions are such that there is high ambient temperature, high concrete temperature, low relative humidity, or high wind speed at the time of delivery to the work site, during placement or during the first 24 hours after placement, concrete shall be mixed, placed and protected in accordance with ACI Standard 305, "Guide to Hot Weather Concreting."
3. Rain Protection:
   a. Have materials available, near the work site, for proper protection of the edges and surface of concrete. Protective material may consist of sheets of burlap or plastic film. Also have planks or other material with suitable stakes that can be used as temporary forms available.
   b. If initial set has not occurred, take every precaution necessary to protect the surface texture of the concrete.

c. If so determined by the Design Professional, failure to properly protect concrete will constitute cause for removal and replacement of defective pavement.

B. Night Conditions: Perform all finishing and covering operations prior to darkness (half an hour after sunset). Do not commence construction until half an hour before sunrise. Do not place or finish concrete under artificial light, unless approved by the Design Professional.

C. Protection from Traffic:
1. General:
a. Protect the new pavement and its appurtenances from traffic, both public and that caused by the Contractor's own employees and agents, at no additional cost to the Owner. This includes the erection and maintenance of warning signs, lights, barricades, watchmen to direct traffic, and pavement bridges or crossovers.
b. Do not operate equipment with metal tracks, metal bucket blades, or metal motor patrol blades directly on new paving. Do not unload soil or granular materials, including base rock for storage and future reloading directly onto new paving.

2. End of Day's Run:
a. At the end of each day's run, erect and maintain safety barriers and fencing as necessary to protect the pavement from damage.
b. Install safety fences after completion of finishing and curing operations. Leave fences in place and maintained until the concrete has attained the minimum strength or age.
c. Intermediate safety fences may be required for the purpose of opening the pavement for access to a side road, side street, or entrance.

3. Repair of Damages: At the discretion of the Design Professional, and at no additional cost to the Owner, repair or replace any part of the pavement damaged by traffic or other causes occurring prior to final acceptance of the pavement.

3.4 USE OF PAVEMENT

Time for opening pavement for use may be determined by maturity method complying with Iowa DOT Materials I.M. 383 or age and test results. The minimum age and test results needed for opening are shown in Table 7010.01.

Table 7010.01: Minimum Age and Tested Strength of Pavement Before Opening

Class of Mix	Type of Cement	Minimum Age For Opening*	Minimum Compressive Strength (psi)	Minimum Flexural Strength Center Point (psi)
C	Type I	7 Days**	3,000	575
M	Type I	48 Hours	3,000	575

* Opening without testing only allowed upon approval of Design Professional
** Five calendar days for concrete 9 inches thick or more.

3.5 TRANSPORTATION RESTRICTIONS

A. Do not use concrete transported with continuous agitation when the cement has been in contact with the aggregate more than 90 minutes before it is placed. With the approval of the Design Professional, an approved retarding admixture may be used at the rates required in Iowa DOT Materials I.M. 403.

B. Do not use concrete transported without continuous agitation if the period elapsed between the time the concrete is mixed and the time it is placed is greater than 30 minutes. With the approval of the Design Professional, an approved retarding admixture may be used at the rates required in Iowa DOT Materials I.M. 403 and the mixed-to-placed time may be extended.

C. Ensure the methods of delivering and handling the concrete are such that objectionable segregation or damage to the concrete will not occur, and concrete placing will occur with a minimum of rehandling.

D. Thoroughly clean the truck compartment in which concrete is transported and flush with water to ensure that hardened concrete will not accumulate. Discharge the flushing water from the truck compartment to the designated discharge point before it is charged with the next batch.

3.6 QUALITY CONTROL

A. Workmanship: The Contractor is responsible for correction of concrete work which does not conform to the specified requirements, including strength, tolerances, and finishes.

B. Tests for Concrete Materials
1. Materials and installed work may require testing and retesting, as directed by the Design Professional, at any time during the process of the work. Allow free access to material stockpiles and facilities at all times. Tests, not specifically indicated to be done at the Owner's expense, including the retesting of rejected materials and installed work, shall be done at the Contractor's expense.
2. Report test results in writing to the Owner's Representative on the same day that tests are made. Reports of compressive strength tests shall obtain the project identification name and number, date of concrete placement, name of Contractor, name of concrete supplier and truck number, name of concrete

testing service, concrete type and class, location of concrete batch in the structure, design compressive strength at 28 days, concrete mix proportions and materials; compressive breaking strength, and type of break for both seven day tests and 28-day tests.

3. Additional Tests: Additional tests of in-place concrete will be required when test results indicate the specified concrete strengths and other characteristics have not been attained in the structure, as directed by the Owner. Tests to determine the adequacy of the concrete shall be by cored cylinders complying with ASTM C42, or by other methods as directed. Contractor shall pay for such tests conducted and any other additional testing as may be required when acceptable concrete is verified.

C. Concrete Quality Control Testing During Construction
   1. An independent testing laboratory will be retained by the Owner to perform all quality control tests and to submit test reports to the Owner's Representative.
      a. The independent testing laboratory will perform inspections, tests, and other services specified and as required by the Owner's Representative.
      b. Reports will be submitted by the independent testing laboratory to the Owner's Representative indicating observations and results of tests and indicating compliance or non-compliance with contract documents.
      c. The Contractor shall cooperate with the independent testing laboratory; furnish samples of materials, design mix, equipment, tools storage and assistance as requested.
         1) Notify the independent testing laboratory 48 hours prior to expected time for operations requiring services.
         2) Make arrangements with the independent testing laboratory and pay for additional samples and test required for Contractor's use.

      d. Retesting required because of non-conformance to specified requirements shall be performed by the independent testing laboratory on instructions by the Owner's Representative. Payment for retesting will be charged to the Contractor by deducting inspection or testing charges from the Contract Sum/Price.

D. Testing: Provide the following material certifications and testing required to be performed by the following:

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Table 7010.02: Material Certifications and Testing

Material or Construction Item	Tests	Applicable Standard*	Methods of Acceptance of Sampling and Testing	Field Sampling and Testing	
				Frequency (minimum)	Responsible Party
Fine Aggregates	Gradation	I.M. 302, 306, 336	Cert. Plant Insp.**	1/250 CY or min 1/day	Supplier/ Contractor
	Moisture	I.M. 308, 527	Cert. Plant Insp.**	1 per 1/2 day	
	Specific Gravity	I.M. 307	Cert. Plant Insp.**	1/250 CY or min 1/day	
	Quality	I.M. 209	Approved Source	Prior to use	
Coarse Aggregates	Gradation	I.M. 302, 306, 336	Cert. Plant Insp.**	1/250 CY or min 1/day	
	Moisture	I.M. 308, 527	Cert. Plant Insp.**	1 per 1/2 day	
	Specific Gravity	I.M. 307	Cert. Plant Insp.**	1/250 CY or min 1/day	
	Quality	I.M. 209	Approved Source	Prior to use	
Portland Cement	Quality	I.M. 401	Approved Source	Prior to use	
Fly Ash	Quality	I.M. 491.17	Approved Source	Prior to use	
GGBFS	Quality	I.M. 491.14	Approved Source	Prior to use	
Curing Compound	Quality	Iowa DOT Section 4105	Approved Source	Prior to use	
Joint Sealer	Quality	I.M. 436.01	Approved Source	Prior to use	
Epoxy Dowel Bars and Assemblies	Quality	I.M. 451.03B	Approved Source	Prior to use	
Tie Bars	Quality	I.M. 451	Approved Source	Prior to use	
Plastic Concrete	Air Content	I.M 318, 327	Field Test	1/200 CY or min. 1/day	Owner/Testing Agency
	Slump	I.M. 317	Field Test	1/200 CY or min. 1/day	
	Cylinders 4"	I.M. 315	Field Test	Set of 6/200 CY or one set/day	
	Thickness	----------	Field Test	1/200 CY	
Hardened Concrete	Strength	I.M. 383	Maturity Tests***	Prior to placement	Owner/Testing Agency

* Refers to the Iowa DOT Materials (Instructional Memorandums) I.M.s, Iowa DOT Standard Specifications, or SUDAS Standard Specifications.

** Certified plant inspection per Iowa DOT Materials I.M. 527.

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*** The Contractor is responsible for developing the maturity curve for the specified mix, taking maturity readings, and delivering a copy of the results to the Design Professional.

E. Air Content:
1. Air content of the concrete will be evaluated according to Iowa DOT Materials I.M. 318 and 327.
2. When a test result is outside the tolerance for the target air content, the contractor will be notified immediately. An air test will then be immediately run behind the paver to aid in identifying the limits of the non-complying air. A test result between 5% and 8% behind the paver will be considered complying. This test will represent all concrete from the back of the paver back to the last documented complying test. Make immediate adjustments to the mix production and placement process to bring the air content back within tolerance. Do not use succeeding loads below the lower target air content tolerance by more than 0.5%. Each subsequent load will be tested until air content is within tolerance for two consecutive loads. For all incorporated, non-complying concrete that is out of tolerance, the Design Professional will determine if removal and replacement is required.

F. Defects or Deficiencies: Remove and replace or repair pavement containing excessive cracks, fractures, spalls, or other defects at no additional cost to the Owner. The method of replacement or repair will be determined by the Design Professional.

END OF SECTION

SECTION 32 1313.10
CONCRETE PAVING FOR SIDEWALKS

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Installation of Sidewalks

1.2 DESCRIPTION OF WORK

A. Install sidewalk.

1.3 SUBMITTALS

A. PCC mix design.

B. Closeout Submittals:
1. Results of required testing.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Portland Cement Concrete: See Section 32 1313.

PART 2 - PRODUCTS

2.1 PORTLAND CEMENT CONCRETE

A. Class B or C concrete with materials complying with Section 32 1313. Use coarse aggregate of Class 2 durability or better.

B. Comply with the following for PCC mixes for sidewalks and shared use paths unless otherwise approved by the Design Professional.

Table 7030.01: PCC Mixes		
	Machine Finish	Hand Finish
Type of Concrete	Class B or C	Class B or C
Slump Minimum	1/2 in.	1/2 in.
Slump Maximum	2 1/2 in.	4 in.
Percent Air Content		
• Target	7%	7%
• Minimum	6%	6%
• Maximum	8 1/2%	8 1/2%

C. Liquid Curing Compound: Comply with Iowa DOT Section 4105.

D. Pavement Sealant: All paving placed between September 1 and March 31 shall be sealed to protect from de-icing agents with one of the following products, or approved equal:
1. Hydrozo 40 Silane. Note that this product requires a 28-day cure prior to application. Pavement must be power-washed prior to application.
2. Consolideck Singlestep.
3. Lin-Seal by W.R. Meadows.

4. Or Engineer pre-approved equivalent

E. Covering:
   1. Burlap: Comply with Iowa DOT Section 4104.
   2. Plastic Film: Comply with Iowa DOT Section 4106.
   3. Insulating Cover: Comply with Iowa DOT Section 4106.

F. Pavement subdrain piping shall conform to SUDAS Standard Specifications Division 4 – Sewers and Drains Section 4040 – Subdrains and Collectors.

2.2 ISOLATION AND EXPANSION JOINT SEALANT

A. Use a 2-part polyurethane, self-leveling sealant complying with ASTM C 920. Application temperature range of 40 to 120°F. Minimum elongation 700%. SL-2 by Sonneborn, Sikaflex-2c SL by Sika, or approved equivalent. Color - concrete grey.

2.3 SIDEWALK EXPANSION JOINT MATERIAL

A. Full depth, preformed, asphaltic or polyurethane foam joint filler. See construction documents for thickness.

PART 3 - EXECUTION

3.1 SUBGRADE PREPARATION

A. Sidewalks:
   1. Remove all vegetation and roots from ground surface.
   2. Construct grade to final subgrade elevation.
      a. Cut area: Remove all material that will be displaced by the sidewalk.
      b. Fill area: Scarify the surface to be covered with embankment to a depth of at least 6 inches and compact. Construct embankment in lifts of 6 inches or less and compact each lift. Tamp surface with a mechanical tamper until firm and unyielding.

   3. Remove all soft, spongy, or yielding spots and fill the void with suitable backfill material.

3.2 ADJUSTMENT OF FIXTURES

A. Adjust fixtures to conform to the finished pavement surface. Cooperate and coordinate with the utility agency to ensure proper fixture adjustment.

3.3 PCC SIDEWALKS

A. Form Setting: Comply with Section 32 1313 with the following additional requirements and exceptions.
   1. Slip form paving equipment may be allowed in lieu of setting forms, if approved by the Design Professional.
   2. Wood forms are allowed.
   3. Use of an automated subgrade trimmer is not required.
   4. Set forms true to line and grade and hold them rigidly in place by stakes placed outside the forms and flush with or below the top edge of the forms.

SECTION 32 1313.10
CONCRETE PAVING FOR SIDEWALKS

B. Concrete Pavement Placement:
   1. Sidewalk:
      a. Maintain moist subgrade in front of paving operation
      b. Deposit concrete on the subgrade as required to minimize rehandling to prevent segregation.
      c. Hand spread with shovels, not rakes.
      d. Place concrete as required to slightly overfill the space between the forms.
      e. Consolidate with vibrators and smooth by use of a straightedge.
      f. Do not contaminate freshly mixed concrete with earth or other foreign materials.

C. Finishing:
   1. Shared Use Paths:
      a. Comply with Section 32 1313.
      b. Provide a medium broom finish perpendicular to traffic flow.

   2. Sidewalks:
      a. Use a wood float to depress the large aggregate and create a dense surface.
      b. Allow concrete to set until all shine has disappeared from the surface.
      c. Smooth with a metal trowel until surface is free from defects and blemishes.
      d. Construct joints by sawing or by using a jointer or groover tool.
      e. Finish edges of sidewalk or driveway with an edging tool having a radius of approximately 1/2 inch. Ensure tool marks do not appear on the finished surface.
      f. Brush with a medium broom perpendicular to the direction of travel to provide a non-skid surface.

D. Curing: When curing is specified in the contract documents, comply with Section 32 1313.

E. Form Removal: Comply with Section 32 1313 – Concrete Paving.

F. Pavement Protection: Refer to Section 32 1313 – Concrete Paving.

G. Use of Pavement: Refer to Section 32 1313 – Concrete Paving.

H. Jointing:
   1. Construction Joints:
      a. Locate construction joints to provide uniform joint spacing.
      b. Place a construction joint at the close of each day's work or when depositing of concrete is stopped for 45 minutes or more.
      c. Form construction joint by using a header board. Set perpendicular to the surface and at right angles to the centerline.

   2. Transverse Contraction Joints:
      a. Shared Use Paths:
         1) Space transverse joints equal to the width of the shared use path, or as specified in the contract documents.
         2) Saw contraction joints according to Section 32 1313.

b. Sidewalks:
   1) Space sidewalk contraction joints equal to the width of the sidewalk.
   2) Form transverse contraction joints to a depth of 1 1/4 inches with a pointed trowel or jointing tool. In lieu of forming, joints may be sawed within 12 hours of placement with a 1/8 inch blade saw to a depth of 1/3 the pavement thickness. Use a straightedge if joints are sawed with a hand-held saw.

3. Longitudinal Contraction Joints:
   a. Shared Use Paths and Sidewalks: Saw joint to 1/8 inch wide and to a depth of 1/3 the pavement thickness.

4. Isolation Joints:
   a. Install isolation joints where sidewalks or shared use paths abut roadway pavement, parking lots, buildings, and structures.
   b. Install a 1/2 inch or 3/4 inch thick strip of preformed resilient joint material, according to Section 32 1313, to the full depth of concrete. Trim any isolation joint material protruding above the finished work to the level of the abutting concrete.
   c. If the isolation joint is to be sealed, place the preformed material 1/2 inch below the level of the abutting concrete.

5. Joint Sealing:
   a. Do not seal construction or contraction joints in sidewalks, shared use paths, or driveways.
   b. If sealing of expansion or isolation joints is specified in the contract documents, trim preformed joint material to a depth of 1/2 inch below the concrete surface. Ensure the joint is clean and dry. Install joint sealant per manufacturer's recommendations.

3.4 TOLERANCES

A. Check finished surface with a 10 foot straightedge placed parallel to the centerline.

B. Ensure the cross-section and profile of the pavement is constructed to within a tolerance of 1/4 inch in 10 feet (0.2%) of the design grades. This does not allow maximum slopes to be exceeded.

C. Mark areas showing bumps of more than 1/4 inch in 10 feet and grind down with an approved grinding tool to an elevation where the area will not show deviations in excess of 1/8 inch.

3.5 CLEANING

A. Remove all litter and construction materials or tools immediately after the end of the curing period.

B. Remove excess dirt from the site.

C. Broom clean completed sidewalks.

SECTION 32 1313.10
CONCRETE PAVING FOR SIDEWALKS

3.6 TESTING

A. General: Concrete testing shall comply with section 32 1313

B. Concrete Compression Tests: When the concrete volume placed on a single day exceeds 5 cubic yards, comply with the following test requirements. When deficiencies are encountered, comply with Section 32 1313.
   1. Prepare at least four 4”X8” test cylinders per day.
   2. If the concrete volume placed on a single day exceeds 100 cubic yards, prepare one test cylinders for each 100 cubic yards placed.
   3. Provide 7 and 28 calendar day tests according to ASTM C 39. Minimum compressive strength is 2,000 psi at 7 days and 4,000 psi at 28 days.

3.7 SIDEWALK AND CURB RAMP COMPLIANCE

A. Compliance with cross slopes and grades, as well as all other elements, for sidewalks and curb ramps is crucial. If the construction cannot be completed as specified in the contract documents, it may be necessary to adjust slopes within the accepted legal limitations. Contact the Design Professional prior to placement of the concrete if changes from the values specified in the contract documents are being made.

END OF SECTION

SECTION 32 1313.10
CONCRETE PAVING FOR SIDEWALKS

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SECTION 32 9112.13
TOPSOIL PLACEMENT AND GRADING

PART 1 GENERAL

1.1 WORK INCLUDED

A. Finish grade subsoil.

B. Place, level, and compact topsoil.

1.2 SUBMITTALS

A. Submit topsoil and compost source.

B. Submit 10-lb. (4.5kg) sample of topsoil mix to Owner.

C. If recent test results are available for fill materials to be used, disregard samples submission and submit such test results to the testing laboratory. Such test results are to clearly indicate types of materials and composition, hardness, compactibility, and suitability for proposed usage.

1.3 PROTECTION

A. Protect landscaping and other features remaining as final work.

B. Protect existing structures, fences, roads, sidewalks, paving and curbs.

PART 2 PRODUCTS

2.1 MATERIALS

A. Topsoil: Reused as approved by the Owner.

B. Topsoil: Imported, friable loam; free of subsoil, roots, grass, excessive amount of weeds, stone, and foreign matter; acidity range (pH) of 5.5 to 7.5; containing a minimum of 4% and a maximum of 25% organic matter. All topsoil is to be approved by the Owner prior to spreading. Topsoil with large amounts of sand may not be approved.

PART 3 EXECUTION

3.1 INSPECTION

A. Verify site conditions and note irregularities affecting work of this Section.

B. Beginning work of this Section means acceptance of existing conditions.

C. Prior to topsoil arriving on site, Owner shall approve the physical soil samples.

SECTION 32 9112.13
TOPSOIL PLACEMENT AND GRADING

3.2 SUBSOIL PREPARATION

A. Eliminate uneven areas and low spots. Remove debris, roots, branches, stones, in excess of 1/2" (12mm) in size. Remove subsoil contaminated with petroleum products.

B. Tilling
1. In areas excavated during construction, the Contractor shall till 2 to 3 inches of topsoil into the top 8 to 12 inches of subsoil. Subsoil shall be tilled and blended with topsoil layer to avoid sharp transitions in the soil profile. Then place the depth of topsoil called out in paragraph 3.5 on top of the tilled area.
2. In areas that have not been excavated during construction but are to be planted or seeded, till the subsoil to a depth of 4 to 6 inches before incorporating topsoil or other amendments. Then place the depth of topsoil called out in paragraph 3.5 on top of the tilled area.
3. Do not till within the drip line of existing trees.

3.3 PLACING TOPSOIL

A. Place topsoil in areas where seeding or sodding is scheduled.

B. Use topsoil in relatively dry state. Place during dry weather.

C. Fine grade topsoil eliminating rough or low areas. Maintain levels, profiles, and contours of subgrade.

D. Remove stone, roots, grass, weeds, debris and foreign material while spreading.

E. Manually spread topsoil around trees, plants, and buildings to prevent damage.

F. Lightly compact placed topsoil.

G. Remove surplus subsoil and topsoil from site.

H. Final grade of planting beds and small turf areas shall be done by hand to avoid compaction and ensure all debris and clods over 1 inch are removed. Large scale seeding or sodding projects may be graded using small tractors, gills, etc.

I. Leave stockpile area and site clean and raked, ready to receive landscaping.

J. Notify Owner upon completion of final grade.

3.4 TOLERANCES

A. Top of Topsoil: Plus or minus 1/2 inch (12mm).

3.5 SCHEDULE OF LOCATIONS

A. See paragraph 3.2B, Tilling, for subsoil preparation and additional topsoil requirements.

SECTION 32 9112.13
TOPSOIL PLACEMENT AND GRADING

B. The following paragraphs identify compacted topsoil thicknesses for various locations:
1. Seeded Grass: 6 in. (150mm).

END OF SECTION

SECTION 32 9112.13
TOPSOIL PLACEMENT AND GRADING

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SECTION 32 9219
SEEDING AND SOIL SUPPLEMENTS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. This part of the Specifications includes providing labor, materials, equipment, and supervision required to provide seeding.

1.2 QUALITY ASSURANCE

A. Seeding is to be installed by Owner.

B. Source Quality Control: Ship seeding materials with certificates of inspection required by governing authorities. Comply with regulations applicable to seeding materials.

C. Do not make substitutions. If specified material is not obtainable, submit proof of non-availability to Owner’s Representative, together with proposal for use of equivalent material.

D. Analysis and Standards: Package standard products with manufacturer's certified analysis. For other materials, provide analysis by recognized laboratory made in accordance with methods established by the Association of Official Agriculture Chemists, wherever applicable.

1.3 SUBMITTALS

A. Manufacturer's or vendor's certified analysis of fertilizer.

B. Seed vendor's certified statement for each grass seed mixture required, stating botanical and common name, percentages by weight, and percentages of purity, germination, and weed seed for each grass seed species.

1.4 DELIVERY, STORAGE AND HANDLING

A. If seed is mixed prior to delivery on the site, it shall be tagged showing a guaranteed statement of composition of mixture and percentage of purity and germination of each variety.

B. If seed is to be mixed at the site, it shall be delivered in original containers bearing producers certification of germination and purity.

C. Tags shall show producers or dealers Iowa Permit Number and date of testing; test date shall be no more than 90 days previous to time of use.

D. Fertilizers shall conform to State of Iowa laws and regulations. If delivered in bulk, bills of lading or other labels shall be furnished to the Design Professional or labels indicating analysis and weight information from each container shall be preserved and furnished to the Design Professional within twenty-four (24) hours of application.

E. Handling of materials as recommended by manufacturer.

F. Store all packaged materials off ground and protect from moisture.

SECTION 32 9219
SEEDING AND SOIL SUPPLEMENTS

G. Storage of all materials in locations designated and approved by Owner's Representative.

1.5 JOB CONDITIONS

A. Utilities: Determine location of underground utilities and perform work in a manner which will avoid possible damage. Hand excavate, as required.

B. Grade Stakes: Maintain grade stakes set by others until removal is mutually agreed upon by parties concerned.

C. Protection: Protect existing irrigation system, structures, utilities, sidewalks, pavements, and other facilities during seeding operations. Repair any damage at no cost to the Owner.

1.6 SEQUENCING AND SCHEDULING

A. Chronological procedure for seeding is to remove any existing vegetation, disc, fertilize, prepare the seed bed, and then coordinate with Owner for seed installation by Owner.

1.7 SPECIAL PROJECT WARRANTY

A. Warranty lawns to provide germination as specified and for seed emergence.

B. Replacement cost shall be borne by Contractor except for possible replacements resulting from loss or damage due to occupancy at project in any part, vandalism, civil disobedience, acts of neglect on the part of others, physical damage by animals, vehicles, fire, or losses due to curtailment of water by local authority, or to "Acts of God". Droughts, floods, tornadoes, winds of hurricane force, and hail are not normal and the damage they do can not be calculated in a bid.

1.8 GUARANTEE

A. If less than 70% of seed fails to become established and survive to the next season in any given area three (3) square feet or larger, the Contractor shall be responsible for preparing the seedbed as specified in Part 3 and Owner will reseed at the rate specified in Part 3.

1.9 PRE-INSTALLATION MEETING

A. Prior to starting onsite installations, a review meeting must be held with the Owner's project construction manager, the Contractor (and any appropriate subcontractors), and the project's Design Professional (and any appropriate subconsultants) to approve the site grading and soil prep work.

SECTION 32 9219
SEEDING AND SOIL SUPPLEMENTS

PART 2 PRODUCTS

2.1 SOIL AMENDMENTS

A. Apply a 6-24-24 commercial fertilizer or the equivalent units of nitrogen, phosphate, and potash at the rate of 300 pounds per acre.

2.2 SEEDING MATERIALS

A. Grass Seed: Provide fresh, clean, new-crop seed complying with tolerance for purity and germination established by Official Seed Analysts of North America. All seed shall be Blue Tag Certified. Certified Blue Tag and Analysis Tag shall be on every bag. All bagged seed mixtures shall have a Certified Blue Mixture Tag on each bag.

B. Seed Mixes
1. Shade Tolerant Lawn Mix: Provide shade tolerant mixture consisting of the following species:

Species (Germination):
Creeping Red Fescue
Chewings Fescue
Hard Fescue

2.3 WATER

A. Water shall be provided and applied by Owner.

PART 3 EXECUTION

3.1 PREPARATION FOR SEEDING

A. Limit preparation of seedbed to areas that will be seeded immediately upon completion.

B. Work areas accessible to field equipment to a depth of no less than 3 inches. Use mechanical rotary tillage equipment for the preparation of seedbed. Where weed growth has developed extensively, they may be disked into the ground. If weed growth develops sufficiently to interfere with proper seedbed preparation, mow the weeds and remove them from the project at no additional cost to the Owner.

C. Use crawler type or dual-wheeled tractors for seedbed preparation. Operation equipment in a manner to minimize displacement of soil and disturbance of the design cross-section. Harrow ridging in excess of 4 inches due to operation of tillage equipment prior to rolling with the cultipacker. Roll the area with no less than one pass of the cultipacker prior to permanent seeding.

D. Shape and fine grade to remove rills or gullies, water pockets, undesirable vegetation, and irregularities to provide a smooth, firm, and even surface true to grade and cross-section. Prepare to a fine texture and without soil lumps. Till parallel to the contours.

E. Smooth the seedbed with a cultivator-type tillage tool having a rake bar or a rock rake. Pick up and remove all debris, such as rocks, stones, concrete larger than 2 inches

(1/2 inch maximum for lawn seeding), or roots and other objectionable material that will interfere with the seeding operation. A spring tooth cultivator may be used in lieu of a rock picker. Remove the rock by hand after each use of the cultivator; repeat the process until the soil is relatively free of rocks.

F. Choose equipment to minimize soil compaction. Operate equipment in a manner to minimize displacement of soil and disturbance of the design cross-section. Roll the area with at least one pass of the cultipacker. Remove ruts that develop during the sequence of operations before subsequent operations are performed.

G. Repair erosion or other damage which occurs during seed bed preparation.

H. Apply commercial fertilizer at the rate specified in 2.1.

I. Apply fertilizer prior to seeding and drag or till into the top one inch (1") of the soil surface.

3.2 SEEDING

A. Seeding will be performed by Owner.

3.3 HYDRAULIC MULCHING FOR SEEDING

A. Hydraulic mulch will be applied by Owner.

B. Watering of seed after placement will be performed by Owner.

3.4 MAINTENANCE

A. Maintenance of new seeding will be performed by Owner.

3.5 REPAIR OF LAWN AREAS DISTURBED BY THIS CONTRACT

A. Repair disturbed areas for seeding by tilling, shaping, and raking as required.

3.6 CLEANUP AND PROTECTION

A. During soil preparation work, keep pavements clean and work area in an orderly condition.

B. Upon completion of job, clean-up all debris, caused by work, and excess material and leave area within contract limits in a neat and clean condition.

3.7 INSPECTION AND ACCEPTANCE

A. Upon completion of the work and fulfillment of the requirements of this Section, notify the Owner’s Representative in writing that the work is ready for final inspection.

B. Request a definite date for final inspection.

SECTION 32 9219
SEEDING AND SOIL SUPPLEMENTS

C. Notify the Owner's Representative seven (7) calendar days prior to the requested final inspection date.

D. Replacement work shall be as specified for original seeding.

E. Replacement work shall be reinspected before acceptance.

END OF SECTION

SECTION 32 9219
SEEDING AND SOIL SUPPLEMENTS

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SECTION 33 0510
SITE PREPARATION FOR BURIED UTILITIES

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Existing utility verification, drainage channel excavation, existing drainage earth fill, pavement and sidewalk removal, access to streets and highways, disposal of debris and refuse, fencing and other activities required on site prior to installation of utilities as indicated in the Drawings.

B. Includes the protection of existing vegetation that is to remain.

1.2 DESCRIPTION OF WORK

A. Provide labor, materials, facilities, and administration required to furnish and construct all work covered by this Section and as shown on the Drawings.

B. Contractor is fully responsible for liaison with utility companies and the Owner.

C. The location of all utilities indicated on the Drawings is taken from existing records. The exact location and elevation of all utilities must be determined by the Contractor. It shall be the duty of the Contractor to ascertain whether any additional facilities other than those shown on the Drawings may be present. Existing underground utilities shown on the Drawings are shown for convenience only and the Owner accepts no responsibility for improper locations or failure to show utility locations on the Drawings. The Contractor shall be responsible to excavate and locate exact locations of utility crossings before installing pipe and/or appurtenances.

PART 2 - PRODUCTS

NOT USED

PART 3 - EXECUTION

3.1 GENERAL

A. Keep project free from drainage ponding due to construction operations during progress of work.

B. Make arrangements for disposal of all water and sewage received in the trench from temporary connections or stoppages. Do not discharge onto private property outside construction right-of-way.

C. Strip topsoil.

D. Remove and store obstructions such as culvert pipe, signs, and fences for replacement upon completion of construction.

3.2 EXISTING UTILITIES

A. Contractor is fully responsible for repairing utilities and services which are not in direct conflict with line or grade of new pipe system and damaged during construction at no expense to Owner.

B. The Contractor shall be responsible to contact all utilities to confirm utility locations and depths. The Contractor shall further be responsible to excavate and uncover utility crossings a sufficient distance ahead of the crossing to avoid conflicts.

C. Location, size, and depth of buried utilities are illustrated based on available records from the utility operating authority. Record locations are field verified based on observable surface features, such as manholes, valve boxes, evidence of trenches, etc. or field marking by the operating authority wherever possible. Excavations have not been made to verify locations or depth of buried utilities. Exact location and elevation of all utilities must be determined by the Contractor to ascertain whether any additional facilities other than those shown on the Plan may be present.

D. Prior to commencing installation of piping, the Contractor shall perform exploratory excavations at indicated utility crossings. If conflict exists, Contractor shall allow time for Owner to survey and evaluate potential conflicts and propose alternate alignments. No additional payment shall be made for delay. Exploratory excavation work shall be incidental to installation of piping.

E. Contractor shall notify Design Professional immediately of utilities not shown on Drawings and utilities shown on Drawings that are determined in the field to be in direct line and/or grade conflict with new pipe system. Design Professional will determine whether the new pipeline can be relocated or if the utility must be relocated.

3.3 PAVEMENT REMOVAL

A. Concrete Pavement, Drives, and Sidewalks
1. Remove to nearest joint beyond minimum distance of 1 ft.-0 in. from edge of trench.
2. Sawcut full depth.
3. Break out remainder of slab; method subject to Design Professional's approval.
4. Remove and replace concrete paving to full concrete panel widths.

3.4 ACCESS TO FACILITIES

A. Contractor shall maintain suitable means of access to all facilities adjoining the construction, except as specifically permitted otherwise by Owner.

C. Suitable access shall mean a roadway of sufficient width, free from ruts, potholes and mud holes, and capable of carrying a passenger car without damage to car.

D. Whenever construction is stopped due to inclement weather, weekends, holidays, overnight, or other reasons, suitable access shall be provided.

3.5 DISPOSAL OF DEBRIS AND REFUSE

A. Disposal of surface materials, construction debris, and trees shall be in accordance with local ordinances.

B. Include cost of loading, hauling, and landfill fees in appropriate proposal item.

SECTION 33 0510
SITE PREPARATION FOR BURIED UTILITIES

C. Burning of refuse is not permitted unless specifically allowed by local or State fire and air pollution authorities in writing.

END OF SECTION

SECTION 33 0510
SITE PREPARATION FOR BURIED UTILITIES

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SECTION 33 4100
STORM UTILITY DRAINAGE PIPING

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Gravity storm sewers and appurtenances, including submittals, materials and material tests, manhole and service installation.

1.2 SUBMITTALS

A. Manufacturer's specifications and/or catalog data listing for plastic or ductile iron pipe, and manhole or intake covers, grates and frames.

B. Manufacturer's certification for reinforced concrete pipe including design classification.

C. Shop drawings showing reinforcing steel details, structural steel details, structural steel supports, and mechanical details for cast in place structures and specialty items.

D. Pipe manufacturer's installation instructions.

1.3 PRESENCE OF UNDERGROUND UTILITIES

A. If utility services are encountered, the Contractor is responsible to have these services relocated if necessary or repaired if damaged.

B. If a main line utility is in direct conflict to the proposed work, the Contractor shall report the conflict to the Owner's Representative immediately. The Owner's Representative will advise the Contractor how the conflict will be resolved. A direct conflict is defined as the existing utility occupying the exact location that the sewer is to be laid. Relocation and/or support of utilities which are near the sewer location, but not in direct conflict, shall be considered incidental to the sewer work. It is the Contractor's responsibility to arrange and pay for such relocation or support.

C. Separation from Water Lines:
   1. Horizontal Separation of Gravity Storm Sewers from Water Mains:
      a. Separate gravity sewer mains from water mains by a horizontal distance of at least 10 feet unless:
         1) The top of a sewer main is at least 18 inches below the bottom of the water main, and
         2) The sewer is placed in a separate trench or in the same trench on a bench of undisturbed earth at a minimum horizontal separation of 3 feet from the water main.

      b. When it is impossible to obtain the required horizontal clearance of 3 feet and a vertical clearance of 18 inches between sewers and water mains, the sewers must be constructed of restrained joint, Class 53 ductile iron pipe with polyethylene encasement and the requirements of this Section. However, provide a linear separation of at least 2 feet.
      c. Separation of Sewer Force Mains from Water Mains: Separate sewer force mains and water mains by a horizontal distance of at least 10 feet unless:

1) The force main is constructed of restrained joint, Class 53 ductile iron pipe with polyethylene encasement and the requirements of this Section.
2) The sewer force main is laid at least 4 linear feet from the water main.

d. Separation of Sewer and Water Main Crossovers:
1) Vertical separation of sewers crossing under any water main should be at least 18 inches when measured from the top of the sewer to the bottom of the water main. If physical conditions prohibit the separation, the sewer may be placed not closer than 6 inches below a water main or 18 inches above a water main. Maintain the maximum feasible separation distance in all cases.
2) Where the sewer crosses over or less than 18 inches below a water main, locate one full length of sewer pipe of water main material so both joints are as far as possible from the water main. The sewer and water pipes must be adequately supported and have watertight joints. Use a low permeability soil for backfill material within 10 feet of the point of crossing.

1.4 JOB CONDITIONS

A. Scheduling
1. Backfill, grading, and material clean-up shall be no more than 200' (61m) behind the location of the pipe placement.
2. The Contractor shall maintain trenches for settling.
3. Owner shall be notified a minimum of 24-hours prior to the establishment of the rough grade to allow the opportunity for hand holes, valve covers, manholes, and other surface fixtures to be located and reviewed.

PART 2 PRODUCTS

2.1 PIPE MATERIALS

A. Pipe
1. Pipe shall be selected from the following choices. Plan or Profiles in Drawings show pipes that require particular material type.

PIPE CLASSIFICATION TABLE
Design Classification by Depth of Cover

Type And Size	Jurisdiction Limitations	Size Limitations	Depth Limitation	Pipe Material Spec	Joint Spec
Open Cut Pipe:					
Reinforced Concrete	None	12" Min. (300mm)	See 2.1C. below	ASTM C76, Class III, Asbestos Free	ASTM C361, ASTM C443
Plastic PVC	None	8" - 12" (200-	None	ASTM D2241-	ASTM D3212,

			300mm)			SDR21 Type I, Grade 1		F477
Ductile Iron (DIP)		None	None		None	Pressure Class 350, ANSI/AWWA C151/A21.51		ANSI A21.11
HDPE N-12		None	None		Refer to manufacturer	ASTM F2648, ASTM F2306, ASTM F2688		ASTM F2306
Polypropylene		None	12” Min. (300mm)		Refer to manufacturer	ASTM F2736, ASTM F2764, ASTM F2881		ASTM F2764, ASTM F2881

2. Pipe for cleanout assemblies shall be ductile iron. See detail on Plans.
3. All ductile iron pipe to be installed with 8-mil polyethylene encasement.
4. Perforated subdrain pipe for applications other than pavement shall be SDR-35 or Schedule 40 PVC with ASTM D3212, F477 joint or HDPE conforming to ASTM F2688 or F2306. Subdrain shall have no sock. Slot subdrain pipe according to ASTM F949 or perforate with four rows of 1/4-inch to 3/8-inch diameter holes along the bottom of the pipe.

B. For reinforced concrete pipe, joints shall be flexible rubber gasket joint and shall conform to ASTM C443 or ASTM C361.

C. Pavement subdrain piping shall conform to SUDAS standard specifications Division 4 – Sewers and Drains Section 4040 – Subdrains and Collectors.

D. Generally, RCP pipes shall conform to the below table for classification based on depth of cover unless specified otherwise by the Plans and Specifications.

Design Classification by Depth of Cover - IDOT Standards

Diameter of Pipe "D" Inches	(H) MAXIMUM ALLOWABLE COVER IN FEET			
	1500D	2000D	3000D	3750D
15*	N/A	10	15	24
18	11	13	20	25
24	12	14	21	26
36	13	16	23	28
48	14	16	24	29
60	14	17	24	29
72	14	17	24	30
84	15	17	25	30

96	15	18	25	31
108	15	18	26	32

* PIPE DEPTH INFORMATION SHOWN IS BASED ON THE IOWA SUDAS SPECIFICIATONS ASSUMING PIPE BEDDING CLASS R-2.

2.2 INLETS, INTAKES, JUNCTION BOXES

A. Cast-in-place structures shall conform to Plan details and paragraph 3.3C.

B. Precast structures shall conform to ASTM C478.

C. Mortar: The mortar shall be composed of one part Portland cement plus 10%, by volume, of hydrated lime and of two parts approved clean sand by volume. Hydrated lime shall be Type N, conforming to the requirements of ASTM C207. After the dry materials have been thoroughly mixed, water shall be added and the mixture shall be turned and chopped by hand or mechanical methods until a stiff mortar results. Mortar shall not be moved more than 30 minutes in advance of use, and retempering will not be permitted. Mortar for pointing shall not be mixed more than 30 minutes in advance of use, and retempering will not be permitted. Mortar for pointing shall be mixed in the proportions of one part Portland cement to one part sand by volume.

D. Grates and castings shall be as noted on the Plans.

E. Manhole covers and frames to be East Jordan Works 1045 non-bolt down or Neenah equivalent or engineer pre-approved equivalent.

F. Adjustment rings shall be concrete.

2.3 WARNING TAPE

A. Non-detectable polyethylene warning tape indicating the utility type. Tape shall be ShieldTec Underground Marking Tape by Empire or equivalent and installed as per the manufacturer's instructions.

2.4 WALL/FLOOR PENETRATION WATERPROOFING

A. All wall/floor penetrations shall have a Linkseal Modular Seal by Thunderline or engineer pre-approved equivalent.

PART 3 EXECUTION

3.1 CONFLICT WITH EXISTING UNDERGROUND UTILITIES AND SERVICES

A. Provide temporary support for existing water, gas, telephone, steam, and sewer and power utility services crossing the trench until backfilling has been completed, unless Plans require relocation.

B. Construct permanent support for existing sewer main or service crossing the trench.

C. All unknown field tile shall be reconnected in similar fashion to their construction.

SECTION 33 4100
STORM UTILITY DRAINAGE PIPING

3.2 CONNECTIONS BETWEEN PIPES OF DISSIMILAR MATERIALS

A. Use special adapters or couplings. Bands or hardware shall be stainless steel. Provide a minimum 6” thick concrete collar around the coupling that extends a minimum 12” beyond the joint in both directions.

3.3 PREPARATION

A. Alignment and Grade:
1. Before installation of new sewer facilities, verify sizes, measurements, type, and location of existing piping, and appurtenances at points of connection to existing system. If a deviation from the Plans is found, the Contractor shall notify the Owner's Representative and obtain instruction on how to proceed.
2. Line and grade control shall be done with a laser beam. The Contractor shall spot check the accuracy of the laser beam in accordance with the following requirements:
a. Elevation shall be checked at the set up point, 25' (8m) point, 50' (15m) point, 100' (30.5m) point, and 100' (30.5m) intervals thereafter to the next set up point.
b. Projector shall be advanced and reset at each manhole with 600' (183m) maximum distance prior to advancement.
c. Grade shall be checked with a rod and level at each checkpoint.
d. Pipe ventilation shall be provided, to prevent beam refraction.

B. See Section 31 2316.13 - *Trench Excavation and Backfill* and plan details for bedding requirements.

C. Refer to Section 33 0510 – Site Preparation for Buried Utilities.

3.4 INLETS, INTAKES, AND JUNCTION BOXES

A. Poured in place concrete structures shall conform to the Plan details and paragraph 3.3C.

B. Precast concrete structures shall be carefully placed true to line and grade, and joints sealed with mastic.

C. Base and Invert: The structure's base and invert shall be constructed of concrete as specified in Sections 2403 and 2404 of the current IDOT Standard Specifications for Highway and Bridge Construction (method of measurement and payment does not apply). Reinforcing to be epoxy coated, grade 60 ksi. Compressive strength of concrete to be 4,000 psi, unless noted otherwise. Reinforcing to be epoxy coated, grade 60 ksi. All bases and inverts shall be poured individually in one continuous pour for each, unless otherwise specified and particular care taken to make channels smooth. All structure inverts and bases shall conform to the Plan detail.
1. Bases for cast-in-place structures shall be constructed on undisturbed frost free dry subgrade.
2. Precast bases for structures may be used with precast structures. Bases shall be placed on a minimum of 6" (150mm) of crushed limestone with full and even bearing.

3. If unsuitable base material exists, the Contractor shall remove the unsuitable material and replace it with sand, rock, gravel, or other suitable material compacted to provide a bed with full and even bearing.

D. Manhole Rings and Covers: The rings and covers of all structures shall be set at the elevation shown on the Drawings and solidly built into place, and grouted with cement mortar. If no elevation is specified, set casting as follows:
1. Manhole lids and frames shall match finished grade in existing pavements or yard areas, and 4" (100mm) below grade for gravel surfaces.
2. Catch basin grates shall be set 1/2" (12mm) below finished grade in paved areas and 6" (150mm) below finished grade in unpaved areas.

3.5 INSTALLATION

A. If the pipe is to be laid below the ground line, a trench shall be excavated to the required depth and of a width sufficient to permit thorough tamping of the backfill under the haunches and around the pipe. Any pipe which is not in true alignment or which shows any undue settlement after laying, but before the fill is placed, shall be taken up and relaid at the Contractor's expense. If shown on the Plans, sufficient camber shall be built into the pipe structure to allow for settlement from fill loads. All joints, except for field or private entrance culverts, shall be sealed with an approved plastic compound or cement mortar. Rubber gasketed joints may be used at no additional cost to the Owner. Lift holes are not permitted. The mortar shall be finished flush on the inside of the pipe and shall be properly cured on the outside. Lifting devices shall have sufficient bearing on the inside of the pipe to avoid damage resulting from a concentration of stresses around the lift holes.

B. If there is a grade discrepancy or any obstruction not shown on the Plans, the Contractor shall notify the Owner's Representative and obtain instructions.

C. Line and grade control shall be done with a laser beam.
1. Grades shall be checked with a level and rod at the set up point, at 25' (8m), 50' (15m), 100' (30.5m), and then at 100' (30.5m) intervals to the next set up point.
2. The projector shall be advanced and reset at each manhole or at 600' (183m) centers; whichever is shorter.
3. Pipe ventilation shall be provided as necessary to prevent beam refraction.

D. If rubber gasket type pipe is specified or used, the joints shall be installed in accordance with the manufacturer's recommendations to ensure that joint devices are properly installed and that rubber gaskets are not displaced.

E. In sealing rigid pipe with mortar, the mortar contact areas of all pipe ends shall be damp when mortar is applied. After applying mortar to the entire interior surface of the bell or groove, the spigot or tongue end shall be forced into position. Any remaining void in the bell or groove shall be filled with a hub of mortar built up adjacent to the bell, or a bead of mortar built up around a groove type joint. The interior joints of either type of pipe shall be finished flush with the surface of the pipe. Outside surface of mortar joints shall be cured with membrane curing compound.

F. In sealing rigid pipe with plastic joint compound, trowel grade compound shall be applied to the mating surfaces of both the tongue and groove or to the entire interior of

the bell and the upper portion of the spigot. Rope or tape type plastic compound shall be applied in accordance with the manufacturer's recommendations. The joints shall be forced together with excess compound extruding both inside and outside the joint. Excess compound shall be removed from the interior surface where accessible. The joint between the bell and spigot shall be uniform for the full circumference and care shall be taken to prevent the bell from supporting the spigot.

G. Excavation, pipe bedding and backfill shall be done in accordance with Section 31 2316.13 - *Trench Excavation and Backfill*.

H. Begin pipeline construction at lowest point in line; lay bell or groove ends pointing upstream.

I. Lower pipe carefully into trench; lay true to line and grade, per Plans.

J. Keep pipe free of all dirt and foreign material.

K. Use no defective pipe; check each length for defects and hairline cracks at ends prior to lowering into trench.

L. Carefully protect pipe and joints from injury while handling and storing pipe.

M. Clean bell and spigot surfaces of dirt and foreign matter before jointing pipe.

N. Lay and join pipe in strict accordance with manufacturer's recommendations.

O. Check alignment and grade of each pipe segment laid. Correct misalignment, displacement, or otherwise defective sewer pipe at Contractor's expense.

P. Provide bell holes at each pipe joint to allow barrel of pipe to support trench load.

Q. Install warning tape 12" to 18" above pipe.

3.6 PIPE CONNECTIONS

A. For manholes, connection of new pipe to an existing structure shall be done as follows: Prepare the existing structure by making an opening with at least a 2" (50mm) clearance all around the pipe to be connected. Insert the pipe so that the end of the pipe is flush with the inside wall. Fill the opening between pipe and manholes wall with an expansive grout in such a manner that watertight condition will result.

B. Manholes to be built on an existing sewer shall be constructed in such a manner as will not damage the existing sewer. The manhole base, walls, and inverts shall be completed before the top half of the existing sewer pipe is cut or broken away. Rough edges of the pipe shall be covered with an expansive grout to produce a smooth finish. Any portion of the existing sewer damaged by the Contractor shall be repaired at no expense to the Owner.

C. Existing Drainage System:
1. Structures: Relay and repoint loose blocks and bricks.

2. System Carrying Water: Provide bypass pumping as necessary to assure continued system operation during connection process.

D. Future Drainage System: The ends of all pipe stubs for future connections at inlet and manhole structures and all pipe installed as a portion of future sewers shall be sealed with suitable plugs. The plugs shall be installed in a manner to prevent infiltration of dirt into the pipe. No direct payment will be made for furnishing and installing plugs.
1. Plug pipes 4" (100mm) through 21" (525mm) with standard disc.
2. Construct bulkheads in pipe 24" (600mm) and larger with bricks and mortar with 1/2" (12mm) plaster outside.
   a. 24" (600mm) to 36" (900mm) - 4" (100mm) thick.
   b. 42" (1.1m) to 60" (1.5m) - 9" (225mm) thick.
   c. 60" (1.5m) and Larger - 12" (300mm) thick.

3.7 TRENCH BACKFILLING

A. General: Backfill of trenches shall be done in accordance with Section 31 2316.13 - *Trench Excavation and Backfill*. The compaction requirement specified in this Section shall be met at the time of the backfilling. Any settlement of trenches in yard or street areas shall be considered an emergency safety issue and the Contractor shall immediately refill the area to finished grade levels.

3.8 INSPECTION

A. After construction has been completed, and before final acceptance of the project, all pipe culverts will be inspected. Any separation at joints sealed with either cement mortar or plastic joint compound shall be resealed with like material.

3.9 FIELD QUALITY CONTROL

A. The allowable drift between structures from the proposed alignment is as follows:
1. The maximum allowable horizontal drift for pipes through 36" (900mm) diameter is 0.40' (122mm) and is 0.80' (244mm) for pipes greater than 36" (900mm) in diameter.
2. The maximum allowable vertical drift for pipes through 36" (900mm) diameter is 0.05' (150mm) and is 0.10' (30mm) for pipes greater than 36" (900mm) in diameter.

END OF SECTION