PROJECT MANUAL
ISSUED FOR BID

S54 FINISH UPGRADES
CAMP DODGE, JOHNSTON, IOWA

Project No. 19083733
Contract No. 34254102

SEPTEMBER 8, 2026

ISG Project No.: 26-34920

IOWA ARMY NATIONAL GUARD

PROJECT MANUAL

S54 FINISH UPGRADES
CAMP DODGE, JOHNSTON, IOWA

For The
IOWA ARMY NATIONAL GUARD

Project No. 19083733
Contract No. 34254102

SEPTEMBER 8, 2026

THE ARMORY BOARD
DEPARTMENT OF PUBLIC DEFENSE (MILITARY DIVISION)

THE ADJUTANT GENERAL
Major General STEPHEN E. OSBORN
CHAIRMAN OF THE ARMORY BOARD

ISSUED BY:

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7105 NW 70th Avenue
Johnston, IA 50131-1824
Phone: (515) 252-4928 d
(515) 975-6211 c

CONSTRUCTION & FACILITIES MANAGEMENT OFFICE:
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Camp Dodge, Building B-61
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Johnston, IA 50131-1824
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DOCUMENT 00 01 02

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CERTIFICATIONS

ISG NO. 26-34920

I hereby certify that the portion of this technical submission described below was prepared by me or under my direct supervision and responsible charge. I am a duly licensed Architect under the laws of the State of Iowa.

Gladys Petersen 09-08-2026

Gladys Petersen, AIA Date

License No.: 08590 Date Issued: June 11, 2024

My License Renewal Date is June 30, 2027

Sections covered by this seal:

Division 00, 01, 03 - 14.

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.

09-08-2026

Adam W. Puls, P.E. Date

License No.: 23206 License Issued: 01-04-2016

My License Renewal Date is December 31, 2027

Sections covered by this seal:

Division 00, 01, and 21 - 23.

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.

Casey G. Larsen 09-08-2026

Casey G. Larsen, P.E. Date

License No.: 26594 Date Issued: 03-01-2021

My License Renewal Date is December 31, 2026

Sections covered by this seal:

Division 00, 01, 26 - 28.

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ADVERTISEMENT FOR BIDS

PROJECT TITLE:
S54 FINISH UPGRADES

BID DATE: SEPTEMBER 24, 2026

PROJECT LOCATION:
CAMP DODGE, JOHNSTON, IOWA

PROJECT NO.: 19083733
CONTRACT NO.: 34254102

The Iowa Department of Public Defense, on behalf of the Iowa National Guard (IANG), will be receiving bids until **1:00 P.M.** local time for the proposed S54 FINISH UPGRADES, CAMP DODGE, JOHNSTON, IOWA. The general scope of work includes, but is not limited to:

Base Bid: Renovation of finishes, including interior repainting work and upgrades to latrines, replacement of select exterior doors, and installation of new IAARNG-compliant room identification and wayfinding signage, along with related work as indicated in the drawings and specifications.

Bids received will be opened and read aloud at the time indicated. Late bids cannot be considered. Bids must be uploaded on the State of Iowa IMPACS system. Visit https://bidopportunities.iowa.gov and select the project with the contract number listed above. At the bottom of that page, select the 'Sign up here!' link to register and receive emails about the project. Navigate back to the project page and select the IMPACS link at the bottom of the page if you need to register to use that system. THIS IS THE ONLY ALLOWABLE BID SUBMISSION PROCEDURE.

A Teams meeting has been established for interested parties to listen in while the bids are opened and evaluated. Here is the information (this will also be posted as a link on the project page at Bid Opportunities)

Microsoft Teams meeting
Join: https://teams.microsoft.com/meet/290111272125781?p=QeWirt5qlKyY36U4xX
Meeting ID: 290 111 272 125 781
Passcode: Bz6N3EF7

Need help? | System reference
Dial in by phone
+1 469-998-6043,,750285535# United States, Dallas
Find a local number
Phone conference ID: 750 285 535#

Bids shall be submitted on the enclosed Form of Bid as set forth in the Instructions to Bidders.

Any construction contractor performing work in Iowa (including out-of-state contractors) must comply with Chapter 91C of Iowa Code

Bidders must comply with all affirmative action/equal employment opportunity provisions of the State of Iowa and the Federal Government. The Iowa Department of Public Defense, Iowa Army National Guard, seeks to provide opportunities for Targeted Small Businesses in accordance with the provisions of Chapter 73 of the Code of Iowa. A listing of certified Targeted Small Businesses can be obtained by visiting the Iowa Department of Economic Development website at https://iowaeda.microsoftcrmportals.com/tsb-search/

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

This project is exempt from Iowa Sales Tax. Davis Bacon Wages **will not** apply to this project, however the Build America Buy America Act **will** apply to this work.

Bidding Documents may be obtained from Beeline and Blue (2507 Ingersoll Avenue, Des Moines, Iowa 50312, (515) 244-1611 or 1-800-347-1610) or they can be found in electronic format on the Bid Opportunities project page.

Bidding Documents may also be viewed online or downloaded at www.beelineandblue.com. Click on "EPLANROOM" and then "PUBLIC PROJECTS". Register and log in, then select the project name or enter the project name in the search window.

The Plan Holders List may be viewed online at www.beelineandblue.com. Navigate to the project as outlined above and click on the "PLAN HOLDERS" tab.

For questions regarding the website, please call (515) 244-1611 or 1-800-347-1610.

A set of the Bidding Documents is also available for review at the Construction and Facilities Management Office, Bldg 3535 (B-61), Camp Dodge.

Award of this contract is dependent on receiving requested Federal and/or State funding. If such funding is not received within the sixty (60) day bid guarantee after the date of receiving bids, all rights and obligations under this agreement are considered null and void.

A Pre-Bid Conference will be held at **10:00 A.M.** local time**, TUESDAY SEPTEMBER 15, 2026** in Conference Room 106 of **BUILDING B-61,** Camp Dodge, 7105 NW 70th Avenue, Johnston, Iowa to review the Plans and Project Manual and to answer questions on this project. A Teams meeting has been established for interested parties to attend if they cannot be on site. Here is the information (this will also be posted as a link on the project page at Bid Opportunities)

Microsoft Teams meeting
Join: https://teams.microsoft.com/meet/283728524439948?p=xeMl0TfGiRfCsDOvLO
Meeting ID: 283 728 524 439 948
Passcode: 4uG2a6zz

Need help? | System reference
Dial in by phone
+1 469-998-6043,,464167249# United States, Dallas
Find a local number
Phone conference ID: 464 167 249#

For further information regarding this project please call Shannon Holt at (515) 729-7819 or Philip Payton at (515) 975-6211.

END OF DOCUMENT 00 11 00

DOCUMENT 00 21 00

INSTRUCTIONS TO BIDDERS

TABLE OF ARTICLES

ARTICLE 1 - DEFINITIONS

1.1 The following definitions add to the list of definitions included in the General Conditions of the Contract and shall be used in conjunction with them as a part of the Bidding Documents.

1.2 Bidding Documents include The Bidding Requirements and the proposed Contract Documents:

1.3 The Bidding Requirements consists of:

.1 Advertisement For Bids.
.2 Instructions to Bidders.
.3 Form of Bid
.4 Supplements to Form of Bid:
.(1) Supplement D: Targeted Small Business Form .....(Submit With Form of Bid)
.(2) Supplement F: Substitution Request Form (Bidding Phase).
.(3) Supplement G: Proposed Subcontractor Form.
.(4) Supplement J: 889 Representation Form

1.4 The Proposed Contract Documents consists of:

.1 Form of Agreement between the Owner and Contractor.
.2 Conditions of the Contract (General, Supplementary, and other Conditions).
.3 Drawings.
.4 Specifications.
.5 Addenda issued prior to execution of the Contract.
.6 Modifications issued after execution of the Contract.
.7 Other documents listed in the Agreement.

1.5 Definitions set forth in the General Conditions of the Contract for Construction or in other Contract Documents are applicable to the Bidding Documents.

1.6 Addenda are a written or graphic instruments issued by the Architect prior to the execution of the Contract which modify or interpret the Bidding Documents by additions, deletions, clarifications, or corrections.

1.7 A Bid is a complete and properly executed proposal to do the Work for the sums stipulated therein, submitted in accordance with the Bidding Documents.

1.8 The Base Bid is the sum stated in the Bid for which the Bidder offers to perform the Work as described in the Bidding Documents.

1.9 An Allowance is a specified monetary sum, specified quantity or time not otherwise defined by the specifications or drawings, but which the contractor is required to include in the bid price.

1.10 A Unit Price is an amount stated in the Bid as a price per unit of measurement for materials, equipment or services or a portion of the Work as described in the Bidding Documents.

1.11 An Alternate Bid (or Alternate) is an amount stated in the Bid to be added to or deducted from the amount of the Base Bid if the corresponding change in the Work, as described in the Bidding Documents, is accepted.

1.12 A Bidder is a person or entity who submits a Bid and who meets the requirements set forth in the Bidding Documents.

1.13 A Certifiable Digital Signature is one that is affixed to a document by a program relying on a token or other credential which can be traced as belonging to the individual signing.

1.14 A Sub-bidder is a person or entity who submits a Bid to a Bidder for materials, equipment or labor for a portion of the Work.

ARTICLE 2 - RECEIPT AND OPENING OF BIDS

2.1 The Iowa Department of Public Defense (Military Division), Iowa Army National Guard, hereinafter called the Owner, will receive Bids electronically via the State of Iowa IMPACS system, until the established bid date and time (see Section 00 41 00 - Form of Bid). The Owner will then publicly open and read all properly submitted Bids. A Teams meeting has been established for interested parties to listen in while the bids are opened and evaluated. Here is the information (this will also be posted as a link on the project page at Bid Opportunities)

Microsoft Teams meeting
Join: https://teams.microsoft.com/meet/290111272125781?p=QeWirt5qlKyY36U4xX
Meeting ID: 290 111 272 125 781
Passcode: Bz6N3EF7

Need help? | System reference
Dial in by phone
+1 469-998-6043,,750285535# United States, Dallas
Find a local number
Phone conference ID: 750 285 535#

2.2 The Owner will reject and return unopened any Bid received after the time specified for the receipt of Bids. See the advertisement and/or bid form for date/time deadline for bid submission.

2.3 **Electronic bids via IMPACS is the ONLY bid submission method. Oral, telephonic, telegraphic, facsimile, mailed or other physically transmitted bids will not be considered.**

2.4 Each Bidder shall be solely responsible for the delivery of their Bid to the Owner before the time specified.

2.5 The Owner acknowledges the responsibility of the Iowa Public Bidding Requirements in advertising and receiving bids for this project.

ARTICLE 3 - BIDDING DOCUMENTS

3.1 Bidders may obtain complete sets of the Bidding Documents from the issuing entity designated in the Advertisement for Bid.

3.2 Bidders and Sub-bidders shall use complete sets of Bidding Documents in preparing Bids; neither the Owner nor Architect assumes responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.

3.3 The Owner and Architect may make copies of the Bidding Documents available on the above terms for the Purpose of obtaining Bids on the Work. No license or grant of use is conferred by issuance of copies of the Bidding Documents.

ARTICLE 4 - PREPARATION OF BIDS

4.1 Prepare Bids on an exact copy of the “Form of Bid” included in these documents. Fill in all applicable blank spaces, typewritten or in ink. The amount must be in both words and figures. If words and figures do not agree, the amount as written in words shall govern.

4.2 All requested Alternates shall be bid. If no change in the Base Bid is required, enter “No Change”.

4.3 The person signing the Bid must initial all erasures or corrections.

4.4 Bids must indicate the full name of the Bidder, must be signed in the firm or corporate name of the Bidder, and must bear the longhand or certifiable digital signature of a principal duly authorized to execute contracts for the Bidder. Bids signed by an agent of the Bidder must be accompanied by evidence of the agent's authority to execute contracts for the Bidder. Type or print below the signature the name of each person signing the Bid.

ARTICLE 5 - SUBMITTAL OF BIDS

5.1 Bids must be uploaded on the State of Iowa IMPACS system. Visit https://bidopportunities.iowa.gov and select the project with the contract number listed elsewhere in this manual. At the bottom of that page, select the 'Sign up here!' link to register and receive emails about the project. Navigate back to the project page and select the IMPACS link at the bottom of the page if you need to register to use that system. THIS IS THE ONLY ALLOWABLE BID SUBMISSION PROCEDURE. Bid packages that are uploaded must include:

1. The Form of Bid (section 00 41 00)
2. Supplement D: Targeted Small Business Form (use provided form).

ARTICLE 6 - MODIFICATION OF BIDS

6.1 No modification of submitted Bids in any way or form will be permitted after the date/time submission deadline.

ARTICLE 7 - WITHDRAWAL OF BIDS

7.1 Any Bid may be withdrawn and resubmitted prior to the time set for the receipt of Bids provided that they are then fully in conformance with these Instructions to Bidders.

7.2 No bid may be withdrawn for a period of sixty (60) calendar days after the time set for the receipt of Bids.

ARTICLE 8 - IOWA TARGETED SMALL BUSINESS REQUIREMENTS

8.1 PROGRAM DESCRIPTION AND REQUIREMENTS:

8.1.1 On construction contracts bid competitively for which a participation goal is indicated, each Bidder who is not a Targeted Small Business and who will be using a Certified Targeted Small Business Subcontractor or supplier must:

.1 Submit with the Form of Bid: Supplement D: Targeted Small Business Form provided herein.

.2 Comply with all relevant provisions of the Iowa Civil Rights Act, Chapter 601A; Executive Order #11, 1984, and #15, 1973, as appended by Executive Order #34, dated July 22, 1988; Federal Executive Order #11245, 1965, as amended by Federal Executive Order #11375, 1967; the Equal Employment Opportunity Act of 1972; and Iowa Code Section 19B.7.

.3 Comply with all provisions of the State of Iowa relevant to fair employment practices, and furnish all information and submit all reports requested by these provisions.

.4 Continue to use the Iowa Targeted Small Business certification guidelines as set out in 481-Chapter 25 of the Iowa Administrative Code for the purpose of identifying Targeted Small Businesses for participation in the award of general and subcontracts.

8.1.2 The mandatory set-aside requirements and bid preferences required by Iowa Code Sections 73.16 to 73.21 are not currently in effect. Use the following guidelines to encourage Targeted Small Business participation.

8.1.3 DEFINITIONS:

.1 Actively manage means exercising the power to make policy decisions affecting the business.

.2 Minority person means an individual who is black, Hispanic, Pacific Island native, American Indian, or Alaskan Native.
.3 Operated means actively involved in the day-to-day management of the business.
.4 Small Business means any enterprise which is located in this State, which is operated for profit under a single management, and which has either fewer than twenty employees or an annual gross income of less than three million dollars computed as an average of the three previous years.

8.2 The Department of Public Defense (Military Division), Iowa Army National Guard (IAARNG), seeks to provide opportunities for Targeted Small Businesses in the awarding of contracts. The IAARNG may award contracts to Targeted Small Businesses under the terms of the Iowa Small Business Procurement Act of 1986 and the Iowa Administrative Code. The IAARNG is also authorized to establish certified Targeted Small Business participation requirements for construction contracts.

8.3 When entering into this contract with the IAARNG, the General Contractor will take documented steps to encourage participation from Targeted Small Businesses for the purpose of subcontracting or supplying of materials. This project has a Targeted Small Business participation goal of ten percent (10%).

8.4 If a prime contractor fails to meet the Targeted Small Business participation goal indicated, the prime contractor shall still be required to submit with the Form of Bid (on the Targeted Small Business Form provided herein) the names of Targeted Small Businesses contacted.

8.5 If the Bidder intends to subcontract with a certified Targeted Small Business in the absence of a stated Targeted Small Business participation goal, the Bidder should inform the State Comptroller Office of this intent by submitting a Targeted Small Business Form so that they may receive credit for this participation.

ARTICLE 9 - QUALIFICATION OF BIDDERS

9.1 Bidders must be registered with the Iowa Labor Commissioner. The Bidders must include an Iowa registration number as provided for on the Form of Bid.

9.2 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.

9.3 Non-resident corporations certify by submittal of a Bid that the corporation shall comply with Chapter 73 of the Iowa Code.

9.4 The Owner may make such investigations as deemed necessary to determine the ability of the Bidder to perform the Work, and the Bidder must furnish to the Owner all such information and data for these purposes as the Owner may request. The Owner reserves the right to reject any Bid if the evidence submitted by, or investigation of, such Bidder fails to satisfy the Owner that such Bidder is properly qualified to carry out the obligations of the Contract and to complete the Work described herein.

9.5 The Owner gives preference to Iowa domestic labor in the constructing or building of any public improvement. By virtue of statutory authority, preference is given to products and provisions produced or grown within the State of Iowa.

9.6 Bidders and all Subcontractors shall be prepared to represent post-bid whether they do or do not use prohibited telecommunications equipment or services in accordance with Section 889 Part B of the FY 2019 National Defense Authorization Act (NDAA). Refer to Article 22 – Post-Bid Information

ARTICLE 10 - SUBCONTRACTORS

10.1 In accordance with Iowa law, the successful Bidder must furnish in writing to the Owner a list of the names of subcontractors who will work on the project as described in Article 22.

10.2 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 contractor's registration number, and (2) be acceptable to the Owner.

ARTICLE 11 - BIDDERS REPRESENTATION

11.1 Each Bidder by submitting a Bid represents that:

11.1.1 The Bidder has read and completely understands the Bidding Requirements and Contract Documents.

11.1.2 The bidder has become familiar with the local conditions under which the Work is to be performed, including availability and cost of labor and materials, and has carefully correlated personal observations with the requirements of the Contract Documents.

.1 A tour of the site will be conducted following the Pre-Bid Conference identified in the Advertisement for Bids. Bidders shall arrange for other site visits in advance by contacting Shannon Holt at (515) 729-7819.

11.1.3 The Bid is based upon the materials, equipment and systems required by the Bidding Documents without exception.

11.1.4 The Bidder has familiarized himself/herself with Federal, State, and Local laws, ordinances, rules, and regulations affecting performance of the Work.

11.1.5 The Bidder agrees that the Contract Time will begin upon receipt of a Notice to Proceed from the Owner, and will achieve Substantial Completion of all the Work within the Contract Time stated on the Bid Form, excepting for delays covered in Article 8 of the General Conditions of the Contract.

11.1.6 The Bidder has given preference to use of Iowa domestic labor and products and provisions produced or grown within the State of Iowa.

11.2 Failure of the selected Bidder to fulfill the provisions of this Article in no way relieve the obligation of the Bidder to furnish all materials and labor necessary to carry out the provisions of the Contract, nor shall such failure constitute grounds for extra compensation over the price stated in the accepted Bid.

ARTICLE 12 - SUBSTITUTIONS

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

12.2 No substitution will be considered during the bidding period unless written request has been submitted to the Architect for approval, on the form provided herein, at least 5 days prior to the bid date. Each such request must include the name of the material, product or equipment for which it is to be substituted and a complete description of the proposed substitution including drawings, cuts, performance and test data, and any other data or information necessary for a complete evaluation. The burden of proof of the merit of the proposed substitution is upon the proposer.

12.3 Request for approval of a substitution will not be considered if Substitution Request Form provided herein is not completely filled out.

12.4 If the Architect approves any proposed substitution, such approval is not official until set forth in an addendum. Do not include any substitutions not confirmed by written addenda.

12.5 Substitutions after the Contract Award may be considered only as provided for in the Conditions of the Contract and Division 1 of the Project Manual.

ARTICLE 13 - ADDENDA AND INTERPRETATIONS

13.1 Bidders must carefully examine and compare the Bidding Documents, examine the site and local conditions and at once report any ambiguity, inconsistency, or error discovered. Bidders and Sub-bidders requiring clarification or interpretation of the Bidding Documents shall make written request to the Architect for interpretation or correction. Such requests must reach the Architect at least seven (7) days prior to the bid date.

13.2 The Architect will issue any and all interpretations, corrections, revisions, and amendments to all holders of Bidding Documents in the form of written addenda. Addenda will be transmitted at least forty-eight (48) hours prior to the time set for the receipt of Bids to all who are known by the issuing office to have received a complete set of Bidding Documents. Copies of Addenda will be made available for inspection wherever Bidding Documents are on file for that purpose. Each Bidder is responsible to ascertain prior to submitting a Bid that the Bidder has received all Addenda issued. All addenda issued shall become part of the Contract Documents and Bidders must acknowledge them in the Form of Bid.

13.3 Only those interpretations, corrections, revisions, and amendments confirmed by written addenda are binding. Bidders are cautioned to refrain from including in their Bid any interpretations, corrections, revisions, or amendments which are not confirmed by written addenda.

13.4 Any question relating to the technical specifications may be directed to the individuals identified on Document 00 01 02 – Project Design Team.

ARTICLE 14 - BID PREFERENCE

14.1 All Bidders must certify their state or foreign country of residence by completing the official address section of the Form of Bid.

14.2 Under Iowa law, as described in the Iowa Administrative Code, resident Bidders on public improvements are allowed a preference equal to the preference given or required by the state or foreign country in which the nonresident Bidder is a resident. “Resident Bidder” means a person or firm authorized to transact business in this State, and having a place of business at which it is and has conducted business for at least six months prior to the first advertisement for the public improvement and, in the case of a corporation, at least fifty percent (50%) of the common stock is owned by residents of this State.

ARTICLE 15 - METHOD OF AWARD

15.1 It is the intent of the Owner to award a Contract to the lowest qualified Bidder provided the Bid has been submitted in accordance with the requirements of the Bidding Documents and does not exceed the funds available. The Owner may reject any or all Bids, waive any irregularities, informalities, or technicalities in any Bid, and accept any Bid in whole or in part which it deems to be in the Owner’s best interests.

15.2 All requested Alternates shall be bid. The Owner reserves the right to accept Alternates in any order or combination, and to determine the low Bidder on the basis of the sum of the Base Bid and Alternate(s) accepted.

15.3 Generally, all Bids received by the Owner which require allocation of appropriated Government funding are subject to the acceptance of the issuing department for the State of Iowa. Each prime Bidder, subcontractor, and material supplier on this project agrees to guarantee their Bid for a period of sixty (60) calendar days after the time set for the receipt of Bids.

15.4 Award of this contract is dependent on receiving requested Federal and/or State funding. If such funding is not received within the sixty (60) day Bid guarantee after the date of receiving Bids, all rights and obligations to enter into a contract are considered null and void.

15.5 The Owner sending a "Notice of Award" to the selected Bidder constitutes award of the Contract.

ARTICLE 16 - EXECUTION OF CONTRACT

16.1 Selected Bidder must, within ten (10) calendar days after receiving Notice of Award, enter into a written contract with the Owner on the Form of Agreement prescribed in these documents.

16.2 The Contract, when duly executed, represents the entire agreement between parties.

16.3 Simultaneously with the delivery of the executed Contract, the Contractor must furnish a performance and payment surety bond in the amount of 100% of the Contract Sum as security for faithful performance of the Contract and for the payment of all persons performing labor and furnishing materials for the work, or evidence of eligibility for waiver of the bond requirements. The bond shall be on the form prescribed in these documents (electronic submission only). The surety on such bond shall be by a corporation duly authorized to do business in the State of Iowa, and said bond shall be signed or countersigned by an Iowa Resident Agent. Attorneys-in-fact who sign surety bonds must file with each bond a certified and effectively dated copy of their power of attorney.

16.4 Completed Contract and Contract Performance and Payment Bond must be dated the same and executed as per State contracting instruction procedures.

16.5 The Owner will maintain a contract administration system ensuring that contractors perform in accordance with the terms, conditions, and specification of their Contract Document.

ARTICLE 17 - IOWA STATE BUILDING CODE

17.1 All construction under this Contract must conform to the requirements of the Iowa State Building Code. Adhere to the provisions of the Iowa State Building Code which takes precedence over local governmental bodies' regulations. Perform work not regulated by the Iowa State Building Code in accordance with other applicable local regulations.

ARTICLE 18 - TAXES

18.1 This project is TAX EXEMPT. Refer to Article 3.6 of the General Conditions (as modified by the Supplementary Conditions) and Article 20.3 of the Instructions To Bidders.

ARTICLE 19 - PREBID CONFERENCE

19.1 The Owner invites Bidders to attend a pre-bid conference on the date, time, and location specified in the Advertisement for Bids.

ARTICLE 20 - POST-BID INFORMATION

20.1 Prior to consideration for Award of Contract, the Apparent Low Bidder shall submit for the general contractor and ALL subcontractors a completed:

20.1.1 Supplement J: 889 Representation Form.

.1 Failure of the bidding entity to successfully meet the requirements of Section 889 Part B of the 2019 NDAA, either through non-use of the prohibited equipment or meeting the mitigation requirements as outlined in Supplement J, will result in the bid being rejected. Failure to meet these requirements by a proposed subcontractor will result in their rejection and trigger the actions outlined in Section 20.2.1 below.

20.2 The Awarded Bidder shall, within forty eight (48) hours of notification of selection for the award of a Contract for the Work, submit:

20.2.1 Supplement G - Proposed Subcontractor Form:

.1 Include the following:

(1). A designation of the Work to be performed by the Bidder with his/her own forces.
(2). A list of names of the subcontractors or other persons or entities (including those who are to furnish materials or equipment fabricated to a special design) proposed for each principal portion of the Work including but not limited to Mechanical Work, Electrical Work, Masonry Work, and Telecommunication Work (as applicable).
(3). The list must include Iowa Contractor's registration numbers for all Subcontractors.

.2 The Bidder will be required to establish to the satisfaction of the Architect and the Owner the reliability and responsibility of the proposed subcontractors or other persons or entities to furnish and perform the Work described in the Bidding Documents.

.3 Prior to the execution of the Contract, the Architect will notify the Bidder in writing if either the Owner or the Architect, after due investigation, has reasonable objection to any subcontractor, person or entity on such list. If the Owner or Architect has a reasonable objection to any subcontractor, person or entity on such list, the Bidder may, at the Bidder's option:

(1). Withdraw the Bid.
(2). Submit an acceptable substitute subcontractor, person or entity with an adjustment in the Base Bid or Alternate Bid to cover the difference in cost occasioned by such substitution. The Owner may, accept the adjusted bid price or disqualify the Bidder.

.4 Subcontractors and other persons and entities proposed by the Bidder and to whom the Owner and the Architect have made no reasonable objection must be used on the Work for which they were proposed and shall not be changed except with the written consent of the Owner and the Architect.

20.3 The Awarded Bidder shall, within one week following the Pre-Construction meeting and prior to purchasing any materials for the Work, submit a completed 'Sales Tax Exempt Application Form'. The Owner will email an electronic copy of the form to the General Contractor shortly after the Pre-Construction Meeting.

END OF DOCUMENT 00 21 00

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SECTION 00 3100
AVAILABLE PROJECT INFORMATION

PART 1 GENERAL

1.01 BUILD AMERICA BUY AMERICA (BABA) GENERAL CLARIFICATION:

A. The prime contractoris responsible for complying with all rules and regulations in regard to BABA and for ensuring that all subcontractors and suppliers are aware of hte requirements and comply with said requirements

B. Prior to submitting shop drawings, the Contractor shall ensure that the proposed product meets BABA requirements and that appropriate clarifications are able to be provided by the maufacturer for required documentation purposes.

   1. Products and manufacturers listed within the project manual specifications are listed to set a level of standard. The Contractor is responsibile for ensuring all products provided meet BABA requirements.

C. If any materials forthe project do not appear to have a BABA compliant option, it is the Contractor's responsibility to reach out to the Owner immediately to discuss ifa waiver request is appropriate. The Contractor shall evaluate all materials for BABA compliance as early as possible after the Owner-Contractor agreement is effective.

1.02 CONSTRUCTION SCHEDULE

A. Work can begin no earlier than November 9, 2026.

B. Work must end by March 27, 2027 with either a completed project or a usable facility with no construction work occuring and all supplies cleared.

C. Work can begin again July 26, 2027 if not finished prior to March 27, 2027.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

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DOCUMENT 00 41 00

FORM OF BID
for
CONSTRUCTION CONTRACT

I. PROJECT TITLE:
S54 FINISH UPGRADES

PROJECT LOCATION:
CAMP DODGE, JOHNSTON, IOWA

BID DATE: SEPTEMBER 24, 2026
AT: 1:00 p.m. Local time

PROJECT NO.: 19083733

CONTRACT NO.: 34254102

TO: Iowa Army National Guard
State Comptroller Office
Attn: Procurement Officer
(Reference Section 00 21 00 for Submittal of Bids)

II. ACKNOWLEDGEMENT

A. The undersigned Bidder, in response to your Advertisement for Bids for construction of the above project, having examined the Drawings, Specifications, and other Bidding Documents and the site of the proposed work, and being familiar with all of the conditions surrounding the construction of the proposed project including the availability of materials and labor, hereby proposes to furnish all labor, materials, and supplies, and to construct the project in accordance with the proposed Contract Documents within the time set forth therein and at the prices stated below. These prices are to cover all expenses incurred in performing the work required under the proposed Contract Documents of which this bid is a part.

B. Accompanying this proposal are the following required documents:

1) Supplement D: Targeted Small Business Form .....(use provided form).

C. Bidder acknowledges receipt of the following Addenda which are a part of the Bidding Documents:

Numbers _____ , _____ , _____ , _____ , _____ , _____.

III. LUMP SUM PROPOSAL

A. **BASE BID:** Bidder agrees to perform all of the work described in the proposed Contract Documents and shown on the Drawings for the Sum of:

_____

_____ Dollars ($ _____)

B. **Amounts will be shown in both words and figures. In case of discrepancy, the amount in words will govern.**

IV. SCHEDULE

A. It is estimated that work can commence by..…….. _____ (mm/dd/yyyy).

and be completed by……_____ (mm/dd/yyyy).

(Note: Not a bid award determining factor.)

V. SUBMISSION CONDITIONS

A. In submitting this bid, it is understood that the Owner reserves the right to accept Alternates in any order or combination and to determine the low Bidder on the basis of the sum of the Base Bid and Alternate(s) accepted.

B. Bidder hereby certifies: (a) that his bid is genuine and is not made in the interest of or on behalf of any undisclosed person, firm, or corporation; (b) that Bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid; (c) that Bidder has not solicited or induced any person, firm, or corporation to refrain from bidding; (d) that Bidder has not sought by collusion to obtain any advantage over any other bidder or over Owner.

VI. CONTRACTOR SIGNATURE

A. Respectfully Submitted:

Firm Name: _____ Telephone No.: _____

Official Address: _____ Email: _____

_____

Mailing Address: _____
(if different from above)

_____

Signed By: _____

Printed Name: _____

_____
(Title)

Date: _____

Federal ID No.: _____

Iowa Contractor Registration No.: _____

END OF DOCUMENT 00 41 00

DOCUMENT 00 43 16

SUPPLEMENT D: TARGETED SMALL BUSINESS FORM

(To be submitted with Form of Bid)

I. PROJECT TITLE:
S54 FINISH UPGRADES

PROJECT LOCATION:
CAMP DODGE, JOHNSTON, IOWA

PROJECT NO.: 19083733
CONTRACT NO.: 34254102

Bidder's Company Name _____ Area Code/Telephone _____

Address _____ City _____ State _____ Zip Code _____

Bidder is _____ is not _____ a certified Iowa Targeted Small Business.

INSTRUCTIONS: Bidder shall provide the information requested below showing any Targeted Small Business Enterprise contacts made prior to bid submission for the project listed. Bidder shall use the construction-related Iowa Targeted Small Business Directory as certified by the Department of Economic Development, State of Iowa. 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. Information is subject to verification and confirmation.

TSB Company Name and Phone #	**Date Contacted**	**Quote Rec'd (Y/N)**	**$ Amount Proposed (if quote used in bid)**

(Use second sheet if needed)

Date _____ Signature of Bidder (same person signing the Form of Bid) _____

END OF DOCUMENT 00 43 16

DOCUMENT 00 43 25

SUPPLEMENT F:
SUBSTITUTION REQUEST FORM (BIDDING PHASE)

TO: **FORWARD ALL SUBSTITUTION REQUESTS TO:**
Zach Thompson, ISG – Des Moines Office
217 East 2nd Street, Suite 110, Des Moines, Iowa 50309
Phone 515.243.9143 Email: zach.thompson@isginc.com

PROJECT: S54 FINISH UPGRADES, CAMP DODGE, JOHNSTON, IOWA

Specification: Title, Section, Page, Paragraph / Article

_____

Proposed Substitution: Description, Manufacturer, Model, Phone No., Trade Name

_____

_____

_____

Product Data: Drawings, Specifications, Performance Data, Test Data – Attached

_____

_____

_____

The Undersigned Certifies: (Check each)

_____ Substitution is equal or superior in all respects to specified item.
_____ Will provide same warranty as specified item.
_____ Same maintenance service and source of replacement parts, as applicable, are available.
_____ Substitution will have no adverse effect on other trades and will not affect or delay progress schedule.
_____ Substitution does not affect dimensions or functional clearances.
_____ Will coordinate installation and adjust other work which may be required, at no additional cost to the Owner.
_____ Waives claims for additional costs or time extensions which may subsequently become apparent.
_____ Will reimburse Owner for review or design services for re-approval by authorities, for changes in building design, detailing, and construction costs caused by the substitutions.

Requested By: _____ Signature: _____

Company: _____ Telephone: _____

Address: _____ Fax: _____

END OF DOCUMENT 00 43 25

DOCUMENT 00 43 36

SUPPLEMENT G:
PROPOSED SUBCONTRACTOR FORM

(To be submitted within 48 hours of notification of selection for the award of a contract)

A. Work proposed to be performed by the Bidder with his/her own forces:

1. _____
2. _____
3. _____
4. _____
5. _____

(attach additional pages as required)

B. A list of names of the subcontractors or other persons or entities (including those who are to furnish materials or equipment fabricated to a special design) proposed for the principal portions of the Work including but not limited to the following (as applicable):

1. Mechanical: _____
2. Electrical: _____
3. Masonry: _____
4. Geothermal: _____
5. Telecommunication: _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____

(attach additional pages as required)

END OF DOCUMENT 00 43 36

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DOCUMENT 00 43 46

SUPPLEMENT J:
889 REPRESENTATION FORM

MICRO-PURCHASE
NATIONAL DEFENSE AUTHORIZATION ACT (NDAA) SECTION 889 REPRESENTATION

For additional information see: https://www.acquisition.gov/FAR-Case-2019-009/889_Part_B

1. ☐ Merchant has an active registration in SAM (www.sam.gov) **and** FAR 52.204-26 is dated Oct 2020 (or later)
   ☐ Merchant is not registered in SAM (www.sam.gov) **or** is registered, but FAR 52.204-26 is dated earlier than Oct 2020

2. Company Name / Merchant (Offeror)	3. Date

4. Company Street Address	5. City	6. State	7. Zip Code

8. Owner or Designated Representative Name	9. E-mail	10. Telephone Number

11. DUNS Number (*if applicable*)	12. Cage Code Number (*if applicable*)	13. SAM Registration Expiration Date (*if applicable*)

14. Complete the following FAR 52.204-26 Representation:

COVERED TELECOMMUNICATIONS EQUIPMENT OR SERVICES-REPRESENTATION (OCT 2020)

(a) *Definitions.* As used in this provision, "covered telecommunications equipment or services" and "reasonable inquiry" have the meaning provided in the clause 52.204-25, Prohibition on Contracting for Certain Telecommunications and Video Surveillance Services or Equipment.

(b) *Procedures.* The Offeror shall review the list of excluded parties in the System for Award Management (SAM) (https://www.sam.gov) for entities excluded from receiving federal awards for "covered telecommunications equipment or services".

(c)(1) *Representation.* The Offeror represents that it ☐ does, ☐ does not provide covered telecommunications equipment or services as a part of its offered products or to the Government in the performance of any contract, subcontract, or other contractual instrument.

(2) After conducting a reasonable inquiry for purposes of this representation, the offeror represents that it ☐ does, ☐ does not use covered telecommunications equipment or services, or any equipment, system, or service that uses covered telecommunications equipment or services

Signature of Owner or Designated Representative identified in Block 8 above. ☒

This representation expires on the date in block 13 or one year from the date in block 3, whichever is soonest. Forward any representation modifications/changes to the sender within 30 days.

Additional Disclosure Instructions to Merchant/Offeror (*if applicable*)

(a) If the Offeror represents in (c)(1) above that, "it *does* provide covered telecommunications equipment […]", then the Offeror should go to FAR 52.204-24 -- Representation Regarding Certain Telecommunications and Video Surveillance Services or Equipment, paragraph (e)(1) *Disclosures* (https://www.acquisition.gov/far/part-52#FAR_52_204_24) to identify the additional documentation that should accompany this representation when sending it back to the sender.

(b) If the Offeror represents in (c)(2) above that, "it *does* use covered telecommunications equipment […]", then the Offeror should go to FAR 52.204-24 -- Representation Regarding Certain Telecommunications and Video Surveillance Services or Equipment, paragraph (e)(2) *Disclosures* (https://www.acquisition.gov/far/part-52#FAR_52_204_24) to identify the additional documentation that should accompany this representation when sending it back to the sender.

GPC-Merchant 889 Representation v.4

END OF DOCUMENT 00 43 46

DOCUMENT 00 52 00

FORM OF AGREEMENT BETWEEN OWNER AND CONTRACTOR

IOWA DEPARTMENT OF PUBLIC DEFENSE
(MILITARY DIVISION)

ARMORY BOARD
IOWA ARMY NATIONAL GUARD

STANDARD CONTRACT FOR CONSTRUCTION

STATE PROJECT: PROJECT NO.: 19083733
CONTRACT NO.: 34254102

AGREEMENT

made as of the _____ day of _____ in the year of Two Thousand Twenty-Six (2026).

BETWEEN the Owner: Iowa Department of Public Defense (Military Division)
Armory Board, Iowa Army National Guard, Adjutant General Chairman
Camp Dodge, 7105 NW 70th Avenue, Johnston, Iowa 50131-1824

and the Contractor:

The Project: S54 FINISH UPGRADES
CAMP DODGE, JOHNSTON, IOWA

The Architect: ISG
217 East 2nd Street, Suite 110
Des Moines, Iowa 50309

Amount: $ _____

Payment to be made by: Iowa Department of Public Defense
State Comptroller Office
Building W-41, Camp Dodge
7105 NW 70th Avenue
Johnston, Iowa 50131-1824

The Owner and the Contractor agree as follows:

ARTICLE 1 - THE CONTRACT DOCUMENTS

1.1 The Contract Documents consists of this Agreement, the Conditions of the Contract (General, Supplementary, and other Conditions), the Drawings, the Specifications, all Addenda issued prior to execution of this Agreement, all other documents listed in this Agreement, and all Modifications issued after execution of this Agreement; these form the Contract, and all are as fully a part of the Contract as if attached to this Agreement or repeated herein. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations or agreements, either written or oral. An enumeration of the Contract Documents, other than modifications, appears in Article 9.

ARTICLE 2 - THE WORK OF THIS CONTRACT

2.1 The Contractor shall fully execute the Work described in the Contract Documents, except to the extent specifically indicated in the Contract Documents to be the responsibility of others.

ARTICLE 3 - DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION

3.1 DATE OF COMMENCEMENT: The Contractor will be required to commence Work under this Contract by _____, after receipt by the Contractor of Notice to Proceed. The Contract Time shall be measured from the date of commencement.

3.2 SUBSTANTIAL COMPLETION: The Contractor shall achieve Substantial Completion of the entire Work not later than _____, subject to adjustments of this Contract Time as provided in the Contract Documents.

ARTICLE 4 - CONTRACT SUM

4.1 The Owner shall pay the Contractor in current funds for the performance of the Work, subject to additions and deductions by Change Order as provided in the Contract Documents, the Contract Sum of

$ _____

4.2 The Contract Sum is determined as follows:

BASE BID: $ _____

ARTICLE 5 - PROGRESS PAYMENTS

5.1 Based upon Applications for Payment submitted to the Architect by the Contractor and Certificates for Payment issued by the Architect, the Owner shall make progress payments on account of the Contract Sum to the Contractor for the period ending on the last day of the month as provided in the Contract Documents and as follows:

5.1.1 Not later than 30 days following the date the Application for Payment is received by the Owner's Representative, ninety-seven (97%) of the portion of the Contract Sum properly allocable to labor, materials, and equipment incorporated in the Work and ninety-seven (97%) of the portion of the

Contract Sum properly allocable to materials and equipment suitably stored at the Site or at some other location agreed upon in writing, for the period covered by the Application for Payment, less the aggregate of previous payments made by the Owner, and upon Substantial Completion of the entire Work, a sum sufficient to increase the total payments to ninety-seven (97%) of the Contract Sum, less such amounts as the Architect shall determine for all incomplete Work, retainage applicable to such work and unsettled claims as provided in the Contract Documents.

5.2 Application for Payment: One (1) copy shall be submitted to the Architect via email in pdf format on AIA Document G702 - 1992, Application and Certificate for Payment, supported by AIA Document G703 – 1992, Continuation Sheet.

5.3 Payments due and unpaid under the Contract Documents shall bear interest from the date payment is due in accordance with Section 573.12, Code of Iowa.

ARTICLE 6 - FINAL PAYMENT

6.1 Final payment, constituting the entire unpaid balance of the Contract Sum, shall be made by the Owner to the Contractor when:

6.1.1 The Contractor has fully performed the Contract except for the Contractor's responsibility to correct Work as provided in Subparagraph 12.2.2 of the General Conditions and to satisfy other requirements, if any, which extend beyond final payment;

6.1.2 all closeout documents required to be submitted with the final Application have been received by the Architect; and

6.1.3 a final Certificate for Payment has been issued by the Architect.

6.2 The Owner's final payment to the Contractor shall be made thirty days after the issuance of the Owner's Letter of Final Acceptance.

ARTICLE 7 - MISCELLANEOUS PROVISIONS

7.1 Terms in this Agreement which are defined in the Conditions of the Contract shall have the meanings designated in those Conditions.

7.2 Where reference is made in this Agreement to a provision of the General Conditions or another Contract Document, the reference refers to that provision as amended or supplemented by other provisions of the Contract Documents.

ARTICLE 8 - FUNDING

8.1 Award of this contract is dependent on receiving requested Federal and/or State funding. If such funding is not received within the sixty (60) day bid guarantee after the date of receiving bids, all rights and obligations under this agreement are considered null and void.

ARTICLE 9 - ENUMERATION OF THE CONTRACT DOCUMENTS

9.1 The Contract Documents, except for Modifications issued after execution of this Agreement, are enumerated as follows:

1. This executed Agreement
2. Any issued Addendums
3. Performance and Payment Bond
4. Application and Certificate for Payment
5. General Conditions of the Contract for Construction
6. Supplementary and other Conditions
7. Certificate(s) of Insurance
8. Certificate of Substantial Completion
9. General Requirements (Division 1)
10. Technical Specifications (All other Divisions)
11. Drawings

STATE OF IOWA:

Department of Public Defense (Military Division)
Armory Board, Iowa Army National Guard

By _____

_____
(Name Typed)

_____
(Title)

Iowa National Guard
(Address)

Camp Dodge, 7105 NW 70th Avenue

Johnston, Iowa 50131-1824

CONTRACTOR:

By _____
(Contractor)

_____
(Name Typed)

_____
(Title)

_____
(Address)

_____

Phone No.: _____

Email: _____

Federal ID No.: _____

IA Registration No.: _____

NOTE: If the Contractor is a corporation, the following witness signatures are not required, but the annexed Certificate of Corporate Authority must be completed. Type or print names under all witness signatures.

IN WITNESS WHEREOF, the parties hereto have executed this Contract as of the _____day of _____, 2026.

(Date to be completed by Owner upon receipt of all signatures.)

_____
State of Iowa - Witness Signature

_____
Printed Name

_____
Contractor – Witness Signature

_____
Printed Name

CERTIFICATE OF CORPORATE AUTHORITY

I, _____ certify that I am the
(typed name of corporate officer other than person signing Contract)

_____ of the corporation named as Contractor
(typed corporate office of person signing above)

herein; that _____, who signed this Contract on behalf of
(typed name of person who signed Contract)

the Contractor, was then _____ of said corporation;
(typed position of person signing Contract)

that said Contract was duly signed for and in behalf of said corporation by authority of its governing body,

and is within the scope of its corporate powers.

AFFIX YOUR CORPORATE SEAL TO THE BOTTOM OF THIS FORM IF ONE EXISTS

END OF DOCUMENT 00 52 00

DOCUMENT 00 61 00

PERFORMANCE AND PAYMENT BOND

AIA Document A312 – Performance and Payment Bond, 2010 Edition shall be utilized for this project and is hereby a part of the Specifications and Contract Documents as if it were bound herein.

Copies and samples for preview of the document can be obtained online from: https://www.aiacontracts.org/purchase.

END OF DOCUMENT 00 61 00

DOCUMENT 00 62 10

APPLICATION AND CERTIFICATE FOR PAYMENT

AIA Document G702 (1992) – Application and Certificate for Payment Form, supported by AIA Document G703 (1992) Continuation Sheet shall be utilized for this project and is hereby a part of the Specifications and Contract Documents as if it were bound herein.

Copies and samples for preview of the document can be obtained online from: https://www.aiacontracts.org/purchase.

Note: Electronically submit Applications for Payment to the Architect or Engineer per the Supplementary Conditions.

END OF DOCUMENT 00 62 10

DOCUMENT 00 72 00

GENERAL CONDITIONS

AIA Document A201-2007 – General Conditions of the Contract for Construction, hereafter referred to as General Conditions, forms the General Conditions for this Construction Contract and is hereby a part of the Specifications and Contract Documents as if it were bound herein.

Copies and samples for preview of the document can be obtained online from: https://www.aiacontracts.org/purchase.

END OF DOCUMENT 00 72 00

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DOCUMENT 00 73 00

SUPPLEMENTARY CONDITIONS

The following supplements modify the General Conditions of the Contract for Construction, AIA Document A201-2007. Where a portion of the General Conditions is modified or deleted by these Supplementary Conditions, the unaltered portions of the General Conditions shall remain in effect.

Unless noted otherwise, all references are to Articles and Sections of AIA Document A201-2007, General Conditions of the Contract for Construction.

See also related topics in Division 1 – General Requirements for additional requirements.

REFERENCE ARTICLE 1 - GENERAL PROVISIONS

1. Reference Section 1.1.1:

   A written order for a minor change in the Work may also be issued by the Owner's Construction Manager as provided in Section 2.1.1.5 of these Supplementary Conditions.

2. Reference Section 1.1.2; Add Sections:

   1.1.2.1 All contracts awarded by the State are subject to access by the State, National Guard Bureau, The Comptroller General of the United States, or any of their duly authorized representatives. This includes books, documents, papers, etc., and records of the Contractor which are directly pertinent to that specific contract for the purpose of making audits, examinations, excerpts, and transcriptions.

   1.1.2.2 Regulations for proper operation and administration of construction contracts: Code of Federal Regulations (CFR), provide solicitation provisions and contract clauses that pertain to this Project. A copy of these regulations are not bound herein, but are included by reference. Copies may be reviewed in the State Comptroller Office, Building 3465 (W-41), Camp Dodge, 7105 NW 70th Avenue, Johnston, Iowa 50131-1824.

3. Reference Section 1.2.1; Add Section:

   1.2.1.1 In the event of conflicts or discrepancies among the Contract Documents, interpretations will be based on the following priorities:

   .1 Modifications
   .2 The Agreement.
   .3 Addenda, with those of later date having precedence over those of earlier date.
   .4 The Supplementary Conditions.
   .5 The General Conditions of the Contract for Construction.
   .6 Division 1 of the Specifications.
   .7 Drawings and Divisions 2-49 of the Specifications.
   .8 Other documents specifically enumerated in the Agreement as part of the Contract Documents.

   In the case of conflicts or discrepancies between Drawings and Division 2-49 of the Specifications or within or among the Contract Documents and not clarified by Addendum, the Architect will determine which takes precedence in accordance with Sections 4.2.11, 4.2.12, and 4.2.13. In instances where conflict or discrepancy involves quality or quantities, the better quality or greater quantity of work will take precedence.

4. Reference Section 1.5; Delete Section 1.5.1 and substitute the following:

1.5.1 All Drawings, Specifications, and other Instruments of Service, and copies thereof, including those in electronic form, are and shall remain the Owner's property with the exception of one contract set for each party to the Contract.

5. Reference Section 1.5; Delete Section 1.5.2 and substitute the following:

1.5.2 The Drawings, Specifications and other Instruments of Service prepared by the Owner or Architect and Architect's consultants, and copies thereof furnished to, or made by, the Contractor, are for use solely with respect to this Project. They are not to be reproduced or used by the Contractor or any Subcontractor, Sub-subcontractor or material or equipment supplier on other projects or for additions to this Project outside the scope of Work without the specific written consent of the Owner.

REFERENCE ARTICLE 2 - OWNER

6. Reference Section 2.1.1; Add Sections:

2.1.1.1 Unless otherwise indicated, the term Owner where referred to in the Contract Documents shall mean The Armory Board for the Iowa Army National Guard – Adjutant General Chairman.

2.1.1.2 The Owner's Representative shall be the State Contracting Officer for the Iowa Army National Guard – State Comptroller Office, executing the Contract on behalf of the State and any other officer or civilian employee properly designated Contracting Officer.

The Owner's Representative hereby authorizes the following persons to represent the Owner in the fulfillment of their respective duties as hereinafter described:

1. The Architect
2. The Owner's Construction Manager

2.1.1.3 Duties of the Owner's Representative

1. The Owner's Representative is authorized to act on behalf of the Owner and shall fulfill the duties, rights and obligations of the Owner under the Contract Documents.
2. The Owner's Representative will prepare and initiate Contract Change Orders in accordance with Section 7.2.
3. The Owner's Representative will have authority to reject Work that does not conform to the Contract Documents in accordance with Section 4.2.6 after review with the Architect.

2.1.1.4 Duties of the Architect

1. The Architect is as defined in Section 4.1.1 and shall provide administration of the Contract as described in the Contract Documents.

2.1.1.5 Duties of the Construction Manager

1. The Owner's Construction Manager shall act on behalf of the Owner in all daily actions and communication in accordance with Section 4.2.4.
2. The Owner's Construction Manager shall be responsible for communication and coordination of concerns of the Project to and from all persons within the Owner's organization.
3. The Owner's Construction Manager shall observe the progress of the Work and report any observed deviations from the Contract Documents to the Architect for a determination. The Owner's Construction Manager is not authorized to permit deviations from the Contract Documents.

4. The Owner's Construction Manager shall assist in coordinating the Contractor's operations with those of the Owner. The Owner's Construction Manager, however, shall not perform any duties for the Contractor.

5. The Owner's Construction Manager shall have the authority to, and may issue an order for a minor change in the Work in accordance with Section 7.4 after review with the Architect.

7. Reference Section 2.2; Delete Section 2.2.5 and substitute the following:

2.2.5 No copies of the Contract Documents will be furnished by the Owner to the Contractor with the exception of any complete sets of Bidding Documents returned to the issuing entity designated in the Advertisement for Bids. Additional reproductions may be made by the Contractor pursuant to Section 1.5.2.

8. Reference Section 2.2; Add Section:

2.2.6 The Owner will procure and bear costs of Special Inspections if required by applicable building codes for the project. See Section 13.5.1.1 of these Supplementary Conditions for additional requirements.

REFERENCE ARTICLE 3 - CONTRACTOR

9. Reference Section 3.1.1; Add Section:

3.1.1.1 Under Chapter 91C of the Iowa Code (1989), any construction contractor performing work in Iowa (including out-of-state contractors) is required to register with the Iowa Division of Labor. (See Article 11 of the Instructions to Bidders).

10. Reference Section 3.2.1; Add Section:

3.2.1.1 The Contract is executed as set forth in the Instructions to Bidders.

11. Reference Section 3.2; Add Sections:

3.2.5 Figured dimensions on the Drawings shall be used in preference to scaling the Drawings. If Contractor scales Drawings, dimensions so obtained shall be the sole responsibility of the Contractor.

3.2.6 Where the Work of the Contractor is affected by finish dimensions of manufacturer's equipment, the finish dimension shall be determined by the Contractor, who shall assume the responsibility for proper coordination.

3.2.7 If in the opinion of the Contractor it is not reasonably possible to provide first-class Work by following the procedures and requirements detailed or specified in the Contract Documents, the Contractor shall make a written request for interpretation to the Architect outlining the conditions and concerns. The Contractor shall not proceed with the portion of the Work in question until a response has been received from the Architect. The Architect shall respond with reasonable promptness.

12. Reference Section 3.3; Add Sections:

3.3.4 The Contractor shall not be relieved of obligations to perform the Work in accordance with the Contract Documents either by activities or duties performed by the Owner or Architect in the Administration of the Contract, or by tests, inspections or approvals required or performed by persons other than the Contractor.

3.3.5 The Contractor shall perform the Work so as to cause a minimum of inconvenience to and interruption of the Owner's operations. Any and all interruptions of the operations of the Owner necessary for the performance of the Work shall be noted in the progress schedule and the Contractor shall additionally give the Owner sufficient advance notice of such interruptions as to allow the Owner time to adjust its operations accordingly. Contractor's failure to give the Owner timely notice of such intentions shall place the responsibility for any resulting delays, additional costs, or other liabilities solely with the Contractor.

3.3.6 Prior to commencing the Work under the Contract, the Contractor shall contact all affected entities supplying utilities and arrange for the moving of such utility installations as is necessary for the performance of the Work. It shall be the responsibility of the Contractor to coordinate the Work with that of the affected entities in such a manner as to cause the least possible interference.

13. Reference Section 3.4.1; Add Section:

3.4.1.1 By virtue of statutory authority, give preference to Iowa domestic labor and materials in the execution of the Work, in accordance with provisions of Chapter 73, Code of Iowa, 1962, and amendments including Senate File 2160, dated April 11, 1984. Machinery, equipment, materials and articles installed or used without such approval are at risk of subsequent rejection.

14. Reference Section 3.4.2; Add Section:

3.4.2.1 After the Contract has been executed, the Owner and Architect will consider a formal request for the substitution of products in place of those specified only under the conditions set forth in the General Requirements (Division 1 of the Specifications).

15. Reference Section 3.5; Add Sections:

3.5.1 This warranty shall be for the period specified in the Contract Performance and Payment Bond unless a longer period is required elsewhere in the Contract Documents for certain portions of Work, in which case the longer period shall govern.

3.5.2 The general warranty provided herein is in addition to and not in limitation of the Contractor's obligations under Section 12.2 and any other warranty or remedy provided by law or by the Contract Documents.

3.5.3 The Contractor will furnish maintenance and 24-hour call-back service for the equipment provided and/or installed by the Contractor for a period of 3 months after the date of Substantial Completion. This maintenance and service will include repair and regular examinations of the equipment and installation by competent and trained employees of the Contractor, and all necessary adjustments, greasing, oiling, cleaning, supplies and parts required to keep the equipment in proper operations, except such parts made necessary due to misuse, accidents, or negligence not caused by the Contractor, Subcontractors, or Sub-subcontractors.

16. Reference Section 3.6; Delete Section and substitute the following:

3.6 TAXES

3.6.1 This project is TAX EXEMPT.

.1 The Iowa Department of Public Defense (DPD) is a registered Designated Exempt Entity (DEE) with the Iowa Department of Revenue (IAC chapter 701 - 19.12.) As a DEE, all contractors that are awarded a contract with the Department are issued a tax-exempt certificate for each project that allows the purchase of building materials or withdraw of inventory without incurring a state sales tax. This special exemption certificate would also allow a manufacturer of building materials to consume materials in the performance of a construction contract with a designated exempt entity, without owing tax on the fabricated cost of those materials.

.2 All Contractors responding to a DPD request for proposal should take this in to consideration when figuring out the cost of materials in the project proposal. Refunds for

state sales tax on building materials will not need to be considered in the proposal and are discouraged. For more information please refer to:

https://tax.iowa.gov/construction-contracts-designated-exempt-entities

.3 If the contract includes machinery or equipment, the contractor must purchase it for resale and give the supplier a regular exemption certificate (issued from DPD). The contractor should not charge sales tax on machinery and equipment sold to DPD.

17. Reference Section 3.7.2; Add Section:

    3.7.2.1 Compliance with the above shall not preclude the establishment of and compliance with non-conflicting higher standards as may be specified or indicated elsewhere in the Contract Documents.

18. Reference Section 3.7.4; Add Sections:

    3.7.4.1 The conditions described in the first sentence include any conditions which the Contractor will consider as the basis for a claim for extra compensation and include but are not limited to materials containing asbestos, polychlorinated biphenyl (PCB), or other hazardous materials.

    3.7.4.2 By failing to give notice within the time allotted above, the Contractor waives all rights for extra compensation of any kind arising out of the concealed or unknown conditions.

19. Reference Section 3.7.5; Modify Section by adding the underlined words, so that the section now reads as follows:

    3.7.5 If, in the course of the Work, the Contractor knowingly encounters and recognizes human remains, burial markers, archeological sites or previously undelineated wetlands not indicated in the Contract Documents, the Contractor shall immediately suspend any operations that would affect them and shall notify the Owner and Architect. Upon receipt of such notice, the Owner shall promptly take any action necessary to obtain governmental authorization required to resume the operations. The Contractor shall continue to suspend such operations until otherwise instructed by the Owner but shall continue with all other operations that do not affect those remains or features. Requests for adjustments in the Contract Sum and Contract Time arising from the existence or good faith belief of such existence of such remains or features may be made as provided in Article 15.

20. Reference Section 3.7; Add Sections:

    3.7.6 See Section 10.7 of these Supplementary Conditions for Stormwater Pollution Prevention Plan and Permit requirements.

    3.7.7 The Contractor must recognize mandatory standards and policies relating to energy efficiency contained in the State Energy Conservation Plan issued in compliance with the Energy Policy and Conservation Act (PL 94-163).

21. Reference Section 3.9.1; Modify the first sentence by adding the underlined words, so that the first sentence now reads as follows:

    3.9.1 The Contractor shall employ a competent superintendent and necessary assistants who shall be in attendance at the Project site during performance of the Work (including work performed by subcontractors).

22. Reference Section 3.9; Add Section:

    3.9.4 The superintendent shall organize and coordinate scheduling of the Work and shall review and coordinate Work between the trades/Subcontractors.

23. Reference Section 3.10.2; Delete the last sentence.

24. Reference Section 3.13; Add Sections:

3.13.1 The Contractor shall provide any additional facilities or areas beyond those areas permitted at the site as required for construction operations or storage of materials at no additional cost to the Owner.

3.13.2 The Contractor shall take all necessary precautions to prevent damage to pipes, conduits, and other underground structures. The Contractor shall protect from disturbance or damage all monuments and property marks until an authorized agent of the Owner has witnessed or otherwise referenced their location and the Contractor shall not remove such marks or monuments until directed.

25. Reference Section 3.15; Delete Sections 3.15.1 and 3.15.2 and substitute the following:

3.15.1 The Contractor shall at all times keep the site of the Work and adjacent premises as free from materials, debris, rubbish and trash as practical and shall remove same from any portion of the site and adjacent premises if, in the opinion of the Owner, such materials, debris, rubbish or trash constitute a nuisance or are in any way objectionable to the public The Contractor shall be responsible for the timely removal of dirt accumulations or any other debris on access roads and public streets and highways resulting from the Contractor's operations.

3.15.2 At the completion of the Work, the Contractor shall remove all materials, implements, staging, piling falsework, debris and rubbish connected with or caused by operations for such Work immediately upon completion of that Work and shall leave the premises in perfect condition insofar as affected by the Work under the Contract. Fires for disposal of rubbish on the site are prohibited.

3.15.3 If the Contractor should fail to clean up the premises as provided in the Contract Documents, the Owner, after giving the Contractor forty-eight hours notice, may do so and Owner shall be entitled to reimbursement from the Contractor.

26. Reference Section 3.16; Add Section:

3.16.2 The Contractor shall furnish the Owner and Architect all necessary assistance to facilitate inspections throughout the process of manufacture or construction, or for the examination of any materials entering into the Work, or for any other purpose required in the discharge of the Owner or Architect's duties.

27. Reference Section 3.18; Add Sections:

3.18.3 The obligations of the Contractor under Section 3.18 shall not extend to the liability of the Owner and its consultants, its agents or employees arising out of: (1) the preparation or approval of maps, Drawings, opinions, reports, surveys, Contract Change Orders, designs or specifications, or (2) the giving of or failure to give directions or instructions by the Owner, its agents or employees providing such giving or failure to give directions or instructions is the primary cause of the injury or damage.

3.18.4 The Contract Documents define claims, damage, losses, and expenses as, but do not limit them to: (1) injury or damage consequent upon the failure of or use or misuse by the Contractor, its Subcontractors, agents, servants, or employees, of any hoist, rigging, blocking, scaffolding, or any and all other kinds of items of equipment furnished or loaned by the Owner; (2) all attorneys' fees and costs incurred in defense of the claim or in bringing an action to enforce the provision of this indemnity or any other indemnity contained in the Contract Documents; and (3) all costs, expenses, lost time, opportunity costs, etc., incurred by the party being indemnified or its employees, agents, or consultants.

3.18.5 The indemnification obligations of the Contractor under this Contract does not extend to the liability of the Owner, any Owner's consultants, or their agents, consultants, or employees arising out of their own negligence.

3.18.6 If trade unions perform the Work or any portion of the Work, the Contractor shall make all necessary arrangements to reconcile without delay, damage or cost to the Owner and its consultants, any conflict between the Contract Documents and any agreements or regulations of any kind at any time in force among members or councils which regulate or distinguish what activities are not included in the work of any particular trade. If this affects the progress of the Work in finishing or installing any items or materials or equipment required under the Contract Documents because of the conflict involving any such agreement or regulation, the Owner or its consultants may require that the Contractor provide other material or equipment of equal kind and quality at no additional cost to the Owner.

REFERENCE ARTICLE 4 - ADMINISTRATION OF THE CONTRACT

28. Reference Section 4.2.2; Add Section:

4.2.2.1 The presence or absence of an Owner's Representative or the Architect on the site for the purpose of inspection shall not relieve the Contractor from any obligations to perform the Work in accordance with the requirements of the Contract Documents.

29. Reference Section 4.2.6:

The Owner will also have the authority to reject Work as provided in Section 2.1.1.3 of these Supplementary Conditions.

REFERENCE ARTICLE 5 - SUBCONTRACTORS

30. Reference Section 5.3; Add Sections:

5.3.1 Such agreements between the Contractor and each Subcontractor (and where appropriate between Subcontractors and Sub-subcontractors) shall also contain provisions that:

.1 require submission to the Contractor of applications for payment under each subcontract to which the Contractor is a party, in reasonable time to enable the Contractor to apply for payment in accordance with Article 9;

.2 require that all Claims for additional costs, extensions of time, damages for delays or other claims with respect to subcontracted portions of the Work shall be submitted to the Contractor (via any Subcontractor or Sub-subcontractor where appropriate) in sufficient time so that the Contractor may comply in the manner provided in the Contract Documents for like Claims by the Contractor against the Owner;

.3 waive all rights the contracting parties may have against one another for damages caused by fire or other perils covered by property insurance described in Article 11, except such rights as they may have to the proceeds of such insurance held by the Owner as trustee;

.4 inform Subcontractors of their rights under Chapter 573, Code of Iowa; and

.5 obligate each Subcontractor to consent specifically to the provisions of Section 5.2.

5.3.2 In accordance with Section 573.12 of the Code of Iowa, the Contractor will make prompt payments to Subcontractors for satisfactory performance of the Work.

REFERENCE ARTICLE 6 - CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

31. Reference Section 6.1.3; Add Section:

6.1.3.1 The Contractor shall be responsible for furnishing accurate information for and participating in the development of a realistic Project schedule.

32. Reference Section 6.2.4; Add Section:

6.2.4.1 Should the Contractor cause damage to the Work or property of any separate contractor or be the cause of delay or failure to perform, the Contractor shall upon due notice promptly attempt to settle with such other contractor by agreement, or otherwise to resolve the dispute. If such separate contractor sues or initiates an arbitration proceeding against the Owner on account of any damage alleged to have been caused by the Contractor, the Owner shall notify the Contractor who shall defend such proceedings, and if any judgment or award against the Owner arises therefrom the contractor shall pay or satisfy it and shall reimburse the Owner for all attorneys' fees and court or arbitration costs which the Owner has incurred.

33. Reference Section 6.2; Add Sections:

6.2.6 Claims and other disputes and matters in question between the Contractor and separate contractors are subject to the provisions of Section 15.3 and 15.4 provided the separate contractor has reciprocal obligations.

6.2.7 The Contractor shall execute all Work in such manner and in such order, or procedure, as will permit the commencement and carrying on of the Work of the Owner and of separate contractors with the least interference possible using a reasonable procedure whenever it is necessary or desirable to execute such work either simultaneously with the Work under Contract, or otherwise. To this end the Contractor shall cooperate and assist the Owner and separate contractors in every reasonable way, and shall interfere as little as possible with their Work. The Contractor shall move, free of charge, the Contractor's plant equipment and materials or any part of same whenever the Owner considers it reasonable and necessary for the work of the Owner or separate contractors.

REFERENCE ARTICLE 7 - CHANGES IN THE WORK

34. Reference Section 7.1.2; Add Section:

7.1.2.1 The Owner's Construction Manager shall also have authority to act alone in issuing an order for a minor change in the Work as provided in Section 2.1.1.5 of these Supplementary Conditions.

35. Reference Section 7.1; Add Sections:

7.1.4 The pricing of changes in the Work which result in an adjustment to the Contract Sum (excepting Alternate Bids, see Section 7.1.5) shall be limited to the Contractor's direct expenses as defined in Sections 7.3.7.1 through 7.3.7.5, plus the applicable percentage of overhead and profit subject to the following limits:

.1 Fifteen percent (15%) maximum mark-up for Work directly performed by employees of the Contractor, Subcontractor, or Sub-subcontractor.

.2 Five percent (5%) maximum Contractor's mark-up for Work performed or passed through by a Subcontractor and passed through to the Owner by the Contractor.

.3 Five percent (5%) maximum Subcontractor's mark-up for Work performed by a Sub-subcontractor and passed through to the Owner by the Subcontractor and Contractor.

.4 The maximum allowable mark-up is twenty-five percent (25%) passed through to the Owner by the Contractor under any circumstances.

7.1.5 The pricing of changes in the Work that add work already bid as an Alternate which have expired, shall adhere to the following guidelines:

.1 Direct material and labor costs associated with the alternate shall be enumerated in the Request for Change and highlight the original cost, the current cost, the difference, and the reason for the difference.

.2 The Contractor may add up to 15% mark-up for the difference between the original direct material and labor costs and the current material and labor costs only.

.3 The contractor may add to the total a 2% mark-up for increased bonds and insurance costs.

7.1.6 Prices shall include all subcontracts and shall be itemized as follows:

.1 Labor costs shall indicate trade, hourly rate, man hours, and total costs.

.2 Materials, supplies and equipment costs shall indicate unit cost, quantity, and total cost for each item.

.3 Machinery and equipment costs shall indicate machinery or equipment type, number of each, hourly rate, and total cost for each item.

7.1.7 The Contractor shall be allowed no additional compensation for any costs, fees or expenses incurred in performing services already required by the Contract for Construction, and shall not be entitled to additional reimbursement for its home office, other non-job site or indirect overhead expenses, or tools necessary for construction.

7.1.8 Any request for time extension as a result of the Change in Work must be justified and presented in adequate detail showing that the proposed change will delay the final Contract completion date.

7.1.9 Contractor shall not apply sales, consumer, use and similar tax charges incurred for material purchases in charges toward the overhead and profit percentage.

7.1.10 The following definitions shall be used in establishing process for Changes in Work:

.1 Direct expense is the Contractor's actual cost of any item that is easily defined as a required item for the completion of his Contract obligation.

.2 Overhead is a business expense created by the Project but not necessarily a direct part of that portion of the Work involved.

.3 Profit is the compensation accruing to the Contractor for the assumption of risk in a business enterprise.

36. Reference Section 7.2.1; Delete Section and substitute the following:

7.2.1 A Change Order is a written instrument prepared by the Owner and signed by the Owner and Contractor stating their agreement upon all of the following:

37. Reference Section 7.4; Add Section:

7.4.1 The Owner's Construction Manager shall also have authority to issue an order for a minor change in the Work as provided in Section 2.1.1.5 of these Supplementary Conditions.

REFERENCE ARTICLE 8 - TIME

38. Reference Section 8.2; Add Section:

8.2.4 In the event the Contractor fails to maintain the schedule, including accepted revisions, the Contractor shall promptly, at no additional cost to the Owner, increase work forces, increase hours, and/or initiate revisions to means and methods of construction as required to make up lost time and complete the Work in accordance with the construction schedule.

REFERENCE ARTICLE 9 - PAYMENTS AND COMPLETION

39. Reference Section 9.3.1; Add the following sentence to Section 9.3.1:

    The Form of Application for Payment shall be a current authorized edition of AIA Document G702 – 1992, Application and Certificate for Payment, supported by a current authorized edition of AIA Document G703 – 1992, Continuation Sheet. One copy of each Application for Payment shall be submitted electronically in .pdf format via email to the Architect or, if applicable, uploaded to the project website for each progress payment.

40. Reference Section 9.3.1; Add Sections:

    9.3.1.3 Applications for Payment shall be submitted once a month.

    9.3.1.4 The Owner will withhold until final payment, retainage in an amount consistent with the provisions of Section 573.12, 573.13, and 573.14 of the Code of Iowa.

41. Reference Section 9.5.1; Add Section:

    9.5.1.8 third party claims filed pursuant to Chapter 573 of the Iowa Code.

42. Reference Section 9.5.3; Delete section in its entirety.

43. Reference Section 9.6.4; Delete the first two sentences.

44. Reference Section 9.8.5; Delete the second sentence and substitute the following:

    Upon such acceptance and consent of surety, if any, the Owner shall make payment sufficient to increase the total payments to ninety-seven percent (97%) of the Contract Sum, less such amounts as the Architect shall determine for incomplete Work and unsettled claims.

45. Reference Section 9.10.1; Add Section:

    9.10.1.1 Issuance of a letter of Final Acceptance by the Owner shall establish the commencement of the thirty-day period during which the Owner retains final payment of the balance due under the Contract under Iowa law and per provisions of this Agreement. If at the end of such thirty-day period, claims are on file with the Owner, the Owner will withhold a sum equal to double the total amount of claims on file or three percent (3%) of the Contract price, whichever is less, until such claims are released or otherwise adjudicated. The Owner will issue a letter of Final Acceptance to the Contractor upon receipt of the Final Certificate for Payment from the Architect.

46. Reference Section 9.10.2; Add Sections:

    9.10.2.1 The Owner will not make final payment until the Contractor has performed final cleanup in accordance with Section 3.15

    9.10.2.2 See Division 1 – General Requirements for items to be submitted with the final Application for Payment. The Architect will not issue a final Certificate of Payment until all items indicated are submitted:

REFERENCE ARTICLE 10 - PROTECTION OF PERSONS AND PROPERTY

47. Reference Section 10.1; Add Sections:

    10.1.1 Accident Prevention: The safety provisions of all applicable laws, building and construction codes shall be observed. Machinery, equipment and all hazards shall be guarded or eliminated in accordance with the safety provisions of the latest edition of the Manual of Accident Prevention in Construction, published by the Associated General Contractors of America, to the extent that such provisions are not in contravention of applicable laws.

10.1.2 The Work shall be governed by applicable provisions of the general law, including the latest amendments of the following:

1. William-Steiger Occupational Safety & Health Act of 1970, Public Law 91-596.
2. Part 1910 – Occupational Safety & Health Standards, Chapter XVII of Title 29, Code of Federal Regulations.
3. Part 1518 –Safety and Health Regulations for Construction, Chapter XIII of Title 29, Code of Federal Regulations.

10.1.3 The Contractor is responsible for conducting a safety program and/or precautions on the project site that assures work on the site is conducted in accordance with all guidelines and requirements of OSHA and other applicable laws, building and construction codes, and sound construction practice. The Contractor shall prepare, implement and enforce a project safety plan for the purpose of maintaining a site where work is conducted in a safe manner. A copy of the safety plan shall be maintained on the site at all times.

48. Reference Section 10.2; Add Sections:

10.2.9 The Contractor must comply with provisions of Section 88.6(1) of the Code of Iowa pertaining to Occupational Safety and Health Administration (OSHA) entrance and inspections which states that the State Labor Commissioner or State Labor Commissioner's representative upon presenting appropriate credentials to the Owner, operator, or agent in charge, is authorized:

.1 To enter without delay and at reasonable times a factory, plant, establishment, construction site, or other area, work place, or environment where work is performed by an employee of an employer; and

.2 To inspect and investigate during regular working hours and other reasonable times, and within reasonable limits, and within a reasonable manner, any such place of employment and all pertinent conditions, structures, machines, apparatus, devices, equipment, and materials therein, and to question privately any such owner, operator, agent, or employer.

49. Reference Section 10.3.1; Add Section:

10.3.1.1 The Contractor is not required pursuant to Article 7 to perform without consent any work relating to asbestos or polychlorinated biphenyl (PCB).

50. Reference Section 10.3; Add Sections:

10.3.7 Lamps, bulbs and ballasts indicated to be removed by the Contractor, and not indicated to be reused on the project, can be salvaged by the Owner or the Contractor. If not salvaged, the Contractor shall pay any required fees and ensure proper disposal as universal waste (ballasts labeled as "PCB Free" can be disposed as solid waste).

10.3.8 All self-luminous or photo-luminescent (radioactive tritium) exit signs shown to be removed by the Contractor shall be removed without damage and turned over to the Owner for disposal.

10.3.9 The Contractor shall not use asbestos-containing products or materials. Requests for exceptions shall be forwarded by the Contractor to the Owner for approval by the Environmental Branch of the Directorate of Installation Management.

10.3.10 The Contractor shall not knowingly remove, damage or disturb asbestos-containing materials unless required by the project's plans and specifications. Any asbestos abatement identified in the Contract Documents as the responsibility of the Contractor must be performed by properly trained and certified personnel in accordance with all environmental and worker safety regulations.

51. Reference Section 10.3.1; Add Section:

10.3.1.1 The Contractor is not required pursuant to Article 7 to perform without consent any work relating to asbestos or polychlorinated biphenyl (PCB).

52. Reference Article 10; Add Sections:

10.5 IOWA HAZARDOUS CHEMICAL RISKS RIGHT TO KNOW LAW:

10.5.1 Owner's Responsibility. Upon request, the Owner will provide to the Contractor a list of known hazardous chemicals within the Project Site to which their employees may be exposed and suggestions for appropriate protective measures.

10.5.2 Contractor's Responsibility. Contractor must inform his/her employees of the Iowa Hazardous Chemical Risks Right to Know Law.

10.5.3 The Contractor must provide to the Owner a list of known hazardous chemicals that they anticipate using on site as well as other pertinent information relating to employee protection. Contractor's Material Safety Data Sheets (MSDS) must be available to the Owner upon request.

10.7 POLLUTION PREVENTION PROCEDURES

10.7.1 The following pollution prevention procedures shall apply to all Contractors working on Iowa Army National Guard projects:

.1 Spill Prevention and Response: The Contractor shall take adequate precautions to prevent spills of hazardous chemicals, oils, and fuels. The Contractor shall have procedures in place to immediately clean up all spills that could occur on the job site or during transportation to and from the job site. Expenses incurred in the spill cleanup shall belong to the Contractor. Specifically:

.a When liquid hazardous chemicals, oils, or fuels are stored on the job site, the contractor shall provide secondary containment, for containers with 55 gallon capacity or greater, equal to or greater than 110% of the volume of the single largest container.

.b The Contractor shall notify the Iowa Army National Guard Environmental Branch in the event of a spill of chemicals, oils or fuels. The Contractor must have sufficient resources on the work site to clean up a spill. All workers at the site shall know whom the Contractor point of contact is and what they are to do in the event of a spill.

.c The point of contact for the Environmental Branch is:

Shannan Garretson, Environmental Program Manager
Building B-61, Camp Dodge
7105 NW 70th Avenue
Johnston, Iowa 50131-1824
Phone: (515) 252-4557
Non-duty Hours Cell Phone (515) 249-5847

.d The Contractor must notify the Iowa Department of Natural Resources and the local sheriff's office of a hazardous substance spill that meets the definition of a "hazardous condition" as defined in the Iowa Administrative Code. Iowa law requires reporting as soon as possible but not later than six hours. Spills meeting the criteria of a "reportable spill" will also require notification of the National Response Center.

10.7.4 Storm Water Pollution Prevention Plans and Permits:

.1 A Storm Water Pollution Prevention Plan and a discharge permit will be required for construction activities resulting in one acre or more soil disturbance.

.2 The Iowa Army National Guard's Director of Installation Management Environmental Branch shall obtain the permit.

.3 The General Contractor, and each subcontractor that has a responsibility described in the plan, will be a co-permittee with the Owner. The General Contractor shall be responsible for compliance with and fulfilling all requirements of the NPDES General Permit Number 2, including the Storm Water Pollution Prevention Plan.

.4 The initial Storm Water Pollution Prevention Plan and Notice of Intent will be provided by the Owner. These and the General Contractor's project inspection diary must be kept on-site and presented to federal, state and local environmental regulatory personnel, and the Owner, when requested.

.5 The General Contractor will provide an individual experienced with storm water pollution prevention plans and techniques to conduct weekly and rainfall inspections of the construction site and review the project's Storm Water Pollution Prevention Plan at the time of each inspection. The General Contractor is responsible for maintaining a copy of each inspection report. The General Contractor will review the weekly and rainfall storm water inspection reports and address any deficiencies within seven days. Deficiencies may also be identified by the Owner at any time. Corrective actions may include installation of additional erosion controls and/or maintenance of existing controls.

.6 If the Contractor should fail to conduct inspections, create reports, maintain the project inspection diary, and address deficiencies, the Owner, after giving the Contractor forty-eight hours notice, may do so and the Owner shall be entitled to reimbursement from the Contractor.

The General Contractor shall be responsible for continuing compliance with all SWPPP requirements until final stabilization is achieved regardless of whether Substantial Completion has been granted or the Owner has occupied any portion of the site or facility. Such practices shall include, but not be limited to, inspections and reports and maintenance of erosion control measures as described above.

.7 The Owner will file a Notice of Discontinuation upon final stabilization of the disturbed area. The General Contractor will provide the original project inspection diary and the marked-up copy of the Storm Water Pollution Prevention Plan to the Owner at the completion of the project.

10.7.5 Removal of Regulated Wastes:

.1 At the completion of the construction project, the Contractor will be required to remove all waste and unused hazardous chemicals including, but not limited to: solvents, adhesives, paints, and fuels. Said materials shall be properly identified, containerized and, if no longer usable, disposed at the Contractor's expense.

REFERENCE ARTICLE 11- INSURANCE AND BONDS

53. Reference Section 11.1; Add Sections:

11.1.5 Insurance: No prime Contractor shall commence work under this contract until he/she has obtained all insurance required under this Section and until such insurance has been approved by the Owner, nor his/her sub-contractor until all similar insurance required of the subcontractor has been obtained and approved. No policy of insurance which is cancelable on less than 30 days written notice to the insured is satisfactory to the Owner's Representative.

11.1.6 Compensation and Employer's Liability Insurance: The Contractor shall take out and maintain during the life of this Contract the Statutory Workmen's Compensation and Employer's Liability Insurance for all of his/her employees to be engaged in work on the project under this Contract, and in case any work is sublet, the Contractor shall require the subcontractor similarly to provide Workmen's Compensation and Employer's Liability Insurance for all of the latter's employees to be engaged in such work.

11.1.7 Bodily Injury Liability and Property Damage Liability Insurance: Each prime Contractor shall take out and maintain during the life of the Contract such Bodily Injury Liability and Property

Damage Liability Insurance as shall protect him/her and any subcontractor performing work covered by the Contract from claims for damage for personal injury, including accidental death, as well as from claims for property damage, which may arise from operations under this Contract, whether such operations be by him/herself or by any subcontractor or by anyone directly or indirectly employed by either of them and the amount of such insurance shall be no less than:

.1 Public Liability Insurance, in an amount no less than Five Hundred Thousand Dollars ($500,000.00), for injuries including wrongful death to any one person, and subject to the same limit for each person in any amount not less than One Million Dollars ($1,000,000.00) on account of one accident.

.2 Property Damage Insurance, in a minimum amount of One Million Dollars ($1,000,000.00) for damages on account of all accidents other than automobile property damage accidents.

.3 Motor Vehicle Bodily Injury Liability in a minimum amount of Five Hundred Thousand Dollars ($500,000.00), per occupant and One Million Dollars ($1,000,000.00) per accident on account of any one automobile accident."

11.1.8 Insurance Certificates: Each prime Contractor shall furnish certificates of insurance listed above to the Owner and they shall also be subject to the Owner's approval for adequacy of protection."

11.1.9 Owner's Protective Liability Insurance: Each prime Contractor shall take out and furnish to the Owner and maintain during the life of this Contract, complete Owner's Protective Liability Insurance in amounts as specified in Section 11.1.7 above, for Bodily Injury Liability Insurance and for Property Damage Liability Insurance."

11.1.10 All insurance coverage must be provided by insurance companies having policy holder ratings no lower than "A" and financial ratings not lower than "XII" in the Best's Insurance Guide, latest edition in effect as of the date of the Contract.

11.1.11 The required limits of liability may be met by using a split-limit or a combined single limit basis. However, the total limit of liability cannot be less than that stated in the requirements.

54. Reference Section 11.4; Delete Section 11.4.1 and substitute the following:

11.4.1 The Contractor shall furnish bonds on the date of execution of the Contract covering faithful performance of the Contract and payment of obligations arising thereunder as stipulated in the Bidding Requirements or specifically required in the Contract Documents. The bond shall be on the form prescribed in the Bidding Requirements and the cost thereof shall be included in the Contract Sum. The amount of each bond shall be equal to one hundred percent (100%) of the Contract Sum.

.1 The Contractor shall deliver the required bonds to the Owner simultaneously with the delivery of the executed Contract.

.2 The Contractor shall require the attorney-in-fact who executes the required bonds on behalf of the surety to affix thereto a certified and current copy of the power of attorney.

55. Reference Section 11.4; Add Section:

11.4.3 If any surety upon any bond furnished in connection with this Contract becomes unacceptable to the State, or if any such surety fails to furnish reports as to their financial condition from time to time as additional security as may be required from time to time to protect the interests of the State or of persons supplying labor or materials in the prosecution of the Work contemplated by the Contract, the State may terminate the Contract.

REFERENCE ARTICLE 12- UNCOVERING AND CORRECTION OF WORK

56. Reference Section 12.1.2; Add Section:

12.1.2.1 If the condition noted in Section 12.1.2 above was caused by a separate contractor, the Contractor shall first attempt to reach settlement with the separate contractor as provided in Article 6.

57. Reference Section 12.2.2; Add the following sentence to Section 12.2.2.1:

The obligations of the Contractor under this Section shall survive termination of the Contract.

58. Reference Section 12.2.2; Add Sections:

12.2.2.4 Upon request by the Owner and prior to the expiration of one year from the date of Substantial Completion, the Architect will conduct and the Contractor shall attend a meeting with the Owner to review the facility operations and performance.

12.2.2.5 If it becomes necessary for the Contractor to replace an item after Substantial Completion under the terms of the Contract Documents, the warranty period of time for the replacement shall begin with the date of the completion of the replacement.

12.2.2.6 If the Contractor does not proceed with correction of such nonconforming Work within a reasonable time fixed by written notice, the Owner may remove it and store the salvageable materials or equipment at the Contractor's expense. If the Contractor does not pay costs of such removal and storage within ten (10) days after written notice, the Owner may, upon ten (10) additional days written notice, sell such materials and equipment and account for the proceeds thereof, after deducting costs and damages that should have been borne by the Contractor, including compensation of the Owner's services and expenses made necessary by this action. If such proceeds of sale do not cover costs which the Contractor should have borne, the Contract Sum will be reduced by the deficiency. If payments then or thereafter due the Contractor are not sufficient to cover such amount, the Contractor must pay the difference to the Owner.

REFERENCE ARTICLE 13 - MISCELLANEOUS PROVISIONS

59. Reference Section 13.1; Delete the words following "…where the Project is located".

60. Reference Section 13.1; Add Section:

13.1.1 This agreement is for services related to a project that is subject to the Build America, Buy America Act (BABAA) requirements under Title IX of the Infrastructure Investment and Jobs Act ("IIJA"), Pub. L. 177-58. Absent an approved waiver, all iron, steel, manufactured products, and construction materials used in this project must be produced in the United States, as further outlined by the Office of Management and Budget's Memorandum M-22-11, Initial Implementation Guidance on Application of Buy America Preference in Federal Financial Assistance Programs for Infrastructure, April 18, 2022.

61. Reference Section 13.5.1; Add Section:

13.5.1.1 Special Inspections, if required for this Project by the Contract Documents, will be procured and paid for by the Owner. The duties and responsibilities of the Contractor in regard to Special Inspections shall be as defined in the General Requirements of the Contract Documents. Special Inspections, if required, are separate and distinct from other Tests and Inspections required by the Contract Documents which shall be procured and paid for by the Contractor under the provisions of Section 13.5.

62. Reference Section 13.6; Delete Section 13.6 and substitute the following:

13.6 INTEREST: Payments due and unpaid under the Contract Documents shall bear interest in accordance with Section 573.12 and 573.14 of the Code of Iowa.

63. Reference Section 13.7; Delete Section in its entirety and substitute the following:

13.7 COMMENCEMENT OF STATUTORY LIMITATION PERIOD

13.7.1 As between the Owner and Contractor:

.1 Before Substantial Completion. As to acts or failures to act occurring prior to the relevant date of Substantial Completion, any applicable statute of limitations shall commence to run and any alleged cause of action shall be deemed to have accrued in any and all events not later than such date of Substantial Completion;

.2 Between Substantial Completion and Final Certificate for Payment. As to acts or failures to act occurring subsequent to the relevant date of Substantial Completion and prior to issuance of the final Certificate for Payment, any applicable statute of limitations shall commence to run and any alleged cause of action shall be deemed to have accrued in any and all events not later than the date of issuance of the final Certificate for Payment; and

.3 After Final Certificate for Payment. As to acts or failures to act occurring after the relevant date of issuance of the final Certificate for Payment, any applicable statute of limitations shall commence to run and any alleged cause of action shall be deemed to have accrued in any and all events not later than the date of any act or failure to act by the Contractor pursuant to any Warranty provided under Section 3.5, the date of any correction of the Work or failure to correct the Work by the Contractor under Section 12.2, or the date of actual commission of any other act or failure to perform any duty or obligation by the Contractor or Owner, whichever occurs last.

64. Reference Article 13; Add Sections:

13.8 MANUFACTURER'S DIRECTIONS

13.8.1 Manufactured articles, materials, and equipment shall be applied, installed, connected, erected, used, cleaned, and conditioned as directed by the manufacturer unless herein specified to the contrary.

13.8.2 Any additional costs incurred as a result of this requirement shall be borne by the Contractor.

13.9 CODE OF FAIR PRACTICES

13.9.1 During the performance of this Contract, the Contractor agrees as follows:

.1 The Contractor will not discriminate against any employee or applicant for employment because of race, creed, color, religion, national origin, sex, age, or physical or mental disability, or status as a Vietnam-era disabled veteran. The Contractor will take affirmative action to ensure that applicants are employed and that employees are treated during employment without regard to their race, creed, color, religion, national origin, sex, age, physical or mental disability, or status as a Vietnam-era disabled veteran except where it relates to a bona fide occupational qualification. Such action includes but is not limited to the following: employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or terminations, rates of pay or other forms of compensation, and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices provided by the Owner setting forth provisions of the nondiscrimination clause.

.2 The Contractor will in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, creed, color, religion, national origin, sex, age, physical or mental disability, or status as a Vietnam-era disabled veteran except where it relates to a bona fide occupational qualification.

.3 The Contractor will send to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding a notice advising

the labor union or workers' representative of the Contractor's commitments under this nondiscrimination clause and post copies of the notice in conspicuous places available to employees and applicants for employment.

.4 The Contractor will comply with all relevant provisions of the Iowa Civil Rights Act of 1965, as amended by Iowa Executive order #15 of 1973, as amended by Iowa Executive Order #34 of 1988; Federal Executive Order 11246 of 1965, as amended by Federal Executive Order 11375 of 1967; the Equal Employment Opportunity Act of 1972; and all provisions relevant to fair application of the rules and regulations of the Owner. The Contractor will furnish all information and reports requested by the Owner or required by or pursuant to the rules and regulations thereof and will also permit access to its payroll and employment records by the Owner or representatives for purposes of investigation to ascertain compliance with such rules, regulations, or requests, or with this nondiscrimination clause.

.5 In the event of the Contractor's noncompliance with the nondiscrimination clauses of this Contract or with any of the aforesaid rules, regulations, or requests, this Contract may be canceled, terminated, or suspended in whole or in part and the Contractor may be declared ineligible for further contracts with the Owner. In addition, the Owner may take such further action, and such other sanctions may be imposed and remedies invoked, as provided by the Iowa Civil Rights Act of 1965 as amended, Chapter 601A, Code of Iowa, as heretofore and hereafter amended, or by the rules and regulations of the Owner or as otherwise provided by law.

.6 The Contractor will include the provisions of this section of Article 13 hereof in every subcontract and purchase order unless specifically exempt by approval of the Owner, in accordance with the rules and regulations, so that such provisions will be binding on each Subcontractor and vendor. The Contractor will take such action with respect to any Subcontractor or purchase order as the Owner or the authorized representative thereof may direct as a means of enforcing such provisions including sanctions for noncompliance; provided however, that in the event the Contractor becomes involved in, or is threatened with, litigation by a Subcontractor or vendor as a result of such direction by the Owner, the Contractor may request the State of Iowa to enter into such litigation to protect the interests of the State of Iowa.

REFERENCE ARTICLE 14 - TERMINATION OR SUSPENSION OF THE CONTRACT

65. Reference Section 14.3; Add Section:

14.3.3 Adjustments made for increases in the cost may have a mutually agreed fixed or percentage fee.

66. Reference Section 14.4; Delete Section 14.4.3 and substitute the following:

14.4.3 In case of such termination for the Owner's convenience, the Contractor shall be entitled to receive from the Owner, payment for Work executed and for proven loss with respect to material, equipment, tools, and construction equipment and machinery, including reasonable overhead and profit. The Contractor shall transfer title to Owner and deliver in the time, place and manner as directed by the Owner, all fabricated and unfabricated parts, Work-in-process, completed Work, supplies and other materials produced as part of, or acquired in connection with the discontinued Work, and other property which would have been required to be furnished to Owner if the Contract had been completed.

67. Reference Article 14; Add Section:

14.5 MISCELLANEOUS TERMINATION

14.5.1 Funding: If the Bidding Requirements indicate Federal funding for this project is received from the Federal Government prior to award of the Contract and such Federal

funding is not received within the sixty (60) day bid guarantee after the date of receiving bids, all rights and obligations to enter into a Contract are considered null and void.

14.5.2 Provisions of law as contained in Chapter 573A of the Code of Iowa, current edition (which pertains to termination of contracts for construction of public improvements when Work thereon is stopped because of a national emergency), applies to and is a part of this Contract and binding upon all parties hereto, including Subcontractors and sureties.

REFERENCE ARTICLE 15 – CLAIMS AND DISPUTES

68. Reference Section 15.1.5.1; Add Section:

15.1.5.1.a The Contractor shall not be entitled to an increase in the Contract Sum as a result of any delays in the progress of the Work. The Contractor's sole remedy for delay is an extension of time, extended by Change Order for such reasonable time as proposed by the Contractor and approved by the Owner.

END OF DOCUMENT 00 73 00

SECTION 01 3000
ADMINISTRATIVE REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. General administrative requirements.

B. Project Coordinator.

C. Electronic document submittal service.

D. Preconstruction meeting.

E. Progress meetings.

F. Construction progress schedule.

G. Requests for Information (RFI) procedures.

H. Submittals for review, information, and project closeout.

I. Submittal procedures.

1.02 RELATED REQUIREMENTS

A. Section 01 6000 - Product Requirements: General product requirements.

B. Section 01 7000 - Execution and Closeout Requirements: Additional coordination requirements.

C. Section 01 7800 - Closeout Submittals: Project record documents; operation and maintenance data; warranties and bonds.

1.03 REFERENCE STANDARDS

A. AIA G716 - Request for Information; 2004.

1.04 GENERAL ADMINISTRATIVE REQUIREMENTS

A. Comply with requirements of Section 01 7000 - Execution and Closeout Requirements for coordination of execution of administrative tasks with timing of construction activities.

B. Make the following types of submittals to Architect:

1. Requests for Information (RFI).
2. Requests 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.

1.05 PROJECT COORDINATOR

A. Project Coordinator: General Contractor.

B. Cooperate with the Project Coordinator in allocation of mobilization areas of site; for field offices and sheds, for employee access, traffic, and parking facilities.

C. During construction, coordinate use of site and facilities through the Project Coordinator.

D. Comply with Project Coordinator's procedures for intra-project communications; submittals, reports and records, schedules, coordination drawings, and recommendations; and resolution of ambiguities and conflicts.

E. Comply with instructions of the Project Coordinator for use of temporary utilities and construction facilities.

F. Coordinate field engineering and layout work under instructions of the Project Coordinator.

G. Make the following types of submittals to Architect through the Project Coordinator:

1. Requests for Information.
2. Requests 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 ELECTRONIC DOCUMENT SUBMITTAL SERVICE

A. See Section 01 31 23 – Project Web Site for complete requirements.

B. All documents transmitted for purposes of administration of the contract are to be in electronic (PDF, MS Word, or MS Excel) format, as appropriate to the document, and transmitted via an Internet-based submittal service that receives, logs and stores documents, provides electronic stamping and signatures, and notifies addressees via email.

1. Besides submittals for review, information, and closeout, this procedure applies to Requests for Information (RFIs), progress documentation, contract modification documents (e.g. supplementary instructions, change proposals, change orders), applications for payment, field reports and meeting minutes, Contractor's correction punchlist, and any other document any participant wishes to make part of the project record.
2. Contractor and Architect are required to use this service.
3. It is Contractor's responsibility to submit documents in allowable format.
4. Subcontractors, suppliers, and Architect's consultants are to be permitted to use the service at no extra charge.
5. Users of the service need an email address, internet access, and PDF review software that includes ability to mark up and apply electronic stamps (such as Adobe Acrobat, www.adobe.com, or Bluebeam PDF Revu, www.bluebeam.com), unless such software capability is provided by the service provider.
6. Paper document transmittals will not be reviewed; emailed electronic documents will not be reviewed.
7. All other specified submittal and document transmission procedures apply, except that electronic document requirements do not apply to samples or color selection charts.

C. Submittal Service: Use one of the following:

1. Procore Construction Management Software: www.procore.com.

D. Training: One, one-hour, web-based training session will be arranged for all participants, with representatives of Architect and Contractor participating; further training is the responsibility of the user of the service.

E. Project Closeout: Architect will determine when to terminate the service for the project and is responsible for obtaining archive copies of files for Owner.

3.02 PRECONSTRUCTION MEETING

A. Architect will schedule a meeting after Notice of Award.

B. Attendance Required:

1. Owner.
2. Architect.
3. Contractor.

C. Note: The following agenda items are not intended to be the final or a complete list of the items that will be discussed. A complete agenda will be distributed at the preconstruction meeting.

D. 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 to Contract, Owner and Architect.
6. Procedures and processing of field decisions, submittals, substitutions, applications for payments, proposal request, requests for information, Change Orders, and Contract closeout procedures.
7. Scheduling.
8. Shop drawings submittal, review times, and overall process.
9. Electronically submitted file and formatting requirements and procedures.
10. Open for comments; attendees are encouraged to bring other topics or concerns up for discussion at this time.

E. Architect will record minutes and distribute copies within two days after meeting to participants, with copies to the Contractor, Owner, participants, and those affected by decisions made.

3.03 PROGRESS MEETINGS

A. Schedule and administer meetings with Owner and Architect on a minimum monthly basis. Subs only come if there is a relavant issue to be addressed at that meeting.

1. Progress meetings with subcontractors should be scheduled appropriately as needed.

B. Make arrangements for meetings, prepare agenda with copies for participants, preside at meetings. Meetings will be held at B61.

C. Attendance Required:

1. Contractor.
2. Owner.
3. Architect.
4. Contractor's superintendent.
5. Major subcontractors.

D. Agenda:

1. Review minutes of previous meetings.
2. Review of work progress.
3. Field observations, problems, and decisions.
4. Identification of problems that impede, or will impede, planned progress.
5. Review of submittals schedule and status of submittals.
6. Review of off-site fabrication and delivery schedules.
7. Maintenance of progress schedule.
8. Corrective measures to regain projected schedules.
9. Planned progress during succeeding work period.
10. Maintenance of quality and work standards.
11. Effect of proposed changes on progress schedule and coordination.

12. Current compliance status of electronically submitted file and formatting requirements and procedures.
13. Other business relating to work.

E. Record minutes and distribute copies within two days after meeting to participants, with copies to Architect, Owner, participants, and those affected by decisions made.

3.04 CONSTRUCTION PROGRESS SCHEDULE

A. Within 7 days after date of the Agreement, submit preliminary schedule defining planned operations for the first 60 days of work, with a general outline for remainder of work.

B. If preliminary schedule requires revision after review, submit revised schedule within 5 days.

C. Within 7 days after review of preliminary schedule, submit draft of proposed complete schedule for review.

1. Include written certification that major contractors have reviewed and accepted proposed schedule.

D. Within 5 days after joint review, submit complete schedule.

E. Submit updated schedule with each Application for Payment.

3.05 REQUESTS FOR INFORMATION (RFI)

A. Definition: A request seeking one of the following:

1. An interpretation, amplification, or clarification of some requirement of Contract Documents arising from inability to determine from them the exact material, process, or system to be installed; or when the elements of construction are required to occupy the same space (interference); or when an item of work is described differently at more than one place in Contract Documents.
2. A resolution to an issue which has arisen due to field conditions and affects design intent.

B. Whenever possible, request clarifications at the next appropriate project progress meeting, with response entered into meeting minutes, rendering unnecessary the issuance of a formal RFI.

C. Preparation: Prepare an RFI immediately upon discovery of a need for interpretation of Contract Documents. Failure to submit an RFI in a timely manner is not a legitimate cause for claiming additional costs or delays in execution of the work.

1. Prepare a separate RFI for each specific item.
   a. Review, coordinate, and comment on requests originating with subcontractors and/or materials suppliers.
   b. Do not forward requests which solely require internal coordination between subcontractors.
2. Prepare in a format and with content acceptable to Owner.

a. Use AIA G716 - Request for Information or equivalent form.
3. Prepare using software provided by the Electronic Document Submittal Service.
4. Combine RFI and its attachments into a single electronic file. PDF format is preferred.
    a. All pages of PDF shall be formatted to 8 1/2x11 or 11x17 whenever possible.

D. Reason for the RFI: Prior to initiation of an RFI, carefully study all Contract Documents to confirm that information sufficient for their interpretation is definitely not included.

1. Include in each request Contractor's signature attesting to good faith effort to determine from Contract Documents information requiring interpretation.
2. Unacceptable Uses for RFIs: Do not use RFIs to request the following::
    a. Approval of submittals (use procedures specified elsewhere in this section).
    b. Approval of substitutions (see Section - 01 6000 - Product Requirements)
    c. Changes that entail change in Contract Time and Contract Sum (comply with provisions of the Conditions of the Contract).
    d. Different methods of performing work than those indicated in the Contract Drawings and Specifications (comply with provisions of the Conditions of the Contract).
3. Improper RFIs: Requests not prepared in compliance with requirements of this section, and/or missing key information required to render an actionable response. They will be returned without a response, with an explanatory notation.
4. Frivolous RFIs: Requests regarding information that is clearly indicated on, or reasonably inferable from, Contract Documents, with no additional input required to clarify the question. They will be returned without a response, with an explanatory notation.
    a. The Owner reserves the right to assess the Contractor for the costs (on time-and-materials basis) incurred by the Architect, and any of its consultants, due to processing of such RFIs.

E. Content: Include identifiers necessary for tracking the status of each RFI, and information necessary to provide an actionable response.

1. Official Project name and number, and any additional required identifiers established in Contract Documents.
2. Owner's, Architect's, and Contractor's names.
3. Discrete and consecutive RFI number, and descriptive subject/title.
4. Issue date, and requested reply date.
5. Reference to particular Contract Document(s) requiring additional information/interpretation. Identify pertinent drawing and detail number and/or specification section number, title, and paragraph(s).
6. Annotations: Field dimensions and/or description of conditions which have engendered the request.
7. Contractor's suggested resolution: A written and/or a graphic solution, to scale, is required in cases where clarification of coordination issues is involved, for example; routing, clearances, and/or specific locations of work shown diagrammatically in Contract Documents. If applicable, state the likely impact of the suggested resolution on Contract Time or the Contract Sum.

F. Attachments: Include sketches, coordination drawings, descriptions, photos, submittals, and other information necessary to substantiate the reason for the request.

G. RFI Log: Prepare and maintain a tabular log of RFIs for the duration of the project.

1. Indicate current status of every RFI. Update log promptly and on a regular basis.
2. Note dates of when each request is made, and when a response is received.
3. Highlight items requiring priority or expedited response.
4. Highlight items for which a timely response has not been received to date.
5. Identify and include improper or frivolous RFIs.

H. Review Time: Architect will respond and return RFIs to Contractor within seven calendar days of receipt. For the purpose of establishing the start of the mandated response period, RFIs received after 12:00 noon will be considered as having been received on the following regular working day.

1. Response period may be shortened or lengthened for specific items, subject to mutual agreement, and recorded in a timely manner in progress meeting minutes.

I. Responses: Content of answered RFIs will not constitute in any manner a directive or authorization to perform extra work or delay the project. If in Contractor's belief it is likely to lead to a change to Contract Sum or Contract Time, promptly issue a notice to this effect, and follow up with an appropriate Change Order request to Owner.

1. Response may include a request for additional information, in which case the original RFI will be deemed as having been answered, and an amended one is to be issued forthwith. Identify the amended RFI with an R suffix to the original number.
2. Do not extend applicability of a response to specific item to encompass other similar conditions, unless specifically so noted in the response.
3. Upon receipt of a response, promptly review and distribute it to all affected parties, and update the RFI Log.
4. Notify Architect within seven calendar days if an additional or corrected response is required by submitting an amended version of the original RFI, identified as specified above.
5. If there is a change to the contract sum the contractor must post a Request for Change (RFC) on Procore. when it is approved by CFMO Contracting Officer, the work can be performed. As noted above, several RFC are typical combined for issuing the CO. CO will only be issued by IAARNG Contracting Officer. RFCs should reference the associated RFI or ITC (ITC = Instruction to the Contractor; all changes intiated by the design team should be issued on PROCORE as ITCs.)

3.06 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 Architect for review for the limited purpose of checking for compliance with information given and the design concept expressed in 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 documents purposes described in Section 01 7800 - Closeout Submittals.

3.07 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 Architect's knowledge as contract administrator or for Owner.

3.08 SUBMITTALS FOR PROJECT CLOSEOUT

A. Submit Correction Punch List for Substantial Completion.

B. Submit Final Correction Punch List for Substantial Completion.

C. When the following are specified in individual sections, submit them at project closeout in compliance with requirements of Section 01 7800 - Closeout Submittals:

1. Project record documents.
2. Operation and maintenance data.
3. Warranties.
4. Bonds.
5. Other types as indicated.

D. Submit for Owner's benefit during and after project completion.

3.09 SUBMITTAL PROCEDURES

A. General Requirements:

1. All submittals shall be submitted to the Architect through the Project Coordinator - No Exceptions.
2. All shop drawings shall be submitted no later than 45 days after execution of the contract.
3. All submittals shall be submitted with a cover page equivalent to the shop drawing submittal form attached to this section.
4. PDFs by e-mail is the preferred method; coordinate with Architect/Engineers' representative.
    a. Refer to "Requirements for Electronically Submitted Shop Drawings" attached to this section.
    b. Where a construction management software program is used all submittals shall be submitted through that service.

1) All submittals shall include an approved cover sheet as the documents need to be able to live outside those programs.

5. By submitting submittals, the Project Coordinator represents to Architect that Project Coordinator has:
   a. Reviewed and approved them.
   b. Determined and verified materials, field measurements, and field construction criteria related thereto, or will do so.
   c. Checked and coordinated the information contained within such submittals with the requirements of the Work of the Contract Documents.
6. Submittals that do not appear to be reviewed and approved will be returned to the Project Coordinator without the Architect's review. Time delays for this breach in procedure will be at the sole expense of the Project Coordinator.
7. Sequentially identify each item. For revised submittals use original number and a sequential alphabetical suffix.
8. 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.
   a. Submittals from sources other than the Contractor, or without Contractor's stamp will not be acknowledged, reviewed, or returned.
9. Schedule submittals to expedite the Project, and coordinate submission of related items.
   a. For each submittal for review, allow 15 calendar days excluding delivery time to and from the Contractor.
   b. For sequential reviews involving Architect's consultants, Owner, or another affected party, allow an additional 7 days.
   c. For sequential reviews involving approval from authorities having jurisdiction (AHJ), in addition to Architect's approval, allow an additional 30 days.
10. Identify variations from Contract Documents and product or system limitations that may be detrimental to successful performance of the completed work.
11. Provide space for Contractor and Architect review stamps.
12. When revised for resubmission, identify all changes made since previous submission.
13. Distribute reviewed submittals. Instruct parties to promptly report inability to comply with requirements.
14. Incomplete submittals will not be reviewed, unless they are partial submittals for distinct portion(s) of the work, and have received prior approval for their use.
15. Submittals not requested will not be recognized or processed.

B. Product Data Procedures:

1. Submit only information required by individual specification sections.
2. Collect required information into a single submittal.
3. Submit concurrently with related shop drawing submittal.
4. Do not submit (Material) Safety Data Sheets for materials or products.

C. Shop Drawing Procedures:

1. Prepare accurate, drawn-to-scale, original shop drawing documentation by interpreting Contract Documents and coordinating related work.
2. Do not reproduce Contract Documents to create shop drawings.
3. Generic, non-project-specific information submitted as shop drawings do not meet the requirements for shop drawings.

D. Samples Procedures:

1. Transmit related items together as single package.
2. Identify each item to allow review for applicability in relation to shop drawings showing installation locations.
3. Include with transmittal high-resolution image files of samples to facilitate electronic review and approval. Provide separate submittal page for each item image.
4. For physical samples, please coordinate delivery with the Architect to ensure proper review and handling.

END OF SECTION

SECTION 01 3000 -- ATTACHMENT

SHOP DRAWING SUBMITTAL FORM

Architects Project No: 26-34920 **Date:** _____

Project Name: S54 Finish Upgrades – Camp Dodge

Specification Section Number: _____ **Shop Drawing #** _____

Specification Section Name: _____

Description: _____

Subcontractor or Supplier Approval:	**General Contractor or Construction Manager Approval:**
Architect / Engineer Review:	**Other Reviews and Comments:**

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Requirements for Electronically Submitted Shop Drawings

1. The Contractor shall fill out and include the submittal cover sheet included in the specification book. This is to be the first page of the submittal. If the Contractor elects to use transmittal sheets they shall be the last page of the submittal.
2. If construction management software (ProCore or similar type program) is used, the cover sheet shall also be used as the document needs to be able to live outside those programs with all notes present on the submittal.
3. Routing of all shop drawings shall be submitted to the Architect through the Project Coordinator.
4. The shop drawings are to be reviewed by the Contractor before submitting. All field required verifications and missing information shall be completed and duly noted on the drawings. The Contractor shall verify that the products submitted are acceptable per the specifications. The Contractor shall then affix their stamp on the submittal cover sheet. Contractor must review - no pass through drawings are permitted. Time delays for this breach in procedure will be at the sole expense of the Project Coordinator.
5. Shop drawing representation: By submitting shop drawings, the Project Coordinator represents to the Architect that the Project Coordinator has: (1) reviewed and approved them, (2) determined and verified materials types and use, obtained field measurements and field construction criteria related thereto, or will do so, and (3) checked and coordinated the information contained within such submittals with the requirements of the work of the contract documents and other trades working on the project and their submittals.
6. The Contractor shall prepare a PDF document so that all sheets of the submittal are one document. Do not submit duplicate submittals for the sole reason to comply with required submittals. Note on the submittal if it is used for another section as well. (The only reason to include more than one section for a submittal).
7. Scans shall be in color. All pages shall be oriented correctly and legible. Actual sheet sizes for the submittal shall be 8 ½ x11 or 11x17 whenever possible. All print and details must be legible at those sizes.
8. Samples and color selections associated with the drawings shall be included when practical. Actual samples shall be photographed, converted to .pdf format and the sheet sized to letter size and any required notes provided on the page. If a separate color selection submittal is provided, provide a cover sheet and list names of all samples and colors on cover sheet and attach the photographs of the samples to document the approval. Actual samples, color selections shall be delivered to Architect / Engineer and the shop drawings will not be reviewed until actual samples are received. Architect / Engineer uses staff from various offices so confirm where the samples need to be sent to expedite the review.
9. Scanned color charts or web sites will not be used to review colors, only to indicate the color that was selected.
10. The PDF file shall be named as follows. Example: 2022-169 23 3700 - Air outlets & inlets.pdf.
11. The email subject line shall list the project number first followed by the project name. Then the section number and a brief description of the submittal contents shall follow the submittal number. Example: 2022-169 Decorah VA 23 3700 Air outlets & inlets
12. The Architect/Engineer will review the drawings, make notes as required on the drawings and stamp them. The PDF file shall then be renamed by adding the action required such as (R) REVIEWED, (FAC) FURNISH AS CORRECTED, (R&R) REVISE AND RESUBMIT or (REJECT) REJECTED. Example: 2022-169 23 3700-Air outlets & inlets R.pdf
13. The Architect/Engineer shall then use the original email and attach the reviewed drawings and forward back to the Project Coordinator. The email that they are attached to will be considered the transmittal.
14. No hard copies will be sent by the Architect/Engineer. Note: Hard copies will be required to be included in the O+M Manuals as part of the project close out submittals.
15. The Project Coordinator shall maintain a shop drawing log for all submittals. Project Coordinator to update on a regular basis and distribute to Architect, Owner and others as requested.

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SECTION 01 31 23

PROJECT WEB SITE

PART 1 - GENERAL

1.1 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 **(via the Owner's Procore subscription)** 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 Owner's 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.

1.2 USER ACCESS LIMITATIONS

A. The Owner's Representative 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 Owner. 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.

1.3 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 the 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.

1.4 SUBMITTALS

A. See Section 01 30 00 ADMINISTRATIVE REQUIREMENTS:

B. Preconstruction Submittals

1. List of Contractor's, Sub-contractor’s, and Supplier’s key Procore personnel. List shall be populated into Owner provided Excel spreadsheet. Include contact information and descriptions of key personnel's roles and responsibilities for this project. Contractor should also identify their organization’s administrator on the list.

1.5 COMPUTER SYSTEM REQUIREMENTS

A. The Contractor shall provide computer hardware, software, and network connections necessary to access and utilize Procore, both at their home office and on the jobsite. Hardware, software, and network connectivity shall meet or exceed the minimum requirements as recommended by Procore Technologies, Inc. for running the Procore system efficiently without interruption or lag. As recommendations are modified by Procore, the Contractor will upgrade their system(s) and software versions 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. It is recommended a faster internet connection speed be used for projects with heavy data loads.

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. Owner 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.

1.6 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. Under no circumstances shall the usage of the Procore be grounds for a time extension or cost adjustment to the contract.

1.7 TRAINING

A. The Contractor shall be responsible for coordinating with the website service provider in a timely manner for training of their employees, sub-contractors, and suppliers in the use of the website service.

PART 2 - PRODUCTS

2.1 DESCRIPTION

A. Procore project management application provided by Procore Technologies, Inc. www.Procore.com (no substitutions). **All project management shall utilize the Owner's Procore subscription)**

PART 3 - EXECUTION

3.1 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. The following items, at a minimum, shall be uploaded, entered, and/or managed on the project web site:

1. Directory.
2. Drawings
3. Specifications
4. Submittals.
5. Closeout Submittals.
6. Substantial Completion Documents
7. Supplemental Instructions (SI's) or Instructions to Contractor (ITC's).
8. Change Directives (CD's).
9. Requests for Information (RFI's).
10. Requests for Change (RFC's) and Requests for Proposal (RFP's).
11. Meeting Minutes.
12. Schedules.
13. Photos.
14. Reports.
15. Tests and Inspections.
16. Punch Lists
17. Pay Applications
18. Change Orders

C. Design Document Submittals

1. All design drawings and specifications shall be submitted as PDF attachments to the Procore submittal work flow process and form.

D. Shop Drawings

1. Shop drawing and design data documents shall be submitted as PDF attachments to the Procore submittal work flow process and form. Examples of shop drawings

include, but are not limited to:

a. Standard manufacturer installation drawings.
b. Drawings prepared to illustrate portions of the work designed or developed by the Contractor.
c. Steel fabrication, piece, and erection drawings.

E. Product Data

1. Product catalog data and manufacturer’s instructions shall be submitted as PDF attachments to the Procore submittal work flow process and form. Examples of product data include, but are not limited to:

a. Manufacturer's printed literature.
b. Preprinted product specification data and installation instructions.

F. Samples

1. Sample submittals shall be physically submitted as specified in Section 01 3300 SUBMITTAL PROCEDURES. Contractor shall upload a photograph of submitted samples, along with a transmittal sheet into Procore.

G. 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.

H. 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.

I. 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.

J. Financial Submittals

1. Schedule of Value, Pay Applications and Change Request Proposals, and Waste Reduction Reports 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. Waste Reduction Reports
d. Contract Change proposals requested by the project owner

END OF SECTION

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SECTION 01 4000
QUALITY REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Submittals.

B. Examination of Drawings and Specifications

C. References and standards.

D. Testing and inspection agencies and services.

E. Control of installation.

F. Tolerances.

G. Manufacturers' field services.

H. Defect Assessment.

1.02 RELATED REQUIREMENTS

A. Document 00 7200 - General Conditions: Inspections and approvals required by public authorities.

B. Section 01 3000 - Administrative Requirements: Submittal procedures.

C. Section 01 31 23 - Project Website: Submittal procedures and electronic document requirements.

D. Section 01 6000 - Product Requirements: Requirements for material and product quality.

1.03 REFERENCE STANDARDS

A. ASTM C1021 - Standard Practice for Laboratories Engaged in Testing of Building Sealants; 2008 (Reapproved 2023).

B. ASTM C1077 - Standard Practice for Agencies Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Testing Agency Evaluation; 2026.

C. ASTM C1093 - Standard Practice for Accreditation of Testing Agencies for Masonry; 2025.

D. ASTM D3740 - Standard Practice for Minimum Requirements for Agencies Engaged in Testing of Soil and Rock as Used in Engineering Design and Construction; 2026.

E. ASTM E329 - Standard Specification for Agencies Engaged in Construction Inspection, Testing, or Special Inspection; 2026.

F. ASTM E543 - Standard Specification for Agencies Performing Nondestructive Testing; 2026.

G. ASTM E699 - Standard Specification for Agencies Involved in Testing, Quality Assurance, and Evaluating of Manufactured Building Components; 2016.

1.04 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. General: As indicated in individual specification sections.

C. Design Data: Submit for Architect's knowledge as contract administrator for the limited purpose of assessing compliance with information given and the design concept expressed in the Contract Documents, or for Owner's information.

D. Test Reports: After each test/inspection, promptly submit two copies of report to Architect and to Contractor.

1. Include:
    a. Date issued.
    b. Project title and number.
    c. Name of inspector.
    d. Date and time of sampling or inspection.
    e. Identification of product and specifications section.
    f. Location in the Project.
    g. Type of test/inspection.
    h. Date of test/inspection.
    i. Results of test/inspection.
    j. Compliance with Contract Documents.
    k. When requested by Architect, provide interpretation of results.
2. Test report submittals are for Architect's knowledge as contract administrator for the limited purpose of assessing compliance with information given and the design concept expressed in the Contract Documents, or for Owner's information.

E. Certificates: When specified in individual specification sections, submit certification by the manufacturer and Contractor or installation/application subcontractor to Architect, in quantities specified for Product Data.

1. Indicate material or product complies with or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.
2. Certificates may be recent or previous test results on material or product, but must be acceptable to Architect.

F. Manufacturer's Instructions: When specified in individual specification sections, submit printed instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing, for the Owner's information. Indicate special procedures, perimeter conditions requiring special attention, and special environmental criteria required for application or installation.

G. Manufacturer's Field Reports: Submit reports for Architect's benefit as contract administrator or for Owner.

1. Submit report in duplicate within 30 days of observation to Architect for information.
2. Submit for information for the limited purpose of assessing compliance with information given and the design concept expressed in the Contract Documents.

H. Erection Drawings: Submit drawings for Architect's benefit as contract administrator or for Owner.

1. Submit for information for the limited purpose of assessing compliance with information given and the design concept expressed in the Contract Documents.
2. Data indicating inappropriate or unacceptable Work may be subject to action by Architect or Owner.

1.05 EXAMINATION OF DRAWINGS AND SPECIFICATIONS

A. Upon receipt of Drawings and Specifications verify that documents are complete. Notify Architect should the documents be incomplete.

B. Immediately notify Architect upon finding discrepancies or omissions in the Drawings and Specifications.

C. Drawings and specifications are complementary and do not create a hierarchy.

D. By submitting a bid, bidders agree that they have reviewed, in detail, all Drawings and Specifications.

E. The following will not entitle a contractor to a change order increasing the overall project cost after the project has been awarded:

1. Selectively choosing less significant content from the drawings or specifications where conflicting information is evident.
2. Disregarding content that only appears in one part of the Bidding Documents.

F. A written request for clarification during the bidding process will result in an addendum being issued to resolve such errors, inconsistencies, or omissions in the Drawings and Specifications therefore creating a level bidding environment for all bidders.

1.06 REFERENCES AND STANDARDS

A. For products and workmanship specified by reference to a document or documents not included in the Project Manual, also referred to as reference standards, comply with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes.

B. Comply with reference standard of date of issue current on date of Contract Documents, except where a specific date is established by applicable code.

C. Obtain copies of standards where required by product specification sections.

D. Maintain copy at project site during submittals, planning, and progress of the specific work, until Substantial Completion.

E. Should specified reference standards conflict with Contract Documents, request clarification from Architect before proceeding.

F. Neither the contractual relationships, duties, or responsibilities of the parties in Contract nor those of Architect shall be altered from Contract Documents by mention or inference otherwise in any reference document.

1.07 TESTING AND INSPECTION AGENCIES AND SERVICES

A. Owner will employ and pay for Special Inspection services and pavement/subgrade testing as specified in Section 01 35 10 - Structural Testing and Special Inspection.

B. Contractor shall employ and pay for all other testing and inspection services required by Contract Documents, governing authorities, manufacturers, or applicable codes unless specifically indicated otherwise.

C. Contractor Employed Agency:

1. Testing agency: Comply with requirements of ASTM E329, ASTM E543, ASTM E699, ASTM C1021, ASTM C1077, ASTM C1093, and ASTM D3740.
2. Inspection agency: Comply with requirements of ASTM D3740 and ASTM E329.
3. Laboratory: Authorized to operate in the State in which the Project is located.
4. Laboratory Staff: Maintain a full time registered Engineer on staff to review services.
5. Testing Equipment: Calibrated at reasonable intervals either by NIST or using an NIST established Measurement Assurance Program, under a laboratory measurement quality assurance program.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 CONTROL OF INSTALLATION

A. Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce work of specified quality.

B. Comply with manufacturers' instructions, including each step in sequence.

C. Should manufacturers' instructions conflict with Contract Documents, request clarification from Architect before proceeding.

D. Comply with specified standards as minimum quality for the work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.

E. Have work performed by persons qualified to produce required and 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 stresses, vibration, physical distortion, and disfigurement.

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 TESTING AND INSPECTION

A. See individual specification sections for testing and inspection required.

B. Testing Agency Duties:

1. Test samples of mixes submitted by Contractor.
2. Provide qualified personnel at site. Cooperate with Architect and Contractor in performance of services.
3. Perform specified sampling and testing of products in accordance with specified standards.
4. Ascertain compliance of materials and mixes with requirements of Contract Documents.
5. Promptly notify Architect and Contractor of observed irregularities or non-compliance of Work or products.
6. Perform additional tests and inspections required by Architect.
7. Submit reports of all tests/inspections specified.

C. Limits on Testing/Inspection Agency Authority:

1. Agency may not release, revoke, alter, or enlarge on requirements of Contract Documents.
2. Agency may not approve or accept any portion of the Work.
3. Agency may not assume any duties of 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 manufacturers' 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 tests/inspections.
d. To provide storage and curing of test samples.

4. Notify Architect and laboratory 24 hours prior to expected time for operations requiring testing/inspection services.
5. Employ services of an independent qualified testing laboratory and pay for additional samples, tests, and inspections required by Contractor beyond specified requirements.
6. Arrange with Owner's agency and pay for additional samples, tests, and inspections required by Contractor beyond specified requirements.

E. Re-testing required because of non-compliance with specified requirements shall be performed by the same agency on instructions by Architect.

F. Re-testing required because of non-compliance with specified requirements shall be paid for by Contractor.

3.04 MANUFACTURERS' FIELD SERVICES

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 as applicable, and to initiate instructions when necessary.

B. Report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturers' written instructions.

3.05 DEFECT ASSESSMENT

A. Replace Work or portions of the Work not complying with specified requirements.

B. If, in the opinion of Architect, it is not practical to remove and replace the work, Architect will direct an appropriate remedy or adjust payment.

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. Temporary Controls: Barriers and enclosures.

D. Vehicular access and parking.

E. Waste removal facilities and services.

F. Field offices.

1.02 TEMPORARY UTILITIES

A. Owner will provide the following:

1. Electrical power, consisting of connection to existing facilities.
   a. Contractor shall provide portable generator power as required when connection to existing facilities is not adequate to complete the Work.
2. Water supply, consisting of connection to existing facilities.
3. Contractor to provide all needed equipment and certified staff to make the connections. And they need to be responsible to turn things off and conserve resources when not in use or they will lose the privilege.

B. Provide and pay for all additional lighting, heating and cooling, and ventilation required to complete the Work.

C. Provide and pay for all temporary heating shelters required to complete the work. The Owner will not consider any requests for extra charges related to weather.

D. Provide and maintain a minimum light level of 5 foot-candles for a safe work environment throughout the project.

E. Permanent convenience receptacles may be utilized during construction.

1. Replace all damage and worn receptacles used during construction prior to substantial completion.

F. Use trigger-operated nozzles for water hoses, to avoid waste of water.

1.03 TEMPORARY SANITARY FACILITIES

A. Provide and maintain required facilities and enclosures. Provide at time of project mobilization.

B. Maintain daily in clean and sanitary condition.

C. At end of construction, return facilities to same or better condition as originally found.

1.04 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 and to protect existing facilities and adjacent properties from damage from construction operations and demolition.

B. Protect non-owned vehicular traffic, stored materials, site, and structures from damage.

1. The term "non-owned" refers to insurance coverage for other vehicles not owned by the named insured's.

1.05 SECURITY

A. Provide security and facilities to protect Work, and Owner's operations from unauthorized entry, vandalism, or theft.

B. Project is on Camp Dodge, any contractors will have to go through Security Gate. Government issued photo IDD is required to be shown at front gate.

1.06 VEHICULAR ACCESS AND PARKING

A. Comply with regulations relating to use of streets and sidewalks, access to emergency facilities, and access for emergency vehicles.

B. Coordinate access and haul routes with governing authorities and Owner. An alternate parking location on Camp Dodge will be designed if needed.

C. Provide and maintain access to fire hydrants, free of obstructions.

D. Provide means of removing mud from vehicle wheels before entering streets.

E. Provide temporary parking areas to accommodate construction personnel. When site space is not adequate, additional parking will be available to construction personnel.

1.07 WASTE REMOVAL

A. Regulatory Requirements: Contractor is responsible for knowing and complying with regulatory requirements, including but not limited to Federal, state and local requirements, pertaining to legal disposal of all construction and demolition waste materials.

B. Instruction: Provide on-site instruction of appropriate separation, handling, and recycling, salvage, reuse, and return methods to be used by all parties at the appropriate stages of the project.

C. Provide waste removal facilities and services as required to maintain the site in clean and orderly condition.

D. Provide containers with lids. Remove trash from site periodically.

E. If materials to be recycled or re-used on the project must be stored on-site, provide suitable non-combustible containers; locate containers holding flammable material outside the structure unless otherwise approved by the authorities having jurisdiction.

1.08 FIELD OFFICES

A. Office: Weathertight, with lighting, electrical outlets, heating, cooling equipment, and equipped with sturdy furniture, drawing rack and drawing display table.

B. Project meetings will be held at B61. No space needs to be provided by Contractor.

1.09 REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS

A. Remove temporary utilities, equipment, facilities, materials, prior to Date of Substantial Completion inspection.

B. Remove underground installations to a minimum depth of 2 feet. Grade site as indicated.

C. Clean and repair damage caused by installation or use of temporary work.

D. Restore existing facilities used during construction to original condition.

E. Restore existing site damaged by construction to original condition.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

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SECTION 01 6000
PRODUCT REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. General product requirements.

B. Re-use of existing products.

C. Transportation, handling, storage and protection.

D. Product option requirements.

E. Base specified/scheduled products and design intent.

F. Inconsistencies.

G. Substitutions in general.

H. Substitution limitations.

I. Procedures for Owner-supplied products.

J. Maintenance materials, including extra materials, spare parts, tools, and software.

1.02 RELATED REQUIREMENTS

A. Section 01 3000 - Administrative Requirements: Submittals.

B. Section 01 4000 - Quality Requirements: Product quality monitoring.

1.03 REFERENCE STANDARDS

A. NFPA 70 - National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

PART 2 PRODUCTS

2.01 EXISTING PRODUCTS

A. Do not use materials and equipment removed from existing premises unless specifically required or permitted by Contract Documents.

B. Existing materials and equipment indicated to be removed, but not to be re-used, relocated, reinstalled, delivered to the Owner, or otherwise indicated as to remain the property of the Owner, become the property of the Contractor; remove from site.

2.02 NEW PRODUCTS

A. Provide new products unless specifically required or permitted by Contract Documents.

B. The Contractor shall assure the Owner that all new equipment and materials are asbestos free. The Contractor, subcontractors, and material suppliers are required to provide letters of non-asbestos confirmation with supporting documentation prior to material installations. The Owner may select materials to test for asbestos at any time including prior to and/or after installation. If suspect asbestos materials are tested and found to contain asbestos, the materials shall be abated in accordance with asbestos regulations by an Owner approved consultant and abatement contractor. New asbestos free products shall be re-installed by the Contractor supplying such material. The Contractor shall be responsible for any and all new materials. If asbestos is found in the new materials, the cost for asbestos design, on-site monitoring, abatement, and replacement shall be the responsibility of the Contractor. Owner will collect and pay for the testing of any random suspect asbestos samples.

C. Use of products having any of the following characteristics is not permitted:

1. Made using or containing CFC's or HCFC's.

D. Where other criteria are met, Contractor shall give preference to products that:

1. Are extracted, harvested, and/or manufactured closer to the location of the project.
2. Have longer documented life span under normal use.
3. Result in less construction waste.

E. Wiring Terminations: Provide terminal lugs to match branch circuit conductor quantities, sizes, and materials indicated. Size terminal lugs to NFPA 70, include lugs for terminal box.

2.03 PRODUCT OPTIONS

A. Products Specified by Reference Standards or by Description Only: Use any product meeting those standards or description.

B. Products Specified by Naming One or More Manufacturers with a Provision for No Substitutions: Use a product of one of the manufacturers named and meeting specifications, no options or substitutions allowed.

C. Products Specified by Naming One or More Manufacturers with or without a Provision for Substitutions: Submit a request for substitution for any manufacturer not named.

D. Products Scheduled on the Drawings by Naming one Manufacturer, but not Indicating Other Approved Manufactures in the Specifications: Use any approved equivalent product complying with the specifications in general and equivalent to the “Basis of Design” identified in the drawing’s schedules. Pre-bid requests for substitutions are required.

E. Products that do not meet project specifications may be rejected at any time during the project.

F. Cost associated with replacement product and delay in project schedule due to rejection shall be at sole expense of Contractor.

2.04 MAINTENANCE MATERIALS

A. Furnish extra materials, spare parts, tools, and software of types and in quantities specified in individual specification sections.

B. Deliver to Project site; obtain receipt prior to final payment.

PART 3 EXECUTION

3.01 BASE SPECIFIED/SCHEDULED PRODUCTS AND DESIGN INTENT

A. Certain specification sections will indicate a base manufacturer and will then list other acceptable manufacturers. Similarly, certain specification sections will list multiple acceptable manufacturers but only one of the manufacturers will be scheduled on a plan sheet. In these scenarios, the designer has designed the system with considerations for the base manufacturer or the product scheduled on the plan sheet. It is the responsibility of all bidders, contractors, suppliers to ensure that when bidding using an acceptable manufacturer other than the base manufacturer or the scheduled manufacturer that the design intent is met. Providing a product by an acceptable manufacturer other than the base specified or scheduled manufacturer constitutes a representation that the submitter:

1. Has investigated supplied product and determined that it meets or exceeds the quality level of the base specified/scheduled product.
2. Will provide the same warranty for the supplied product as for the base specified/scheduled product.
3. As a result of differences between the base specified/scheduled product and the other acceptable manufacturers will coordinate installation and make changes to other Work that may be required for the Work to be complete with no additional cost to Owner.
4. Waives claims for additional costs or time extension that may subsequently become apparent.
5. Will reimburse Owner and Architect for review or redesign services associated with re-approval by authorities.
6. Will maintain dimensions, locations, clearances, accesses and other design intent shown on the plan or otherwise provided by the base specified/scheduled product.

3.02 INCONSISTENCIES

A. If there is an inconsistency in the quality and/or quantity of Work required by the Contract Documents, either the greater quality and/or quantity of Work indicated shall be provided in accordance with the Engineer/Architect's interpretation without change in the contract sum.

3.03 SUBSTITUTIONS IN GENERAL

A. Requests for substitutions during the bid period shall comply with Article 14 – Substitutions of the Instructions to Bidders and with this specification section.

B. Proposed substitutions are required to be equivalent or better in all aspects to the specified products including but not limited to appearance, quality, and performance.

C. When specified in individual sections actual samples shall be provided a minimum of 12 days prior to the bid due date for Architect's review and approval before products other than those scheduled or specified with be accepted; No Exceptions.

D. Contractors are responsible for confirming compatibility of all proposed substitutions to adjacent materials.

3.04 SUBSTITUTION LIMITATIONS

A. Where the Bid Documents stipulate a particular product, substitutions will be considered up to 10 days before receipt of bids. No substitution requests will be reviewed or accepted after the 10 day period prior to bid.

B. Document each request with complete data substantiating compliance of proposed substitution with Contract Documents.

1. The substantiating data shall provide a side by side comparison consisting of sufficient information to determine acceptability of such products.

C. A request for substitution constitutes a representation that the submitter:

1. Has investigated proposed product and determined that it meets or exceeds the quality level of the specified product.
2. Agrees to provide the same warranty for the substitution as for the specified product.
3. Agrees to coordinate installation and make changes to other Work that may be required for the Work to be complete with no additional cost to Owner.
4. Waives claims for additional costs or time extension that may subsequently become apparent.
5. Agrees to reimburse Owner and Architect for review or redesign services associated with re-approval by authorities.

D. Provide complete information on required changes to other Work to accommodate each proposed substitution.

E. Substitutions will not be considered when they are indicated or implied on shop drawing or product data submittals, without separate written request, or when acceptance will require revision to the Contract Documents.

F. When a request to substitute a product is made, Architect may approve the substitution and will issue an Addendum to known bidders.

G. Subsequent requests for substitutions will be considered in the case of product unavailability or other conditions beyond the control of the Contractor or as follows:

1. Timing: Architect will consider requests for substitution if received within 60 days after commencement of the Work or the Notice to Proceed. Requests received after that time may be considered or rejected at the discretion of the Architect.
2. Condition: Architect will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Architect will return requests without action, except to record noncompliance with these requirements:
    a. Requested substitution offers Owner a substantial advantage in cost, time, energy conservation, or other considerations, after deducting additional responsibilities Owner must assume. Owner's additional responsibilities may include compensation to Architect for redesign and evaluation services, increased cost of other construction by Owner, and similar considerations.
    b. Requested substitution does not require extensive revisions to the Contract Documents.
    c. Requested substitution is consistent with the Contract Documents and will produce indicated results.
    d. Substitution request is fully documented and properly submitted.
    e. Requested substitution will not adversely affect Contractor's Construction Schedule.
    f. Requested substitution has received necessary approvals of authorities having jurisdiction.
    g. Requested substitution is compatible with other portions of the Work.
    h. Requested substitution has been coordinated with other portions of the Work.
    i. Requested substitution provides specified warranty.

H. Substitution Submittal Procedure

1. Transmit each substitution request with the Substitution Request cover letter attached to this specification section.
2. PDFs by e-mail is the preferred method; coordinate with Architect's representative. Only submit paper copies where necessary as follows:
    a. Submit five copies of request for substitution for consideration.
3. The submitter shall prepare a single PDF file when submitting by e-mail so that all sheets of a submittal are included in one document. Only ONE major product per submittal is permitted. Each PDF shall contain Bookmarks set to the destination of separate items contained within the file. If the submitter elects to use their own transmittal sheet it shall be a separate attachment.
    a. Scans shall be in color, pages shall be oriented correctly, actual sheet sizes for the submittal shall be 11 by 17 inch or 8-1/2 by 11 inch whenever possible, and all content must be legible.
4. Limit each request to one proposed substitution.
5. Multiple proposed substitutions submitted on one form will only be considered when products are directly related. Major products and components should be listed first.
6. Submit shop drawings, product data, certified test results, etc. attesting to the proposed product equivalence. Burden of proof is on proposer.
7. The Architect will reply with a decision to accept or reject request in a timely manner.

I. Substitution Submittal Procedure (after contract award):

1. Requests for Substitutions received after Bid Opening will not be considered except in such cases where it is necessary to make a substitution due to strikes, lockouts, bankruptcy, discontinuance of a product, and similar circumstances.

Such Requests for Substitution of materials after Contract Award shall be made in writing to the Architect and shall be made within ten (10) days of the date that the Contractor ascertains they cannot obtain the material or equipment specified.

2. Requests for Substitution will not be considered when they are indicated or implied on Shop Drawings or Product Data submittals without a separate previously submitted Request for Substitution Form, or when acceptance will require substantial revision of the Contract Documents.
3. The Architect with approval by the Owner will be the judge of the acceptability of all Requests for Substitution received after Bid Opening.

3.05 OWNER-SUPPLIED PRODUCTS

A. Owner's Responsibilities:

1. Arrange for and deliver Owner reviewed shop drawings, product data, and samples, to Contractor.
2. Arrange and pay for product delivery to site.
3. On delivery, inspect products jointly with Contractor.
4. Submit claims for transportation damage and replace damaged, defective, or deficient items.
5. Arrange for manufacturers' warranties, inspections, and service.

B. Contractor's Responsibilities:

1. Review Owner reviewed shop drawings, product data, and samples.
2. Receive and unload products at site; inspect for completeness or damage jointly with Owner.
3. Handle, store, install and finish products.
4. Repair or replace items damaged after receipt.

3.06 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.

3.07 STORAGE AND PROTECTION

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 weathertight, climate-controlled enclosures in an environment favorable to product.

E. For exterior storage of fabricated products, place on sloped 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 manufacturer's warranty conditions, if any. Effective dates of warranties shall be the Date of Substantial Completion (not the date of purchase, delivery or installation) and must be identified on the warranty or by signed letter modifying the warranty.

H. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to prevent condensation and degradation of products.

I. Store loose granular materials on solid flat surfaces in a well-drained area. Prevent mixing with foreign matter.

J. Prevent contact with material that may cause corrosion, discoloration, or staining.

K. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement, or damage.

L. 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

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SECTION 01 6000 -- ATTACHMENT

SUBSTITUTION REQUESTS

Architects Project No: 26-34920 **Date:** _____

Project Name: S54 Finish Upgrades – Camp Dodge

Specification Section	Manufacturer Specified	Proposed Manufacturer

Indicate drawing sheet name in lieu of specification section where applicable.

Vendor/Supplier

Name: _____

Address: _____

Contact: _____ **E-Mail:** _____

Telephone: _____ **Fax:** _____

Reason for Substitution: _____

_____

_____

_____

Does Specification Allow for Substitutions of Proposers Items? Yes: ___ No: ___

Will the Substitution Provide Cost Savings to the Owner? Yes: ___ No: ___

Are Proposed Substitutions Equivalent/Superior to those Specified? Yes: ___ No: ___

Did you provide marked-up product information showing side by side comparisons for both the specified products and proposed products? Yes: ___ No: ___

I, _____, accept responsibility for coordination of proposed substitution and accept all additional costs resulting from the incorporation of proposed substitution into the Project. (Proposers Signature Required)

For Architect's Use:……Comments: _____

Accepted: ___ Not Accepted: ___ _____

No Action Required: ___ _____

Submission: Incomplete: ___ Too Late: ___ _____

Reviewed By: _____ _____

Date: _____ _____

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SECTION 01 7000
EXECUTION AND CLOSEOUT REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Examination, preparation, and general installation procedures.

B. Access panels required by trade.

C. Requirements for alterations work, including selective demolition.

D. Construction documents and clash detection discovery.

E. Pre-installation meetings.

F. Cutting and patching.

G. Surveying for laying out the work.

H. Cleaning and protection.

I. Starting of systems and equipment.

J. Demonstration and instruction of Owner personnel.

K. Closeout procedures, including Contractor's Correction Punch List, except payment procedures.

L. General requirements for maintenance service.

1.02 RELATED REQUIREMENTS

A. Section 01 3000 - Administrative Requirements: Submittals procedures.

B. Section 01 5000 - Temporary Facilities and Controls: Temporary exterior enclosures.

C. Section 01 5000 - Temporary Facilities and Controls: Temporary interior partitions.

D. Section 01 7800 - Closeout Submittals: Project record documents, operation and maintenance data, warranties, and bonds.

E. Section 07 8400 - Firestopping.

F. Individual Product Specification Sections:

1. Advance notification to other sections of openings required in work of those sections.
2. Limitations on cutting structural members.

1.03 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Cutting and Patching: Submit written request in advance of cutting or alteration that affects:

1. Structural integrity of any element of Project.
2. Integrity of weather exposed or moisture resistant element.
3. Efficiency, maintenance, or safety of any operational element.
4. Visual qualities of sight exposed elements.
5. Work of Owner or separate Contractor.
6. Include in request:
   a. Identification of Project.
   b. Location and description of affected work.
   c. Necessity for cutting or alteration.
   d. Description of proposed work and products to be used.
   e. Alternatives to cutting and patching.
   f. Effect on work of Owner or separate Contractor.
   g. Written permission of affected separate Contractor.
   h. Date and time work will be executed.

C. Project Record Documents: Accurately record actual locations of capped and active utilities.

1.04 QUALIFICATIONS

A. For demolition work, employ a firm specializing in the type of work required.

1. Minimum of five years of experience.

B. For survey work, employ a land surveyor registered in the State in which the Project is located and acceptable to Architect. Submit evidence of Surveyor's Errors and Omissions insurance coverage in the form of an Insurance Certificate.

C. For construction surveying and building layout at the option of the contractor, employ ISG; Contact Dan Stueber; Phone: 507.387.6651.

1. Scope: Building Staking; Curb and Gutter/Edge of Bituminous Staking; Watermain and Sanitary Sewer Staking; Other Miscellaneous Staking; and additional Field Crew Coordination Requirements. Refer to proposal for additional information.
2. Bidding: Obtain proposal from ISG and include the amount in base bid.

D. For field engineering, employ a professional engineer of the discipline required for specific service on Project, licensed in the State in which the Project is located. Employ only individual(s) trained and experienced in establishing and maintaining horizontal and vertical control points necessary for laying out construction work on project of similar size, scope and/or complexity.

1.05 PROJECT CONDITIONS

A. Ventilate enclosed areas to assist cure of materials, to dissipate humidity, and to prevent accumulation of dust, fumes, vapors, or gases.

B. Dust Control: Execute work by methods to minimize raising dust from construction operations. Provide positive means to prevent air-borne dust from dispersing into atmosphere and over adjacent property.

C. Noise Control: Provide methods, means, and facilities to minimize noise produced by construction operations.

1.06 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, with provisions for accommodating items installed later.

B. Notify affected utility companies and comply with their requirements.

C. Verify that utility requirements and characteristics of new 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 that are indicated diagrammatically on drawings. Follow routing indicated 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, ducts, and wiring within the construction. Coordinate locations of fixtures and outlets with finish elements.

F. Coordinate completion and clean-up of work of separate sections.

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.

1.07 CONSTRUCTION DOCUMENTS AND CLASH DETECTION DISCOVERY

A. All building infrastructure is to comply with the design intent as indicated in the Construction Documents. All deviations to be reviewed and approved with the ISG design team prior to authorizing changes to determine any related or impacted Scopes of Work. The PDF Drawing set and Project Manual are the Construction Documents.

B. Shared Revit/CAD documents may be used to build clash detection models, however, what is viewed in a Revit/CAD model provided by ISG should only be used as a guide. Do not make changes without prior approval which may then cause other design issue conflicts (e.g. - lowered ceilings, pipes not in walls, routing that has other consequences, et cetera).

C. Furthermore, the Revit/CAD model provided representing the Construction Documents have not been processed in a manner that resolves all potential building clash detection items, and it is expected that minor adjustments will be made on-site to complete the Work based on the design intent without additional cost to the Owner. Refer to Coordination verbiage above about utilizing spaces efficiently.

PART 2 PRODUCTS

2.01 PATCHING MATERIALS

A. New Materials: As specified in product sections; match existing products and work for patching and extending work.

B. Type and Quality of Existing Products: Determine by inspecting and testing products where necessary, referring to existing work as a standard.

C. Product Substitution: For any proposed change in materials, submit request for substitution described in Section 01 6000 - Product Requirements.

PART 3 EXECUTION

3.01 EXAMINATION

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 misfabrication.

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, including 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.

3.02 PREPARATION

A. Clean substrate surfaces prior to applying next material or substance.

B. Seal cracks or openings of substrate prior to applying next material or substance.

C. Apply manufacturer required or recommended substrate primer, sealer, or conditioner prior to applying any new material or substance in contact or bond.

3.03 PREINSTALLATION MEETINGS

A. When required in individual specification sections, convene a preinstallation meeting at the site prior to commencing work of the section.

B. Require attendance of parties directly affecting, or affected by, work of the specific section.

C. Notify Architect four days in advance of meeting date.

D. Prepare agenda and preside at meeting:

1. Review conditions of examination, preparation and installation procedures.
2. Review coordination with related work.

E. Record minutes and distribute copies within two days after meeting to participants, with two copies to Architect, Owner, participants, and those affected by decisions made.

3.04 LAYING OUT THE WORK

A. Verify locations of survey control points prior to starting work.

B. Promptly notify Architect of any discrepancies discovered.

C. Protect survey control points prior to starting site work; preserve permanent reference points during construction.

D. Promptly report to Architect the loss or destruction of any reference point or relocation required because of changes in grades or other reasons.

E. Replace dislocated survey control points based on original survey control. Make no changes without prior written notice to Architect.

F. Utilize recognized engineering survey practices.

G. Establish elevations, lines and levels. Locate and lay out by instrumentation and similar appropriate means:

1. Site improvements including pavements; stakes for grading, fill and topsoil placement; utility locations, slopes, and invert elevations.
2. Grid or axis for structures.
3. Building foundation, column locations, ground floor elevations.

H. Regularly verify layouts by same means.

I. Maintain a complete and accurate log of control and survey work as it progresses.

3.05 GENERAL INSTALLATION REQUIREMENTS

A. 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.

B. Make vertical elements plumb and horizontal elements level, unless otherwise indicated.

C. Install equipment and fittings plumb and level, neatly aligned with adjacent vertical and horizontal lines, unless otherwise indicated.

D. Make consistent texture on surfaces, with seamless transitions, unless otherwise indicated.

E. Make neat transitions between different surfaces, maintaining texture and appearance.

3.06 ACCESS PANELS REQUIRED BY TRADE

A. Trade requiring access shall provide and install access panels where not show or specified.

B. The finished appearance and function will be subject to approval by the Architect/Owner.

C. Provide panels that accommodate adjacent finishes in finished spaces.

D. Access panels shall meet all code requirements for each location they are installed and shall be sized appropriately.

3.07 ALTERATIONS

A. Drawings showing existing construction and utilities are based on casual field observation and existing record documents only.

1. Verify that construction and utility arrangements are as indicated.
2. Report discrepancies to Architect before disturbing existing installation.
3. Beginning of alterations work constitutes acceptance of existing conditions.

B. Keep areas in which alterations are being conducted separated from other areas that are still occupied.

1. Provide, erect, and maintain temporary dustproof partitions of construction specified in Section 01 5000.
2. Provide walk-off mats as required to separate demolition and construction from existing building.

C. Maintain weatherproof exterior building enclosure except for interruptions required for replacement or modifications; take care to prevent water and humidity damage.

1. Where openings in exterior enclosure exist, provide construction to make exterior enclosure weatherproof.
2. Insulate existing ducts or pipes that are exposed to outdoor ambient temperatures by alterations work.

D. Remove existing work as indicated and as required to accomplish new work.

1. Remove rotted wood, corroded metals, and deteriorated masonry and concrete; replace with new construction specified.
2. Remove items indicated on drawings.
3. Relocate items indicated on drawings.
4. Where new surface finishes are to be applied to existing work, perform removals, patch, and prepare existing surfaces as required to receive new finish; remove existing finish if necessary for successful application of new finish.
5. Where new surface finishes are not specified or indicated, patch holes and damaged surfaces to match adjacent finished surfaces as closely as possible.

E. Services (Including but not limited to HVAC, Plumbing, and Electrical): Remove, relocate, and extend existing systems to accommodate new construction.

1. Maintain existing active systems that are to remain in operation; maintain access to equipment and operational components; if necessary, modify installation to allow access or provide access panel.
2. Where existing systems or equipment are not active and Contract Documents require reactivation, put back into operational condition; repair supply, distribution, and equipment as required.
3. Where existing active systems serve occupied facilities but are to be replaced with new services, maintain existing systems in service until new systems are complete and ready for service.
    a. Disable existing systems only to make switchovers and connections; minimize duration of outages.
    b. Provide temporary connections as required to maintain existing systems in service.
4. Verify that abandoned services serve only abandoned facilities.
5. Remove abandoned pipe, ducts, conduits, and equipment, including those above accessible ceilings; remove back to source of supply where possible, otherwise cap stub and tag with identification; patch holes left by removal using materials specified for new construction.

F. Protect existing work to remain.

1. Prevent movement of structure; provide shoring and bracing if necessary.
2. Perform cutting to accomplish removals neatly and as specified for cutting new work.
3. Repair adjacent construction and finishes damaged during removal work.

G. Adapt existing work to fit new work: Make as neat and smooth transition as possible.

H. Patching: Where the existing surface is not indicated to be refinished, patch to match the surface finish that existed prior to cutting. Where the surface is indicated to be refinished, patch so that the substrate is ready for the new finish.

I. Refinish existing surfaces as indicated:

1. Where rooms or spaces are indicated to be refinished, refinish all visible existing surfaces to remain to the specified condition for each material, with a neat transition to adjacent finishes.
2. If mechanical or electrical work is exposed accidentally during the work, re-cover and refinish to match.

J. Remove demolition debris and abandoned items from alterations areas and dispose of off-site.

K. Do not begin new construction in alterations areas before demolition is complete.

L. Comply with all other applicable requirements of this section.

3.08 CUTTING AND PATCHING

A. Whenever possible, execute the work by methods that avoid cutting or patching.

B. See Alterations article above for additional requirements.

C. Perform whatever cutting and patching is necessary to:

1. Complete the work.
2. Fit products together to integrate with other work.
3. Provide openings for penetration of mechanical, electrical, and other services.
4. Match work that has been cut to adjacent work.
5. Repair areas adjacent to cuts to required condition.
6. Repair new work damaged by subsequent work.
7. Remove and replace defective and non-complying work.

D. Execute work by methods that avoid damage to other work and that will provide appropriate surfaces to receive patching and finishing. In existing work, minimize damage and restore to original condition.

E. Employ original installer to perform cutting for weather exposed and moisture resistant elements, and sight exposed surfaces.

1. All other cutting and patching is to be performed by the responsible trade.

F. Cut rigid materials using masonry saw or core drill. Pneumatic tools not allowed without prior approval.

G. Restore work with new products in accordance with requirements of Contract Documents.

H. Fit work airtight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.

I. At penetrations of fire rated walls, partitions, ceiling, or floor construction, completely seal voids with fire rated material in accordance with Section 07 8400, to full thickness of the penetrated element.

J. Patching:

1. Finish patched surfaces to match finish that existed prior to patching. On continuous surfaces, refinish to nearest intersection or natural break. For an assembly, refinish entire unit.
2. Match color, texture, and appearance.

3. Repair patched surfaces that are damaged, lifted, discolored, or showing other imperfections due to patching work. If defects are due to condition of substrate, repair substrate prior to repairing finish.

3.09 PROGRESS CLEANING

A. Maintain areas free of waste materials, debris, and rubbish. Maintain site in a clean and orderly condition.

B. Remove debris and rubbish from pipe chases, plenums, attics, crawl spaces, and other closed or remote spaces, prior to enclosing the space.

C. Broom and vacuum clean interior areas prior to start of surface finishing, and continue cleaning to eliminate dust.

D. Collect and remove waste materials, debris, and trash/rubbish from site regularly and dispose off-site; do not burn or bury.

3.10 PROTECTION OF INSTALLED WORK

A. Protect installed work from damage by construction operations.

B. Provide special protection where specified in individual specification sections.

C. Provide temporary and removable protection for installed products. Control activity in immediate work area to prevent damage.

D. Provide protective coverings at walls, projections, jambs, sills, and soffits of openings.

E. Protect finished floors, stairs, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects, by protecting with durable sheet materials.

F. Prohibit traffic or storage upon waterproofed or roofed surfaces. If traffic or activity is necessary, obtain recommendations for protection from waterproofing or roofing material manufacturer.

G. Remove protective coverings when no longer needed; reuse or recycle coverings if possible.

3.11 SYSTEM STARTUP

A. Coordinate schedule for start-up of various equipment and systems.

B. Verify that each piece of equipment or system has been checked for proper lubrication, drive rotation, belt tension, control sequence, and for conditions that may cause damage.

C. Verify tests, meter readings, and specified electrical characteristics agree with those required by the equipment or system manufacturer.

D. Verify that wiring and support components for equipment are complete and tested.

E. Execute start-up under supervision of applicable Contractor personnel and manufacturer's representative in accordance with manufacturers' instructions.

F. Submit a written report that equipment or system has been properly installed and is functioning correctly.

3.12 DEMONSTRATION AND INSTRUCTION

A. Demonstrate start-up, operation, control, adjustment, troubleshooting, servicing, maintenance, and shutdown of each item of equipment at scheduled time, at equipment location.

B. For equipment or systems requiring seasonal operation, perform demonstration for other season within six months.

C. Provide a qualified person who is knowledgeable about the Project to perform demonstration and instruction of Owner's personnel.

3.13 ADJUSTING

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

3.14 FINAL CLEANING

A. Execute final cleaning prior to final project assessment.

1. The intent of final cleaning is to provide the Owner with a product that is free of all dust, dirt, and debris related to the Work, and in a like new condition.

B. Use cleaning materials that are nonhazardous.

C. Clean interior and exterior glass, surfaces exposed to view; remove temporary labels, stains and foreign substances, polish transparent and glossy surfaces, vacuum carpeted and soft surfaces.

D. Remove all labels that are not permanent. Do not paint or otherwise cover fire test labels or nameplates on mechanical and electrical equipment.

E. Wipe clean wood and laminate surfaces including doors, countertops, cabinets, windows, sills and all other similar surfaces.

F. Wipe clean all painted surfaces.

G. Clean all hard finish floors including tile and sealed concrete and all others according to manufacturer's instructions.

H. Clean equipment and fixtures to a sanitary condition with cleaning materials appropriate to the surface and material being cleaned.

I. Clean filters of operating equipment.

J. Remove waste, surplus materials, trash/rubbish, and construction facilities from the site; dispose of in legal manner.

3.15 CLOSEOUT PROCEDURES

A. Make submittals that are required by governing or other authorities.

1. Provide copies to Architect and Owner.

B. Accompany Project Coordinator on preliminary inspection to determine items to be listed for completion or correction in the Contractor's Correction Punch List for Contractor's Notice of Substantial Completion.

C. Notify Architect when work is considered ready for Architect's Substantial Completion inspection.

D. Submit written certification containing Contractor's Correction Punch List, that Contract Documents have been reviewed, work has been inspected, and that work is complete in accordance with Contract Documents and ready for Architect's Substantial Completion inspection.

E. Conduct Substantial Completion inspection and create Final Correction Punch List containing Architect's and Contractor's comprehensive list of items identified to be completed or corrected and submit to Architect.

F. Correct items of work listed in Final Correction Punch List and comply with requirements for access to Owner-occupied areas.

G. Accompany Project Coordinator on Contractor's preliminary final inspection.

H. Notify Architect when work is considered finally complete and ready for Architect's Substantial Completion final inspection.

I. Complete items of work determined by Architect listed in executed Certificate of Substantial Completion.

J. After all utilities have been installed but prior to substantial completion, Contractor shall demonstrate, in the presence of the Owner, continuity of all tracer wires from end to end at all underground utilities. Tracer wires which fail a continuity test shall be repaired or replaced and re-tested until a successful continuity test is achieved. Provide Owner 48 hour notice of this activity.

3.16 MAINTENANCE

A. Provide service and maintenance of components indicated in specification sections.

B. Maintenance Period: As indicated in specification sections or, if not indicated, not less than one year from the Date of Substantial Completion or the length of the specified warranty, whichever is longer.

C. Examine system components at a frequency consistent with reliable operation. Clean, adjust, and lubricate as required.

D. Include systematic examination, adjustment, and lubrication of components. Repair or replace parts whenever required. Use parts produced by the manufacturer of the original component.

E. Maintenance service shall not be assigned or transferred to any agent or subcontractor without prior written consent of the Owner.

END OF SECTION

SECTION 01 74 19

CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes administrative and procedural requirements for the following:

1. Salvaging nonhazardous demolition and construction waste.
2. Recycling nonhazardous demolition and construction waste.
3. Disposing of nonhazardous demolition and construction waste.

B. Related Requirements:

1. Section 02 41 19 "Selective Demolition" for disposition of waste resulting from partial demolition of buildings, structures, and site improvements, and for disposition of hazardous waste.
2. Section 04 20 00 "Unit Masonry" for disposal requirements for masonry waste.
3. Section 07 54 00 “Thermoplastic Membrane Roofing” for recycling of membrane roofing material.
4. Section 31 10 00 "Site Clearing" for disposition of waste resulting from site clearing and removal of above- and below-grade improvements.

1.2 DEFINITIONS

A. Construction Waste: Building and site improvement materials and other solid waste resulting from construction, remodeling, renovation, or repair operations. Construction waste includes packaging.

B. Demolition Waste: Building and site improvement materials resulting from demolition or selective demolition operations.

C. Disposal: Removal off-site of demolition and construction waste and subsequent sale, recycling, reuse, or deposit in landfill or incinerator acceptable to authorities having jurisdiction.

D. Divert: Redirection of demolition or construction waste from disposal in landfills to alternate destinations for recycle, salvage, or reuse.

E. Recycle: Recovery of demolition or construction waste for subsequent processing in preparation for reuse.

F. Salvage: Recovery of demolition or construction waste and subsequent sale or reuse in another facility.

G. Salvage and Reuse: Recovery of demolition or construction waste and subsequent incorporation into the Work.

1.3 PERFORMANCE REQUIREMENTS

A. General: Achieve minimum end-of-Project rate for salvage/recycling of **60 percent** by weight of total non-hazardous solid waste generated by the Work. Practice efficient waste management in the use of materials in the course of the Work. Use all reasonable means to divert construction and demolition waste from landfills and incinerators. Facilitate recycling and salvage of materials, including, but not limited to, the following:

1. Demolition Waste:

a. Asphalt paving.
b. Concrete.
c. Concrete reinforcing steel.
d. Brick.
e. Concrete masonry units.
f. Wood studs.
g. Wood joists.
h. Plywood and oriented strand board.
i. Wood paneling.
j. Wood trim.
k. Structural and miscellaneous steel.
l. Rough hardware.
m. Roofing.
n. Insulation.
o. Doors and frames.
p. Door hardware.
q. Windows.
r. Glazing.
s. Metal studs.
t. Gypsum board.
u. Acoustical tile and panels.
v. Carpet.
w. Carpet pad.
x. Demountable partitions.
y. Equipment.
z. Cabinets.
aa. Plumbing fixtures.
bb. Piping.
cc. Supports and hangers.
dd. Valves.
ee. Sprinklers.
ff. Mechanical equipment.
gg. Refrigerants.
hh. Electrical conduit.
ii. Copper wiring.
jj. Lighting fixtures.
kk. Lamps.
ll. Ballasts.
mm. Electrical devices.
nn. Switchgear and panelboards.
oo. Transformers.

pp. Site-clearing waste.

2. Construction Waste:

a. Concrete
b. Masonry and CMU.
c. Lumber.
d. Wood sheet materials.
e. Wood trim.
f. Metals.
g. Roofing.
h. Insulation.
i. Carpet and pad.
j. Gypsum board.
k. Piping.
l. Electrical conduit.
m. Packaging: Regardless of salvage/recycle goal indicated in "General" Paragraph above, salvage or recycle **100 percent** of the following uncontaminated packaging materials:

1) Paper.
2) Cardboard.
3) Boxes.
4) Plastic sheet and film.
5) Polystyrene packaging.
6) Wood crates.
7) Plastic pails.

B. Methods of trash/waste disposal that are not acceptable are:

1. Burning on the project site.
2. Burying on the project site.
3. Dumping or burying on other property, public or private.
4. Other illegal dumping or burying.

C. Regulatory Requirements: Contractor is responsible for knowing and complying with regulatory requirements, including but not limited to Federal, State, and local requirements, pertaining to legal disposal of all construction and demolition waste materials.

1.4 ACTION SUBMITTALS

A. Waste Management Plan: Submit plan within 10 days of date established for the Notice to Proceed or prior to commencement of any work, whichever comes first.

1.5 INFORMATIONAL SUBMITTALS

A. Waste Reduction Reports: Reports shall be created using Owner's "Waste Reduction Report Template". Print reports to pdf prior to submission. **Include scans of all related invoices/weight tickets with each report.**

1. Progress Reports: Submit an updated report monthly. Submit concurrently with Applications for Payment. Failure to submit report may delay payment. Upload reports to the Project website. Include the following information:

    a. Total quantity of construction waste in tons.

    b. Total quantity of diverted waste in tons (itemized by material type).

        1) If containers taken to a recycling facility contain co-mingled waste to be sorted by the recycler, use the current recovery rate for their facility for each drop-off drop-off date when calculating actual diverted waste quantities for reporting. For example, if the facility's recovery rate is 75.8%, and 20 tons of co-mingled waste is dropped off, even though it may be 100% recyclable, only 75.87% of it can be reported (15.16 tons). Verify the facility's current recovery rate for the month in which each drop-off was made.

    c. Total percentage of construction waste diverted from landfill.

    d. Landfill Disposal:

        1) Identification of material.

        2) Amount of waste material disposed of in landfills in tons. List weights for each individual haul and calculated total weight on each updated report.

        3) Identity of the landfill, hauler, date of haul, and ticket number.

    e. Recycled and Salvaged Material:

        1) Identification of material, including material retrieved by installer for use on other projects or for return to manufacturer for recycling.

        2) Amount of waste material recycled or salvaged in tons. List weights for each individual haul and calculated total weight on each updated report.

        3) Identity of the receiving party, hauler, date of haul, and ticket number.

        4) Certification by receiving party that materials will not be disposed of in landfills or by incineration.

    f. Material Reused on Project:

        1) Identification of material and how it was reused on the Project.

        2) Amount of waste material reused in tons. List weights for each material and calculated total weight on each updated report.

        3) Include weight tickets or calculations as evidence of quantities.

    g. Other Disposal Methods: Include information similar to that described above, as appropriate to disposal method.

2. Final Report: At completion of Project, upload a Final Report to the Project website.

1.6 WASTE MANAGEMENT PLAN

A. Develop a waste management plan to include the following information:

1. Analysis of the trash and waste projected to be generated during the entire project cycle, including types and quantities.

2. Landfill Options: The name, address, and telephone number of the landfill(s) where trash/waste will be disposed of.
3. Landfill Alternatives: List all waste materials that will be diverted from landfills using reuse, salvage, or recycling. Include list of local receivers and processors and type of material each will accept. Include names, addresses, and telephone numbers.
4. Meetings: Describe regular meetings to be held to address waste prevention, reduction, recycling, salvage, reuse, and disposal.
5. Materials Handling and Procedures: Describe the means by which materials to be diverted from landfills will be protected from contamination and prepared for acceptance by designated facilities; include separation procedures for recyclables, storage, and packaging.
6. Transportation: Identify the destination and means of transportation of materials to be recycled; i.e. whether materials will be site-separated and self-hauled to designated centers, or whether mixed materials will be collected by a waste hauler.

B. The following sources may be useful in developing the Waste Management Plan:

1. Alter Trading Corporation
https://www.altertrading.com/locations/8
1810 E. Hull Ave
Des Moines, IA 50313
(515) 262-0764

2. Hallett Material
www.hallettmaterials.com
jsinclair@hallettmaterials.com
4764 NE 22nd St, Des Moines, Iowa
(515) 266-9928

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 PLAN IMPLEMENTATION

A. Coordinator: Designate an on-site waste management coordinator responsible for instructing workers and overseeing and documenting results of the Waste Management Plan.

B. Communication: Distribute copies of the Waste Management Plan to the job site foreman, each subcontractor, the Owner, and the Owner's Project Architect.

C. Training: Train workers, subcontractors, and suppliers on proper waste management procedures as appropriate for the work:

1. Distribute and review the Waste Management Plan with each entity when they first begin work on-site. Provide on-site instruction of appropriate separation, handling, and recycling, salvage, reuse and return methods to be used by all parties at the appropriate stages of the project.

2. Provide follow-up training for each entity as needed to maintain compliance with the plan.

D. Meetings:

1. Review the Waste Management Plan at the Pre-Construction Meeting. Discuss responsibilities of each involved party and goals for the project. Revise and resubmit the plan as agreed to at the meeting.
2. Include waste management and recycling discussion in pre-installation meetings.
3. Include waste management and recycling as an agenda item in all progress meetings with the Owner and job safety meetings with the subcontractors..

E. Facilities: Provide specific facilities for separation and storage of materials for recycling, salvage, reuse, return, and trash disposal, for use by all contractors and installers.

1. As a minimum, provide:
   a. Separate area for storage of materials to be reused on-site, such as wood cut-offs for blocking.
   b. Separate dumpsters for each category of recyclable.
   c. Recycling bins at worker lunch areas.
2. Provide adequate space for pick-up and delivery and convenience to subcontractors.
3. Keep recycling and trash/waste bin areas neat and clean and clearly marked in order to avoid contamination of materials.

F. Hazardous Wastes: Separate, store, and dispose of hazardous wastes in accordance with applicable regulations.

G. Transportation: Arrange for timely pickups from the site or deliveries to approved facilities of trash/waste material to keep construction site clear and prevent contamination of materials. Keep copies of delivery and pickup receipts for reporting.

3.2 SALVAGING DEMOLITION AND CONSTRUCTION WASTE

A. Salvaged Items for Reuse in the Work: Salvage items for reuse and handle as follows:

1. Clean salvaged items.
2. Pack or crate items after cleaning. Identify contents of containers with label indicating elements, date of removal, quantity, and location where removed.
3. Store items in a secure area until installation.
4. Protect items from damage during transport and storage.
5. Install salvaged items to comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make items functional for use indicated.

B. Salvaged Items for sale and donation not permitted on Project site.

C. Salvaged Items for Owner's Use: Salvage items for Owner's use and handle as follows:

1. Clean salvaged items.

2. Pack or crate items after cleaning. Identify contents of containers with label indicating elements, date of removal, quantity, and location where removed.
3. Store and protect items from damage in a secure area until pick-up by Owner.
4. Notify Owner when items are ready for pick-up.

3.3 RECYCLING DEMOLITION AND CONSTRUCTION WASTE, GENERAL

A. General: Recycle paper and beverage containers used by on-site workers.

B. Procedures: Separate recyclable waste from other waste materials, trash, and debris. Separate recyclable waste by type at Project site to the maximum extent practical according to approved construction waste management plan.

1. Provide appropriately marked containers or bins for controlling recyclable waste until removed from Project site. Include list of acceptable and unacceptable materials at each container and bin.

    a. Inspect containers and bins for contamination and remove contaminated materials if found.

2. Stockpile processed materials on-site without intermixing with other materials. Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust.
3. Stockpile materials away from construction area. Do not store within drip line of remaining trees.
4. Store components off the ground and protect from the weather.
5. Remove recyclable waste from Owner's property and transport to recycling receiver or processor.

3.4 RECYCLING DEMOLITION WASTE

A. Land Clearing Debris: Collect wood debris from land clearing separate from large amounts of dirt and other non-wood materials and transport to recycling facility.

B. Asphalt Paving: Break up and transport paving to asphalt-recycling facility.

C. Concrete and Masonry: Free of metals including reinforcing, wood, and other contaminants. Process by one of the following means:

1. If allowed by specifications, during demolition, crush concrete and concrete masonry to aggregate size. Store crushed material on-site in a clean area to avoid contamination from other materials or building processes. Re-use on site crushed material for fill, for stabilizing soils, or as base and sub-base materials.
2. If crushing on-site is impractical, store material during demolition processes on site in a clean, uncontaminated area and transport concrete and masonry materials to a certified concrete recycler.

D. Wood Materials: Sort and stack members according to size, type, and length. Separate lumber, engineered wood products, panel products, and treated wood materials. Reuse on-site as appropriate or transport to recycling facility.

E. Metals: Cut as required to fit into containers.

F. Asphalt Shingle Roofing: Separate organic and glass-fiber asphalt shingles and felts. Remove and dispose of nails, staples, and accessories.

G. Gypsum Board: Stack large clean pieces on wood pallets or in container and store in a dry location. Remove edge trim and sort with other metals. Remove and dispose of fasteners.

H. Acoustical Ceiling Panels and Tile: Stack large clean pieces on wood pallets and store in a dry location.

I. Metal Suspension System: Separate metal members including trim, and other metals from acoustical panels and tile and sort with other metals.

J. Carpet (and pad): Roll large pieces tightly after removing debris, trash, adhesive, and tack strips.

1. Store clean, dry carpet (and pad) in a closed container or trailer provided by Carpet Reclamation Agency or carpet recycler.

K. Carpet Tile: Remove debris, trash, and adhesive.

1. Stack tile on pallet and store clean, dry carpet in a closed container or trailer provided by Carpet Reclamation Agency or carpet recycler.

L. Piping: Reduce piping to straight lengths and store by type and size. Separate supports, hangers, valves, sprinklers, and other components by type and size.

M. Conduit: Reduce conduit to straight lengths and store by type and size.

N. Packaging:

1. Cardboard and Boxes: Break down packaging into flat sheets. Bundle and store in a dry location.
2. Polystyrene Packaging: Separate and bag materials.
3. Pallets: As much as possible, require deliveries using pallets to remove pallets from Project site. For pallets that remain on-site, break down pallets into component wood pieces and comply with requirements for recycling wood.
4. Crates: Break down crates into component wood pieces and comply with requirements for recycling wood.

3.5 DISPOSAL OF WASTE

A. General: 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 acceptable to authorities having jurisdiction.

1. Except as otherwise specified, do not allow waste materials that are to be disposed of to accumulate on-site.
2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.

END OF SECTION 01 74 19

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SECTION 01 7800
CLOSEOUT SUBMITTALS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Project record documents.

B. Operation and maintenance data.

C. Warranties and bonds.

1.02 RELATED REQUIREMENTS

A. Section 01 3000 - Administrative Requirements: Submittals procedures, shop drawings, product data, and samples.

B. Individual Product Sections: Specific requirements for operation and maintenance data.

C. Individual Product Sections: Warranties required for specific products or Work.

1.03 SUBMITTALS

A. Project Record Documents: Submit documents to Architect with claim for final Application for Payment.

B. Preliminary Operation and Maintenance Manual: Submit preliminary draft of proposed format and outline of contents in a PDF format before start of Work. Architect will review draft and return with comments.

C. Final Operation and Maintenance Manual: Submit final manual and electronic copies with claim for final Application for Payment. Architect will retain one electronic copy. The original manual and one electronic copy will be provided to the Owner.

1. At the option of the Owner provide only an electronic copy in PDF format uploaded to Procore, no flash drive is needed.

D. Operation and Maintenance Data:

1. Submit two copies of preliminary draft or proposed formats and outlines of contents before start of Work. Architect will review draft and return one copy with comments.
2. For equipment, or component parts of equipment put into service during construction and operated by Owner, submit completed documents within ten days after acceptance.
3. Submit one copy of completed documents 15 days prior to final inspection. This copy will be reviewed and returned after final inspection, with Architect comments. Revise content of all document sets as required prior to final submission.

4. Submit revised final operation and maintenance documents following Architect review and in quantities specified herein within 10 days a.

E. Warranties and Bonds:

1. For equipment or component parts of equipment put into service during construction with Owner's permission, submit documents within 10 days after acceptance.
2. Make other submittals within 10 days after Date of Substantial Completion, prior to final Application for Payment.
3. For items of Work for which acceptance is delayed beyond Date of Substantial Completion, submit within 10 days after acceptance, listing the date of acceptance as the beginning of the warranty period.

F. Required Closeout Submittals:

1. See attachment to this section for the “Project Closeout Submittal Checklist”. This checklist shall be completed in its entirety and uploaded to the Project Website prior to requesting and receiving final payment.
2. Include applicable test reports, certifications, and required forms identified in the Project Closeout Submittal Checklist.

1.04 REQUIRED CLOSEOUT SUBMITTALS

A. See attachment this section for the “Project Closeout Submittal Checklist”. This checklist shall be completed in its entirety and uploaded to the Project Website prior to requesting and receiving final payment”.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 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.
6. Manufacturer's instruction for assembly, installation, and adjusting.

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.

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 alternates utilized.
3. Changes made by Addenda and modifications.

F. Record Drawings and Shop Drawings: Legibly mark each item to record actual construction including:

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.

3.02 OPERATION AND MAINTENANCE DATA

A. 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.

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

C. 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.

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

E. O&M binders shall include all final, approved submittals that have been uploaded to the Closeout Tab of the Project Website. Do not submit O&M binders until all electronic copies of the required O&M and Warranty submittals have been uploaded to the Project Website and have achieved final approval.

F. Submit the number of copies of O&M binders requested by the A/E for review (up to three copies maximum). A/E shall review the O&M binders to verify completion. Contractor shall make any corrections to the O&M binders noted and upon final approval submit 1 (one) copy.

3.03 OPERATION 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. Additional information as specified in individual product specification sections.

D. 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 specific products.

3.04 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 replaceable 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 specific products.

C. 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.

D. Maintenance Requirements: Include routine procedures and guide for preventative maintenance and trouble shooting; disassembly, repair, and reassembly instructions; and alignment, adjusting, balancing, and checking instructions.

E. Provide servicing and lubrication schedule, and list of lubricants required.

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

G. Include sequence of operation by controls manufacturer.

H. Provide original manufacturer's parts list, illustrations, assembly drawings, and diagrams required for maintenance.

I. Provide list of original manufacturer's spare parts, current prices, and recommended quantities to be maintained in storage.

J. Include test and balancing reports.

K. Additional Requirements: As specified in individual product specification sections.

3.05 ASSEMBLY OF OPERATION AND MAINTENANCE MANUALS

A. Assemble operation and maintenance data into durable manuals for Owner's personnel use, with data arranged in the same sequence as, and identified by, the specification sections.

B. Where systems involve more than one specification section, provide separate tabbed divider for each system.

C. Binders: Commercial quality, 8-1/2 by 11 inch three D side ring binders with durable plastic covers; 2 inch maximum ring size. When multiple binders are used, correlate data into related consistent groupings.

D. Cover: Identify each binder with typed or printed title OPERATION AND MAINTENANCE INSTRUCTIONS; identify title of Project; identify subject matter of contents.

E. Project Directory: Title and address of Project; names, addresses, and telephone numbers of Architect, Consultants, Contractor, and subcontractors, with names of responsible parties.

F. Tables of Contents: List every item separated by a divider, using the same identification as on the divider tab; where multiple volumes are required, include all volumes Tables of Contents in each volume, with the current volume clearly identified.

G. Dividers: Provide tabbed dividers for each separate product and system; identify the contents on the divider tab; immediately following the divider tab include a description of product and major component parts of equipment.

H. Text: Manufacturer's printed data, or typewritten data on 24 pound paper.

I. Drawings: Provide with reinforced punched binder tab. Bind in with text; fold larger drawings to size of text pages.

J. Arrangement of Contents: Organize each volume in parts as follows:

1. Project Directory.
2. Table of Contents, of all volumes, and of this volume.
3. Operation and Maintenance Data: Arranged by system, then by product category.
    a. Source data.
    b. Product data, shop drawings, and other submittals.
    c. Operation and maintenance data.
    d. Field quality control data.
    e. Original warranties and bonds.

K. Electronic Copy: Provide one copies of all operation and maintenance data in a PDF format on Procore.. Locate storage devices in the front of the operation and maintenance manual. Label device with project name and substantial completion date.

3.06 WARRANTIES AND BONDS

A. Obtain warranties and bonds, executed in duplicate by responsible Subcontractors, suppliers, and manufacturers, within 10 days after completion of the applicable item of work. Except for items put into use with Owner's permission, leave date of beginning of time of warranty until the Date of Substantial Completion is determined.

B. Verify that documents are in proper form, contain full information, and are notarized.

C. Co-execute submittals when required.

D. Retain warranties and bonds until time specified for submittal.

E. Include originals of each in operation and maintenance manuals, indexed separately on Table of Contents.

ATTACHMENT: PROJECT CLOSEOUT SUBMITTAL CHECKLIST

END OF SECTION

CONSTRUCTION & FACILITIES MANAGEMENT OFFICE
Building 3535 (formerly B-61), Camp Dodge
7105 NW 70th Avenue
Johnston, IA 50131-1824
(515) 252-4269 (phone) (515) 252-4589 (fax)

PROJECT CLOSEOUT SUBMITTAL CHECKLIST

PROJECT TITLE: S79 Express Store – Camp Dodge

PROJECT NO.: 25-32737

CONTRACT NO.: XXXXXX

PROJECT LOCATION: Johnston, Iowa

Note: Checklist must be completed in its entirety and uploaded to the Project Website (Closeout Log, Section 01 78 00) prior to requesting and receiving final payment. If a listed item is not applicable to the Work, check "N/A".

	Description	Notes	Upload To	Completed	N/A
1	**AIA G706 -** Contractor's Affidavit of Payment of Debts and Claims		Closeout Log, Section 01 78 00	☐	☐
2	**AIA G707 -** Consent of Surety to Final Payment		Closeout Log, Section 01 78 00	☐	☐
3	**Final Punchlist**	With all items marked completed	Closeout Log, Section 01 78 00	☐	☐
4	**Project Record Documents (hard copy)**	Upload transmittal only (for tracking purposes)	Closeout Log, Section 01 78 39	☐	☐
5	**O&M Manuals (hard copy)**	Upload transmittal only (for tracking purposes)	Closeout Log, Section 01 78 23	☐	☐
6	**Energy Rebate Forms**	Per Supplementary Conditions, Article 13.8	Reports Log, Utility Incentive	☐	☐
7	**Keys, Cores, Schedule, and Bitting List**		Door Hardware, Section 08 70 00	☐	☐
8	**List of Extra Materials**		Closeout Log, Section 01 78 00	☐	☐
9	**Arc Flash Analysis Report**	With documentation of labels installed on panels	Reports Log	☐	☐
10	**SWPPP Notice of Final Stabilization Form**	See attached form below	Reports Log	☐	☐
11	**Geothermal Project Record Documents**		Closeout Log, Section 23 21 13.33	☐	☐
12	**Fire Alarm System Final Documentation**		Tests, Inspections, & Reviews Log	☐	☐
13	**GC and Subcontractor Contact List**	Arranged by Division and Section	Closeout Log, Section 01 78 00	☐	☐

14	**Fire Marshal Inspector's Final Report**	With approval to occupy	Tests, Inspections, & Reviews Log	☐	☐
15	**State Electrical Inspections**		Tests, Inspections, & Reviews Log	☐	☐
16	**Boiler Inspector's Final Report**		Tests, Inspections, & Reviews Log	☐	☐
17	**Elevator Inspector's Final Report**		Tests, Inspections, & Reviews Log	☐	☐
18	**Backflow Device Test Report(s)**	See attached form below	Tests, Inspections, & Reviews Log	☐	☐
19	**Water Distribution/Service Form A**	Flushing and Disinfection- See attached form below	Tests, Inspections, & Reviews Log	☐	☐
20	**Water Distribution/Service Form B**	Pressure and Leak Test- See attached form below	Tests, Inspections, & Reviews Log	☐	☐
21	**Emergency Fixture Testing Checklist A**	Drench Shower- See attached form below	Tests, Inspections, & Reviews Log	☐	☐
22	**Emergency Fixture Testing Checklist B**	Eye / Eye-Face Wash- See attached form below	Tests, Inspections, & Reviews Log	☐	☐
23	**High Potential Test Report**	See attached form below	Tests, Inspections, & Reviews Log	☐	☐
24	**Waste Reduction Final Report**	Per Section 01 74 19	Reports Log	☐	☐
25	**Crane Load Test**		Tests, Inspections, & Reviews Log	☐	☐
26	**Generator Load Test**		Tests, Inspections, & Reviews Log	☐	☐
27	**Communications Schedule of Values**		Submittal Log, Section 00 43 14.13	☐	☐
28	**Kitchen Equipment Schedule of Values**		Submittal Log, Section 00 43 14.16	☐	☐
29	**Electronic Submittals**	All required items uploaded to Project Website, Per Section 01 33 50	Various logs.	☐	☐

SECTION 02 4100
DEMOLITION

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Selective demolition of building elements for alteration purposes.

B. Abandonment and removal of existing utilities and utility structures.

1.02 RELATED REQUIREMENTS

A. Section 01 5000 - Temporary Facilities and Controls: Site fences, security, protective barriers, and waste removal.

B. Section 01 7000 - Execution and Closeout Requirements: Project conditions; protection of bench marks, survey control points, and existing construction to remain; reinstallation of removed products; temporary bracing and shoring.

1.03 REFERENCE STANDARDS

A. 29 CFR 1926 - Safety and Health Regulations for Construction; Current Edition.

B. NFPA 241 - Standard for Safeguarding Construction, Alteration, and Demolition Operations; 2027.

1.04 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements for submittal procedures.

B. Site Plan: Indicate:

1. Vegetation to be protected.
2. Areas for temporary construction and field offices.
3. Areas for temporary and permanent placement of removed materials.

C. Demolition Plan: Submit demolition plan as required by OSHA and local AHJs.

1. Indicate extent of demolition, removal sequencing, bracing and shoring, and location and construction of barricades and fences.
2. Summary of safety procedures.
3. Demolition firm qualifications.

D. Project Record Documents: Accurately record actual locations of capped and active utilities and subsurface construction.

1.05 QUALITY ASSURANCE

A. Demolition Firm Qualifications: Company specializing in the type of work required.

1. Minimum of 5 years of documented experience.

PART 2 PRODUCTS -- NOT USED

PART 3 EXECUTION

3.01 GENERAL PROCEDURES AND PROJECT CONDITIONS

A. Comply with applicable codes and regulations for demolition operations and safety of adjacent structures and the public.

1. Obtain required permits.
2. Coordinate haul routes.
3. Take precautions to prevent catastrophic or uncontrolled collapse of structures to be removed; do not allow worker or public access within range of potential collapse of unstable structures.
4. Provide, erect, and maintain temporary barriers and security devices.
5. Use physical barriers to prevent access to areas that could be hazardous to workers or the public.
6. Conduct operations to minimize effects on and interference with adjacent structures and occupants.
7. Do not close or obstruct roadways or sidewalks without permits from authority having jurisdiction.
8. Conduct operations to minimize obstruction of public and private entrances and exits. Do not obstruct required exits at any time. Protect persons using entrances and exits from removal operations.
9. Obtain written permission from owners of adjacent properties when demolition equipment will traverse, infringe upon, or limit access to their property.

B. Do not begin removal until receipt of notification to proceed from Owner.

C. Do not begin removal until built elements to be salvaged or relocated have been removed.

D. Do not begin removal until vegetation to be relocated has been removed and vegetation to remain has been protected from damage.

E. Protect existing structures and other elements to remain in place and not removed.

1. Provide bracing and shoring.
2. Prevent movement or settlement of adjacent structures.
3. Repair or replace existing site effected by the Work to a condition equivalent to before starting the Work. Take photographic evidence of surfaces like turf, pavement, and landscaping as necessary for record and review before and after the Work is complete.
4. Stop work immediately if adjacent structures appear to be in danger.

F. Minimize production of dust due to demolition operations. Do not use water if that will result in ice, flooding, sedimentation of public waterways or storm sewers, or other pollution.

G. Hazardous Materials:

1. If hazardous materials are discovered during removal operations, stop work and notify Architect and Owner; hazardous materials include regulated asbestos containing materials, lead, PCBs, and mercury.

3.02 EXISTING UTILITIES

A. Coordinate work with utility companies. Notify utilities before starting work, comply with their requirements, and obtain required permits.

B. Protect existing utilities to remain from damage.

C. Do not disrupt public utilities without permit from authority having jurisdiction.

D. Do not close, shut off, or disrupt existing life safety systems that are in use without at least 7 days prior written notification to Owner.

E. Do not close, shut off, or disrupt existing utility branches or take-offs that are in use without at least 3 days prior written notification to Owner.

F. Locate and mark utilities to remain; mark using highly visible tags or flags, with identification of utility type; protect from damage due to subsequent construction, using substantial barricades if necessary.

G. Remove exposed piping, valves, meters, equipment, supports, and foundations of disconnected and abandoned utilities.

3.03 SELECTIVE DEMOLITION FOR ALTERATIONS

A. Existing construction and utilities indicated on drawings are based on casual field observation and existing record documents only.

1. Verify construction and utility arrangements are as indicated.
2. Report discrepancies to Architect before disturbing existing installation.
3. Beginning of demolition work constitutes acceptance of existing conditions that would be apparent upon examination prior to starting demolition.

B. Separate areas in which demolition is being conducted from areas that remain occupied.

1. Provide, erect, and maintain temporary dustproof partitions of construction necessary to prevent noise and debris from effecting areas outside the construction area .
2. Provide walk-off mats as required to separate demolition and construction from existing building.

C. Maintain weatherproof exterior building enclosure, except for interruptions required for replacement or modifications; prevent water and humidity damage.

1. Where openings in exterior enclosure exist, provide construction to make exterior enclosure weatherproof.
2. Insulate existing ducts or pipes that are exposed to outdoor ambient temperatures by alterations work.

D. Remove existing work as indicated and required to accomplish new work.

1. Remove rotted wood, corroded metals, and deteriorated masonry and concrete; replace with new construction indicated.
2. Remove items indicated on drawings.
3. Relocate items indicated on drawings.
4. Where new surface finishes are to be applied to existing work, perform removals, patch, and prepare existing surfaces as required to receive new finish; remove existing finish if necessary for successful application of new finish.
5. Where new surface finishes are not specified or indicated, patch holes and damaged surfaces to match adjacent finished surfaces as closely as possible.

E. Services including, but not limited to, HVAC, Plumbing, Fire Protection, Electrical, and Telecommunications: Remove existing systems and equipment as indicated.

1. Maintain existing active systems that are to remain in operation; maintain access to equipment and operational components; if necessary, modify installation to allow access or provide access panel.
2. Where existing active systems serve occupied facilities but are to be replaced with new services, maintain existing systems in service until new systems are complete and ready for service.
    a. Disable existing systems only to make switchovers and connections; minimize duration of outages.
    b. Provide temporary connections as required to maintain existing systems in service.
3. Verify that abandoned services serve only abandoned facilities before removal.
4. Remove abandoned pipe, ducts, conduits, and equipment, including those above accessible ceilings. Remove back to source of supply where possible, otherwise cap stub and tag with identification.

F. Protect existing work to remain.

1. Prevent movement of structure. Provide shoring and bracing as required.
2. Perform cutting to accomplish removal work neatly and as specified for cutting new work.
3. Repair adjacent construction and finishes damaged during removal work.
4. Patch to match new work.

G. Adapt existing work to fit new work: Make as neat and smooth transition as possible.

1. When existing finished surfaces are cut so that a smooth transition with new work is not possible, terminate existing surface along a straight line at a natural line of division and make recommendation to Architect.
2. Where removal of partitions or walls results in adjacent spaces becoming one, rework floors, walls, and ceilings to a smooth plane without breaks, steps, or bulkheads.

3. Where a change of plane of 1/4 inch or more occurs in existing work, submit recommendation for providing a smooth transition for Architect review and request instructions.
4. Modify existing doors as necessary to clear new floor finishes. Refinish door, frame and trim as required.

H. Patching: Where the existing surface is not indicated to be refinished, patch to match the surface finish that existed prior to cutting. Where the surface is indicated to be refinished, patch so that the substrate is ready for the new finish.

I. Refinish existing surfaces as indicated:

1. Where rooms or spaces are indicated to be refinished, refinish all visible existing surfaces to remain to the specified condition for each material, with a neat transition to adjacent finishes.
2. If mechanical or electrical work is exposed accidentally during the work, re-cover and refinish to match.

J. Clean existing systems and equipment.

K. Remove demolition debris and abandoned items from alterations areas and dispose of off-site; do not burn or bury.

L. Do not begin new construction in alterations areas before demolition is complete.

M. Comply with all other applicable requirements of this section.

3.04 DEBRIS AND WASTE REMOVAL

A. Remove debris, junk, and trash from site.

B. Remove from site all materials not to be reused on site; do not burn or bury.

C. Leave site in clean condition, ready for subsequent work.

D. Clean up spillage and wind-blown debris from public and private lands.

E. Assume full responsibility for acceptable disposition of removal materials and for damages resulting from disposal operations.

END OF SECTION

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SECTION 07 9200
JOINT SEALANTS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Nonsag gunnable joint sealants.

B. Self-leveling pourable joint sealants.

C. Joint backings and accessories.

1.02 REFERENCE STANDARDS

A. ASTM C920 - Standard Specification for Elastomeric Joint Sealants; 2018 (Reapproved 2024).

B. ASTM C1193 - Standard Guide for Use of Joint Sealants; 2025.

C. ASTM C1330 - Standard Specification for Cylindrical Sealant Backing for Use with Cold Liquid-Applied Sealants; 2023.

1.03 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements for submittal procedures.

B. Product Data: Submit manufacturer's technical datasheets for each product to be used; include the following:

1. Physical characteristics, including movement capability, VOC content, hardness, cure time, and color availability.
2. List of backing materials approved for use with the specific product.
3. Substrates that product is known to satisfactorily adhere to and with which it is compatible.
4. Substrates the product should not be used on.

C. Product Data for Accessory Products: Submit manufacturer's technical data sheet for each product to be used, including physical characteristics, installation instructions, and recommended tools.

D. Color Cards for Selection: Where sealant color is not specified, submit manufacturer's color cards showing standard colors available for selection.

E. Samples for Verification: Where custom sealant color is specified, obtain directions from Architect and submit at least two physical samples for verification of color of each required sealant.

1.04 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum five years documented experience.

B. Installer Qualifications: Company specializing in performing the work of this section and with at least five years of documented experience.

1.05 WARRANTY

A. See Section 01 7800 - Closeout Submittals for additional warranty requirements.

B. Manufacturer Warranty: Provide five year manufacturer warranty for installed sealants and accessories that fail to achieve a watertight seal, exhibit loss of adhesion or cohesion, or do not cure. Complete forms in Owner's name and register with manufacturer.

C. Extended Correction Period: Correct defective work within five year period commencing on Date of Substantial Completion.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Base Manufacturer: Tremco Commercial Sealants & Waterproofing: www.tremcosealants.com.

B. Other Acceptable Manufacturers:

1. Master Builders Solutions: www.master-builders-solutions.com/en-us.
2. Bostik Inc: www.bostik-us.com.
3. Dow Chemical Company: www.dow.com.
4. Manus Products, Inc.: www.manus.net.
5. Pecora Corporation: www.pecora.com.
6. Red Devil: www.reddevil.com.
7. Sherwin-Williams Company: www.sherwin-williams.com.
8. Sika Corporation: www.usa.sika.com.
9. W.R.Meadows, Inc: www.wrmeadows.com.
10. Hilti: www.hilti.com.
11. Substitutions: See Section 01 6000 - Product Requirements.

2.02 JOINT SEALANT APPLICATIONS

A. Scope:

1. Exterior Joints: Seal open joints, whether or not the joint is indicated on drawings, unless specifically indicated not to be sealed. Exterior joints to be sealed include, but are not limited to:
   a. Wall expansion and control joints.
   b. Joints between door, window, and other frames and adjacent construction.
   c. Joints and penetrations of pipes, tubes, conduit, ductwork, and structural framing through walls, ceilings, and floors in finished and unfinished spaces.

d. Joints between different exposed materials.
e. Openings below ledge angles in masonry.
f. Exterior Joints shall include those between non-conditioned spaces and conditioned spaces.
g. Other joints indicated on drawings.

2. Interior Joints: Do not seal interior joints unless specifically indicated to be sealed. Interior joints to be sealed include, but are not limited to, the following items.
   a. Joints between door, window, and other frames and adjacent construction.
   b. Joints and penetrations of pipes, tubes, conduit, ductwork, and structural framing through walls, ceilings, and floors in finished and unfinished spaces.
   c. Do not install sealants where a tested firestop system is required.
   d. Joints indicated on the drawings.
   e. Interior joints to be sealed shall include those between non-conditioned spaces and conditioned spaces.
   f. Other joints indicated below.
3. Do not seal the following types of joints:
   a. Intentional weep holes in masonry.
   b. Joints indicated to be treated with manufactured expansion joint cover, or some other type of sealing device.
   c. Joints where sealant is specified to be provided by manufacturer of product to be sealed.
   d. Joints where installation of sealant is specified in another section.
   e. Joints between suspended panel ceilings/grid and walls.

B. Exterior Joints: Use nonsag polyurethane sealant, unless otherwise indicated.

1. Control and Expansion Joints in Concrete Paving: Self-leveling polyurethane traffic-grade sealant.

C. Interior Joints: Use nonsag polyurethane sealant, unless otherwise indicated.

1. Wall and Ceiling Joints in Non-Wet Areas: Acrylic emulsion latex sealant.
2. Wall and Ceiling Joints in Wet Areas: Nonsag polyurethane sealant for continuous liquid immersion.
3. Floor Joints in Wet Areas: Self-leveling polyurethane traffic-grade sealant suitable for continuous liquid immersion.
4. Joints between Fixtures in Wet Areas and Floors, Walls, and Ceilings: Mildew-resistant silicone sealant; Refer to colors below.
5. In Sound-Rated Assemblies: Acrylic emulsion latex sealant.
6. Other Floor Joints: Self-leveling polyurethane traffic-grade sealant.

D. Interior Wet Areas: Bathrooms, restrooms, kitchens, food service areas, and food processing areas; fixtures in wet areas include plumbing fixtures, food service equipment, countertops, cabinets, and other similar items.

E. Sound-Rated Assemblies: Walls and ceilings identified as STC-rated, sound-rated, or acoustical.

2.03 JOINT SEALANTS - GENERAL

A. Colors: Color shall be selected by the Architect from manufacturer's full range unless specifically indicated to be a specific color.

2.04 NONSAG JOINT SEALANTS

A. Mildew-Resistant Silicone Sealant: ASTM C920, Grade NS, Uses M and A; single component, mildew resistant; not expected to withstand continuous water immersion or traffic.

1. Products:
   a. Tremsil 200 manufactured by Tremco Commercial Sealants.
   b. Substitutions: See Section 01 6000 - Product Requirements.

B. Polyurethane Sealant: ASTM C920, Grade NS, Uses M and A; single or multi-component; not expected to withstand continuous water immersion or traffic.

1. Movement Capability: Plus and minus 25 percent, minimum.
2. Color: To be selected by Architect from manufacturer's standard range.
3. Products:
   a. Master Builders Solutions; MasterSeal NP1 or NP2: www.master-builders-solutions.com/en-us/#sle.
   b. Tremco Commercial Sealants & Waterproofing; Dymeric 240 FC or Dymonic FC: www.tremcosealants.com/#sle.
   c. Substitutions: See Section 01 6000 - Product Requirements.

C. Acrylic Emulsion Latex: Water-based; ASTM C834, paintable, single component, non-staining, non-bleeding, non-sagging; not intended for exterior use.

1. Color: To be selected by Architect from manufacturer's full range.
2. Products:
   a. Tremco Commercial Sealants & Waterproofing; Tremflex 834: www.tremcosealants.com/#sle.
   b. Substitutions: See Section 01 6000 - Product Requirements.

2.05 SELF-LEVELING JOINT SEALANTS

A. Self-Leveling Polyurethane Sealant: ASTM C920, Grade P, Uses M and A; single or multicomponent; explicitly approved by manufacturer for traffic exposure; not expected to withstand continuous water immersion.

1. Color: To be selected by Architect from manufacturer's full range.
2. Products:
   a. THC-901 or Vulkem 445SSL manufactured by Tremco Commercial Sealants & Waterproofing.
   b. MasterSeal SL 1 or SL 2 (also NP 1, or NP 2 manufactured by Master Builders Solutions.
   c. Substitutions: See Section 01 6000 - Product Requirements.

2.06 ACCESSORIES

A. Backer Rod: Cylindrical cellular foam rod with surface that sealant will not adhere to, compatible with specific sealant used, and recommended by backing and sealant manufacturers for specific application.

1. Type for Joints Not Subject to Pedestrian or Vehicular Traffic: ASTM C1330; Type B - Bi-Cellular Polyethylene.
2. Type for Joints Subject to Pedestrian or Vehicular Traffic: ASTM C1330; Type C - Closed Cell Polyethylene.
3. Closed Cell and Bi-Cellular: 25 to 33 percent larger in diameter than joint width.

B. Backing Tape: Self-adhesive polyethylene tape with surface that sealant will not adhere to and recommended by tape and sealant manufacturers for specific application.

C. Masking Tape: Self-adhesive, nonabsorbent, nonstaining, removable without adhesive residue, and compatible with surfaces adjacent to joints and sealants.

D. Joint Cleaner: Noncorrosive and nonstaining type, type recommended by sealant manufacturer; compatible with joint forming materials.

E. Primers: Type recommended by sealant manufacturer to suit application; nonstaining.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that joints are ready to receive work.

B. Verify that backing materials and substrates to be sealed are compatible with sealants.

C. Verify that backer rods are of the correct size.

3.02 PREPARATION

A. Remove loose materials and foreign matter that could impair adhesion of sealant.

B. Clean joints, and prime as necessary, in accordance with manufacturer's instructions.

C. Perform preparation in accordance with manufacturer's instructions and ASTM C1193.

D. Mask elements and surfaces adjacent to joints from damage and disfigurement due to sealant work; be aware that sealant drips and smears may not be completely removable.

3.03 INSTALLATION

A. Install this work in accordance with sealant manufacturer's requirements for preparation of surfaces and material installation instructions.

B. Provide joint sealant installations complying with ASTM C1193 and in accordance with Manufacturer's recommendations.

C. Measure joint dimensions and size joint backers to achieve width-to-depth ratio, neck dimension, and surface bond area as recommended by manufacturer, except where specific dimensions are indicated.

D. Install bond breaker backing tape where backer rod cannot be used.

E. Install sealant free of air pockets, foreign embedded matter, ridges, and sags, and without getting sealant on adjacent surfaces.

F. Do not install sealant when ambient temperature is outside manufacturer's recommended temperature range, or will be outside that range during the entire curing period, unless manufacturer's approval is obtained and instructions are followed.

G. Nonsag Sealants: Tool surface concave, unless otherwise indicated; remove masking tape immediately after tooling sealant surface.

H. Concrete Floor Joint Filler: After full cure, shave joint filler flush with top of concrete slab.

3.04 CLEANING

A. Clean adjacent soiled surfaces.

3.05 PROTECTION

A. Protect sealants until cured.

3.06 FIELD QUALITY CONTROL

A. See Section 01 4000 - Quality Requirements for additional requirements.

B. Perform field quality control inspection/testing as specified in PART 1 under QUALITY ASSURANCE article and perform hand-pull lab tests in accordance with ASTM C1193, Method A.

C. Destructive Adhesion Testing: If there are any failures in first 1,000 linear feet, notify Architect immediately.

D. Remove and replace failed portions of sealants using same materials and procedures as indicated for original installation.

E. Repair destructive test location damage immediately after evaluation and recording of results.

END OF SECTION

SECTION 08 1113
HOLLOW METAL DOORS AND FRAMES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Non-fire-rated hollow metal doors and frames.

B. Fire-rated hollow metal doors and frames.

C. Thermally insulated hollow metal doors with frames.

D. Hollow metal borrowed lites glazing frames.

E. Accessories.

1.02 RELATED REQUIREMENTS

A. Section 08 7100 - Door Hardware.

B. Section 08 8000 - Glazing: Glass for doors and borrowed lites.

C. Section 09 9113 - Exterior Painting: Field painting.

D. Section 09 9123 - Interior Painting: Field painting.

1.03 REFERENCE STANDARDS

A. ADA Standards - 2010 ADA Standards for Accessible Design; 2010.

B. ANSI/SDI A250.4 - Test Procedure and Acceptance Criteria for Physical Endurance for Steel Doors, Frames and Frame Anchors; 2026.

C. ANSI/SDI A250.8 - Specifications for Standard Steel Doors and Frames (SDI-100); 2023.

D. ANSI/SDI A250.10 - Test Procedure and Acceptance Criteria for Prime Painted Steel Surfaces for Steel Doors and Frames; 2025.

E. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2025a.

F. ASTM A1008/A1008M - Standard Specification for Steel, Sheet, Cold-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, Required Hardness, Solution Hardened, and Bake Hardenable; 2026.

G. ASTM A1011/A1011M - Standard Specification for Steel, Sheet and Strip, Hot-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, and Ultra-High Strength; 2025.

H. ASTM C143/C143M - Standard Test Method for Slump of Concrete; 2026b.

I. ASTM C476 - Standard Specification for Grout for Masonry; 2023.

J. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2026a.

K. BHMA A156.115 - Hardware Preparation in Steel Doors and Frames; 2016.

L. ICC A117.1 - Accessible and Usable Buildings and Facilities; 2017.

M. ITS (DIR) - Directory of Listed Products; Current Edition.

N. NAAMM HMMA 830 - Hardware Selection for Hollow Metal Doors and Frames; 2002.

O. NAAMM HMMA 831 - Hardware Locations for Hollow Metal Doors and Frames; 2024.

P. NAAMM HMMA 840 - Guide Specifications for Receipt, Storage and Installation of Hollow Metal Doors and Frames; 2024.

Q. NFPA 80 - Standard for Fire Doors and Other Opening Protectives; 2025, with Amendment (2024).

R. NFPA 252 - Standard Methods of Fire Tests of Door Assemblies; 2022.

S. UFC 4-010-01 - DoD Minimum Antiterrorism Standards for Buildings; 2018, with Editorial Revision (2024).

T. UL (DIR) - Online Certifications Directory; Current Edition.

U. UL 10C - Standard for Positive Pressure Fire Tests of Door Assemblies; Current Edition, Including All Revisions.

1.04 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements for submittal procedures.

B. Product Data: Materials and details of design and construction, hardware locations, reinforcement type and locations, anchorage and fastening methods, and finishes; and one copy of referenced standards/guidelines.

1. Exterior door product data indicating air leakage, test pressure, and test method for door; and U-value.

C. Shop Drawings: Details of each opening, showing elevations, glazing, frame profiles, and any indicated finish requirements.

D. Manufacturer's Certificate: Certify that door and frame assemblies comply with applicable requirements of UFC 4-010-01.

1.05 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section, with not less than three years documented experience.

B. Installer Qualifications: Company specializing in performing work of the type specified and with at least three years of documented experience.

1.06 DELIVERY, STORAGE, AND HANDLING

A. Comply with NAAMM HMMA 840 or ANSI/SDI A250.8 (SDI-100) in accordance with specified requirements.

B. Protect with resilient packaging; avoid humidity build-up under coverings; prevent corrosion and adverse effects on factory applied painted finish.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Hollow Metal Doors and Frames:

1. Ceco Door, an Assa Abloy Group company: www.assaabloydss.com/#sle.
2. Curries, an Assa Abloy Group company: www.assaabloydss.com/#sle.
3. Fleming Door Products, an Assa Abloy Group company: www.assaabloydss.com/#sle.
4. Mesker, dormakaba Group: www.meskeropeningsgroup.com/#sle.
5. Republic Doors, an Allegion brand: www.republicdoor.com/#sle.
6. Steelcraft, an Allegion brand: www.allegion.com/#sle.
7. Technical Glass Products: www.tgpamerica.com/#sle.
8. Substitutions: See Section 01 6000 - Product Requirements.

2.02 PERFORMANCE REQUIREMENTS

A. Requirements for Hollow Metal Doors and Frames:

1. Steel Sheet: Comply with one or more of the following requirements; galvannealed steel complying with ASTM A653/A653M, cold-rolled steel complying with ASTM A1008/A1008M, or hot-rolled pickled and oiled (HRPO) steel complying with ASTM A1011/A1011M, commercial steel (CS) Type B, for each.
2. Accessibility: Comply with ICC A117.1 and ADA Standards.
3. Exterior Door Top Closures: Flush end closure channel, with top and door faces aligned.
4. Door Edge Profile: Manufacturers standard for application indicated.
5. Typical Door Face Sheets: Flush.
6. Glazed Lights: Non-removable stops on non-secure side; sizes and configurations as indicated on drawings. Style: Flush.
7. Hardware Preparations, Selections and Locations: Comply with NAAMM HMMA 830 and NAAMM HMMA 831 or BHMA A156.115 and ANSI/SDI A250.8 (SDI-100) in accordance with specified requirements.
8. Non-handed doors are not acceptable.

9. Zinc Coating for Typical Interior and/or Exterior Locations: Provide metal components zinc-coated (galvanized) and/or zinc-iron alloy-coated (galvannealed) by the hot-dip process in accordance with ASTM A653/A653M, with manufacturer's standard coating thickness, unless noted otherwise for specific hollow metal doors and frames.
    a. Based on NAAMM HMMA Custom Guidelines: Provide at least A25/ZF75 (galvannealed) for interior applications, and at least A60/ZF180 (galvannealed) or G60/Z180 (galvanized) for corrosive locations.
10. Antiterrorism Requirements: Exterior door and frame assemblies shall comply with applicable requirements of UFC 4-010-01, Standard 12.

B. Combined Requirements: If a particular door and frame unit is indicated to comply with more than one type of requirement, comply with the specified requirements for each type; for instance, an exterior door that is also indicated as being sound-rated must comply with the requirements specified for exterior doors and for sound-rated doors; where two requirements conflict, comply with the most stringent.

2.03 HOLLOW METAL DOORS

A. Exterior Doors: Thermally insulated.

1. Thermally Enhanced Core Basis of Design: Provide Imperial with QMAX Thermally Enhanced Core for use in Mercury 3 Thermal Break Frames by CECO DOOR an Assa Abloy company or approved equivalent.
    a. U-Factor with Mercury 3 Thermal Break Frame: 0.34 maximum.
    b. Resistance to air infiltration (0.1 cfm sq ft), in accordance with NFRC 400 and ASTM E283 test method.
2. Based on SDI Standards: ANSI/SDI A250.8 (SDI-100).
    a. Level .
    b. Physical Performance Level A, 1,000,000 cycles; in accordance with ANSI/SDI A250.4.
    c. Model 2 - Seamless.
        1) “Seamless design” means all seams on the vertical edges are continuously welded the full height
        2) of the door, filled, and finished smooth for no visible seams.
    d. Door Face Metal Thickness: 16 gauge, 0.053 inch, minimum.
    e. Zinc Coating: A60/ZF180 galvannealed coating; ASTM A653/A653M.
3. Door Core Material: Polystyrene, 1 lbs/cu ft minimum density.
    a. Foam Plastic Insulation: Manufacturer's standard board insulation with maximum flame spread index (FSI) of 75, and maximum smoke developed index (SDI) of 450 in accordance with ASTM E84, and completely enclosed within interior of door.
4. Door Thickness: 1-3/4 inches, nominal.
5. Door Finish: Factory primed and field finished.
6. All exterior doors shall be closed flush at the top and bottom edges. Install minimum 20 gauge channels (legs down at top of door, legs up at bottom of door) even with the top and bottom edges of door face sheets (no recesses). Seam wire weld continuous or spot weld around entire perimeter of channel. Fill all welds and seams and finish smooth for no visible seams. Provide openings in the bottom closure channel to permit the escape of entrapped moisture.

B. Fire-Rated Doors:

1. Based on SDI Standards: ANSI/SDI A250.8 (SDI-100).
    a. Level 2 - Heavy-duty.
    b. Physical Performance Level B, 500,000 cycles; in accordance with ANSI/SDI A250.4.
    c. Model 1 - Full Flush.
    d. Door Face Metal Thickness: 18 gauge, 0.042 inch, minimum.
2. Fire Rating: As indicated on Door Schedule, tested in accordance with UL 10C and NFPA 252 ("positive pressure fire tests").
3. Provide units listed and labeled by UL (DIR) or ITS (DIR).
    a. Attach fire rating label to each fire rated unit.
4. Door Core Material: Manufacturers standard core material/construction in compliance with requirements.
5. Door Thickness: 1-3/4 inches, nominal.
6. Door Finish: Factory primed and field finished.

2.04 HOLLOW METAL FRAMES

A. Comply with standards and/or custom guidelines as indicated for corresponding door in accordance with applicable door frame requirements.

B. Exterior Door Frames: Full profile/continuously welded type.

1. Thermally Broken Frames Basis of Design: Provide Mercury 3 Thermal Break Frames by CECO DOOR an Assa Abloy company or approved equivalent.
    a. Refer to performance data under Hollow Metal Doors Above.
2. Galvanizing: Components hot-dipped zinc-iron alloy-coated (galvannealed) in accordance with ASTM A653/A653M, with A60/ZF180 coating.
3. Frame Metal Thickness: 14 gauge, 0.067 inch, minimum.
4. Frame Finish: Factory primed and field finished.
5. Increase face dimension of frame heads as required to align with masonry coursing.
6. Weatherstripping: Separate, see Section 08 7100.

C. Door Frames, Fire-Rated: Face welded type.

1. Fire Rating: Same as door, labeled.
2. Frame Metal Thickness: 16 gauge, 0.053 inch, minimum.
3. Frame Finish: Factory primed and field finished.

D. Borrowed Lites Glazing Frames: Construction and face dimensions to match door frames, and as indicated on drawings.

E. Frames Depth: Size frame depth to accommodate wall assembly thickness and to allow proper attachment to assembly components.

F. Cut ends of glazing stops and similar removable steel components shall be factory primed after fabrication.

2.05 FINISHES

A. Primer: Rust-inhibiting, complying with ANSI/SDI A250.10, door manufacturer's standard.

B. Finish: Paint in field. Color as selected by the Architect.

2.06 ACCESSORIES

A. Glazing: As specified in Section 08 8000, factory installed.

B. Grout for Frames: Mortar grout complying with ASTM C476 with maximum slump of 4 inches as measured in accordance with ASTM C143/C143M for hand troweling in place; plaster grout and thinner pumpable grout are prohibited.

C. Silencers: Resilient rubber, fitted into drilled hole; provide three on strike side of single door, three on center mullion of pairs, and two on head of pairs without center mullions.

1. Install silencers before grouting frames.

D. Temporary Frame Spreaders: Provide for factory- or shop-assembled frames.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify existing conditions before starting work.

B. Verify that opening sizes and tolerances are acceptable.

C. Verify that finished walls are in plane to ensure proper door alignment.

3.02 PREPARATION

A. Coat inside of frames to be installed in masonry or to be grouted, with bituminous coating, prior to installation.

B. Fill frames at exterior doors and doors between heated and unconditioned space with foam-in-place insulation. Product: Great Stuff Pro window and door by Dupont or approved equivalent.

3.03 INSTALLATION

A. Install doors and frames in accordance with manufacturer's instructions and related requirements of specified door and frame standards or custom guidelines indicated.

B. Install fire rated units in accordance with NFPA 80.

C. Coordinate frame anchor placement with wall construction.

D. Anchor exterior frames to structural backup framing and not to brick veneer.

E. Grout frames in masonry construction, using hand trowel methods; brace frames so that pressure of grout before setting will not deform frames.

F. Frames in stud walls and frames installed in existing openings shall remain ungrouted. Fill frame cavities with fiberglass batt insulation.

G. Install door hardware as specified in Section 08 7100.

3.04 FIELD QUALITY CONTROL

A. Exterior (door/windows) opening wrap: Allow for field observations before installing doors/windows.

3.05 TOLERANCES

A. Maximum Diagonal Distortion: 1/16 inch measured with straight edge, corner to corner.

3.06 ADJUSTING

A. Adjust for smooth and balanced door movement.

3.07 SCHEDULE

A. Refer to Door and Frame Schedule on the drawings.

END OF SECTION

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SECTION 08 7100
DOOR HARDWARE

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Removal, protection, and reinstallation of existing door hardware indicated to be reused.

B. Coordination of existing door hardware with new doors and frames.

1.02 EXISTING CONDITIONS

A. Verify existing door hardware indicated for reuse is suitable for installation on new doors and frames.

B. Notify Architect of existing hardware that is damaged, missing, or incompatible with new work before proceeding.

PART 2 PRODUCTS

2.01 EXISTING DOOR HARDWARE

A. Existing door hardware indicated on Drawings for reuse.

B. Provide miscellaneous fasteners and accessories required for complete reinstallation of existing hardware.

PART 3 EXECUTION

3.01 REMOVAL AND PROTECTION

A. Remove existing door hardware indicated for reuse without damage.

B. Protect salvaged hardware from damage and loss until reinstallation.

3.02 INSTALLATION

A. Reinstall existing door hardware on new doors and frames at locations indicated.

B. Coordinate preparation of new doors and frames with existing hardware.

C. Install hardware securely and adjust for proper operation.

D. For fire-rated openings, maintain requirements of the fire-rated door assembly.

END OF SECTION

SECTION 08 8813
FIRE-RATED GLAZING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Fire-rated glazing units.

B. Glazing compounds.

1.02 RELATED REQUIREMENTS

A. Section 08 1113 - Hollow Metal Doors and Frames: Glazed lites in doors, borrowed lites, and transoms.

B. Section 08 1416 - Flush Wood Doors: Glazed lites in doors.

1.03 REFERENCE STANDARDS

A. 16 CFR 1201 - Safety Standard for Architectural Glazing Materials; Current Edition.

B. ASTM C864 - Standard Specification for Dense Elastomeric Compression Seal Gaskets, Setting Blocks, and Spacers; 2005 (Reapproved 2026).

C. ASTM C1193 - Standard Guide for Use of Joint Sealants; 2025.

D. ASTM E119 - Standard Test Methods for Fire Tests of Building Construction and Materials; 2026.

E. GANA (GM) - GANA Glazing Manual; 2022.

F. GANA (SM) - GANA Sealant Manual; 2008.

G. ICC (IBC) - International Building Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

H. IGMA TM-3000 - North American Glazing Guidelines for Sealed Insulating Glass Units for Commercial & Residential Use; 1990 (Reaffirmed 2016).

I. ITS (DIR) - Directory of Listed Products; Current Edition.

J. NFPA 252 - Standard Methods of Fire Tests of Door Assemblies; 2022.

K. NGA (LGRM) - Laminated Glazing Reference Manual; 2019.

L. UFC 4-010-01 - DoD Minimum Antiterrorism Standards for Buildings; 2018, with Editorial Revision (2024).

M. UL (DIR) - Online Certifications Directory; Current Edition.

N. UL 10B - Standard for Fire Tests of Door Assemblies; Current Edition, Including All Revisions.

O. UL 10C - Standard for Positive Pressure Fire Tests of Door Assemblies; Current Edition, Including All Revisions.

P. UL 263 - Standard for Fire Tests of Building Construction and Materials; Current Edition, Including All Revisions.

1.04 ADMINISTRATIVE REQUIREMENTS

A. Preinstallation Meeting: Convene preinstallation meeting one week before starting work of this section; require attendance by each of affected installers.

1.05 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements for submittal procedures.

B. Product Data on Glazing Unit Glazing Types: Provide structural, physical, and environmental characteristics, size limitations, special handling and installation requirements.

C. Product Data on Glazing Compounds and Accessories: Provide chemical, functional, and environmental characteristics, limitations, special application requirements, and identify available colors.

D. Samples: One samples 12 by 12 inch in size of glass units.

E. Manufacturer's Certificate: Certify that door and frame assemblies comply with applicable requirements of UFC 4-010-01.

1.06 QUALITY ASSURANCE

A. Perform work in accordance with GANA (GM), GANA (SM), IGMA TM-3000, and NGA (LGRM) for glazing installation methods. Maintain one copy on site.

B. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years of documented experience.

C. Installer Qualifications: Company specializing in performing work of type specified and with at least three years of documented experience.

PART 2 PRODUCTS

2.01 GLAZING UNITS

A. Type FRG-1 - Fire-Resistance-Rated Glazing: Type, thickness, and configuration of glazing that contains flames, smoke, and blocks radiant heat, as required to achieve indicated fire rating period exceeding 45 minutes.

1. Applications:
    a. As indicated on the drawings.
2. Glass Type: Multi-laminate annealed glass with intumescent fire retardant interlayers.
    a. Laminates: No surface laminates allowed.
3. Provide products listed by ITS (DIR) or UL (DIR) and approved by authorities having jurisdiction.
4. Safety Glazing Certification: 16 CFR 1201 Category II.
5. Glazing Method: As required for fire rating.
6. Fire Rating Period: As indicated on drawings.
7. Antiterrorism Requirements: Glazing in locations required to comply with antiterrorism standards shall comply with UFC 4-010-01, Standard 10.
8. Markings for Fire-Resistance-Rated Glazing Assemblies: Provide permanent markings on fire-resistance-rated glazing in compliance with ICC (IBC), local building code, and authorities having jurisdiction.
    a. "W" - meets wall assembly criteria of ASTM E119 or UL 263 fire test standards.
    b. "D" - meets fire door assembly criteria of NFPA 252, UL 10B, or UL 10C fire test standards.
    c. "H" - meets fire door assembly hose stream test of NFPA 252, UL 10B, or UL 10C fire test standards.
    d. 'T' - meets temperature rise of not more than 450 degrees F above ambient at end of 30 minutes fire exposure in accordance with NFPA 252, UL 10B, or UL 10C fire test standards.
    e. "XXX" - placeholder that represents fire rating period, in minutes.
9. Products:
    a. GGI - General Glass International: www.generalglass.com/#sle.
    b. SAFTIFIRST, a division of O'Keeffe's Inc: www.safti.com/#sle.
    c. Technical Glass Products: www.fireglass.com/#sle.
    d. Vetrotech North America: www.vetrotechusa.com/#sle.
    e. Substitutions: See Section 01 6000 - Product Requirements.

2.02 ACCESSORIES

A. Setting Blocks: Aluminum silicate, with 80 to 90 Shore A durometer hardness; ASTM C864 Option II. Length of 0.1 inch for each square foot of glazing or minimum 4 inch by width of glazing rabbet space minus 1/16 inch by height to suit glazing method and pane weight and area.

B. Spacer Shims: Neoprene, 50 to 60 Shore A durometer hardness; ASTM C864 Option II. Continuous by one half the height of glazing stop by thickness to suit application, self adhesive on one face.

C. Glazing Tape: Flexible tape made from spun calcium-magnesium-silica fibers in binder; designed to remain stable at temperatures up to 2,012 degrees F.

    1. Thickness: As recommended by framing manufacturer for glazing application.

D. Glazing Gaskets: Flexible intumescent seals.

    1. Material: Co-extruded intercalated graphite combined with thermoplastic lip.

E. Glazing Splines: Resilient silicone extruded shape to suit glazing channel retaining slot; ASTM C864 Option II; color black.

F. Smoke Removal Window/Glazing Unit Markings: Adhesive backed markings affixed to manually operable or fixed windows of high-rise buildings to identify units intended for post-fire smoke removal in compliance with ICC (IBC) and authorities having jurisdiction.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that openings for glazing are correctly sized and within tolerances, including those for size, squareness, and offsets at corners.

B. Verify that surfaces of glazing channels or recesses are clean, free of obstructions that may impede moisture movement, weeps are clear, and support framing is ready to receive glazing system.

3.02 PREPARATION

A. Clean contact surfaces with appropriate solvent and wipe dry within maximum of 24 hours before glazing. Remove coatings that are not tightly bonded to substrates.

B. Seal porous glazing channels or recesses with substrate compatible primer or sealer.

C. Prime surfaces scheduled to receive sealant where required for proper sealant adhesion.

3.03 INSTALLATION - GENERAL

A. Install glazing in compliance with written instructions of glass, gaskets, and other glazing material manufacturers unless more stringent requirements are indicated, including those in referenced glazing standards.

B. Install glazing sealants in accordance with ASTM C1193, GANA (SM), and manufacturer's instructions.

C. Do not exceed edge pressures around perimeter of glass lites as stipulated by glass manufacturer.

D. Set glass lites of system with uniform pattern, draw, bow, and similar characteristics.

E. Set glass lites in proper orientation so that coatings face exterior or interior as indicated.

F. Prevent glass from contact with contaminating substances that may result from construction operations including, but not limited to weld spatter, fire-safing, plastering, mortar droppings, etc.

3.04 INSTALLATION - DRY GLAZING METHOD (TAPE AND TAPE)

A. Application - Interior Glazed: Set glazing infills from interior of building.

B. Cut glazing tape to length and set against permanent stops, projecting 1/16 inch above sightline.

C. Place setting blocks at 1/4 points with edge block no more than 6 inches from corners.

D. Rest glazing on setting blocks and push against tape for full contact at perimeter of pane or unit.

E. Place glazing tape on free perimeter of glazing in same manner described above.

F. Install removable stop without displacement of tape. Exert pressure on tape for full continuous contact.

G. Carefully trim protruding tape with knife.

3.05 CLEANING

A. Remove excess glazing materials from finish surfaces immediately after application using solvents or cleaners recommended by manufacturers.

B. Remove nonpermanent labels immediately after glazing installation is complete.

C. Clean glass and adjacent surfaces after sealants are fully cured.

D. Clean glass on both exposed surfaces not more than four days prior to Date of Substantial Completion in accordance with glass manufacturer's written recommendations.

3.06 PROTECTION

A. After installation, mark pane with 'X' by using removable plastic tape or paste; do not mark heat-absorbing or reflective glass units.

B. Remove and replace glass that is damaged during construction period prior to Date of Substantial Completion.

END OF SECTION

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SECTION 09 2116
GYPSUM BOARD ASSEMBLIES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Performance criteria for gypsum board assemblies.

B. Fire-Resistance-Rated Assemblies.

C. Metal stud wall framing.

D. Acoustic insulation.

E. Gypsum wallboard.

F. Backing Board For Wet Areas, Cement-Based Board Tile Backer.

G. Backing Board For Non-Wet Areas, Gypsum-Based Board Tile Backer.

H. Joint treatment and accessories.

I. Plaster repair materials and accessories.

J. Prefabricated Wood Blocking System.

K. Drywall Grid Suspension System.

1.02 RELATED REQUIREMENTS

A. Section 06 1000 - Rough Carpentry: Wood blocking product and execution requirements.

1.03 REFERENCE STANDARDS

A. AISI S220 - North American Standard for Cold-Formed Steel Nonstructural Framing; 2020.

B. AISI S240 - North American Standard for Cold-Formed Steel Structural Framing; 2020.

C. ANSI A108.11 - American National Standard Specifications for Interior Installation of Cementitious Backer Units; 2023.

D. ANSI A118.9 - American National Standard Specifications for Test Methods and Specifications for Cementitious Backer Units; 2023.

E. ASTM A1003/A1003M - Standard Specification for Steel Sheet, Carbon, Metallic- and Nonmetallic-Coated for Cold-Formed Framing Members; 2025.

F. ASTM C475/C475M - Standard Specification for Joint Compound and Joint Tape for Finishing Gypsum Board; 2017 (Reapproved 2022).

G. ASTM C635/C635M - Standard Specification for Manufacture, Performance, and Testing of Metal Suspension Systems for Acoustical Tile and Lay-in Panel Ceilings; 2022.

H. ASTM C665 - Standard Specification for Mineral-Fiber Blanket Thermal Insulation for Light Frame Construction and Manufactured Housing; 2024.

I. ASTM C754 - Standard Specification for Installation of Steel Framing Members to Receive Screw-Attached Gypsum Panel Products; 2020.

J. ASTM C840 - Standard Specification for Application and Finishing of Gypsum Board; 2025.

K. ASTM C954 - Standard Specification for Steel Drill Screws for the Application of Gypsum Panel Products or Metal Plaster Bases to Steel Studs from 0.033 in. (0.84 mm) to 0.112 in. (2.84 mm) in Thickness; 2022.

L. ASTM C1002 - Standard Specification for Steel Self-Piercing Tapping Screws for Application of Gypsum Panel Products or Metal Plaster Bases to Wood Studs or Steel Studs; 2022.

M. ASTM C1007 - Standard Specification for Installation of Load Bearing (Transverse and Axial) Steel Studs and Related Accessories; 2020 (Reapproved 2024).

N. ASTM C1047 - Standard Specification for Accessories for Gypsum Wallboard and Gypsum Veneer Base; 2019.

O. ASTM C1325 - Standard Specification for Fiber-Mat Reinforced Cementitious Backer Units; 2025.

P. ASTM C1396/C1396M - Standard Specification for Gypsum Board; 2024.

Q. ASTM D3273 - Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber; 2021.

R. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2026a.

S. ASTM E90 - Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements; 2023.

T. ASTM E413 - Classification for Rating Sound Insulation; 2022.

U. GA-214 - Levels of Finish for Gypsum Panel Products; 2021.

V. GA-216 - Application and Finishing of Gypsum Panel Products; 2024.

W. GA-600 - Fire Resistance and Sound Control Design Manual; 2024.

X. UL (FRD) - Fire Resistance Directory; Current Edition.

1.04 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements for submittal procedures.

B. Shop Drawings: Indicate the location of all expansion joints in plan and elevation view. Include details at intersections of walls, floors, ceilings, and other construction.

C. Product Data:

1. Provide data on metal framing, gypsum board, accessories, and joint finishing system.

1.05 QUALITY ASSURANCE

A. Installer Qualifications: Company specializing in performing work of the type specified and with at least five years of documented experience.

PART 2 PRODUCTS

2.01 GYPSUM BOARD ASSEMBLIES

A. Provide completed assemblies complying with ASTM C840 and GA-216.

B. Interior Partitions, Indicated as Acoustic: Provide completed assemblies with the following characteristics:

1. Acoustic Attenuation: STC as indicated calculated in accordance with ASTM E413, based on tests conducted in accordance with ASTM E90.
2. Walls indicated to receive sound insulation that are not indicated to meet an STC rating are not intended to be constructed as an acoustic assembly.

C. Fire-Resistance-Rated Assemblies: Provide completed assemblies with the following characteristics:

1. Gypsum Association File Numbers: Comply with requirements of GA-600 for the particular assembly.
2. UL Assembly Numbers: Provide construction equivalent to that listed for the particular assembly in the current UL (FRD).

2.02 METAL FRAMING MATERIALS

A. Steel Sheet: ASTM A1003/A1003M, subject to the ductility limitations indicated in AISI S220 or equivalent.

B. Manufacturers - Metal Framing, Connectors, and Accessories:

1. ClarkDietrich: www.clarkdietrich.com/#sle.
2. MarinoWARE: www.marinoware.com/#sle.
3. Phillips Manufacturing Co: www.phillipsmfg.com/#sle.
4. Telling Industries: www.tellingindustries.com/#sle.
5. The Steel Network, Inc: www.steelnetwork.com.

6. Custom Stud, Inc: www.customstud.com.
7. Super Stud Building Products, Inc: www.buysuperstud.com.
8. MRI Steel Framing, LLC: www.mristeelframing.com.
9. MBA Metal Framing: www.mbastuds.com.
10. Substitutions: See Section 01 6000 - Product Requirements.

C. Nonstructural Framing System Components: AISI S220; galvanized sheet steel, of size and properties necessary to comply with ASTM C754 for the spacing indicated, with maximum deflection of wall framing of L/120 at 5 psf.

1. Shapes and Sizes: As indicated on the drawings and as follows.
   a. Studs: "C" shaped with flat or formed webs.
   b. **CH Studs**: "CH" shaped with flat or formed webs.
   c. Runners: "U" shaped, sized to match studs.
2. Resilient Furring Channels: Single leg configuration; 1/2 inch channel depth.
   a. Products:
      1) ClarkDietrich; RC Deluxe Resilient Channel: www.clarkdietrich.com/#sle.
      2) Substitutions: See Section 01 6000 - Product Requirements.

D. Shaft Wall Studs and Accessories: AISI S220; galvanized sheet steel, of size and properties necessary to comply with ASTM C754 and specified performance requirements.

1. Products:
   a. Same manufacturer as other framing materials.
   b. Substitutions: See Section 01 6000 - Product Requirements.

E. Partition Head To Structure Connections: Provide track fastened to structure with legs of sufficient length to accommodate deflection, for friction fit of studs cut short and screwed to secondary deflection channel set inside but unattached to top track.

F. Deflection and Firestop Track: Intumescent strip factory-applied to track flanges expands when exposed to heat or flames to provide a perimeter joint seal.

1. Products:
   a. ClarkDietrich; BlazeFrame Firestop Deflection Track: www.clarkdietrich.com/#sle.
   b. Substitutions: See Section 01 6000 - Product Requirements.

G. Partition Head of Wall Positive Attachment Deflection Clip for Rated Walls: Provide track fastened to structure with legs of sufficient length to accommodate deflection, for friction fit of studs cut short and held in place with deflection clips that provides positive attachment while allowing unencumbered movement of the roof or floor deck above.

1. Products:
   a. RediKlip or PosiClip by Specialty Metal Solutions a FireTrak Company: www.firetrack.com.
   b. Substitutions: Or Equivalent.

H. Grid Suspension Systems: Steel grid system of main tees and support bars connected to structure using hanging wire.

1. Main runners with double stitched web for added strength and knurled face for easier screw installation.

2. Cross tees feature staked-on end tabs for optimal tightness and ease of installation; Stepped-end design featured on cross tees.
3. Material: Classified Heavy Duty per ASTM C635/C635M; Utilizes G40 hot-dipped galvanized construction for superior corrosion resistance.
4. Products:
    a. Armstrong; Drywall Grid System: www.armstrongceilings.com.
    b. CertainTeed Corporation: www.certainteed.com/ceilings-and-walls/#sle.
    c. Rockfon; Chicago Metallic Drywall Grid: www.rockfon.com.
    d. USG Corporation; Drywall Suspension System: www.usg.com/#sle.
    e. Substitutions: See Section 01 6000 - Product Requirements.

2.03 BOARD MATERIALS

A. Manufacturers - Gypsum-Based Board:

1. American Gypsum Company: www.americangypsum.com/#sle.
2. CertainTeed Corporation: www.certainteed.com/#sle.
3. Georgia-Pacific Gypsum: www.gpgypsum.com/#sle.
4. Gold Bond Building Products, LLC provided by National Gypsum Company: www.goldbondbuilding.com/#sle.
5. PABCO Gypsum: www.pabcogypsum.com/#sle.
6. USG Corporation: www.usg.com/#sle.
7. Substitutions: See Section 01 6000 - Product Requirements.

B. Gypsum Wallboard: Paper-faced gypsum panels as defined in ASTM C1396/C1396M; sizes to minimize joints in place; ends square cut.

1. Application: Use for vertical surfaces and ceilings, unless otherwise indicated.
2. At Assemblies Indicated with Fire-Resistance Rating: Use type required by indicated tested assembly; if no tested assembly is indicated, use Type X board, UL, or WH listed.
3. Thickness:
    a. Vertical Surfaces: 5/8 inch.
    b. Ceilings: 5/8 inch.

C. Backing Board For Wet Areas:

1. Application: Surfaces behind tile in wet areas including all restroom walls and other locations scheduled to receive FRP or tile finish.
2. ANSI Cement-Based Board: Non-gypsum-based; aggregated Portland cement panels with glass fiber mesh embedded in front and back surfaces complying with ANSI A118.9 or ASTM C1325.
    a. Thickness: 5/8 inch.
    b. Products:
        1) Custom Building Products: www.custombuildingproducts.com/#sle.
        2) PermaBASE Building Products, LLC provided by National Gypsum Company; PermaBase Cement Board: www.goldbondbuilding.com/#sle.
        3) USG Corporation; Fiberock Brand Aqua-Tough AR Interior Panels Regular 5/8 in. (15.9 mm): www.usg.com/#sle.
        4) Substitutions: See Section 01 6000 - Product Requirements.

D. Backing Board For Non-Wet Areas: Water-resistant gypsum backing board as defined in ASTM C1396/C1396M; sizes to minimum joints in place; ends square cut.

1. Application: Vertical surfaces behind thinset tile and wet walls (walls with plumbing fixtures) as required by code. Do not use this type of backing board in wet areas like tub and shower surrounds.
2. Mold Resistance: Score of 10, when tested in accordance with ASTM D3273.
3. Type X Thickness: 5/8 inch.
4. Edges: Tapered.

E. Shaftwall and Coreboard: **Type SLX**; 1 inch thick by 24 inches wide, beveled long edges, ends square cut.

1. Paper-Faced Type: Gypsum shaftliner board or gypsum coreboard as defined ASTM C1396/C1396M; water-resistant faces.
2. Mold Resistance: Score of 10, when tested in accordance with ASTM D3273.

2.04 GYPSUM BOARD ACCESSORIES

A. Acoustic Insulation: ASTM C665; preformed glass fiber, friction fit type, unfaced. Thickness: 3 or more inches as required to fill wall depth.

1. ASTM E84 surface burning characteristics: Flame Spread Index 25 or less; Smoke Developed Index 450 or less.

B. Finishing Accessories: ASTM C1047, extruded aluminum alloy (6063 T5), galvanized steel sheet ASTM A924/A924M G90, rolled zinc, or rigid plastic, unless noted otherwise.

1. Types: As detailed or required for finished appearance.
   a. Products for specific applications:
      1) Expansion Joints (V-Groove Joint): Trim-Tex #093V Expansion joint or approved equal shall be used at expansion joints in flat wall or ceiling applications.
      2) Angled Joints: Trim-Tex Magic Corner or approved equal shall be used at angular walls and ceilings.
      3) Wall Termination: Trim-Tex Tear Away XT Extra Tall Masking or approved equal shall be used at all locations where new construction terminates into existing construction or non-gypsum construction.
2. Special Shapes: In addition to conventional corner bead and control joints, provide U-bead at exposed panel edges.
3. Products:
   a. Same manufacturer as framing materials.
   b. Fry Reglet Corporation: www.fryreglet.com/#sle.
   c. Phillips Manufacturing Co: www.phillipsmfg.com/#sle.
   d. Trim-tex, Inc: www.trim-tex.com/#sle.
   e. Substitutions: See Section 01 6000 - Product Requirements.

C. Joint Materials: ASTM C475/C475M and as recommended by gypsum board manufacturer for project conditions.

1. Paper Tape: 2 inch wide, creased paper tape for joints and corners, except as otherwise indicated.
2. Joint Compound: Drying type, vinyl-based, ready or field-mixed.
3. Joint Compound (Optional): Setting type, field-mixed.

D. Screws for Fastening of Gypsum Panel Products to Cold-Formed Steel Studs Less than 0.033 inches in Thickness and Wood Members: ASTM C1002; self-piercing tapping screws, corrosion-resistant.

E. Screws for Fastening of Gypsum Panel Products to Steel Members from 0.033 to 0.112 inch in Thickness: ASTM C954; steel drill screws, corrosion-resistant.

F. Plaster repair materials and accessories: Provide plaster materials by USG, National Gypsum Company, or equal to provide a complete system at patch locations. Repair all patch locations back to structural components as required to provide a solid patch. Blend new and old work to the highest level of finish to hide patch locations. Submit product data for patch material as indicated in this section.

G. Prefabricated Blocking Systems: DANBACK 3/4 inch standard/treated plywood or approved equal: www.danback.com.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that project conditions are appropriate for work of this section to commence.

3.02 PROTECTION

A. All data cabling (including concealed or above ceilings) shall be protected from drywall mud or paint overspray or installed after drywall finishing and painting is completed. Paint or drywall mud on data cabling voids the cable manufacturer's warranty. Any data cabling with paint or drywall mud on them shall be replaced by the Contractor at no additional cost to the Owner.

3.03 SHAFT WALL INSTALLATION

A. Shaft Wall Framing: Install in accordance with manufacturer's installation instructions.

B. Shaft Wall Liner: Cut panels to accurate dimensions and install sequentially between special friction studs.

3.04 FRAMING INSTALLATION

A. Metal Framing: Install in accordance with ASTM C1007AISI S220 and manufacturer's instructions.

B. Drywall Grid Suspension System Ceilings: Install suspension system in accordance with manufacturers instructions.

C. Studs: Space studs at 16 inches on center.

1. Extend partition framing to structure where indicated and to ceiling in other locations.

2. Partitions Terminating at Ceiling: Attach ceiling runner securely to ceiling track in accordance with manufacturer's instructions.
3. Partitions Terminating at Structure: Attach extended leg top runner to structure, maintain clearance between top of studs and structure, and brace both flanges of studs with continuous bridging.

D. Openings: Reinforce openings as required for weight of doors or operable panels, using not less than double studs at jambs.

E. Blocking: Install wood blocking for support of:

1. Wall-mounted cabinets.
2. Plumbing fixtures.
3. Toilet partitions.
4. Toilet accessories.
5. Wall-mounted door hardware.
6. All other items indicated on the drawings and in the specifications.

3.05 ACOUSTIC ACCESSORIES INSTALLATION

A. Acoustic Insulation: Place tightly within spaces, around cut openings, behind and around electrical and mechanical items within partitions, and tight to items passing through partitions.

B. Acoustic Sealant: Install in accordance with manufacturer's instructions.

1. Place one bead continuously on substrate before installation of perimeter framing members.
2. Place continuous bead at perimeter of each layer of gypsum board.
3. Seal around all penetrations by conduit, pipe, ducts, and rough-in boxes, except where firestopping is provided.

3.06 BOARD INSTALLATION

A. Comply with ASTM C840, GA-216, and manufacturer's instructions. Install to minimize butt end joints, especially in highly visible locations.

B. Provide solid continuous shims under first layer of gypsum board as necessary to minimize variations in plane. Tolerance of surface shall be as indicated.

C. Single-Layer Non-Rated: Install gypsum board in most economical direction, with ends and edges occurring over firm bearing.

1. Exception: Tapered edges to receive joint treatment at right angles to framing.

D. Fire-Resistance-Rated Construction: Install gypsum board in strict compliance with requirements of assembly listing.

E. Cementitious Backing Board: Install over steel framing members where indicated, in accordance with ANSI A108.11 and manufacturer's instructions.

F. Installation on framing: Use screws for attachment of boards.

3.07 INSTALLATION OF TRIM AND ACCESSORIES

A. Control Joints: Place control joints consistent with lines of building spaces and as follows:

1. Not more than 30 feet apart on walls, soffits, and ceilings in any direction.
2. At intersections of soffits and intersecting walls.
3. At intersection of half height wall and intersecting walls.
4. At locations indicated on the drawings.
5. Other locations where cracking may occur due to changes in height and structure.
6. All jointing locations shall be indicated on shop drawings.

B. Corner Beads: Install at external corners, using longest practical lengths.

C. Edge Trim: Install at locations where gypsum board abuts dissimilar materials.

3.08 JOINT TREATMENT

A. Paper Faced Gypsum Board: Use paper joint tape, embed with drying or setting joint compound and finish with drying or setting joint compound.

B. Finish gypsum board in accordance with levels defined in ASTM C 840 (additional reference guideline; GA-214 - Recommended Levels of Gypsum Board Finish), as follows:

1. Level 4: Walls to receive paint shall receive GA-214 Level 4 finish with a light orange peel texture unless otherwise indicated. Ceilings to receive paint finish or wall coverings, unless otherwise indicated.
   a. No visible defects should be apparent under normal lighting conditions. Provide Level 5 finish where defects become apparent at no additional cost to the Owner.
   b. Contractors that cannot guarantee their Level 4 finish will be free of visible defects under normal lighting conditions should provide a Level 5 finish.
   c. If the Architect or Owner is unsatisfied with a Level 4 finish due to visible defects under normal lighting conditions then a Level 5 finish shall be installed at no additional cost to the Owner. No exceptions.
2. Level 2: In utility areas, behind cabinetry, and on backing board to receive tile finish.
3. Level 1: Wall areas above finished ceilings, whether or not accessible in the completed construction.

C. Tape, fill, and sand exposed joints, edges, and corners to produce smooth surface ready to receive finishes.

1. Feather coats of joint compound so that camber is maximum 1/32 inch.
2. Tapered edges of gypsum board that are not located at taped and filled joints shall also be filled and sanded smooth to match the plane of the wall.

D. Fill and finish joints and corners of cementitious backing board as recommended by manufacturer.

3.09 TOLERANCES

A. Maximum Variation of Finished Gypsum Board Surface from True Flatness: 1/8 inch in 10 feet in any direction.

END OF SECTION

SECTION 09 5100
ACOUSTICAL CEILINGS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Suspended metal grid ceiling system.

B. Acoustical units.

1.02 REFERENCE STANDARDS

A. ASTM C635/C635M - Standard Specification for Manufacture, Performance, and Testing of Metal Suspension Systems for Acoustical Tile and Lay-in Panel Ceilings; 2022.

B. ASTM C636/C636M - Standard Practice for Installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-In Panels; 2019 (Reapproved 2025).

C. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2026a.

D. ASTM E1264 - Standard Classification for Acoustical Ceiling Products; 2023.

1.03 ADMINISTRATIVE REQUIREMENTS

A. Sequence work to ensure acoustical ceilings are not installed until building is enclosed, sufficient heat is provided, dust generating activities have terminated, and overhead work is completed, tested, and approved.

B. Do not install acoustical units until after interior wet work is dry.

1.04 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements for submittal procedures.

B. Shop Drawings: Indicate grid layout and related dimensioning, junctions with other ceiling finishes, and changes in elevation. Detail each type of junction and elevation change at no less than 1-1/2 inch per 12 inches annotating all related materials.

C. Product Data: Provide data on suspension system components and acoustical units.

D. Samples: Submit two samples 4 by 4 inch in size illustrating material and finish of acoustical units.

E. Samples: Submit one sample each, 12 inches long, of suspension system main runner, cross runner, and perimeter molding.

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

G. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.

1. See Section 01 6000 - Product Requirements, for additional provisions.
2. Extra Acoustical Units: Quantity equal to 5 percent of total installed.

1.05 QUALITY ASSURANCE

A. Suspension System Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum five years documented experience.

B. Acoustical Unit Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum five years documented experience.

1.06 FIELD CONDITIONS

A. Maintain uniform temperature of minimum 60 degrees F, and maximum humidity of 40 percent prior to, during, and after acoustical unit installation.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Acoustic Tiles/Panels:

1. Armstrong World Industries, Inc: www.armstrongceilings.com/#sle.
2. Certainteed Architectural: www.certainteed.com/ceilings-and-walls/#sle.
3. USG Corporation: www.usg.com/ceilings/#sle.
4. Substitutions: See Section 01 6000 - Product Requirements.

B. Suspension Systems:

1. Same as for acoustical units.

2.02 ACOUSTICAL UNITS

A. Acoustical Panels: Mineral fiber with plastic membrane-faced overlay, with the following characteristics:

1. Classification: ASTM E1264 Type X.
2. Size: 24 by 24 inches.
3. Thickness: 5/8 inch.
4. Panel Edge: Reveal.
5. Suspension System: Exposed grid.
6. Products:

a. USG Corporation; Clean Room Acoustical Panels: www.usg.com/ceilings/#sle.
b. Substitutions: See Section 01 6000 - Product Requirements.

B. Acoustical Panels: Glass fiber with membrane-faced overlay, lay-in panels for exposed suspension system, with the following characteristics:

1. Classification: ASTM E1264 Type XII.
2. Size: 24 by 24 inches.
3. Thickness: 5/8 inch.
4. Panel Edge: Reveal.
5. Color: As indicated on Drawings.
6. Suspension System: Exposed.
7. Products:
   a. USG Corporation; Premier Hi-Lite Acoustical Panels: www.usg.com/ceilings/#sle.
   b. Substitutions: See Section 01 6000 - Product Requirements.

2.03 SUSPENSION SYSTEM(S)

A. Manufacturers:

1. USG Corporation; Donn DX.
2. Substitutions: See Section 01 6000 - Product Requirements.

B. Metal Suspension Systems - General: Complying with ASTM C635/C635M; die cut and interlocking components, with perimeter moldings, hold down clips, stabilizer bars, clips, and splices as required.

C. Exposed Suspension System: Hot-dip galvanized steel grid and cap.

1. Application(s): Exposed Grid Unless Indicated Otherwise.
2. Structural Classification: Intermediate-duty, when tested in accordance with ASTM C635/C635M.
3. Profile: Tee; 15/16 inch face width.
4. Construction: Double web.
5. Finish: Baked enamel.
6. Color: White.

2.04 ACCESSORIES

A. Support Channels and Hangers: Galvanized steel; size and type to suit application and ceiling system flatness requirement specified.

B. Hanger Wire: 12 gauge, 0.08 inch galvanized steel wire.

C. Hold-Down Clips: Manufacturer's standard clips to suit application.

D. Perimeter Moldings: Same metal and finish as grid.

1. At Non-concealed Grid and Elevation Changes in Grid: Provide extruded aluminum pieces by same manufacturer as grid in height and profile indicated.

a. Manufactured by same grid manufacturer.
b. Edge height: As indicated.

2. At Concealed Grid: Provide exposed L-shaped molding.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify existing conditions before starting work.

B. Verify that layout of hangers will not interfere with other work.

3.02 INSTALLATION - SUSPENSION SYSTEM

A. Install suspension system in accordance with ASTM C 636/C 636M and as supplemented in this section.

B. Rigidly secure system, including integral mechanical and electrical components, for maximum deflection of 1:360.

C. Locate system on room axis according to reflected plan.

D. Perimeter Molding: Install at intersection of ceiling and vertical surfaces and at junctions with other interruptions.

1. Use longest practical lengths.
2. Overlap and rivet corners.

E. Install after major above-ceiling work is complete. Coordinate the location of hangers with other work.

F. Suspension System, Non-Seismic: Hang suspension system independent of walls, columns, ducts, pipes and conduit. Where carrying members are spliced, avoid visible displacement of face plane of adjacent members.

G. Where ducts or other equipment prevent the regular spacing of hangers, reinforce the nearest affected hangers and related carrying channels to span the extra distance.

H. Where suspension system hangers are attached to metal roof deck, use fasteners that do not penetrate through the top of the roof deck. Fasteners shall be shorter than the depth of the deck flute or installed through the sides of deck flutes.

I. Do not support components on main runners or cross runners if weight causes total dead load to exceed deflection capability.

J. Support fixture loads using supplementary hangers located within 6 inches of each corner, or support components independently.

K. Do not eccentrically load system or induce rotation of runners.

3.03 INSTALLATION - ACOUSTICAL UNITS

A. Install acoustical units in accordance with manufacturer's instructions.

B. Fit acoustical units in place, free from damaged edges or other defects detrimental to appearance and function.

C. Lay directional patterned units with pattern parallel to longest room axis.

D. Fit border trim neatly against abutting surfaces.

E. Install units after above-ceiling work is complete.

F. Install acoustical units level, in uniform plane, and free from twist, warp, and dents.

G. Cutting Acoustical Units:

1. Cut to fit irregular grid and perimeter edge trim.
2. Make field cut edges of same profile as factory edges.

H. Install hold-down clips on panels within 20 ft of an exterior door.

3.04 TOLERANCES

A. Maximum Variation from Flat and Level Surface: 1/8 inch in 10 feet.

B. Maximum Variation from Plumb of Grid Members Caused by Eccentric Loads: 2 degrees.

END OF SECTION

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SECTION 09 9113
EXTERIOR PAINTING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Surface preparation.

B. Field application of paints.

C. Scope: Finish exterior surfaces exposed to view, unless fully factory-finished and unless otherwise indicated, including the following:

1. Exposed surfaces of primed and unprimed metal items unless specifically indicated to not be painted.
2. Mechanical and Electrical:
   a. Shop-primed items.
   b. Paint metals that are not resistant to corrosion.

D. Do Not Paint or Finish the Following Items:

1. Items factory-finished unless otherwise indicated; materials and products having factory-applied primers are not considered factory finished.
2. Items indicated to receive other finishes.
3. Items indicated to remain unfinished.
4. Fire rating labels, equipment serial number and capacity labels, and operating parts of equipment.
5. Floors, unless specifically indicated.
6. Glass.
7. Concealed pipes, ducts, and conduits.

1.02 DEFINITIONS

A. Comply with ASTM D16 for interpretation of terms used in this section.

1.03 REFERENCE STANDARDS

A. 40 CFR 59, Subpart D - National Volatile Organic Compound Emission Standards for Architectural Coatings; U.S. Environmental Protection Agency; Current Edition.

B. ASTM D16 - Standard Terminology for Paint, Related Coatings, Materials, and Applications; 2024.

C. ASTM D4442 - Standard Test Methods for Direct Moisture Content Measurement of Wood and Wood-Based Materials; 2020 (Reapproved 2025).

D. MPI (APSM) - Master Painters Institute Architectural Painting Specification Manual; Current Edition.

E. SSPC-SP 1 - Solvent Cleaning; 2015, with Editorial Revision (2016).

F. SSPC-SP 2 - Hand Tool Cleaning; 2024.

G. SSPC-SP 3 - Power Tool Cleaning; 2024.

1.04 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Product Data: Provide complete list of products to be used, with the following information for each:

1. Manufacturer's name, product name and/or catalog number, and general product category (e.g. "alkyd enamel").
2. MPI product number (e.g. MPI #47).
3. Cross-reference to specified paint system(s) product is to be used in; include description of each system.
4. Manufacturer's installation instructions.
5. If proposal of substitutions is allowed under submittal procedures, explanation of substitutions proposed.

C. Samples: Submit three paper "draw down" samples, 8-1/2 by 11 inches in size, illustrating range of colors available for each finishing product specified.

1. Where sheen is specified, submit samples in only that sheen.
2. Where sheen is not specified, discuss sheen options with Architect before preparing samples, to eliminate sheens not required.
3. Allow 15 days for approval process, after receipt of complete samples by Architect.
4. Paint color submittals will not be considered until color submittals for major materials not to be painted, such as factory finished items, have been approved.

D. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.

1. See Section 01 6000 - Product Requirements, for additional provisions.
2. Do not provide or leave extra paint materials for the Owner.
3. Do provide product info, color names, and installation locations for all products and colors. Information shall be included in the Operation and Maintenance Manual.

1.05 QUALITY ASSURANCE

A. Applicator Qualifications: Company specializing in performing the type of work specified with minimum five years documented experience.

1.06 DELIVERY, STORAGE, AND HANDLING

A. Deliver products to site in sealed and labeled containers; inspect to verify acceptability.

B. Container Label: Include manufacturer's name, type of paint, brand name, lot number, brand code, coverage, surface preparation, drying time, cleanup requirements, color designation, and instructions for mixing and reducing.

C. Paint Materials: Store at minimum ambient temperature of 45 degrees F and a maximum of 90 degrees F, in ventilated area, and as required by manufacturer's instructions.

1.07 FIELD CONDITIONS

A. Do not apply materials when surface and ambient temperatures are outside the paint product manufacturer's temperature ranges.

B. Follow manufacturer's recommended procedures for producing best results, including testing of substrates, moisture in substrates, and humidity and temperature limitations.

C. Provide lighting level of 80 ft candles measured mid-height at substrate surface.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Provide paints and finishes from the same manufacturer to the greatest extent possible.

1. If a single manufacturer cannot provide specified products, minor exceptions will be permitted provided approval by Architect is obtained using the specified procedures for substitutions.

B. Paints:

1. Base Manufacturer: Sherwin Williams: www.sherwin-williams.com.
2. Other Manufacturers: Approved products shall meet performance and physical characteristics of base manufacturer (basis of design) product including published ratio of solids by volume, plus or minus two percent.
3. Substitutions: See Section 01 6000 - Product Requirements.

2.02 PAINTS AND FINISHES - GENERAL

A. Paints and Finishes: Ready-mixed, unless required to be a field-catalyzed paint.

1. Provide paints and finishes of a soft paste consistency, capable of being readily and uniformly dispersed to a homogeneous coating, with good flow and brushing properties, and capable of drying or curing free of streaks or sags.
   a. Sprayed finish is preferred on all metal surfaces, and is required on the following surfaces:
      1) Metal doors and frames; prior to hardware installation.
2. Provide materials that are compatible with one another and the substrates indicated under conditions of service and application, as demonstrated by manufacturer based on testing and field experience.

3. Provide commercial grade paint systems by approved paint manufacturer for substrates not specifically covered under paint systems.
    a. Consult with Architect/Engineer/Designer for approval of additional products and systems. Provide quantifiable product information.
4. Supply each paint material in quantity required to complete entire project's work from a single production run.
5. Do not reduce, thin, or dilute paint or finishes or add materials unless such procedure is described explicitly in manufacturer's product instructions.

B. Primers: Where the manufacturer offers options on primers for a particular substrate, use primer categorized as "best" by the manufacturer.

C. Volatile Organic Compound (VOC) Content:

1. Provide paints and finishes that comply with the most stringent requirements specified in the following:
    a. 40 CFR 59, Subpart D--National Volatile Organic Compound Emission Standards for Architectural Coatings.
2. Determination of VOC Content: Testing and calculation in accordance with 40 CFR 59, Subpart D (EPA Method 24), exclusive of colorants added to a tint base and water added at project site; or other method acceptable to authorities having jurisdiction.

D. Sheens: Provide the sheens specified; where sheen is not specified, sheen will be selected later by Architect from the manufacturer's full line.

E. Colors: As indicated on drawings.

1. Where indicated or scheduled colors do not match the paint product lines indicated below it is anticipated that colors will be color matched; product lines below are intended to set a level of standard for the product lines used for each application.
2. Locations Not Indicated: Selection to be made by Architect after award of contract.
3. Extend colors to surface edges; colors may change at any edge as directed by Architect.

F. Coats: The number of coats specified, are based on manufacturer’s recommendations. Provide for additional coats, as necessary, for complete coverage and true color. Additional coats due to a lack of coverage shall be provided at no additional cost to the Owner. No exceptions.

G. Coverage: Do not stretch products beyond their recommended coverage rate nor install fewer coats than specified regardless of appearance after previous coats are applied. Thin product application may show surface imperfections or inconsistencies that would otherwise not be visible. Additional coats due to a lack of proper coverage shall be provided at no additional cost to the Owner. No exceptions.

2.03 PAINT SYSTEMS - EXTERIOR

A. Paint Product: **Pro Industrial Acrylic**

1. Primer: Prime and/or touch up as per Manufacturers recommended Specifications in accordance with specified Product.
2. Number of Paint Coats Over Primer: Two.
3. Types of Substrates:
   a. Steel.
4. Sheen: As scheduled on the drawings.
5. Location Types:
   a. Hollow metal doors and frames.
   b. Steel lintels and structural steel unless noted otherwise.
   c. Stair guardrails and handrails.
   d. Stair components other than guardrails and handrails.
   e. Other metals unless noted otherwise.

2.04 ACCESSORY MATERIALS

A. Accessory Materials: Provide primers, sealers, cleaning agents, cleaning cloths, sanding materials, and clean-up materials as required for final completion of painted surfaces.

B. Patching Material: Latex filler.

C. Fastener Head Cover Material: Latex filler.

PART 3 EXECUTION

3.01 EXAMINATION

A. Do not begin application of paints and finishes until substrates have been properly prepared.

B. Verify that surfaces are ready to receive work as instructed by the product manufacturer.

C. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

D. Test shop-applied primer for compatibility with subsequent cover materials.

E. Measure moisture content of surfaces using an electronic moisture meter. Do not apply finishes unless moisture content of surfaces are below the following maximums:

1. Masonry, Concrete, and Concrete Masonry Units: 12 percent.
2. Exterior Wood: 15 percent, measured in accordance with ASTM D4442.

3.02 PREPARATION

A. Clean surfaces thoroughly and correct defects prior to application.

B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

C. Remove or mask and/or protect all surfaces, appurtenances not affiliated with coating process, including but not limited to electrical plates, hardware, light fixture trim, escutcheons, and fittings, prior to preparing surfaces for finishing.

D. Seal surfaces that might cause bleed through or staining of topcoat.

E. Remove mildew from impervious surfaces by scrubbing with solution of tetra-sodium phosphate and bleach. Rinse with clean water and allow surface to dry.

F. Ferrous Metal:

1. Solvent clean according to SSPC-SP 1.
2. Shop-Primed Surfaces: Sand and scrape to remove loose primer and rust. Feather edges to make touch-up patches inconspicuous. Clean surfaces with solvent. Prime bare steel surfaces. Re-prime entire shop-primed item.
3. Painted Surfaces: Sand and scrape to remove loose primer and rust. Feather edges to make touch-up patches inconspicuous. Clean surfaces with solvent. Prime bare steel surfaces.

3.03 APPLICATION

A. Remove unfinished louvers, grilles, covers, and access panels on mechanical and electrical components and paint separately.

B. Apply products in accordance with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual".

C. Do not apply finishes to surfaces that are not dry. Allow applied coats to dry before next coat is applied.

D. Apply each coat to uniform appearance in thicknesses specified by manufacturer.

E. Painting shall be free from paint runs; no exceptions.

F. Vacuum clean surfaces of loose particles. Use tack cloth to remove dust and particles just prior to applying next coat.

G. Reinstall electrical cover plates, hardware, light fixture trim, escutcheons, and fittings removed prior to finishing.

3.04 CLEANING

A. Collect waste material that could constitute a fire hazard, place in closed metal containers, and remove daily from site.

3.05 PROTECTION

A. Protect finishes until completion of project.

B. Touch-up damaged finishes after Substantial Completion.

END OF SECTION

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SECTION 09 9123
INTERIOR PAINTING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Surface preparation.

B. Field application of paints.

C. Scope: Finish interior surfaces exposed to view, unless fully factory-finished and unless otherwise indicated.

1. Both sides and edges of plywood backboards for electrical and telecom equipment before installing equipment.
2. Exposed surfaces of primed and unprimed metal items in finished areas unless specifically indicated to not be painted.
3. Mechanical and Electrical:
   a. In finished areas, paint insulated and exposed pipes, conduit, boxes, insulated and exposed ducts, hangers, brackets, collars and supports, mechanical equipment, electrical equipment, and pipes, unless otherwise indicated.
   b. In finished areas, paint shop-primed items.

D. Do Not Paint or Finish the Following Items:

1. Items factory-finished unless otherwise indicated; materials and products having factory-applied primers are not considered factory finished.
2. Items indicated to receive other finishes.
3. Items indicated to remain unfinished.
4. Fire rating labels, equipment serial number and capacity labels, bar code labels, and operating parts of equipment.
5. Floors, unless specifically indicated.
6. Glass.
7. Concealed pipes, ducts, and conduits.

1.02 RELATED REQUIREMENTS

A. Section 09 2116 - Gypsum Board Assemblies: Joint and surface treatment prior to painting.

1.03 DEFINITIONS

A. Comply with ASTM D16 for interpretation of terms used in this section.

1.04 REFERENCE STANDARDS

A. 40 CFR 59, Subpart D - National Volatile Organic Compound Emission Standards for Architectural Coatings; U.S. Environmental Protection Agency; Current Edition.

B. ASTM D16 - Standard Terminology for Paint, Related Coatings, Materials, and Applications; 2024.

C. MPI (APSM) - Master Painters Institute Architectural Painting Specification Manual; Current Edition.

D. SSPC-SP 1 - Solvent Cleaning; 2015, with Editorial Revision (2016).

1.05 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Product Data: Provide complete list of products to be used, with the following information for each:

1. Manufacturer's name, product name and/or catalog number, and general product category (e.g., "alkyd enamel").
2. MPI product number (e.g., MPI #47).
3. Cross-reference to specified paint system products to be used in project; include description of each system.
4. Manufacturer's installation instructions.
5. If proposal of substitutions is allowed under submittal procedures, explanation of substitutions proposed.

C. Samples: Submit three paper "draw down" samples, 8-1/2 by 11 inches in size, illustrating range of colors available for each finishing product specified.

1. Where sheen is specified, submit samples in only that sheen.
2. Where sheen is not specified, discuss sheen options with Architect before preparing samples, to eliminate sheens not required.
3. Allow 15 days for approval process, after receipt of complete samples by Architect.
4. Paint color submittals will not be considered until color submittals for major materials not to be painted, such as factory finished items, have been approved.

D. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.

1. See Section 01 6000 - Product Requirements, for additional provisions.
2. Do not provide or leave extra paint materials for the Owner.
3. Do provide product info, color names, and installation locations for all products and colors. Information shall be included in the Operation and Maintenance Manual.

1.06 QUALITY ASSURANCE

A. Applicator Qualifications: Company specializing in performing the type of work specified with minimum five years documented experience.

1.07 MOCK-UP

A. See Section 01 4000 - Quality Requirements, for general requirements for mock-up.

B. Contractor shall provide mock-up on site of each specified interior wall/door/trim color for Owner acceptance.

1.08 DELIVERY, STORAGE, AND HANDLING

A. Deliver products to site in sealed and labeled containers; inspect to verify acceptability.

B. Container Label: Include manufacturer's name, type of paint, brand name, lot number, brand code, coverage, surface preparation, drying time, cleanup requirements, color designation, and instructions for mixing and reducing.

C. Paint Materials: Store at minimum ambient temperature of 45 degrees F and a maximum of 90 degrees F, in ventilated area, and as required by manufacturer's instructions.

1.09 FIELD CONDITIONS

A. Do not apply materials when surface and ambient temperatures are outside the temperature ranges required by the paint product manufacturer.

B. Follow manufacturer's recommended procedures for producing best results, including testing of substrates, moisture in substrates, and humidity and temperature limitations.

C. Provide lighting level of 80 fc measured mid-height at substrate surface.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Provide paints and finishes from the same manufacturer to the greatest extent possible.

1. If a single manufacturer cannot provide specified products; minor exceptions will be permitted provided approval by Architect is obtained using the specified procedures for substitutions.

B. Paints:

1. Base Manufacturer: Sherwin Williams: www.sherwin-williams.com.
2. Other Manufacturers: Approved products shall meet performance and physical characteristics of base manufacturer (basis of design) product including published ratio of solids by volume, plus or minus two percent.
3. Substitutions: See Section 01 6000 - Product Requirements.

2.02 PAINTS AND FINISHES - GENERAL

A. Paints and Finishes: Ready-mixed, unless intended to be a field-catalyzed paint.

1. Provide paints and finishes of a soft paste consistency, capable of being readily and uniformly dispersed to a homogeneous coating, with good flow and brushing properties, and capable of drying or curing free of streaks or sags.
    a. Spayed finish; is preferred on all metal surfaces; is required on the following surfaces:
        1) Metal doors and frames; prior to hardware installation.
2. Provide materials that are compatible with one another and the substrates indicated under conditions of service and application, as demonstrated by manufacturer based on testing and field experience.
3. Provide commercial grade paint systems by approved paint manufacturer for substrates not specifically covered under paint systems.
    a. Consult with Architect/Engineer/Designer for approval of additional products and systems. Provide quantifiable product information.
4. Supply each paint material in quantity required to complete entire project's work from a single production run.
5. Do not reduce, thin, or dilute paint or finishes or add materials unless such procedure is specifically described in manufacturer's product instructions.

B. Primers: Where the manufacturer offers options on primers for a particular substrate, use primer categorized as "best" by the manufacturer.

C. Volatile Organic Compound (VOC) Content:

1. Provide paints and finishes that comply with the most stringent requirements specified in the following:
    a. 40 CFR 59, Subpart D--National Volatile Organic Compound Emission Standards for Architectural Coatings.
2. Determination of VOC Content: Testing and calculation in accordance with 40 CFR 59, Subpart D (EPA Method 24), exclusive of colorants added to a tint base and water added at project site; or other method acceptable to authorities having jurisdiction.

D. Sheens: Provide the sheens specified; where sheen is not specified, sheen will be selected later by Architect from the manufacturer's full line.

E. Colors: As indicated on drawings.

1. Where indicated or scheduled colors do not match the paint product lines indicated below it is anticipated that colors will be color matched; product lines below are intended to set a level of standard for the product lines used for each application.
2. Locations Not Indicated: Selection to be made by Architect after award of contract.
3. Extend colors to surface edges; colors may change at any edge as directed by Architect.
4. In finished areas, finish pipes, ducts, conduit, and equipment the same color as the wall/ceiling under which they are mounted.

F. Coats: The number of coats specified, are based on manufacturer’s recommendations. Provide for additional coats, as necessary, for complete coverage and true color. Additional coats due to a lack of coverage shall be provided at no additional cost to the Owner. No exceptions.

G. Coverage: Do not stretch products beyond their recommended coverage rate nor install fewer coats than specified regardless of appearance after previous coats are applied. Thin product application may show surface imperfections or inconsistencies that would otherwise not be visible. Additional coats due to a lack of proper coverage shall be provided at no additional cost to the Owner. No exceptions.

2.03 PAINT SYSTEMS - INTERIOR

A. Paint Product: **Pro Industrial Pre-Catalyzed Waterbased Epoxy (Single-Component)**

1. Primer: Prime and/or touch up as per Manufacturers recommended Specifications in accordance with specified Product.
2. Number of Paint Coats Over Primer: Two.
3. Types of Substrates:
   a. Steel.
4. Sheen: As scheduled on the drawings.
5. Location Types:
   a. Hollow metal doors and frames.
   b. Steel lintels and structural steel unless noted otherwise.
   c. Stair components.
   d. Other metals unless noted otherwise.

B. Paint Product: **Harmony Interior Acrylic**

1. Primer: One coat primer sealer in all locations; primer shall be installed under paint products even if product is considered self-priming.
2. Number of Paint Coats Over Primer: Two.
3. Types of Substrates:
   a. Gypsum board.
4. Sheen: As scheduled on the drawings.
5. Locations Types:
   a. Walls unless noted otherwise.
   b. Ceilings unless noted otherwise.
   c. Soffits unless noted otherwise.
   d. Bulkheads unless noted otherwise.

2.04 ACCESSORY MATERIALS

A. Accessory Materials: Provide primers, sealers, cleaning agents, cleaning cloths, sanding materials, and clean-up materials as required for final completion of painted surfaces.

B. Patching Material: Latex filler.

C. Fastener Head Cover Material: Latex filler.

PART 3 EXECUTION

3.01 EXAMINATION

A. Do not begin application of paints and finishes until substrates have been adequately prepared.

B. Verify that surfaces are ready to receive work as instructed by the product manufacturer.

C. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

D. Test shop-applied primer for compatibility with subsequent cover materials.

E. Measure moisture content of surfaces using an electronic moisture meter. Do not apply finishes unless moisture content of surfaces is below the following maximums:

1. Gypsum Wallboard: 12 percent.

3.02 PREPARATION

A. Clean surfaces thoroughly and correct defects prior to application.

B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

C. Remove or mask and/or protect all surfaces, appurtenances not affiliated with coating process, including but not limited to electrical plates, hardware, light fixture trim, escutcheons, and fittings, prior to preparing surfaces for finishing.

D. Seal surfaces that might cause bleed through or staining of topcoat.

E. Gypsum Board: Fill minor defects with filler compound. Spot prime defects after repair.

F. Ferrous Metal:

1. Solvent clean according to SSPC-SP 1.
2. Shop-Primed Surfaces: Sand and scrape to remove loose primer and rust. Feather edges to make touch-up patches inconspicuous. Clean surfaces with solvent. Prime bare steel surfaces. Re-prime entire shop-primed item.

3.03 APPLICATION

A. Remove unfinished louvers, grilles, covers, and access panels on mechanical and electrical components and paint separately.

B. Apply products in accordance with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual".

C. Do not apply finishes to surfaces that are not dry. Allow applied coats to dry before next coat is applied.

D. Apply each coat to uniform appearance in thicknesses specified by manufacturer.

E. Painting shall be free from paint runs; no exceptions.

F. Vacuum clean surfaces of loose particles. Use tack cloth to remove dust and particles just prior to applying next coat.

G. Reinstall electrical cover plates, hardware, light fixture trim, escutcheons, and fittings removed prior to finishing.

3.04 CLEANING

A. Collect waste material that could constitute a fire hazard, place in closed metal containers, and remove daily from site.

B. Clean painting equipment only in Contractor-furnished receptacles. Collect and dispose of paint waste, solvents, and rinse water in accordance with applicable regulations. Do not discharge paint waste into sanitary sewers, storm sewers, or onto the ground.

3.05 PROTECTION

A. All data cabling (including concealed or above ceilings) shall be protected from drywall mud or paint overspray or installed after drywall finishing and painting is completed. Paint or drywall mud on data cabling voids the cable manufacturer’s warranty. Any data cabling with paint or drywall mud on them shall be replaced by the contractor at no additional cost to the Owner.

B. Protect existing equipment, devices, and components indicated to remain from paint, overspray, and other damage during painting operations.

C. Protect finishes until completion of project.

D. Touch-up damaged finishes after Substantial Completion.

END OF SECTION

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SECTION 10 1400
SIGNAGE

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Room and door signs.

1.02 REFERENCE STANDARDS

A. 36 CFR 1191 - Americans with Disabilities Act (ADA) Accessibility Guidelines for Buildings and Facilities; Architectural Barriers Act (ABA) Accessibility Guidelines; current edition.

B. ADA Standards - 2010 ADA Standards for Accessible Design; 2010.

C. ICC A117.1 - Accessible and Usable Buildings and Facilities; 2017.

1.03 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Product Data: Manufacturer's printed product literature for each type of sign, indicating sign styles, font, foreground and background colors, locations, overall dimensions of each sign.

C. Signage Schedule: Provide information sufficient to completely define each sign for fabrication, including room number, room name, other text to be applied, sign and letter sizes, fonts, and colors.

1. When room numbers to appear on signs differ from those on drawings, include the drawing room number on schedule.
2. When content of signs is indicated to be determined later, request such information from Owner through Architect at least 2 months prior to start of fabrication; upon request, submit preliminary schedule.
3. Submit for approval by Owner through Architect prior to fabrication.
4. Include sign type, text copy, quantity, furnishing/installation responsibility, and installation notes for each sign.

D. Selection Samples: Where colors are not specified, submit two sets of color selection charts or chips.

E. Manufacturer's Qualification Statement.

1.04 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years of documented experience.

1.05 DELIVERY, STORAGE, AND HANDLING

A. Package signs as required to prevent damage before installation.

B. Store tape adhesive at normal room temperature.

1.06 FIELD CONDITIONS

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

B. Maintain this minimum temperature during and after installation of signs.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Sign Manufacturers/Suppliers:

1. Accent Signage Systems, Inc: www.accentsignage.com.
2. ADASigns: www.adasigns.com.
3. American Marking, Inc: www.americanmarkinginc.com.
4. Architectural Graphics, Inc.: www.agisign.com.
5. ASI Sign Systems: www.asisignage.com.
6. Best Sign Systems, Inc: www.bestsigns.com.
7. Compliancesigns: www.compliancesigns.com.
8. Cosco Industries (ADA signs): www.coscoarchitecturalsigns.com/#sle.
9. Cosco Industries (non-ADA signs): www.coscoarchitecturalsigns.com/#sle.
10. Gemini: www.geminimade.com.
11. Indigo Signworks: www.indigosignworks.com.
12. Inpro: www.inprocorp.com/#sle.
13. Latitude Signage and Design: www.latitudesignage.com.
14. Mankato Sign Service.
15. Mohawk Sign Systems, Inc: www.mohawksign.com.
16. M&M Signs.
17. Schwaab, Inc: www.schwaab.com.
18. Seton Identification Products: www.seton.com/aec.
19. Sign Pro.
20. Substitutions: See Section 01 6000 - Product Requirements.

2.02 SIGNAGE APPLICATIONS

A. Accessibility Compliance: Signs are required to comply with ADA Standards and ICC A117.1 and applicable building codes, unless otherwise indicated; in the event of conflicting requirements, comply with the most comprehensive and specific requirements.

B. Room and Doors Signs; Accessibility, Service Rooms, and Other Signs Where Indicated:

1. Sign Type: Flat signs with engraved or applied panel media as specified.
2. Provide "tactile" signage, with letters raised minimum 1/32 inch and Grade II braille.
3. Character Height: 1 inch unless otherwise indicated or required by code.
4. Sign Height: 2 inches unless otherwise indicated or required by code.
    a. Fire Riser and Fire Control Rooms (When Applicable): 4 inches in height with a 1/4 inch stroke; sans serif font in contrasting colors.
5. Service Rooms: Identify with the room names and numbers shown on the drawings.
    a. Service Rooms Shall Include:
        1) Fire Riser and Control Rooms.
        2) Mechanical and Electrical Rooms.
6. Rest Rooms: Identify with pictograms, the names "RESTROOM", "MEN", and "WOMEN", room numbers shown on the drawings, and braille.
7. Other Signs: Identify with room names, room numbers, maximum occupancy signs, and other regulatory signage as indicated.

2.03 SIGN TYPES

A. Interior Flat Signs: Signage media without frame, plastic.

1. Edges: Square.
2. Corners: Square.
3. Wall Mounting of One-Sided Signs: Tape adhesive.

B. Exterior Flat Signs: Signage media without frame, .040 rust-free aluminum.

1. Edges: Square.
2. Corners: Square.
3. Wall Mounting of One-Sided Signs: Tape adhesive.

C. Color and Font: Unless otherwise indicated or required by code:

1. Character Font: Helvetica, Arial, or other sans serif font.
2. Character Case: Upper case only.
3. Background Color: As scheduled.
4. Character Color: Contrasting color.

2.04 TACTILE SIGNAGE MEDIA

A. Engraved Panels: Laminated colored plastic; engraved through face to expose core as background color:

1. Total Thickness: 1/8 inch.

B. Applied Character Panels: Acrylic plastic base, with applied acrylic plastic letters and braille.

1. Total Thickness: 1/8 inch.
2. Letter Thickness: 1/8 inch.
3. Letter Edges: Square.

C. Cutout Characters: Acrylic plastic base, with applied acrylic plastic letters and braille.

1. Total Thickness: 1/8 inch.
2. Letter Thickness: 1/8 inch.
3. Letter Edges: Square.

2.05 ACCESSORIES

A. Concealed Screws: Stainless steel, galvanized steel, chrome plated, or other non-corroding metal.

B. Tape Adhesive: Double sided tape, permanent adhesive.

C. Provide sign backers at all signs mounted to glazing, matching the sign manufacturer's recommendations and the approved sign design.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that substrate surfaces are ready to receive work.

3.02 INSTALLATION

A. Install in accordance with manufacturer's instructions.

B. Install neatly, with horizontal edges level.

C. Protect from damage until Date of Substantial Completion; repair or replace damaged items.

END OF SECTION

SECTION 10 2113.19
PLASTIC TOILET COMPARTMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Solid plastic toilet compartments.

B. Urinal screens.

C. Locker room benches.

1.02 REFERENCE STANDARDS

A. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2026a.

B. NFPA 286 - Standard Methods of Fire Tests for Evaluating Contribution of Wall and Ceiling Interior Finish to Room Fire Growth; 2024.

1.03 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Product Data: Provide data on panel construction, hardware, and accessories.

C. Shop Drawings: Indicate partition plan, elevation views, dimensions, details of wall and floor supports, door swings.

D. Samples: Submit two samples of partition panels, 4 by 4 inch in size illustrating panel finish, color, and sheen.

E. Manufacturer's Installation Instructions: Indicate special procedures.

1.04 WARRANTIES

A. Provide manufacturer’s 25 year warranty against breakage, corrosion, and delamination under normal conditions.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Basis of Design: Scranton Products, Hiny Hiders: www.scrantonproducts.com.

1. All American Metal Corp - AAMCO: www.allamericanmetal.com/#sle.
2. ASI Accurate Partitions: www.asi-accuratepartitions.com/#sle.

3. ASI Global Partitions: www.asi-globalpartitions.com/#sle.
4. General Partitions Mfg. Corp: www.generalpartitions.com/#sle.
5. Hadrian: www.hadrian-inc.com/#sle.
6. Metpar Corp: www.metpar.com/#sle.
7. Partition Systems International of South Carolina: www.psisc.com/#sle.
8. Scranton Products: www.scrantonproducts.com/#sle.
9. Substitutions: Not permitted.

2.02 PLASTIC TOILET COMPARTMENTS

A. Solid Plastic Toilet Compartments: Factory fabricated doors, pilasters, and divider panels made of solid molded high density polyethylene (HDPE), tested in accordance with ASTM E84 and NFPA 286; floor-mounted headrail-braced.

1. Color: Single color as selected from the manufacturers full range of colors, available color options shall be equivalent to those provided by manufacturer indicated as Basis of Design.

B. Doors:

1. Thickness: 1 inch.
2. Width: 24 inch.
3. Width for Ambulatory Use: 32 inch, out-swinging and self-closing.
4. Width for Handicapped Use: 36 inch, out-swinging.
5. Height: 55 inch.

C. Panels:

1. Thickness: 1 inch.
2. Height: 55 inch.

D. Pilasters:

1. Thickness: 1 inch.
2. Width: As required to fit space; minimum 3 inch.

E. Screens: Without doors; to match compartments; mounted to wall with continuous panel brackets.

F. Urinal Screens: Wall mounted with continuous satin stainless steel or aluminum angle brackets each side; through bolt with tamper proof type fasteners.

G. Crossbracing for ceiling-hung partitions: Provide crossbracing of the same materials as other panel components, minimum 4 inch tall, fastened at interior side of partitions. Install crossbracing.

2.03 LOCKER ROOM BENCHES

A. Basis of Design: As indicated on Drawings.

B. Bench Top: Hardwood; size as indicated.

C. Pedestals: Stainless steel.

D. Anchors: Stainless steel sidewalk bolts.

2.04 ACCESSORIES

A. Pilaster Shoes: Stainless steel, satin finish, 3 inches high; concealing floor fastenings.

B. Head Rails: Extruded aluminum, anti-grip profile.

1. In addition to above partition doors and pilasters provide head rails above partition end walls and any open perimeter edge of the partitions.

C. Wall and Pilaster Brackets: Satin stainless steel or aluminum when stainless steel is not offered; continuous type.

D. Strikes: Continuous type, aluminum.

E. Latches: Stainless steel or aluminum when stainless steel is not offered.

F. Attachments, Screws, and Bolts: Stainless steel, tamper proof type.

1. For attaching panels and pilasters to brackets: Through-bolts and nuts; tamper proof.
2. Attach all components to solid blocking or structural substrate.

G. Hardware: Satin stainless steel:

1. Pivot hinges, gravity type, adjustable for door close positioning; two per door.
   a. Wrap-Around Hinges: 8 inches and fabricated from heavy-duty stainless steel or extruded aluminum when stainless steel is not provided. Hinges are through-bolted to pilasters and doors with stainless steel tamper resistant Torx head hex bolts. Hinges operate with field adjustable nylon cams. Cams can be field set in 30, 60 or 90 degree increments.
2. Door Latch: Slide type .
3. Door strike and keeper with rubber bumper; mounted on pilaster in alignment with door latch.
4. Coat hook with rubber bumper; one per compartment, mounted on door.
5. Provide door pull for outswinging doors.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that field measurements are as indicated.

B. Verify correct spacing of and between plumbing fixtures.

C. Verify correct location of built-in framing, anchorage, and bracing.

3.02 INSTALLATION

A. Install partitions rigid, straight, plumb, and level manor, with plastic laid out as shown on shop drawings and manufacturer's installation instructions.

B. Maintain 3/8 inch to 1/2 inch space between wall and panels and between wall and end pilasters.

C. Attach panel brackets securely to walls using anchor devices.

D. Attach panels and pilasters to brackets. Locate head rail joints at pilaster center lines.

E. Field touch-up of scratches or damaged finish will not be permitted. Replace damaged or scratched materials with new materials.

3.03 TOLERANCES

A. Maximum Variation From True Position: 1/4 inch.

B. Maximum Variation From Plumb: 1/8 inch.

3.04 ADJUSTING

A. Adjust and align hardware to uniform clearance at vertical edge of doors, not exceeding 3/16 inch.

B. Adjust hinges to position doors in partial opening position when unlatched. Return out-swinging doors to closed position.

C. Adjust adjacent components for consistency of line or plane.

END OF SECTION

SECTION 10 2800
TOILET, BATH, AND LAUNDRY ACCESSORIES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Commercial toilet accessories.

B. Electric hand/hair dryers.

1.02 REFERENCE STANDARDS

A. ASTM B456 - Standard Specification for Electrodeposited Coatings of Copper Plus Nickel Plus Chromium and Nickel Plus Chromium; 2017 (Reapproved 2022).

1.03 ADMINISTRATIVE REQUIREMENTS

A. Coordinate the work with the placement of internal wall reinforcement, concealed ceiling supports, and reinforcement of toilet partitions to receive anchor attachments.

1.04 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Product Data: Submit data on accessories describing size, finish, details of function, and attachment methods.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Commercial Toilet, Shower, and Bath Accessories:

1. Georgia-Pacific Professional: www.gppro.com/#sle.
2. Bobrick Washroom Equipment, Inc: www.bobrick.com.
3. Spartan Chemical Company: www.spartanchemical.com.
4. Substitutions: Section 01 6000 - Product Requirements.

B. Provide products of each category type by single manufacturer.

2.02 MATERIALS

A. Accessories - General: Shop assembled, free of dents and scratches and packaged complete with anchors and fittings, steel anchor plates, adapters, and anchor components for installation.

2.03 FINISHES

A. Stainless Steel: Satin finish, unless otherwise noted.

B. Chrome/Nickel Plating: ASTM B456, SC 2, polished finish, unless otherwise noted.

2.04 COMMERCIAL TOILET ACCESSORIES

A. Existing Mirrors: Existing mirrors indicated on Drawings to remain. Protect from damage during construction.

B. Toilet Paper Dispenser: Surface-mounted, double-roll, unrestricted-delivery type; heavy-duty cast aluminum, satin matte silver-gray finish; capacity for two rolls:

1. Product:
   a. Model 0264-1A by American Specialties: www.americanspecialties.com.
   b. Substitutions: Section 01 6000 - Product Requirements.

C. Grab Bars: Stainless steel, nonslip grasping surface.

1. Standard Duty Grab Bars:
   a. Push/Pull Point Load: 250 pound-force, minimum.
   b. Dimensions: 1-1/2 inch outside diameter, minimum 0.05 inch 0.05 inch wall thickness, concealed flange mounting, 1-1/2 inch 1-1/2 inch clearance between wall and inside of grab bar.
   c. Length and Configuration: As indicated on drawings.
   d. Products:
      1) B-6806 Series manufactured by Bobrick.
      2) Substitutions: Section 01 6000 - Product Requirements.

D. Sanitary Napkin Disposal Unit: Stainless steel, surface-mounted, self-closing door, locking panel with full-length stainless steel piano-type hinge, removable receptacle.

1. Products:
   a. B-254 manufactured by Bobrick.
   b. Substitutions: Section 01 6000 - Product Requirements.

2.05 ELECTRIC HAND/HAIR DRYERS

A. Electric Hand Dryers: Traditional fan-in-case type, with downward fixed nozzle.

1. Operation: Automatic, sensor-operated on and off.
2. Mounting: Wall-mounted - surface.
3. Cover: Stainless steel with brushed finish.
   a. Tamper-resistant screw attachment of cover to mounting plate.
4. Air Velocity: 17,500 linear feet per minute, minimum, at full power.
5. Heater: 500 W, minimum, at full power.
6. Fan/Heater Control: Field adjustable down to approximately half-speed with corresponding reduction in heat output.
7. Total Wattage: 1400 W, maximum.
8. Runtime: Automatic shut-off after 60 seconds of continous air.
9. Sound Level: 80 db, maximum.

10. Exit Air Temperature: 113 deg. F, minimum.
11. Electric Hand Dryer Products:
    a. Excel Dryer Inc; XLERATOR XL: www.exceldryer.com/#sle.
    b. Substitutions: Section 01 6000 - Product Requirements.

2.06 OTHER MISCELLANEOUS ROOM ACCESSORIES

A. Door Mounted Coat Hook:

1. Product: B-6717 manufactured by Bobrick.
2. Location: Provide one hook at single use restroom doors.
3. Substitutions: See Section 01 6000 - Product Requirements.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify existing conditions before starting work.

B. Verify exact location of accessories for installation.

C. For electrically-operated accessories, verify that electrical power connections are ready and in the correct locations.

D. Verify that field measurements are as indicated on drawings.

3.02 INSTALLATION

A. Install accessories in accordance with manufacturers' instructions in locations indicated on drawings.

B. Install plumb and level, securely and rigidly anchored to substrate.

C. Mounting Heights: As required by accessibility regulations, unless otherwise indicated.

3.03 PROTECTION

A. Protect installed accessories from damage due to subsequent construction operations.

END OF SECTION

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SECTION 12 3600
COUNTERTOPS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Countertops for architectural cabinet work.

1.02 REFERENCE STANDARDS

A. ISFA 2-01 - Classification and Standards for Solid Surfacing Material; 2013.

B. NEMA LD 3 - High-Pressure Decorative Laminates; 2005.

C. NSI (DSDM) - Dimensional Stone Design Manual, Version VIII; 2016.

1.03 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements for submittal procedures.

B. Product Data: Manufacturer's data sheets on each product to be used, including:

1. Preparation instructions and recommendations.
2. Storage and handling requirements and recommendations.
3. Specimen warranty.

C. Shop Drawings: Complete details of materials and installation ; combine with shop drawings of cabinets and casework specified in other sections.

1. Indicate layout of countertop supports brackets at all locations. Include attachment details to walls and counters. Final bracket layout shall be subject to Architect approval.
2. For bracket layout unsupported spans of countertops shall not exceed 48 inches. Wall hung or cantilever spans shall resist a 50 lbs per square foot load and not deflect in excess of 1/4 inch in any span or portion thereof.

D. Selection Samples: For each finish product specified, color chips representing manufacturer's full range of available colors and patterns.

E. Test Reports: Chemical resistance testing, showing compliance with specified requirements.

1.04 QUALITY ASSURANCE

A. Installer Qualifications: Company specializing in performing work of the type specified in this section, with not less than three years of documented experience.

1.05 DELIVERY, STORAGE, AND HANDLING

A. Store products in manufacturer's unopened packaging until ready for installation.

B. Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction.

1.06 FIELD CONDITIONS

A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

PART 2 PRODUCTS

2.01 COUNTERTOPS

A. Solid Surfacing Countertops: Solid surfacing sheet or plastic resin casting self-supporting over structural members.

1. Flat Sheet Thickness: 1/2 inch, minimum, unless otherwise indicated.
2. Solid Surfacing Sheet and Plastic Resin Castings: Complying with ISFA 2-01 and NEMA LD 3; acrylic or polyester resin, mineral filler, and pigments; homogenous, non-porous and capable of being worked and repaired using standard woodworking tools; no surface coating; color and pattern consistent throughout thickness.
    a. Manufacturers:
        1) Corian Solid Surface, a division of DuPont, Inc.: www.corian.com/#sle.
        2) Substitutions: See Section 01 6000 - Product Requirements.
    b. Finish on Exposed Surfaces: Semi-gloss, gloss rating of 25 to 50.
    c. Color and Pattern: To be selected from manufacturer's full line.
3. Other Components Thickness: 1/2 inch, minimum.
4. Exposed Edge Treatment: Built up to minimum 1-1/4 inch thick; square edge; use marine edge at sinks.
5. Back and End Splashes: Same sheet material, radiused top; minimum 4 inches high, unless otherwise indicated. Provide where indicated on Drawings.

2.02 MATERIALS

A. Counter Support Brackets:

1. Counter support brackets unless noted otherwise shall be 1/8” steel, reversible brackets as manufactured by A&M Hardware, Inc., 1165 Strickler Road, Mount Joy, PA 17552. 888-647-0200. www.aandmhardware.com.
2. Sizes shall be selected from the manufacturer's standards:
    a. 24”x29” (Paint/Primer Finish Only)
    b. 24”x24” (Paint/Primer Finish Only)
    c. 18”x24” (Available in S.S.)
    d. 15”x21” (Available in S.S.)
    e. 12”x18” (Paint/Primer Finish Only)

f. 8”x12” (Available in S.S.)
g. 5"x8" (Paint/Primer Finish Only)

3. Brackets finish shall be standard texture powder coat in black, white, gray or almond.
   a. To be selected by Architect.
4. Provide 8" Black Oak Park Bracket by Knape & Vogt Mfg Co Model 200OP BLK 8 at all locations indicted on the drawings.
5. Support counters at each end and in the center at a minimum; counter fabricated to determine final bracket quantity, spacing, and locations.
6. Other equivalent brackets are acceptable.

B. Concealed Counter Support Brackets:

1. Counter Support Brackets: Provide Concealed Brackets by A&M Hardware, Inc., 1165 Strickler Road, Mount Joy, PA 17552. 888-647-0200. www.aandmhardware.com or equivalent.
2. Federal Brace: www.federalbrace.com or equivalent.
3. Bracket Length: Provide maximum allowed length at each location; brackets shall include upper extension at all location where wall extends above counter.
4. Bracket finish shall be standard texture powder coat in black, white, gray or almond.
5. Attachment Hardware: Manufacturers standard.
6. Other equivalent brackets are acceptable.

C. Concealed Floating Shelf Support Rods:

1. Federal Brace: www.federalbrace.com or equivalent.
   a. Other equivalent brackets are acceptable.

D. Counter Support Brackets with Skirt/Apron Support:

1. ADA Vanity Bracket by A&M Hardware, Inc, or equivalent.
2. Stone Pro ADA Compliant Countertop Support #3743 by Braxton-Bragg, Rakks EHV-Vanity Supports, or equivalent.
3. Federal Brace: www.federalbrace.com or equivalent.
   a. Other equivalent brackets are acceptable.
4. Fasteners: Provide Flat head 1/4" - 20 thread with 4 mm hex drive connector bolts in chrome, black, or oil rubbed bronze. Color as selected by Architect.

E. Counter Support Brackets; Flat Brackets:

1. Centerline Brackets: Countertop Island Support Brackets.
2. Speed Brace Stealth & Stealth HD; and Panel Clips.

F. Steel Support Posts: Manufacturer's standard with factory finish and flush fasteners at base flange. Color and sheen as selected by the Architect from manufacturer's full range of factory applied finishes.

G. Adhesives: Chemical resistant waterproof adhesive as recommended by manufacturer of materials being joined.

H. Joint Sealant: Mildew-resistant silicone sealant, clear.

2.03 FABRICATION

A. Fabricate tops and splashes in the largest sections practicable, with top surface of joints flush.

1. Join lengths of tops using best method recommended by manufacturer.
2. Fabricate to overhang fronts and ends of cabinets 1 inch except where top butts against cabinet or wall.
3. Prepare all cutouts accurately to size; replace tops having improperly dimensioned or unnecessary cutouts or fixture holes.

B. Provide back/end splash wherever counter edge abuts vertical surface unless otherwise indicated.

1. Secure to countertop with concealed fasteners and with contact surfaces set in waterproof glue.
2. Height: 4 inches, unless otherwise indicated.

PART 3 EXECUTION

3.01 EXAMINATION

A. Do not begin installation until substrates have been properly prepared.

B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

C. Verify that wall surfaces have been finished and mechanical and electrical services and outlets are installed in proper locations.

3.02 PREPARATION

A. Clean surfaces thoroughly prior to installation.

B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.03 INSTALLATION

A. Securely attach countertops to cabinets using concealed fasteners. Make flat surfaces level; shim where required.

B. Attach wood countertops using screws with minimum penetration into substrate board of 5/8 inch.

C. Seal the exposed front underside edge of plastic laminate countertops with clear solvent based polyurethane at all locations; or wrap with plastic laminate back to face of casework below.

D. Seal joint between back/end splashes and vertical surfaces.

3.04 TOLERANCES

A. Variation From Horizontal: 1/8 inch in 10 feet, maximum.

B. Offset From Wall, Countertops: 1/8 inch maximum; 1/16 inch minimum.

C. Field Joints: 1/8 inch wide, maximum.

3.05 CLEANING

A. Clean countertops surfaces thoroughly.

3.06 PROTECTION

A. Protect installed products until completion of project.

B. Touch-up, repair or replace damaged products before Date of Substantial Completion.

END OF SECTION

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SECTION 22 0010
BASIC MECHANICAL PLUMBING REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Basic Mechanical Plumbing Requirements specifically applicable to Division 22 in addition to Division 1 - General Requirements.

1.02 SCOPE OF WORK

A. The Mechanical Plumbing Contract shall also include furnishing and installing a complete plumbing system for the building remodel/addition and all other related work as called for under the specifications and shown on plans.

1.03 WORK INCLUDED

A. The Mechanical Plumbing Contract shall include all work under the listed Division 22 of the Specifications Index and all related Mechanical work as shown on the Drawings for the project.

B. A Complete table of Mechanical Reference Symbols is shown on the plans.

C. Under this Contract the Mechanical Contractor shall furnish the Owner with two 3-ring binders of all pertinent systems related documents. Submit manuals to the Engineer for his review. The Engineer will then turn books over to the Owner. The books shall contain the following items:

1. Shop drawings on all major equipment.
2. Operating Instructions for all major equipment.
3. Maintenance Instructions for all major equipment.
4. Wiring diagrams for all equipment.
5. Test and Balance Reports.

D. The Mechanical Contractor is responsible for contacting the utility companies and coordinating the water, sewer and natural gas connections for the building service. Include all costs in bid.

E. The Mechanical installation to be made under Divisions 22 is set up for contract bidding as follows:

1. Mechanical Plumbing Contractor is a sub-contractor to the General Contractor.
   a. The Mechanical contractor is responsible for own equipment, such as cranes, lifts, etc. in order to provide a complete installation of mechanical systems.
   b. The Mechanical contractor shall be a sub-contractor to the General Contractor and shall include in his bid, prices from sub-contractors for control wiring, and other trades necessary to complete the entire job.

1.04 SPECIFICATIONS COMPLIANCE

A. The requirements of these specifications shall be complied with in every respect. Therefore, it shall be absolutely mandatory that the job foreman, all lead mechanics, subcontractors and their foreman have completely studied these specifications, be completely knowledgeable as to their entire contents, and maintain a copy at the job-site. Failure to comply with this requirement will be reason to presume the mechanic or subcontractor is not in responsible charge of his work due to ignorance of job requirements, and will be reason for the owner to require dismissal and replacement with approved personnel. Every foreman and lead mechanic shall be provided with a complete copy of this specification.

1.05 INCONSISTENCIES

A. If there is an inconsistency in the quality and/or quantity of Work required by the Contract Documents, either the greater quality and/or quantity of Work indicated shall be provided in accordance with the Engineer/Architect's interpretation without change in the contract sum.

1.06 WORK NOT INCLUDED

A. The following work is not included as part of the Contract.

1. The removal and storage of any equipment in the building required to be moved or relocated during the construction process.

1.07 CODES, FEES AND LATERAL COSTS

A. The Plumbing Installation shall meet all applicable local, state and federal codes and standards.

B. All permits necessary for a complete plumbing installation shall be paid for by this Contractor.

C. This contractor shall contact the local utilities for gas, water, sanitary and storm sewers, and include in their bid the any costs associated with service installation charges of the utility(s).

D. Except in those municipalities which provide state- approved electrical inspection, all installation of electrical equipment wiring shall be inspected by the State Board of Electricity. Allowance shall be made in the bid and contract for the cost of such inspection.

1. Fees for such inspection will be charged in accordance with the rules and regulations of the State Board of Electricity. Evidence of payment of fees shall be provided by the Contractor with his Request for Payment.

1.08 REFERENCES

A. All equipment, piping, etc., shall be new and shall be installed to meet the approval of the following additional ordinances: ASME Rules for Pressure Tanks, National Board of Fire Underwriter's Rules, American Waterworks and the American Gas Association.

1.09 SUBMITTALS

A. Submit under provisions of Division 01 3000.

B. Submit shop drawings and product data grouped to include complete submittals of related systems, products, and accessories in a single submittal.

C. All documents shall be submitted in .pdf format unless pre-approved by Engineer.

D. The contractor shall not use any equipment or materials that does not have the engineer's stamped approval.

E. Mark dimensions and values in units to match those specified.

1.10 PROJECT/SITE CONDITIONS

A. Install Work in locations shown on Drawings, unless prevented by Project conditions.

1.11 SEQUENCING AND SCHEDULING

A. Construct Work in sequence under provisions of Division 1.

1.12 PRE-CONSTRUCTION COORDINATION AND VERIFICATION

A. This Contractor shall coordinate his work with other Contractors on this job. Any conflict which cannot be resolved shall be settled by the Architect/Engineer.

B. Field verification of scale dimensions on plans is directed since actual locations, distances and levels will be governed by actual field conditions.

C. The Contractors shall check architectural, structural, plumbing, heating, ventilating and electrical plans to avert possible installation conflicts. Should drastic changes from original plans be necessary to resolve such conflicts this Contractor shall notify the Architect/Engineer and secure written approval and agreement on necessary adjustments before the installation is started.

D. Discrepancies shown on different plans or between plans and actual field conditions or between plans and specifications shall promptly be brought to the attention of the Architect/Engineer for a decision.

E. The Contractor shall consider and review the complete set of documents, etc., Architectural, Structural, Mechanical, Electrical, etc., (Drawings and Specifications) as his complete set. He will be responsible for any and all mechanical work shown or stated (to be by him), to include this work in his bid and install such items even though they are not specifically shown or stated on the Mechanical section of the plans and specifications.

1.13 COORDINATION

A. Contractor shall be responsible for continual coordination of the mechanical work with other trades so as to avoid conflicts in installation. Contractor shall cooperate with other trades to assure that construction proceeds in an orderly and timely manner.

B. Study the civil, structural, electrical, shop and any specialty drawings and specifications to determine required coordination.

1. Anchor bolts, sleeves, inserts and supports that may be required for the mechanical work shall be furnished and installed under the same division of the specifications as the respective items to be supported. Excluded from this requirement are cast in place anchor bolts.
2. Slots, chases, openings and recesses through floors and walls as specified will be provided by the various trades in their respective materials, but the trade requiring them shall see that they are properly located in zones provided or otherwise approved by the Engineer or Architect and/or Owner.
3. Locations of pipes, panels, equipment, fixtures, etc., shall be adjusted to accommodate interferences encountered. The Project Coordinator shall determine the exact rerouting and location of each pipe and/or duct encountered prior to fabrication.
   a. Right-of-Way: Lines which pitch shall have the right of way over those which do not pitch. Lines whose elevations cannot be changed shall have the right of way over lines whose elevations can be changed.
   b. Offsets, transitions and changes in direction in pipes shall be made as required to maintain proper head room and pitch of sloping lines whether or not indicated on the drawings.
4. Installation of Arrangement: The contractor shall install all mechanical work to permit removal of, and access to, (without damage to other parts) all parts requiring periodic replacement or maintenance.

C. Layout Priority:

1. All trades shall understand that other trades will need to work in the same areas during the project. All final decisions as to the right-of-way and runs of utility lines (pipes, ducts, etc.) shall be made by Owner and/or Architect. In general, priority shall be given as follows:
   a. Sheet metal ductwork
   b. Light Fixtures
   c. Plumbing waste lines, downspouts, and vents
   d. Sprinkler piping
   e. Gravity water lines
   f. Refrigerant lines
   g. Gas and air lines
   h. Plumbing water
   i. Electrical conduit

D. PREPARE DETAILED SHOP DRAWINGS WHERE NECESSARY TO ASSURE PROPER FIT AND NECESSARY CLEARANCE.

1.14 CUTTING, PATCHING AND FIRESTOPPING

A. The Plumbing Contractor shall set all sleeves in construction for their Work.

B. Where cutting is required, it shall be done by the Plumbing Contractor.

C. All patching shall be done by Plumbing Contractor.

D. All cutting of any kind must be done with great care so as not to leave unsightly surfaces which may not be entirely concealed by plates, escutcheons, or their normal concealing construction, if such unsightly conditions occur, Plumbing Contractor will be required, at their own expense, to replace the damaged construction.

E. This Plumbing Contractor shall provide and install firestopping materials per Section 07 8400 - Firestopping.

1.15 ACCESS PANELS REQUIRED BY TRADE

A. Trade requiring access shall provide and install access panels where not shown or specified.

B. The finished appearance and function will be subject to approval by the Architect/Owner.

C. Provide panels that accommodate adjacent finishes in finished spaces.

D. Access panels shall meet all code requirements for each location they are installed and shall be sized appropriately.

1.16 ELECTRICAL

A. Electrical Contractor shall furnish all motor starters and motor controls and provide all wiring for motor control operation, except if specified otherwise.

1.17 ADDITIONAL ELECTRICAL COSTS

A. If the Mechanical Contractor substitutes equipment for specified units, the mechanical contractor shall be responsible for any additional electrical installation costs for this substitution whether the other equipment was listed as equal in the specification or was approved equal after the project was in the bidding process.

1.18 GUARANTEE

A. This Contractor shall be responsible for the proper installation and working of everything in this contract and shall guarantee to remedy free of charge any defects in workmanship and materials that may appear to give or gives rise to trouble of any kind for a period of one year from date of final substantial completion.

PART 2 PRODUCTS

2.01 NOT USED

PART 3 EXECUTION

3.01 NOT USED

END OF SECTION

SECTION 22 0050
SELECTIVE PLUMBING DEMOLITION

PART 1 GENERAL

1.01 DESCRIPTION

A. The Front End Sections, General Requirements, Special Requirements, Division 1 and other applicable specifications included in the project manual form a part of the Plumbing specification and shall have the same force as if it was printed in this section.

B. In all cases where a device or part of the equipment is herein referred to in the singular, such reference shall apply to as many such items as are required to complete the installation.

1.02 SECTION INCLUDES

A. Plumbing demolition.

B. Removal of existing piping and equipment.

1.03 QUALITY ASSURANCE

A. Applicable Regulatory Agencies and Code requirements.

B. Reference Standards - Comply with the following:

1. Safety Requirements for Demolition - ANSI A 10.6.
2. National Fire Protection Association (NFPA): Safeguarding Building Construction and Demolition Operations - NFPA 241.
3. US Environmental Protection Agency (EPA)
4. The Federal Register - Emissions Standards for Hazardous Air Pollutants - 40 CFR-81.

1.04 RELATED SECTIONS

A. Section 22 0010 Basic Mechanical Plumbing Requirements.

PART 2 PRODUCTS

2.01 MATERIALS

A. Materials used for patching and finishing shall be of the same quality and texture as the adjacent undisturbed areas. Refer to 22 0010 Basic Mechanical Plumbing Requirements for additional information regarding cutting, patching and finishing.

B. Use fireproof materials according to 22 0010 Basic Mechanical Plumbing Requirements and Division 7 for patching fire resistive construction.

PART 3 EXECUTION

3.01 GENERAL

A. Provide alteration and demolition of plumbing systems as required by the drawings and specifications.

B. Contractor shall remove all abandoned piping, hangers, equipment, and support within project limits, whether shown on drawings or not. Existing piping rendered abandoned after demolition of equipment shall be removed.

C. Do not begin work until time schedules and manner of operations have been approved by the Owner's Representative. All interruptions of existing services shall be included in the Owner approved schedules, and so identified. Demolition shall follow the Mechanical, Plumbing, and Electrical phasing plans.

D. Verify the location of all related existing equipment, piping and other plumbing systems. Provide for the removal, relocation, rerouting, and reconnecting of this work as required due to demolition methods or sequences employed. Obtain the Owner's permission prior to commencing any work.

E. Comply with the installation procedures specified in the applicable specification sections in Division 22.

F. Remove all support items associated with demolished equipment unless noted otherwise.

G. Where existing equipment must remain in service during construction, provide rerouting and reconnecting of plumbing services as required to maintain continuous service.

H. Maintain system continuity and operation of piping circuits, whether spliced, extended, relocated or newly constructed. Provide temporary piping and connections to maintain existing systems in service during construction. When work must be performed on energized equipment or circuits, use personnel experienced in such operations.

I. All piping hangers, supports, anchors, etc., shall be removed along with all piping shown to be removed.

J. Coordinate utility service outages with Utility Company.

K. Existing Plumbing System: Maintain existing system in service until new system is complete and ready for service. Obtain permission from Owner and Engineer at least one week before partially or completely disabling existing system. Minimize outage duration. Make temporary connections to maintain service in areas adjacent to work area.

L. Contractor shall pay for all fees for disposal of equipment.

3.02 EXAMINATION

A. Verify that abandoned or removed apparatus and equipment serve only abandoned facilities.

B. Demolition Drawings are based on non-destructive field observation and existing record documents. Report discrepancies to Architect and Engineer before disturbing existing installation.

C. Beginning of demolition means installer accepts existing conditions.

3.03 DEMOLITION AND EXTENSION OF EXISTING PLUMBING SYSTEMS

A. Remove, relocate, and extend existing installations to accommodate new construction.

B. Remove abandoned piping to source of supply.

C. Disconnect and remove existing apparatus and equipment where noted.

D. Extend existing installations using materials and methods compatible with existing plumbing installations, or as specified.

3.04 PIPING

A. All welded piping shall be cut off square at the locations indicated on the demolition drawings. All openings of any remaining valves, piping or fittings shall be closed off with weld caps or blind flanges to prevent debris from entering the existing systems.

B. All threaded piping shall be disconnected at the location indicated on the demolition drawings. All openings of remaining valves, piping, fittings and equipment shall be closed off with pipe plugs or pipe caps as required to prevent debris from entering the existing systems.

C. All pipe hangers, supports, and/or anchors shall be removed along with all piping shown to be removed.

3.05 INSULATION

A. Insulation shall be removed from all piping, fittings, valves and equipment designated for demolition.

B. Comply with all safety precautions related to insulation removal.

3.06 CLEANING AND REPAIR

A. Clean and repair existing materials and equipment which remain or are to be reused.

3.07 REMOVAL OF EXISTING EQUIPMENT

A. The Contractor shall remove existing equipment where indicated and/or required. All such material removed shall not be reused in the new construction work unless specifically noted or approved.

B. The Owner shall have the first right of salvage of all removed equipment and materials. The contractor shall coordinate with the Owner which equipment and materials will be retained by the Owner and which are to be disposed. The disposed materials shall become the property of the Contractor who shall remove the unused equipment and materials from the site and dispose of properly. Refer to the "Special Conditions" included in the specifications for additional information.

C. The contractor shall remove all equipment and materials that are being retained by the Owner with care and transported to a location within the project site determined by the Owner. The contractor shall be liable for damage to existing salvaged equipment during removal and transporting.

END OF SECTION

SECTION 22 4000
PLUMBING FIXTURES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Lavatories.

1.02 RELATED REQUIREMENTS

A. Section 07 9200 - Joint Sealants: Sealing joints between fixtures and walls and floors.

B. Section 22 1005 - Plumbing Piping.

C. Section 26 0583 - Wiring Connections: Electrical characteristics and wiring connections.

1.03 REFERENCE STANDARDS

A. Applicable State Plumbing Code with Amendments

B. ADA Standards - 2010 ADA Standards for Accessible Design; 2010.

C. ANSI Z358.1 - American National Standard for Emergency Eyewash and Shower Equipment; 2014, with Editorial Revision (2020).

D. ASHRAE Std 18 - Methods of Testing for Rating Drinking-Water Coolers with Self-Contained Mechanical Refrigeration; 2008 (Reaffirmed 2013).

E. ASME A112.6.1M - Floor-Affixed Supports for Off-the-Floor Plumbing Fixtures for Public Use; 1997 (Reaffirmed 2017).

F. ASME A112.18.1 - Plumbing Supply Fittings; 2024.

G. ASME A112.19.1 - Enamelled Cast Iron and Enamelled Steel Plumbing Fixtures; 2024.

H. ASME A112.19.2 - Ceramic Plumbing Fixtures; 2024.

I. ASME A112.19.5 - Flush Valves and Spuds for Water Closets, Urinals, and Tanks; 2022.

J. ASSE 1070 - Performance Requirements for Water Temperature Limiting Devices; 2020.

K. IAPMO Z124 - Plastic Plumbing Fixtures; 2022, with Editorial Revision.

L. IAPMO Z124 - Plastic Plumbing Fixtures; 2022, with Editorial Revision.

M. NSF 61 - Drinking Water System Components - Health Effects; 2025, with Addendum

N. NSF 372 - Drinking Water System Components - Lead Content; 2024.

1.04 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Product Data: Provide catalog illustrations of fixtures, sizes, rough-in dimensions, utility sizes, trim, and finishes.

C. Warranty: Submit manufacturer warranty and ensure forms have been completed in Owner's name and registered with manufacturer.

1.05 REGULATORY REQUIREMENTS

1.06 DELIVERY, STORAGE, AND HANDLING

A. Accept fixtures on site in factory packaging. Inspect for damage.

B. Protect installed fixtures from damage by securing areas and by leaving factory packaging in place to protect fixtures and prevent use.

1.07 WARRANTY

A. See Section 01 7800 - Closeout Submittals, for additional warranty requirements.

B. Provide five year manufacturer warranty for electric water cooler.

PART 2 PRODUCTS

2.01 GENERAL

A. Potable Water Systems: Provide plumbing fittings and faucets that comply with NSF 61 and NSF 372 for maximum lead content; label pipe and fittings.

2.02 REGULATORY REQUIREMENTS

A. Comply with applicable codes for installation of plumbing systems.

B. Provide to Owner certificate of compliance from Authority Having Jurisdiction indicating approval of installation.

C. All faucets shall carry WaterSense label.

2.03 LAVATORIES

A. Lavatory Manufacturers:

1. American Standard, Inc: www.americanstandard-us.com.
2. Kohler Company: www.kohler.com.
3. Substitutions: See Section 01 6000 - Product Requirements.

B. See plumbing fixture schedule for requirements.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that walls and floor finishes are prepared and ready for installation of fixtures.

B. Confirm that millwork is constructed with adequate provision for the installation of counter top lavatories and sinks.

3.02 PREPARATION

A. Rough-in fixture piping connections in accordance with minimum sizes indicated in fixture rough-in schedule for particular fixtures.

3.03 INSTALLATION

A. Install each fixture with trap, easily removable for servicing and cleaning.

B. Provide chrome plated rigid or flexible supplies to fixtures with quarter turn stops, reducers, and escutcheons.

C. Install components level and plumb.

D. Install and secure fixtures in place with wall supports and bolts.

E. Seal fixtures to wall, casework, and/or floor surfaces with sealant as specified in Section 07 9200 - Joint Sealants, color to match fixture.

3.04 INTERFACE WITH WORK OF OTHER SECTIONS

A. Review millwork shop drawings. Confirm location and size of fixtures and openings before rough-in and installation.

3.05 ADJUSTING

A. Adjust stops or valves for intended water flow rate to fixtures without splashing, noise, or overflow.

3.06 CLEANING

A. Clean plumbing fixtures and equipment.

B. See Section 01 7419 - Construction Waste Management and Disposal, for additional requirements.

3.07 PROTECTION

A. Protect installed products from damage due to subsequent construction operations.

B. Repair or replace damaged products before Date of Substantial Completion.

END OF SECTION

SECTION 26 0010
BASIC ELECTRICAL REQUIREMENTS

PART 1GENERAL

1.01 SECTION INCLUDES:

A. Basic Electrical Requirements specifically applicable to Division 26 Sections, in addition to Division 01 - General Requirements.

1.02 SCOPE OF WORK:

A. The Electrical Contract Installation shall include a complete Electrical Installation for the project. All conduit, fixtures and equipment herein specified, mentioned or shown on Drawings, shall be furnished and installed in place, connected up and ready for normal operation except for such items as are specifically mentioned to be furnished by others.

1.03 WORK INCLUDED:

A. The Electrical Contract shall include all work under the listed Sections of the Specifications Index and all related Electrical work as shown on the Drawings for the project.

B. A Complete table of Electrical Reference Symbols is shown on the plans.

C. Under this Contract the Electrical Contractor shall furnish the Owner with a USB flash drive and PDF set of all pertinent systems related documents. The documents shall contain the following items:

1. Shop drawings on all major equipment.
2. Operating Instructions for all major equipment.
3. Maintenance Instructions for all major equipment.
4. Wiring diagrams for all equipment.
5. Control drawings for any systems not furnished under other contracts.

D. The Electrical Contractor is responsible for own equipment, such as cranes, lifts, etc. in order to provide a complete installation of Electrical systems.

E. Branch feeders, branch wiring, etc., as shown on the plans or required for operation of the electrical system.

F. Repair of all damage done to the premises as a result of the installation and removal of all debris or surplus material left by those engaged in the work.

1.04 SPECIFICATIONS COMPLIANCE

A. The requirements of these specifications shall be complied with in every respect. Therefore, it shall be absolutely mandatory that the job foreman, all lead electricians,

subcontractors and their foreman have completely studied these specifications, be completely knowledgeable as to their entire contents, and maintain a copy at the job-site. Failure to comply with this requirement will be reason to presume the electrician or subcontractor is not in responsible charge of their work due to ignorance of job requirements, and will be reason for the Owner to require dismissal and replacement with approved personnel. Every foreman and lead mechanic shall be provided with a complete copy of this specification.

1.05 INCONSISTENCIES

A. If there is an inconsistency in the quality and/or quantity of Work required by the Contract Documents, either the greater quality and/or quantity of Work indicated shall be provided in accordance with the Engineer/Architect's interpretation without change in the contract sum.

1.06 CODES, FEES AND LATERAL COSTS:

A. The Electrical Installation shall meet all applicable local, state and federal codes and standards. All permits necessary for a complete electrical installation shall be paid for by this Contractor.

B. Except in those municipalities which provide state-approved electrical inspection, all installation of electrical equipment wiring shall be inspected by the State Board of Electricity. Allowance shall be made in the bid and contract for the cost of such inspection.

C. Fees for such inspection will be charged in accordance with the rules and regulations of the State Board of Electricity. Evidence of payment of fees shall be provided by the Contractor with the Request for Payment.

1.07 REGULATORY REQUIREMENTS:

A. Conform to requirements of ANSI/NFPA 70.

B. Furnish products listed by Underwriters Laboratories, Inc. or other testing firm acceptable to authority having jurisdiction.

1.08 SUBMITTALS:

A. Submit under provisions of Division 01.

B. Submit shop drawings and product data of related systems, products, and accessories.

C. Mark dimensions and values in units to match those specified.

1.09 PROJECT/SITE CONDITIONS:

A. Install Work in locations shown on Drawings, unless prevented by Project conditions.

1.10 SEQUENCING AND SCHEDULING:

A. Construct Work in sequence under provisions of Division 1.

1.11 PRE-CONSTRUCTION COORDINATION AND VERIFICATION:

A. This Contractor shall coordinate their work with other Contractors on this job. Any conflict which cannot be resolved shall be settled by the Architect/Engineer.

B. Field verification of scale dimensions on plans is directed since actual locations, distances and levels will be governed by actual field conditions.

C. The Contractors shall check architectural, structural, plumbing, heating, ventilating and electrical plans to avert possible installation conflicts. Should drastic changes from original plans be necessary to resolve such conflicts this Contractor shall notify the Architect/Engineer and secure written approval and agreement on necessary adjustments before the installation is started.

D. Discrepancies shown on different plans or between plans and actual field conditions or between plans and specifications shall promptly be brought to the attention of the Architect/Engineer for a decision.

E. The Contractor shall consider and review the complete set of documents, etc., Architectural, Structural, Mechanical, Electrical, etc., (Drawings and Specifications) as a complete set. They will be responsible for any and all electrical work shown or stated (to be by the Contractor), to include this work in their bid and install such items even though they are not specifically shown or stated on the Electrical section of the plans and specifications.

F. The drawings are indicative of the work to be installed, but do not show all bends, fittings, boxes and specialties required to complete the installation.

G. All conduits, wires, outlets boxes, switches, receptacles, devices and fixtures shall be included in the work.

H. Where it is stated that the Contractor shall “provide” a device or piece of equipment, it shall mean that such a device or equipments are finished and installed.

1.12 CUTTING, PATCHING, AND FIRESTOPPING:

A. The Electrical Contractor shall set all sleeves in construction for their Work.

B. Where cutting is required, it shall be done by the Electrical Contractor.

C. All patching shall be done by Electrical Contractor.

D. All conduit and outlet installations and cutting of any kind must be done with great care so as not to leave unsightly surfaces which may not be entirely concealed by plates, escutcheons, or their normal concealing construction, if such unsightly conditions occur, Electrical Contractor will be required, at their own expense, to replace the damaged construction.

E. This Electrical Contractor shall provide and install firestopping materials per Section 07 8400 - Firestopping.

1.13 GUARANTEE:

A. This Contractor shall be responsible for the proper installation and working of everything in this contract and shall guarantee to remedy free of charge any defects in workmanship and materials that may appear to give or gives rise to trouble of any kind for a period of one year from date of final substantial completion.

PART 2 NOT USED

PART 3 EXECUTION

3.01 EQUIPMENT CONNECTIONS:

A. Provide necessary power wiring for equipment furnished by others. Verify requirements with the Contractors responsible to supply each piece of equipment. Provide heavy duty disconnect switches as indicated.

3.02 AS-BUILT DRAWINGS:

A. Contractor shall keep an accurate record of all deviations from contract drawings and specifications. Edits shall neatly and correctly enter in colored crayon any deviations on drawings affected, and shall keep drawings available for inspection. Extra set of drawings will be furnished for this purpose.

B. At the completion of the job, and before final acceptance, the Contractor shall provide a complete set of as-built drawings. The Contractor shall show locations for all major electrical devices, including panelboards and all major runs of conduit, the circuiting of each fixture, outlet, etc., shall be shown. Certify to the accuracy of each print, by signature thereon, and deliver same to Architect.

END OF SECTION

SECTION 26 0519
LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Single conductor building wire.

B. Wiring connectors.

C. Electrical tape.

D. Heat shrink tubing.

E. Wire pulling lubricant.

F. Cable ties.

1.02 RELATED REQUIREMENTS

A. Section 07 8400 - Firestopping.

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

C. Section 26 0553 - Identification for Electrical Systems: Identification products and requirements.

1.03 REFERENCE STANDARDS

A. ASTM B3 - Standard Specification for Soft or Annealed Copper Wire; 2013 (Reapproved 2024).

B. ASTM B8 - Standard Specification for Concentric-Lay-Stranded Copper Conductors, Hard, Medium-Hard, or Soft; 2023.

C. ASTM B33 - Standard Specification for Tin-Coated Soft or Annealed Copper Wire for Electrical Purposes; 2010, with Editorial Revision (2020).

D. ASTM B787/B787M - Standard Specification for 19 Wire Combination Unilay-Stranded Copper Conductors for Subsequent Insulation; 2004 (Reapproved 2020).

E. ASTM D3005 - Standard Specification for Low-Temperature Resistant Vinyl Chloride Plastic Pressure-Sensitive Electrical Insulating Tape; 2024.

F. ASTM D4388 - Standard Specification for Nonmetallic Semi-Conducting and Electrically Insulating Rubber Tapes; 2020.

G. NECA 1 - Standard for Good Workmanship in Electrical Construction; 2023.

H. NEMA WC 70 - Power Cables Rated 2000 Volts or Less for the Distribution of Electrical Energy; 2021.

I. NETA ATS - Standard for Acceptance Testing Specifications for Electrical Power Equipment And Systems; 2025.

J. NFPA 70 - National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

K. UL 44 - Thermoset-Insulated Wires and Cables; Current Edition, Including All Revisions.

L. UL 83 - Thermoplastic-Insulated Wires and Cables; Current Edition, Including All Revisions.

M. UL 267 - Outline of Investigation for Wire-Pulling Compounds; Current Edition, Including All Revisions.

N. UL 486A-486B - Wire Connectors; Current Edition, Including All Revisions.

O. UL 486C - Splicing Wire Connectors; Current Edition, Including All Revisions.

P. UL 486D - Sealed Wire Connector Systems; Current Edition, Including All Revisions.

Q. UL 510 - Polyvinyl Chloride, Polyethylene, and Rubber Insulating Tape; Current Edition, Including All Revisions.

1.04 ADMINISTRATIVE REQUIREMENTS

A. Coordination:

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

1.05 QUALITY ASSURANCE

A. Comply with requirements of NFPA 70.

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

1.06 DELIVERY, STORAGE, AND HANDLING

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

1.07 FIELD CONDITIONS

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

PART 2 PRODUCTS

2.01 CONDUCTOR AND CABLE APPLICATIONS

A. Do not use conductors and cables for applications other than as permitted by NFPA 70 and product listing.

B. Provide single conductor building wire installed in suitable raceway unless otherwise indicated, permitted, or required.

C. Nonmetallic-sheathed cable is not permitted.

D. Underground feeder and branch-circuit cable is not permitted.

E. Service entrance cable is not permitted.

F. Armored cable is not permitted.

G. Metal-clad cable is not permitted.

2.02 CONDUCTOR AND CABLE GENERAL REQUIREMENTS

A. Provide products that comply with requirements of NFPA 70.

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

C. Unless specifically indicated to be excluded, provide all required conduit, boxes, wiring, connectors, etc. as required for a complete operating system.

D. Comply with NEMA WC 70.

E. Thermoplastic-Insulated Conductors and Cables: Listed and labeled as complying with UL 83.

F. Thermoset-Insulated Conductors and Cables: Listed and labeled as complying with UL 44.

G. Conductor Material:

1. Provide copper conductors only. Aluminum conductors are not acceptable for this project. Conductor sizes indicated are based on copper.
2. Copper Conductors: Soft drawn annealed, 98 percent conductivity, uncoated copper conductors complying with ASTM B3, ASTM B8, or ASTM B787/B787M unless otherwise indicated.
3. Tinned Copper Conductors: Comply with ASTM B33.

H. Minimum Conductor Size:

1. Branch Circuits: 12 AWG.
   a. Exceptions:
      1) 20 A, 120 V circuits longer than 75 feet: 10 AWG, for voltage drop.
      2) 20 A, 120 V circuits longer than 150 feet: 8 AWG, for voltage drop.
2. Control Circuits: 14 AWG.

I. Conductor Color Coding:

1. Color code conductors as indicated unless otherwise required by the authority having jurisdiction. Maintain consistent color coding throughout project.
2. Color Coding Method: Integrally colored insulation.
   a. Conductors size 4 AWG and larger may have black insulation color coded using vinyl color coding electrical tape.
3. Color Code:
   a. 208Y/120 V, 3 Phase, 4 Wire System:
      1) Phase A: Black.
      2) Phase B: Red.
      3) Phase C: Blue.
      4) Neutral/Grounded: White.
   b. Equipment Ground, All Systems: Green.
   c. For modifications or additions to existing wiring systems, comply with existing color code when existing code complies with NFPA 70 and is approved by the authority having jurisdiction.

2.03 SINGLE CONDUCTOR BUILDING WIRE

A. Description: Single conductor insulated wire.

B. Conductor Stranding:

1. Feeders and Branch Circuits:
   a. Size 10 AWG and Smaller: Stranded.
   b. Size 8 AWG and Larger: Stranded.

C. Insulation Voltage Rating: 600 V.

D. Insulation:

1. Copper Building Wire: Type THHN/THWN-2, except as indicated below.
   a. Size 4 AWG and Larger: Type XHHW-2.
   b. Installed Underground: Type XHHW-2.

2.04 WIRING CONNECTORS

A. Description: Wiring connectors appropriate for the application, suitable for use with the conductors to be connected, and listed as complying with UL 486A-486B or UL 486C as applicable.

B. Wiring Connectors for Splices and Taps:

1. Copper Conductors Size 8 AWG and Smaller: Use twist-on insulated spring connectors.
   a. Push-in wire connectors are not permitted.
2. Copper Conductors Size 6 AWG and Larger: Use mechanical connectors.

C. Wiring Connectors for Terminations:

1. Provide terminal lugs for connecting conductors to equipment furnished with terminations designed for terminal lugs.
2. Where over-sized conductors are larger than the equipment terminations can accommodate, provide connectors suitable for reducing to appropriate size, but not less than required for the rating of the overcurrent protective device.
3. Provide motor pigtail connectors for connecting motor leads in order to facilitate disconnection.
4. Copper Conductors Size 8 AWG and Larger: Use mechanical connectors where connectors are required.

D. Twist-on Insulated Spring Connectors: Rated 600 V, 221 degrees F for standard applications and 302 degrees F for high temperature applications; pre-filled with sealant and listed as complying with UL 486D for damp and wet locations.

E. Mechanical Connectors: Provide bolted type.

2.05 ACCESSORIES

A. Electrical Tape:

1. Vinyl Color Coding Electrical Tape: Integrally colored to match color code indicated; listed as complying with UL 510; minimum thickness of 7 mil; resistant to abrasion, corrosion, and sunlight; suitable for continuous temperature environment up to 221 degrees F.
2. Vinyl Insulating Electrical Tape: Complying with ASTM D3005 and listed as complying with UL 510; minimum thickness of 7 mil; resistant to abrasion, corrosion, and sunlight; conformable for application down to 0 degrees F and suitable for continuous temperature environment up to 221 degrees F.
3. Rubber Splicing Electrical Tape: Ethylene Propylene Rubber (EPR) tape, complying with ASTM D4388; minimum thickness of 30 mil; suitable for continuous temperature environment up to 194 degrees F and short-term 266 degrees F overload service.
4. Electrical Filler Tape: Rubber-based insulating moldable putty, minimum thickness of 125 mil; suitable for continuous temperature environment up to 176 degrees F.
5. Moisture Sealing Electrical Tape: Insulating mastic compound laminated to flexible, all-weather vinyl backing; minimum thickness of 90 mil.

B. Heat Shrink Tubing: Heavy-wall, split-resistant, with factory-applied adhesive; rated 600 V; suitable for direct burial applications; listed as complying with UL 486D.

C. Wire Pulling Lubricant:

1. Listed and labeled as complying with UL 267.
2. Suitable for use with conductors/cables and associated insulation/jackets to be installed.

3. Suitable for use at installation temperature.

D. Cable Ties: Material and tensile strength rating suitable for application.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that interior of building has been protected from weather.

B. Verify that work likely to damage wire and cable has been completed.

C. Verify that raceways, boxes, and equipment enclosures are installed and are properly sized to accommodate conductors and cables in accordance with NFPA 70.

D. Verify that field measurements are as indicated.

E. Verify that conditions are satisfactory for installation prior to starting work.

3.02 PREPARATION

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

3.03 INSTALLATION

A. Circuiting Requirements:

1. Unless dimensioned, circuit routing indicated is diagrammatic.
2. When circuit destination is indicated without specific routing, determine exact routing required.
3. Arrange circuiting to minimize splices.
4. Include circuit lengths required to install connected devices within 10 ft of location indicated.
5. Maintain separation of Class 1, Class 2, and Class 3 remote-control, signaling, and power-limited circuits in accordance with NFPA 70.
6. Circuiting Adjustments: Unless otherwise indicated, when branch circuits are indicated as separate, combining them together in a single raceway is permitted, under the following conditions:
   a. Provide no more than six current-carrying conductors in a single raceway. Dedicated neutral conductors are considered current-carrying conductors.
   b. Increase size of conductors as required to account for ampacity derating.
   c. Size raceways, boxes, etc. to accommodate conductors.
7. Common Neutrals: Unless otherwise indicated, sharing of neutral/grounded conductors among single phase branch circuits of different phases installed in the same raceway is not permitted. Provide dedicated neutral/grounded conductor for each individual branch circuit.

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

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

D. Installation in Raceway:

1. Tape ends of conductors and cables to prevent infiltration of moisture and other contaminants.
2. Pull all conductors and cables together into raceway at same time.
3. Do not damage conductors and cables or exceed manufacturer's recommended maximum pulling tension and sidewall pressure.
4. Use suitable wire pulling lubricant where necessary, except when lubricant is not recommended by the manufacturer.

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

F. Secure and support conductors and cables in accordance with NFPA 70 using suitable supports and methods approved by the authority having jurisdiction. Provide independent support from building structure. Do not provide support from raceways, piping, ductwork, or other systems.

G. Terminate cables using suitable fittings.

H. Install conductors with a minimum of 12 inches of slack at each outlet.

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

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

K. Make wiring connections using specified wiring connectors.

1. Make splices and taps only in accessible boxes. Do not pull splices into raceways or make splices in conduit bodies or wiring gutters.
2. Remove appropriate amount of conductor insulation for making connections without cutting, nicking or damaging conductors.
3. Do not remove conductor strands to facilitate insertion into connector.
4. Clean contact surfaces on conductors and connectors to suitable remove corrosion, oxides, and other contaminates. Do not use wire brush on plated connector surfaces.
5. Mechanical Connectors: Secure connections according to manufacturer's recommended torque settings.

L. Insulate splices and taps that are made with uninsulated connectors using methods suitable for the application, with insulation and mechanical strength at least equivalent to unspliced conductors.

1. Dry Locations: Use insulating covers specifically designed for the connectors, electrical tape, or heat shrink tubing.
   a. For taped connections, first apply adequate amount of rubber splicing electrical tape or electrical filler tape, followed by outer covering of vinyl insulating electrical tape.
2. Damp Locations: Use insulating covers specifically designed for the connectors, electrical tape, or heat shrink tubing.
   a. For connections with insulating covers, apply outer covering of moisture sealing electrical tape.

b. For taped connections, follow same procedure as for dry locations but apply outer covering of moisture sealing electrical tape.

3. Wet Locations: Use heat shrink tubing.

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

N. Field-Applied Color Coding: Where vinyl color coding electrical tape is used in lieu of integrally colored insulation as permitted in Part 2 under "Color Coding", apply half overlapping turns of tape at each termination and at each location conductors are accessible.

O. Install firestopping to preserve fire resistance rating of partitions and other elements, using materials and methods specified in Section 07 8400.

P. Unless specifically indicated to be excluded, provide final connections to all equipment and devices, including those furnished by others, as required for a complete operating system.

3.04 FIELD QUALITY CONTROL

A. See Section 01 4000 - Quality Requirements, for additional requirements.

B. Correct deficiencies and replace damaged or defective conductors and cables.

END OF SECTION

SECTION 26 0526
GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Grounding and bonding requirements.

B. Conductors for grounding and bonding.

C. Connectors for grounding and bonding.

1.02 RELATED REQUIREMENTS

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

B. Section 26 0553 - Identification for Electrical Systems: Identification products and requirements.

1.03 REFERENCE STANDARDS

A. NECA 1 - Standard for Good Workmanship in Electrical Construction; 2023.

B. NFPA 70 - National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

C. UL 467 - Grounding and Bonding Equipment; Current Edition, Including All Revisions.

1.04 ADMINISTRATIVE REQUIREMENTS

A. Coordination:

1. Verify exact locations of underground metal water service pipe entrances to building.
2. Coordinate the work with other trades to provide steel reinforcement complying with specified requirements for concrete-encased electrode.
3. Notify Architect of any conflicts with or deviations from Contract Documents. Obtain direction before proceeding with work.

1.05 QUALITY ASSURANCE

A. Comply with requirements of NFPA 70.

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

PART 2 PRODUCTS

2.01 GROUNDING AND BONDING REQUIREMENTS

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

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

C. Unless specifically indicated to be excluded, provide all required components, conductors, connectors, conduit, boxes, fittings, supports, accessories, etc. as necessary for a complete grounding and bonding system.

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

E. Bonding and Equipment Grounding:

1. Provide bonding for equipment grounding conductors, equipment ground busses, metallic equipment enclosures, metallic raceways and boxes, device grounding terminals, and other normally non-current-carrying conductive materials enclosing electrical conductors/equipment or likely to become energized as indicated and in accordance with NFPA 70.
2. Provide insulated equipment grounding conductor in each feeder and branch circuit raceway. Do not use raceways as sole equipment grounding conductor.
3. Where circuit conductor sizes are increased for voltage drop, increase size of equipment grounding conductor proportionally in accordance with NFPA 70.
4. Unless otherwise indicated, connect wiring device grounding terminal to branch circuit equipment grounding conductor and to outlet box with bonding jumper.
5. Terminate branch circuit equipment grounding conductors on solidly bonded equipment ground bus only. Do not terminate on neutral (grounded) or isolated/insulated ground bus.
6. Provide bonding jumper across expansion or expansion/deflection fittings provided to accommodate conduit movement.
7. Provide bonding for interior metal piping systems in accordance with NFPA 70. This includes, but is not limited to:
   a. Metal water piping where not already effectively bonded to metal underground water pipe used as grounding electrode.
   b. Metal gas piping.

2.02 GROUNDING AND BONDING COMPONENTS

A. General Requirements:

1. Provide products listed, classified, and labeled as suitable for the purpose intended.
2. Provide products listed and labeled as complying with UL 467 where applicable.

B. Conductors for Grounding and Bonding, in Addition to Requirements of Section 26 0526:

1. Use insulated copper conductors unless otherwise indicated.

C. Connectors for Grounding and Bonding:

1. Description: Connectors appropriate for the application and suitable for the conductors and items to be connected; listed and labeled as complying with UL 467.
2. Unless otherwise indicated, use mechanical connectors, compression connectors, or exothermic welded connections for accessible connections.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that work likely to damage grounding and bonding system components has been completed.

B. Verify that field measurements are as indicated.

C. Verify that conditions are satisfactory for installation prior to starting work.

D. Verify that final backfill and compaction has been completed before driving rod electrodes.

3.02 INSTALLATION

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

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

C. Make grounding and bonding connections using specified connectors.

1. Remove appropriate amount of conductor insulation for making connections without cutting, nicking or damaging conductors. Do not remove conductor strands to facilitate insertion into connector.
2. Remove nonconductive paint, enamel, or similar coating at threads, contact points, and contact surfaces.
3. Exothermic Welds: Make connections using molds and weld material suitable for the items to be connected in accordance with manufacturer's recommendations.
4. Mechanical Connectors: Secure connections according to manufacturer's recommended torque settings.
5. Compression Connectors: Secure connections using manufacturer's recommended tools and dies.

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

END OF SECTION

SECTION 26 0529
HANGERS AND SUPPORTS FOR ELECTRICAL SYSTEMS

PART 1 GENERAL

1.01 SECTION INCLUDES

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

1.02 RELATED REQUIREMENTS

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

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

1.03 REFERENCE STANDARDS

A. ASTM A123/A123M - Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products; 2024.

B. ASTM A153/A153M - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware; 2023.

C. ASTM B633 - Standard Specification for Electrodeposited Coatings of Zinc on Iron and Steel; 2023.

D. MFMA-4 - Metal Framing Standards Publication; 2004.

E. NECA 1 - Standard for Good Workmanship in Electrical Construction; 2023.

F. NFPA 70 - National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

1.04 ADMINISTRATIVE REQUIREMENTS

A. Coordination:

1. Coordinate sizes and arrangement of supports and bases with actual equipment and components to be installed.
2. Coordinate work to provide additional framing and materials required for installation.
3. Coordinate compatibility of support and attachment components with mounting surfaces at installed locations.
4. Coordinate arrangement of supports with ductwork, piping, equipment and other potential conflicts.

5. Notify Architect of conflicts with or deviations from Contract Documents. Obtain direction before proceeding with work.

B. Sequencing:

1. Do not install products on or provide attachment to concrete surfaces until concrete has cured; see Section 03 3000.

1.05 QUALITY ASSURANCE

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

PART 2 PRODUCTS

2.01 SUPPORT AND ATTACHMENT COMPONENTS

A. General Requirements:

1. Provide required hangers, supports, anchors, fasteners, fittings, accessories, and hardware as necessary for complete installation of electrical work.
2. Provide products listed, classified, and labeled as suitable for purpose intended, where applicable.
3. Do not use products for applications other than as permitted by NFPA 70 and product listing.
4. Steel Components: Use corrosion-resistant materials suitable for environment where installed.
   a. Indoor Dry Locations: Use zinc-plated steel or approved equivalent unless otherwise indicated.
   b. Outdoor and Damp or Wet Indoor Locations: Use galvanized steel, stainless steel, or approved equivalent unless otherwise indicated.
   c. Zinc-Plated Steel: Electroplated in accordance with ASTM B633.
   d. Galvanized Steel: Hot-dip galvanized after fabrication in accordance with ASTM A123/A123M or ASTM A153/A153M.

B. Conduit and Cable Supports: Straps and clamps suitable for conduit or cable to be supported.

1. Conduit Straps: One-hole or two-hole type; steel or malleable iron.
2. Conduit Clamps: Bolted type unless otherwise indicated.

C. Outlet Box Supports: Hangers and brackets suitable for boxes to be supported.

D. Metal Channel/Strut Framing Systems:

1. Description: Factory-fabricated, continuous-slot, metal channel/strut and associated fittings, accessories, and hardware required for field assembly of supports.
2. Comply with MFMA-4.
3. Channel Material:

a. Indoor Dry Locations: Use painted steel, zinc-plated steel, or galvanized steel.
b. Outdoor and Damp or Wet Indoor Locations: Use galvanized steel.

E. Anchors and Fasteners:

1. Unless otherwise indicated and where not otherwise restricted, use anchor and fastener types indicated for specified applications.
2. Concrete: Use preset concrete inserts, expansion anchors, or screw anchors.
3. Solid or Grout-Filled Masonry: Use expansion anchors or screw anchors.
4. Hollow Masonry: Use toggle bolts.
5. Hollow Stud Walls: Use toggle bolts.
6. Steel: Use beam clamps, machine bolts, or welded threaded studs.
7. Sheet Metal: Use sheet metal screws.
8. Wood: Use wood screws.
9. Plastic and lead anchors are not permitted.
10. Post-Installed Concrete and Masonry Anchors: Evaluated and recognized by ICC Evaluation Service, LLC (ICC-ES) for compliance with applicable building code.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that mounting surfaces are ready to receive support and attachment components.

B. Verify that conditions are satisfactory for installation prior to starting work.

3.02 INSTALLATION

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

B. Install hangers and supports in accordance with NECA 1.

C. Install anchors and fasteners in accordance with ICC Evaluation Services, LLC (ICC-ES) evaluation report conditions of use where applicable.

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

E. Unless specifically indicated or approved by Architect, do not provide support from suspended ceiling support system or ceiling grid.

F. Unless specifically indicated or approved by Architect, do not provide support from roof deck.

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

H. Equipment Support and Attachment:

1. Use metal, fabricated supports or supports assembled from metal channel/strut to support equipment as required.
2. Use metal channel/strut secured to studs to support equipment surface mounted on hollow stud walls when wall strength is not sufficient to resist pull-out.
3. Use metal channel/strut to support surface-mounted equipment in wet or damp locations to provide space between equipment and mounting surface.
4. Unless otherwise indicated, mount floor-mounted equipment on properly sized concrete pad 4 inches in height; see Section 03 3000.
5. Securely fasten floor-mounted equipment. Do not install equipment such that it relies on its own weight for support.

I. Secure fasteners in accordance with manufacturer's recommended torque settings.

J. Remove temporary supports.

3.03 FIELD QUALITY CONTROL

A. See Section 01 4000 - Quality Requirements for additional requirements.

B. Inspect support and attachment components for damage and defects.

C. Repair cuts and abrasions in galvanized finishes using zinc-rich paint recommended by manufacturer. Replace components that exhibit signs of corrosion.

D. Correct deficiencies and replace damaged or defective support and attachment components.

E. Install hangers and supports as required to adequately and securely support electrical system components, in a neat and workmanlike manner, as specified in NECA 1.

1. Do not fasten supports to pipes, ducts, mechanical equipment, or conduit.
2. Obtain permission from Architect before drilling or cutting structural members.

F. Rigidly weld support members or use hexagon-head bolts to present neat appearance with adequate strength and rigidity. Use spring lock washers under all nuts.

END OF SECTION

SECTION 26 0533.13
CONDUIT FOR ELECTRICAL SYSTEMS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Galvanized steel rigid metal conduit (RMC).

B. Galvanized steel intermediate metal conduit (IMC).

C. Galvanized steel electrical metallic tubing (EMT).

1.02 RELATED REQUIREMENTS

A. Section 07 8400 - Firestopping.

B. Section 26 0526 - Grounding and Bonding for Electrical Systems.

1. Includes additional requirements for fittings for grounding and bonding.

C. Section 26 0529 - Hangers and Supports for Electrical Systems.

1.03 REFERENCE STANDARDS

A. ANSI C80.1 - American National Standard for Electrical Rigid Steel Conduit (ERSC); 2025.

B. ANSI C80.3 - American National Standard for Electrical Metallic Tubing -- Steel (EMT-S); 2020.

C. ANSI C80.6 - American National Standard for Electrical Intermediate Metal Conduit; 2025.

D. NECA 1 - Standard for Good Workmanship in Electrical Construction; 2023.

E. NECA 101 - Standard for Installing Steel Conduits (Rigid, IMC, EMT); 2020.

F. NEMA FB 1 - Fittings, Cast Metal Boxes, and Conduit Bodies for Conduit, Electrical Metallic Tubing, and Cable; 2014.

G. NFPA 70 - National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

H. UL 6 - Electrical Rigid Metal Conduit-Steel; Current Edition, Including All Revisions.

I. UL 514B - Conduit, Tubing, and Cable Fittings; Current Edition, Including All Revisions.

J. UL 797 - Electrical Metallic Tubing-Steel; Current Edition, Including All Revisions.

K. UL 1242 - Electrical Intermediate Metal Conduit-Steel; Current Edition, Including All Revisions.

L. UL 2419 - Outline of Investigation for Electrically Conductive Corrosion Resistant Compounds; Current Edition, Including All Revisions.

1.04 ADMINISTRATIVE REQUIREMENTS

A. Coordination:

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

B. Sequencing:

1. Do not begin installation of conductors and cables until installation of conduit between termination points is complete.

1.05 QUALITY ASSURANCE

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

1.06 DELIVERY, STORAGE, AND HANDLING

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

PART 2 PRODUCTS

2.01 CONDUIT APPLICATIONS

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

B. Unless otherwise indicated and where not otherwise restricted, use conduit types indicated for specified applications. Where more than one listed application applies, comply with most restrictive requirements. Where conduit type for particular application is not specified, use galvanized steel rigid metal conduit.

C. Concealed Within Masonry Walls: Use galvanized steel rigid metal conduit (RMC), galvanized steel intermediate metal conduit (IMC), or galvanized steel electrical metallic tubing (EMT).

D. Interior, Damp or Wet Locations: Use galvanized steel rigid metal conduit, intermediate metal conduit (IMC), or electrical metallic tubing (EMT).

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

F. Flexible Connections to Vibrating Equipment:

1. Dry Locations: Use flexible metal conduit (FMC).
2. Damp, Wet, or Corrosive Locations: Use liquidtight flexible metal conduit (LFMC).
3. Maximum Length: 6 feet unless otherwise indicated.

2.02 CONDUIT - GENERAL REQUIREMENTS

A. Comply with NFPA 70.

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

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

D. Minimum Conduit Size, Unless Otherwise Indicated:

1. Branch Circuits: 3/4 inch (21 mm) trade size.
2. Branch Circuit Homeruns: 3/4 inch (21 mm) trade size.

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

2.03 GALVANIZED STEEL RIGID METAL CONDUIT (RMC)

A. Manufacturers:

1. Allied Tube & Conduit, a division of Atkore International: www.alliedeg.com/#sle.
2. Nucor Tubular Products: www.nucortubular.com/#sle.
3. Wheatland Tube, a division of Zekelman Industries: www.wheatland.com/#sle.

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

C. Fittings:

1. Manufacturers:
   a. Bridgeport Fittings Inc: www.bptfittings.com/#sle.
   b. Emerson Electric Co; O-Z/Gedney: www.emerson.com/#sle.
2. Nonhazardous Locations: Use fittings complying with NEMA FB 1 and listed and labeled as complying with UL 514B or UL 6.
3. Material: Use steel or malleable iron.

4. Connectors and Couplings: Use threaded type fittings only. Threadless fittings, including set screw and compression/gland types, are not permitted.

2.04 GALVANIZED STEEL INTERMEDIATE METAL CONDUIT (IMC)

A. Manufacturers:

1. Allied Tube & Conduit, a division of Atkore International: www.alliedeg.com/#sle.
2. Nucor Tubular Products: www.nucortubular.com/#sle.
3. Wheatland Tube, a division of Zekelman Industries: www.wheatland.com/#sle.

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

C. Fittings:

1. Manufacturers:
   a. Bridgeport Fittings, LLC: www.bptfittings.com/#sle.
   b. Emerson Electric Co; O-Z/Gedney: www.emerson.com/#sle.
2. Nonhazardous Locations: Use fittings complying with NEMA FB 1 and listed and labeled as complying with UL 514B or UL 1242.
3. Material: Use steel or malleable iron.
4. Connectors and Couplings: Use threaded type fittings only. Threadless fittings, including set screw and compression/gland types, are not permitted.

2.05 GALVANIZED STEEL ELECTRICAL METALLIC TUBING (EMT)

A. Manufacturers:

1. Allied Tube & Conduit, a division of Atkore International: www.alliedeg.com/#sle.
2. Wheatland Tube, a Division of Zekelman Industries: www.wheatland.com/#sle.

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

C. Fittings:

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

2.06 ACCESSORIES

A. Conduit Joint Compound: Corrosion-resistant, electrically conductive compound listed as complying with UL 2419; suitable for use with conduit to be installed.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that field measurements are as indicated.

B. Verify that mounting surfaces are ready to receive conduits.

C. Verify that conditions are satisfactory for installation prior to starting work.

3.02 INSTALLATION

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

B. Install conduit in accordance with NECA 1.

C. Galvanized Steel Rigid Metal Conduit (RMC): Install in accordance with NECA 101.

D. Intermediate Metal Conduit (IMC): Install in accordance with NECA 101.

E. Conduit Routing:

1. Unless dimensioned, conduit routing indicated is diagrammatic.
2. When conduit destination is indicated without specific routing, determine exact routing required.
3. Conceal conduits unless specifically indicated to be exposed.
4. Conduits in the following areas may be exposed, unless otherwise indicated:
   a. Electrical rooms.
   b. Mechanical equipment rooms.
   c. Within joists in areas with no ceiling.
5. Arrange conduit to maintain adequate headroom, clearances, and access.
6. Arrange conduit to provide no more than equivalent of four 90-degree bends between pull points.
7. Route conduits above water and drain piping where possible.
8. Arrange conduit to prevent moisture traps. Provide drain fittings at low points and at sealing fittings where moisture may collect.
9. Maintain minimum clearance of 6 inches between conduits and piping for other systems.
10. Maintain minimum clearance of 12 inches between conduits and hot surfaces. This includes, but is not limited to:
    a. Heaters.
    b. Hot water piping.
    c. Flues.

F. Conduit Support:

1. Secure and support conduits in accordance with NFPA 70 using suitable supports and methods approved by authorities having jurisdiction; see Section 26 0529.
2. Provide independent support from building structure. Do not provide support from piping, ductwork, or other systems.
3. Use conduit strap to support single surface-mounted conduit.
   a. Use clamp back spacer with conduit strap for damp and wet locations to provide space between conduit and mounting surface.
4. Use metal channel/strut with accessory conduit clamps to support multiple parallel surface-mounted conduits.

5. Use conduit clamp to support single conduit from beam clamp or threaded rod.
6. Use trapeze hangers assembled from threaded rods and metal channel/strut with accessory conduit clamps to support multiple parallel suspended conduits.
7. Use of wire for support of conduits is not permitted.

G. Connections and Terminations:

1. Use approved zinc-rich paint or conduit joint compound on field-cut threads of galvanized steel conduits prior to making connections.
2. Where two threaded conduits must be joined and neither can be rotated, use three-piece couplings or split couplings. Do not use running threads.
3. Use suitable adapters where required to transition from one type of conduit to another.
4. Terminate threaded conduits in boxes and enclosures using threaded hubs or double lock nuts for dry locations and raintight hubs for wet locations.
5. Provide insulating bushings, insulated throats, or listed metal fittings with smooth, rounded edges at conduit terminations to protect conductors.
6. Secure joints and connections to provide mechanical strength and electrical continuity.

H. Penetrations:

1. Do not penetrate or otherwise notch or cut structural members, including footings and grade beams, without approval of Structural Engineer.
2. Make penetrations perpendicular to surfaces unless otherwise indicated.
3. Provide sleeves for penetrations as indicated or as required to facilitate installation. Set sleeves flush with exposed surfaces unless otherwise indicated or required.
4. Conceal bends for conduit risers emerging above ground.
5. Where conduits penetrate waterproof membrane, seal as required to maintain integrity of membrane.
6. Make penetrations for roof-mounted equipment within associated equipment openings and curbs where possible to minimize roofing system penetrations. Where penetrations are necessary, seal as indicated or as required to preserve integrity of roofing system and maintain roof warranty.
7. Install firestopping to preserve fire resistance rating of partitions and other elements; see Section 07 8400.

I. Conduit Movement Provisions: Where conduits are subject to movement, provide expansion and expansion/deflection fittings to prevent damage to enclosed conductors or connected equipment. This includes, but is not limited to:

1. Where conduits cross structural joints intended for expansion, contraction, or deflection.

J. Conduit Sealing:

1. Use foam conduit sealant to prevent entry of moisture and gases. This includes, but is not limited to:
   a. Where conduits may transport moisture to contact live parts.

K. Provide grounding and bonding; see Section 26 0526.

3.03 CLEANING

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

END OF SECTION

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SECTION 26 0533.16
BOXES FOR ELECTRICAL SYSTEMS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Outlet and device boxes up to 100 cubic inches, including those used as junction and pull boxes.

1.02 RELATED REQUIREMENTS

A. Section 07 8400 - Firestopping.

B. Section 26 0529 - Hangers and Supports for Electrical Systems.

1.03 REFERENCE STANDARDS

A. NECA 1 - Standard for Good Workmanship in Electrical Construction; 2023.

B. NECA 130 - Standard for Installing and Maintaining Wiring Devices; 2016.

C. NEMA FB 1 - Fittings, Cast Metal Boxes, and Conduit Bodies for Conduit, Electrical Metallic Tubing, and Cable; 2014.

D. NEMA OS 1 - Sheet-Steel Outlet Boxes, Device Boxes, Covers, and Box Supports; 2013 (Reaffirmed 2020).

E. NFPA 70 - National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

F. UL 514A - Metallic Outlet Boxes; Current Edition, Including All Revisions.

1.04 ADMINISTRATIVE REQUIREMENTS

A. Coordination:

1. Coordinate the work with other trades to avoid placement of ductwork, piping, equipment, or other potential obstructions within the dedicated equipment spaces and working clearances for electrical equipment required by NFPA 70.
2. Coordinate arrangement of electrical equipment with the dimensions and clearance requirements of the actual equipment to be installed.
3. Coordinate minimum sizes of boxes with the actual installed arrangement of conductors, clamps, support fittings, and devices, calculated according to NFPA 70.
4. Coordinate minimum sizes of pull boxes with the actual installed arrangement of connected conduits, calculated according to NFPA 70.
5. Coordinate the placement of boxes with millwork, furniture, devices, equipment, etc. installed under other sections or by others.

6. Coordinate the work with other trades to preserve insulation integrity.
7. Coordinate the work with other trades to provide walls suitable for installation of flush-mounted boxes where indicated.
8. Notify Architect of any conflicts with or deviations from Contract Documents. Obtain direction before proceeding with work.

1.05 QUALITY ASSURANCE

A. Comply with requirements of NFPA 70.

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

1.06 DELIVERY, STORAGE, AND HANDLING

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

B. Products: Provide products listed and classified by Underwriters Laboratories Inc., as suitable for the purpose specified and indicated.

PART 2 PRODUCTS

2.01 BOXES

A. General Requirements:

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

B. Outlet and Device Boxes Up to 100 cubic inches, Including Those Used as Junction and Pull Boxes:

1. Use sheet-steel boxes for dry locations unless otherwise indicated or required.
2. Use cast iron boxes or cast aluminum boxes for damp or wet locations unless otherwise indicated or required; furnish with compatible weatherproof gasketed covers.
3. Sheet-Steel Boxes: Comply with NEMA OS 1, and list and label as complying with UL 514A.
4. Cast Metal Boxes: Comply with NEMA FB 1, and list and label as complying with UL 514A; furnish with threaded hubs.

5. Wall Plates: Stainless Steel.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that field measurements are as indicated.

B. Verify that mounting surfaces are ready to receive boxes.

C. Verify that conditions are satisfactory for installation prior to starting work.

3.02 INSTALLATION

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

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

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

D. Unless otherwise indicated, provide separate boxes for line voltage and low voltage systems.

E. Unless otherwise indicated, boxes may be surface-mounted where exposed conduits are indicated or permitted.

F. Box Locations:

1. Locate boxes to be accessible. Provide access panels in accordance with Section 08 3100 as required where approved by the Architect.
2. Unless dimensioned, box locations indicated are approximate.
3. Locate boxes so that wall plates do not span different building finishes.
4. Locate boxes so that wall plates do not cross masonry joints.
5. Unless otherwise indicated, where multiple outlet boxes are installed at the same location at different mounting heights, install along a common vertical center line.

G. Box Supports:

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

H. Install boxes plumb and level.

I. Install boxes as required to preserve insulation integrity.

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

K. Install firestopping to preserve fire resistance rating of partitions and other elements, using materials and methods specified in Section 07 8400.

L. Close unused box openings.

M. Install blank wall plates on junction boxes and on outlet boxes with no devices or equipment installed or designated for future use.

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

O. Align adjacent wall mounted outlet boxes for switches, thermostats, and similar devices.

3.03 CLEANING

A. Clean interior of boxes to remove dirt, debris, plaster and other foreign material.

END OF SECTION

SECTION 26 0553
IDENTIFICATION FOR ELECTRICAL SYSTEMS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Electrical identification requirements.

B. Wire and cable markers.

1.02 RELATED REQUIREMENTS

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

1.03 REFERENCE STANDARDS

A. NFPA 70 - National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

1.04 QUALITY ASSURANCE

A. Comply with requirements of NFPA 70.

PART 2 PRODUCTS

2.01 IDENTIFICATION REQUIREMENTS

A. Existing Work: Unless specifically excluded, identify existing elements to remain that are not already identified in accordance with specified requirements.

B. Identification for Equipment:

1. Use identification nameplate to identify each piece of electrical distribution and control equipment and associated sections, compartments, and components.
    a. Panelboards:
        1) Use typewritten circuit directory to identify load(s) served for panelboards with a door. Identify spares and spaces using pencil.
        2) For power panelboards without a door, use identification nameplate to identify load(s) served for each branch device. Identify spares and spaces.
2. Use identification label or handwritten text using indelible marker on inside of door at each fused switch to identify required NEMA fuse class and size.

C. Identification for Conductors and Cables:

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

2.02 WIRE AND CABLE MARKERS

A. Markers for Conductors and Cables: Use wrap-around self-adhesive vinyl cloth, wrap-around self-adhesive vinyl self-laminating, heat-shrink sleeve, plastic sleeve, plastic clip-on, or vinyl split sleeve type markers suitable for the conductor or cable to be identified.

B. Markers for Conductor and Cable Bundles: Use plastic marker tags secured by nylon cable ties.

C. Legend: Power source and circuit number or other designation indicated.

D. Text: Use factory pre-printed or machine-printed text, all capitalized unless otherwise indicated.

E. Minimum Text Height: 1/8 inch.

F. Color: Black text on white background unless otherwise indicated.

PART 3 EXECUTION

3.01 PREPARATION

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

3.02 INSTALLATION

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

B. Install identification products to be plainly visible for examination, adjustment, servicing, and maintenance. Unless otherwise indicated, locate products as follows:

1. Conductors and Cables: Legible from the point of access.

C. Install identification products centered, level, and parallel with lines of item being identified.

D. Install self-adhesive labels and markers to achieve maximum adhesion, with no bubbles or wrinkles and edges properly sealed.

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

END OF SECTION

SECTION 26 0583
WIRING CONNECTIONS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Electrical connections to equipment.

1.02 RELATED REQUIREMENTS

A. Section 26 0519 - Low-Voltage Electrical Power Conductors and Cables.

B. Section 26 0533.13 - Conduit for Electrical Systems.

C. Section 26 0533.16 - Boxes for Electrical Systems.

1.03 REFERENCE STANDARDS

A. NFPA 70 - National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

1.04 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Manufacturer's Instructions: Indicate application conditions and limitations of use stipulated by product testing agency. Include instructions for storage, handling, protection, examination, preparation, and installation of product.

1.05 QUALITY ASSURANCE

A. Comply with requirements of NFPA 70.

B. Products: Listed, classified, and labeled as suitable for the purpose intended.

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

PART 2 PRODUCTS

2.01 MATERIALS

A. Wire and Cable: As specified in Section 26 0519.

B. Boxes: As specified in Section 26 0533.16.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that equipment is ready for electrical connection, wiring, and energization.

3.02 ELECTRICAL CONNECTIONS

A. Make electrical connections in accordance with equipment manufacturer's instructions.

B. Make conduit connections to equipment using flexible conduit. Use liquidtight flexible conduit with watertight connectors in damp or wet locations.

C. Connect heat producing equipment using wire and cable with insulation suitable for temperatures encountered.

D. Install terminal block jumpers to complete equipment wiring requirements.

E. Install interconnecting conduit and wiring between devices and equipment to complete equipment wiring requirements.

END OF SECTION