Attachment C
RFB C142B3018

PROJECT MANUAL

BLDG. B-3 REROOFING
CAMP DODGE, JOHNSTON, IOWA

Project No. 19083033
Contract No. C142B3018

JUNE 10, 2021

ASK STUDIO ARCHITECTS SCHIPPER KASTNER

ASK Project No.: 20028

IOWA ARMY NATIONAL GUARD

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PROJECT MANUAL

BLDG. B-3 REROOFING
CAMP DODGE, JOHNSTON, IOWA

For The
IOWA ARMY NATIONAL GUARD

Project No. 19083033
Contract No. C142B3018

JUNE 10, 2021

THE ARMORY BOARD
DEPARTMENT OF PUBLIC DEFENSE (MILITARY DIVISION)

THE ADJUTANT GENERAL
Major General BENJAMIN J. CORELL
CHAIRMAN OF THE ARMORY BOARD

ISSUED BY:

STATE COMPTROLLER OFFICE:

Jocelyn Brincks, Contracting Officer
Camp Dodge, Building 3465 (W-41)
7105 NW 70th Avenue
Johnston, IA 50131-1824
Phone: (515) 252-4522

CONSTRUCTION & FACILITIES MANAGEMENT OFFICE:

Michael Brothers, Design Branch Chief
Camp Dodge, Building 3535 (B-61)
7105 NW 70th Avenue
Johnston, IA 50131-1824
Phone: (515) 252-4225

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DOCUMENT 00 01 02

PROJECT DESIGN TEAM:

ARCHITECT:

Michael Kastner AIA LEED AP
ASK Studio
3716 Ingersoll Ave Ste A
Des Moines, Iowa 50312
Phone: 515.277.6707
Email: mkastner@askstudio.com

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DOCUMENT 00 01 05

CERTIFICATIONS

	I HEREBY CERTIFY THAT THE PORTION OF THIS TECHNICAL SUBMISSION DESCRIBED BELOW WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED ARCHITECT UNDER THE LAWS OF THE STATE OF IOWA. **MICHAEL J. KASTNER** **DATE** **DISCIPLINE: ARCHITECTURE** **IOWA REGISTRATION NO: 5346:** **SECTIONS COVERED BY THIS SEAL:**

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DOCUMENT 00 01 10

TABLE OF CONTENTS

END OF DOCUMENT 00 01 10

Legend:

IAARNG: Iowa Army National Guard
ASK: Architects Shipper Kastner

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DOCUMENT 00 43 25

SUPPLEMENT F:
SUBSTITUTION REQUEST FORM (BIDDING PHASE)

TO: **FORWARD ALL SUBSTITUTION REQUESTS TO:**

Michael Kastner, ASK Studio
3716 Ingersoll Ave Ste A
Des Moines, Iowa 50312
Phone: 515.277.6707 Email: mkastner@askstudio.com

PROJECT: BUILDING B-03 REROOFING, CAMP DODGE, JOHNSTON, IOWA

Specification: Tile, 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

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DEPARTMENTS OF THE ARMY AND THE AIR FORCE
NATIONAL GUARD BUREAU
111 SOUTH GEORGE MASON DRIVE
ARLINGTON, VA 22204-1382

RECEIVED
NOV 30 1993
FACILITIES & CONSTRUCTION

NGB-AEN

24 NOV 1993

MEMORANDUM FOR SEE DISTRIBUTION

SUBJECT: Applicability of Davis-Bacon Act

1. The purpose of this memorandum is to clarify the relation of the Davis-Bacon Act to State contracts.

2. All State contracts are exempt from the provisions of the Davis-Bacon Act even though they are funded by 100% Federal funds contributed to the State from the National Guard Bureau. 32 CFR 33.36 (i)(5) requires the use of the Federal Davis-Bacon Act only in cases where it is required by the Federal grant program legislation. Our authorization statues do not require the use of the Davis-Bacon Act. Therefore, the States must follow the applicable State law. Questions should be referred to the State full time Judge Advocate.

3. For further information, please contact Patrick Batt at DSN 327-7911.

FOR THE CHIEF, NATIONAL GUARD BUREAU:

DONALD R. FRANKLAND
LTC EN
Director of Engineering

DISTRIBUTION

Each TAG (1)

CF:
Each FMO (1)
Each USPFO (1)

AGIA-SJA 6 JAN 94

MEMORANDUM FOR CW5 JERRY KLINKEFUS

SUBJECT: APPLICABILITY OF DAVIS BACON ACT TO STATE CONTRACT ACTIVITY

1. As a result of my review of the code of IOWA, I have determined that the IOWA state contracting actions which use ARNG appropriations, do not require the Davis Bacon Act clause(s).

2. This is consistent with NGB guidance specific to National Guard appropriation and authorization language, part 31, Code of Federal Regulations.

EDWARD J STROBL, LT COL, IA ANG
STAFF JUDGE ADVOCATE

END OF DOCUMENT 00 43 43

SECTION 01 10 00

SUMMARY

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Project Description

B. Contract Description

C. Description of Work

D. Work by Owner

E. Owner Occupancy

F. Permits, Fees, and Regulatory Agencies

G. Contract Documents

1.02 PROJECT DESCRIPTION

A. Architect: Architects Schipper Kastner

B. Project Name: IAARNG Bldg B3 Reroofing

C. Owner:Iowa Army National Guard.

D. The Project consists of reroofing Bldg W3, Camp Dodge.

1.03 CONTRACT DESCRIPTION

A. Contract Type: A single prime contract is to be awarded based on a stipulated sum as described in Document 00 52 00 Form of Agreement Between the Owner and Contractor.

1.04 DESCRIPTION OF WORK

A. Work includes:

1. Removal and disposal of asbestos containing material in tar sealant as indicated on drawings.
2. Demolition and reroofing of existing hip hip shingle roof with new Style D roof edge, Ice & Water Shield protection, underlayment and shingles.
3. Replacement of existing ridge vent and static roof vents.
4. Replacement of boot flashing at existing pipe/vent penetrations.
5. Installation of new metal fascia, metal gutters and metal downspouts.

1.05 WORK BY OWNER

A. No associated work to be completed by Owner.

1.06 OWNER OCCUPANCY

A. Owner will occupy building throughout reroofing.

B. Cooperate with Owner to minimize conflict and to facilitate Owner's operations.

1.07 PERMITS, FEES, INSPECTIONS AND REGULATORY REQUIREMENTS

A. The following regulations are applicable to this project:

1. Iowa State Building Code.
2. International Building Code - 2015 Edition
3. International Fire Code - 2015 Edition
4. State Electrical Code, IAC 661 Chapter 504; National Electric Code - 2017 Edition with ammendments
5. State Mechanical Code, IAC 641, Chapter 61; International Mechanical Code - 2018 Edition with ammendments.
6. State Plumbing Code, IAC 641, Chapter 25; UPC 2018 Edition
7. ICC International Energy Conservation Code - 2012 Edition

B. Reviews/Inspections:

1. City of Johnston will not review plans, will not require building permit, and will not be conducting inspections.
2. State Fire Marshal's Office Construction Inspection;
    a. The State Fire Marshal's Office has issued a small projects exception for this project.
    b. The State Fire Marshal's Office, Building Code Division, will be not performing construction inspections for this project.

1.08 CONTRACTOR USE OF SITE AND PREMISES

A. Refer to Section 01 50 00 Temporary Facilities and Controls for additional Site Requirements.

B. Arrange use of site and premises to allow:
    1. Maintain Owner access to building entries and use of the building.

C. Provide access to and from premises as required by law and by Owner:
    1. Emergency Building Exits During Construction: Keep all exits required by code open during construction period; provide temporary exit signs if exit routes are temporarily altered.
    2. Do not obstruct roadways, sidewalks, or other public ways without permit.

D. Utility Outages and Shutdown:
    1. Do not disrupt or shut down life safety systems, including but not limited to fire alarm system, without coordinating with Owner and Authorities having jurisdiction .
    2. Prevent accidental disruption of utility services.

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

1.09 CONTRACT DOCUMENTS

A. Specifications:
    1. Specifications and other Contract Documents which are a part of the Contract Documents are as listed in the Specifications "TABLE of CONTENTS".
    2. Work shall conform to requirements of Specifications and other written instructions which may be subsequently issued by the Architect to supplement, modify or interpret.

B. Plans:
    1. Drawings for work in this Contract shall be listed on Title Sheet of the Drawings.

C. Specifications are intended to cover all labor, materials and standards of workmanship to be employed in the work indicted on the Plans and called for in the Specifications or reasonably implied therein. The Plans and Specifications supplement one another. Any part of the work mentioned in one and not represented in the other shall be done the same as if it has been mentioned in both.
    1. If the drawings and specifications are in conflict, and the Contractor did not pose the question in writing so that an interpretation could be given prior to receipt of the bids, then the Contractor is responsible for having used the most expensive/conservative of the ways represented by the point of conflict, and included in the bid.

D. The Contractor shall not make alterations in the Drawings and Specifications. In the event of errors or discrepancies, the Contractor shall notify the Architect. The Architect will make the necessary corrections/interpretation.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION 01 10 00

SECTION 01 20 00
PRICE AND PAYMENT PROCEDURES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Procedures for preparation and submittal of applications for progress payments.

B. Documentation of changes in Contract Sum and Contract Time.

C. Change procedures.

D. Procedures for preparation and submittal of application for final payment.

1.02 RELATED REQUIREMENTS

A. Section 00 52 00 - Agreement Form: Contract Sum, retainages, payment period, monetary values of unit prices.

1.03 SCHEDULE OF VALUES

A. Electronic media printout including equivalent information will be considered in lieu of standard form specified; submit draft to Architect for approval.

B. Forms filled out by hand will not be accepted.

C. Submit a printed schedule on AIA Form G703 - Application and Certificate for Payment Continuation Sheet. Contractor's standard form or electronic media printout will be considered.

D. Submit Schedule of Values in duplicate within 15 days after date of Owner-Contractor Agreement.

E. Format: Utilize the Table of Contents of this Project Manual. Identify each line item with number and title of the specification Section, and provide breakdown between materials and labor. Identify separate line item for Site Mobilization, Bonds and Insurance, and General Conditions.

F. Include within each line item, a direct proportional amount of Contractor's overhead and profit.

G. Revise schedule to list approved Change Orders, with each Application For Payment.

1.04 APPLICATIONS FOR PROGRESS PAYMENTS

A. Payment Period: Submit at intervals stipulated in the Agreement.

B. Electronic media printout including equivalent information will be considered in lieu of standard form specified; submit sample to Architect for approval.

C. Forms filled out by hand will not be accepted.

D. Present required information on electronic media printout.

E. Form: AIA G702 Application and Certificate for Payment and AIA G703 - Continuation Sheet including continuation sheets when required.

F. Execute certification by signature of authorized officer.

G. Use data from approved Schedule of Values. Provide dollar value in each column for each line item for portion of work performed and for stored products.

H. List each authorized Change Order as a separate line item, listing Change Order number and dollar amount as for an original item of work.

I. Submit one pdf email copy of each Application for Payment to Architect.

J. Progress Payments:
   1. The Owner will make payment to the Contractor based upon the total of Work Completed and Suitably Stored Materials.
   2. The payment due will be equal to the sum of the Completed Work and Suitably Stored Materials, less 5% retainage to be held by the Owner until Completion of the Project, less previous payments.

3. Off site stored material; payment may be requested for materials stored off-site. Contractor shall submit with Application written location where material is stored, evidence of payment for off-site stored materials, and certificate of insurance for off-site stored materials.

K. Include the following with the application:
   1. Transmittal letter as specified for submittals in Section 01 30 00.
   2. Construction progress schedule, revised and current as specified in Section 01 30 00.
   3. Waste management recycling report.

L. When Architect requires substantiating information, submit data justifying dollar amounts in question. Provide one copy of data with cover letter for each copy of submittal. Show application number and date, and line item by number and description.

1.05 MODIFICATION PROCEDURES

A. Submit name of the individual authorized to receive change documents and who will be responsible for informing others in Contractor's employ or subcontractors of changes to Contract Documents.

B. Architect will issue and Instruction to Contractor (ITC) for any change in the Work or Contract time that includes a detailed description of the proposed change with supplementary and/or revised drawings and specifications.

C. Contractor shall submit a Request for Change (RFC) to architect for any ITC that involves a change in Contract Sum or Contract Time. RFC shall include a substantiation of costs as outlined below.

D. Contractor may propose a change by submitting a request for change to Architect, describing the proposed change and its full effect on the work, with a statement describing the reason for the change, and the effect on the Contract Sum and Contract Time with full documentation. Document any requested substitutions in accordance with Section 01 60 00.

E. No work involving a change in Contract Sum or Contract Time shall proceed without written approval from Owner.

F. For accepted changes, Owner shall provide a written acceptance/approval for contractor to proceed with the change. Change to be incorporated into final change order.

G. Computation of Change in Contract Amount: Refer to Section 00 73 00 - Supplementary Conditions.

H. Substantiation of Costs: Provide full information required for evaluation.
   1. Provide following data:
      a. Quantities of products, labor, and equipment.
      b. Taxes, insurance, and bonds.
      c. Overhead and profit.
      d. Justification for any change in Contract Time.
      e. Credit for deletions from Contract, similarly documented.
   2. For Time and Material work, submit itemized account and supporting data after completion of change, within time limits indicated in the Conditions of the Contract.

I. After execution of Change Order, promptly revise Schedule of Values and Application for Payment forms to record each authorized Change Order as a separate line item and adjust the Contract Sum.

J. Promptly revise progress schedules to reflect any change in Contract Time, revise sub-schedules to adjust times for other items of work affected by the change, and resubmit.

K. Promptly enter changes in Project Record Documents.

1.06 APPLICATION FOR FINAL PAYMENT

A. Prepare Application for Final Payment as specified for progress payments, identifying total adjusted Contract Sum, previous payments, and sum remaining due.

B. Application for Final Payment will not be considered until the following have been submitted and approved:

1. All closeout procedures specified in Section 01 70 00.
2. Submittals as specified in Article 9 of General Conditions AIA A201 and Supplementary General Conditions Section 00 73 00.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION 01 20 00

SECTION 01 30 00

PROJECT COORDINATION

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Contractor's personnel.

B. Preconstruction meeting.

C. Construction progress meetings.

D. Construction progress schedule.

E. Requests for Interpretation (RFI) procedures.

F. Shop Drawing/Submittal procedures.

1.02 RELATED REQUIREMENTS

A. Section 01 32 16 - Construction Progress Schedule: Form, content, and administration of schedules.

B. Section 01 70 00 - Execution and Closeout Requirements: Additional coordination requirements.

C. Section 01 78 00 - Close-Out Submittals: Project record documents; operation and maintenance data; warranties and bonds.

1.03 PROJECT COORDINATOR

A. Project Coordinator: Contractor's Project Manager.

B. Project Superintendent:
   1. The superintendent shall be at the job site during the performance of all work, including work by subcontractors.
   2. The General Contractor shall submit to the Owner for approval the qualifications of the superintendent, which should include 5 - 7 years experience with projects of comparable size and construction.

C. Cooperate with the Project Coordinator in allocation of mobilization areas of site; for field offices and trailers, for site and premises access, traffic, and parking facilities.

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

E. 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.

F. Comply with instructions of the Project Coordinator for use of temporary utilities and construction facilities. Responsibility for providing temporary utilities and construction facilities is identified in Section 01 10 00 - Summary.

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

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 PRECONSTRUCTION MEETING

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

B. Attendance Required:
   1. Owner.
   2. Architect.
   3. Contractor's Project Coordinator.
   4. Major Subcontractor's Project Manager/Superintendent.

C. Agenda:
   1. Execution of Owner-Contractor Agreement.

2. Submission of executed bonds and insurance certificates.
3. Distribution of Contract Documents.
4. Submission of list of Subcontractors, schedule of values, submittals schedule, and construction progress schedule.
5. Designation of personnel representing the parties to Contract, Owner, Contractor, and Architect.
6. Procedures and processing of field decisions, submittals, substitutions, applications for payments, proposal request, Change Orders, and Contract closeout procedures.
7. Access to site and use of premises, including: site security and access, parking, material deliveries and storage.
8. Any project Phasing and owner occupancy
9. Safety and Housekeeping
10. Scheduling.
11. Procedures and requirements for site security and access, Owner's use, and material deliveries and storage.
12. Procedures and requirements for field testing and required reporting forms.
13. Procedures for maintaining record documents.
14. Requirements for start-up of equipment.
15. Inspection and acceptance of equipment put into service during construction period.

D. Architect shall record minutes and distribute copies electronically.

E. Architect shall record minutes and distribute copies within two days after meeting to participants, with one copies to Contractor, Architect, Owner, and participants. Contractor shall forward to sub-contractors and those affected by decisions made.

3.02 CONSTRUCTION PROGRESS MEETINGS

A. Schedule and administer meetings throughout progress of the work at maximum bi-monthly intervals.

B. Contractor shall make arrangements for meetings, prepare agenda with copies for participants, and preside at meetings.

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 and planned progress during succeeding work period.
3. Review construction progress schedule status, maintenance of schedule, and corrective measures to regain schedule
4. Field observations, problems, and decisions.
5. Identification of problems that impede, or will impede, planned progress.
6. Review of submittals schedule and status of submittals.
7. Review of proposed Change Modifications and Requests for Information
8. Review of off-site fabrication and delivery schedules.
9. Maintenance of progress schedule.
10. Corrective measures to regain projected schedules.
11. Planned progress during succeeding work period.
12. Maintenance of quality and work standards.
13. Effect of proposed changes on progress schedule and coordination.
14. Other business relating to work.

E. Record minutes and post to Electronic Documents Service within two days after meeting.

3.03 CONSTRUCTION PROGRESS SCHEDULE

A. Refer to Section 01 32 16 - Construction Progress Schedule.

B. If preliminary schedule requires revision after review, submit revised schedule within 10 days.

C. Within 20 days after review of preliminary schedule, submit draft of proposed complete schedule for review.

D. Submit updated schedule with each Application for Payment.

3.04 REQUESTS FOR INTERPRETATION (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 a 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. Combine RFI and its attachments into a single electronic file. PDF format is preferred.

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

E. 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. Do not extend applicability of a response to specific item to encompass other similar conditions, unless specifically so noted in the response.
   2. Upon receipt of a response, promptly review and distribute it to all affected parties, and update the RFI Log.

3.05 SUBMITTALS

A. An Electronic Submittal Service will not be required or used for this project. Submittals shall be pdf documents and shall be e-mailed to Architect and Owner's Project Manager.

B. Submittals
   1. The following items, at a minimum, shall be electronic submittals (PDF) and shall be forwarded to Owner and Architect:
      a. Shop Drawings.
      b. Product Data.
      c. Transmittals for Samples delivered.
      d. Informational Submittals.
      e. Closeout Submittals.
      f. Substantial Completion Documents.
      g. Instructions To Contractor (ITC) by architect
      h. Change Directives (CD's)
      i. Requests for Information (RFI's).

j. Requests for Change (RFC's) and Requests for Proposal (RFP's).
k. Meeting Minutes.
l. Test and Inspection Reports.
m. Photos
n. Reports.
o. Punchlists.

2. Submittal Format:
   a. All submittals shall be uploaded in “PDF” format except for documents requiring data input from the Consultant(s) (such as responses to RFI's) which shall be uploaded in “DOC” format.
3. Shop Drawing and Product Data Submittal Procedures:
   a. General Contractor shall review submittals, add review comments, and apply electronic stamp certifying that the submittal complies with the requirements of the Contract Documents including verification of manufacturer / product, dimensions and coordination of information with other parts of the work.
   b. General Contractor shall create an electronic transmittal for each submittal, attach to submittal in PDF format, and forward to Owner and Architect.
   c. Architect (and/or Sub-Consultant if applicable) shall review submittal, add review comments, apply electronic stamp indicating status of submittal, and return pdf to General Contractor and Owner. General Contractor will receive email notice of completed review.
   d. Distribution of reviewed submittals to subcontractors and suppliers is the responsibility of the General Contractor.
   e. Re-submittals, if required, shall be forwarded under the same procedures as described above.

C. Duties/Responsibilities:
1. Contractor:
   a. Coordinate each submittal with requirements of the Contract Documents.
   b. Review submittals prior to submission to co-ordinate work between disciplines, sequencing of construction, and required quantities.
   c. Affix stamp and initials or signature and indicate requirements for resubmittal or approval of submittal.
   d. Determine and verify field dimensions and field construction criteria and coordination.
   e. Notify the Architect/Engineer in writing at time of submission of any deviations in the submittals from requirements of the Contract Documents.
   f. Begin no fabrication or work for items which require a submittal prior to Architect/Engineer's approval of submittal.
2. Architect:
   a. Review submittals for general conformance with requirements of the Contract Documents.
   b. Review submittals with reasonable promptness and in accordance with schedule.
   c. Affix stamp and initials or signature and indicate requirements for resubmittal or approval of submittal.
   d. Acceptance of shop drawings by the Architect does not relieve the Contractor from any responsibility for deviations from the Contract Documents unless such deviations are clearly noted in writing on the submission and written approval for such deviation has been indicated by the Architect.
   e. Quantities, dimensions, etc., will be reviewed only as required to determine design intent. Contractor shall be responsible for insuring compliance between all submissions and the Contract Documents.

END OF SECTION 01 30 00

SECTION 01 32 16
CONSTRUCTION PROGRESS SCHEDULE

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Preliminary schedule.

B. Construction progress schedule, bar chart type.

1.02 RELATED SECTIONS

A. Section 01 10 00 - Summary: Work sequence.

B. Section 01 20 00 - Price and Payment Procedures.

C. Section 01 30 00 - Project Coordinations; Submittal Procedures

1.03 SUBMITTALS

A. Within 10 days after date of Agreement, submit preliminary schedule.

B. If preliminary schedule requires revision after review, submit revised schedule within 10 days.

C. Within 20 days after review of preliminary schedule, submit draft of proposed complete schedule for review.

D. Submit updated schedule with each Application for Payment.

E. Submit the number of opaque reproductions that Contractor requires, plus two copies which will be retained by Architect.

1.04 QUALITY ASSURANCE

A. Scheduler: Contractor's personnel or specialist Consultant specializing in CPM scheduling with two years minimum experience in scheduling construction work of a complexity comparable to this Project, and having use of computer facilities capable of delivering a detailed graphic printout within 48 hours of request.

1.05 SCHEDULE FORMAT

A. Listings: In chronological order according to the start date for each activity. Identify each activity with the applicable specification section number.

B. Sheet Size: Multiples of 8-1/2 x 11 inches or 11 x 17 inches

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 PRELIMINARY SCHEDULE

A. Prepare preliminary schedule in the form of a horizontal bar chart.

3.02 CONTENT

A. Show complete sequence of construction by activity, with dates for beginning and completion of each element of construction.

B. Identify each item by specification section number.

C. Show accumulated percentage of completion of each item, and total percentage of Work completed, as of the first day of each month.

D. Provide separate schedule of submittal dates for shop drawings, product data, and samples, owner-furnished products, products identified under Allowances, and dates reviewed submittals will be required from Architect. Indicate decision dates for selection of finishes.

E. Provide legend for symbols and abbreviations used.

3.03 BAR CHARTS

A. Include a separate bar for each major portion of Work or operation.

B. Identify the first work day of each week.

3.04 REVIEW AND EVALUATION OF SCHEDULE

A. Participate in joint review and evaluation of schedule with Architect at each submittal.

B. Evaluate project status to determine work behind schedule and work ahead of schedule.

C. After review, revise as necessary as result of review, and resubmit within 10 days.

3.05 UPDATING SCHEDULE

A. Maintain schedules to record actual start and finish dates of completed activities.

B. Indicate progress of each activity to date of revision, with projected completion date of each activity.

C. Annotate diagrams to graphically depict current status of Work.

D. Identify activities modified since previous submittal, major changes in Work, and other identifiable changes.

E. Indicate changes required to maintain Date of Substantial Completion.

F. Submit reports required to support recommended changes.

3.06 DISTRIBUTION OF SCHEDULE

A. To be posted electronically. Refer to Section 01 3000 for procedures for Electronic Submittals

B. Instruct recipients to promptly report, in writing, problems anticipated by projections indicated in schedules.

END OF SECTION 01 32 16

SECTION 01 40 00

QUALITY REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Control of installation.

B. Tolerances.

C. Manufacturers' field services.

D. Defect Assessment.

E. Owner Required Report Forms

1.02 RELATED REQUIREMENTS

A. Document 00 72 00 - General Conditions: Inspections and approvals required by public authorities.

B. Section 01 30 00 - Project Coordination: Submittal procedures.

C. Section 01 60 00 - 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 2014).

B. ASTM C1077 - Standard Practice for Laboratories Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Laboratory Evaluation; 2014.

C. ASTM C1093 - Standard Practice for Accreditation of Testing Agencies for Masonry; 2013.

D. ASTM D3740 - Standard Practice for Minimum Requirements for Agencies Engaged in the Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction; 2012a.

E. ASTM E329 - Standard Specification for Agencies Engaged in Construction Inspection and/or Testing; 2014a.

F. ASTM E543 - Standard Specification for Agencies Performing Nondestructive Testing; 2013.

1.04 SUBMITTALS

A. See Section 01 30 00 - Project Coordination, for submittal procedures.

B. 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.

C. 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.

D. Manufacturer's Field Reports: Submit reports 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.

1.05 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.

1.06 TESTING AND INSPECTION

A. Special Inspections
   1. No special inspections required for re-roofing project.

B. Manufacturer's Inspection
   1. Completed roofing system to be inspected by roofing manufacturer's representative.
   2. Roofing manufacturer's representative shall prepare and issue report of findings and required corrections. Report shall be issued to General Contractor, Owner, and Architect.
   3. Cost for inspection shall be part of contract.

C. All testing and inspections required by Code or governing authorities, other than Special Inspections, shall be arranged and paid for by the Contractor.

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 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.

C. Failure of the Architect to identify and/or reject Work not conforming to specified requirements shall not be construed as implying acceptance.

END OF SECTION 01 40 00

SECTION 01 50 00

TEMPORARY FACILITIES AND CONTROLS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Temporary Controls: Barriers, enclosures, and fencing.

B. Security requirements.

C. Vehicular access and parking.

D. Waste removal facilities and services.

1.02 RELATED REQUIREMENTS

A. Section 01 51 00 - Temporary Utilities.

1.03 TEMPORARY UTILITIES - SEE SECTION 01 51 00

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, to allow for owner's use of site 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.

C. Provide fencing/barriers at roof openings and/or edges as required by OSHA.

D. Construction site enclosure fencing is not required.

1.05 SECURITY

A. Site is within the security perimeter of Camp Dodge.

B. Contractor shall be responsible to provide security and facilities to protect Work, stored materials, tools, and access to existing facilities through construction area from unauthorized entry, vandalism, or theft.

C. Coordinate with Owner's security program.

D. Workers will be required to present government issued photo ID to gain access to site.

1.06 TEMPORARY FIRE PROTECTION

A. Contractor shall provide and maintain portable, general purpose fire extinguishers as required by governing authorities.

1.07 STAGING, VEHICULAR ACCESS AND PARKING

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

B. Existing on site parking areas to the east of the building may be used for construction parking.
   1. Coordinate with Owner

C. Materials staging:
   1. Existing parking areas may be utilized for materials storage and staging.
   2. Coordinate locations required with Owner.

1.08 WASTE REMOVAL

A. See Section 01 74 19 - Waste Management, for additional requirements.

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

C. Provide containers with lids. Remove trash from site weekly.

D. 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.

E. Open free-fall chutes are not permitted. Terminate closed chutes into appropriate containers with lids.

1.09 FIELD OFFICES

A. A Contractor's Field Office will not be required to be provided.

B. Owner will provide space for job meetings within B3 or adjacent building B60 at Camp Dodge.

C. Provide and maintain master set of Contract Documents, Change Orders, Field Orders, Supplementary Drawings, and RFI's on site.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION 01 50 00

SECTION 01 51 00

TEMPORARY UTILITIES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Temporary Utilities: Provision of electricity, lighting, heat, ventilation, and water.

B. Temporary Sanitation Facilities

1.02 RELATED REQUIREMENTS

A. Section 01 50 00 - Temporary Facilities and Controls:

1.03 TEMPORARY ELECTRICITY

A. Cost: By Owner.

B. Connect to Owner's existing power service
   1. Exercise measures to conserve energy.

1.04 TEMPORARY WATER SERVICE

A. Cost of Water Used: By Owner.

B. Connect to existing building water source.
   1. Exercise measures to conserve water.

1.05 TEMPORARY PHONE SERVICE

A. Owner will not provide temporary phone line and/or service.

B. Contractor and Sub-Contractors shall provide their own individual respective cell phones/services.

1.06 TEMPORARY SANITARY FACILITIES

A. Provide and maintain sufficient portable sanitary facilities for all workmen on site as required by regulatory agencies. Provide at time of project mobilization.

B. Use of existing facilities is not permitted.

C. Maintain daily in clean and sanitary condition.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 REMOVAL

A. Completely remove temporary materials and equipment prior to substantial completion.

B. Clean and repair any damage caused by temporary installations.

C. Restore permanent facilities used for temporary services to their specified condition.

END OF SECTION 01 51 00

SECTION 01 60 00

PRODUCT REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. General product requirements.

B. Transportation, handling, storage and protection.

C. Product option requirements.

D. Substitution limitations.

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

1.02 RELATED REQUIREMENTS

A. Section 01 25 00 - Substitution Procedures: Substitutions made during procurement and/or construction phases.

B. Section 01 40 00 - Quality Requirements: Product quality monitoring.

C. Section 01 74 19 - Construction Waste Management and Disposal: Waste disposal requirements potentially affecting product selection, packaging and substitutions.

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 NEW PRODUCTS

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

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

1. Made using or containing CFC's or HCFC's.
2. Containing any asbestos

2.02 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: 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 a Provision for Substitutions: Submit a request for substitution for any manufacturer not named.

2.03 MAINTENANCE MATERIALS

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

B. Deliver and place in location as directed; obtain receipt prior to final payment.

PART 3 EXECUTION

3.01 SUBSTITUTION LIMITATIONS

A. See Section 01 25 00 - Substitution Procedures.

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

C. 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.

3.02 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.

3.03 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. See Section 01 74 19.

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. Provide off-site storage and protection when site does not permit on-site storage or protection.

G. Protect products from damage or deterioration due to construction operations, weather, precipitation, humidity, temperature, sunlight and ultraviolet light, dirt, dust, and other contaminants.

H. Comply with manufacturer's warranty conditions, if any.

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

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

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

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

M. Arrange storage of products to permit access for inspection. Periodically inspect to verify products are undamaged and are maintained in acceptable condition.

3.04 WARRANTIES

A. Effective dates of warranties shall be the Date of Substantial Completion (not the date of delivery or installation) and must be identified on the warranty or by signed letter modifying the warranty.

END OF SECTION 01 60 00

SECTION 01 70 00

EXECUTION AND CLOSEOUT REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Coordination

B. Examination, preparation, and general installation procedures.

C. Requirements for alterations work, including selective demolition.

D. Pre-installation meetings.

E. Cleaning and protection.

F. Substantial Completion and Final Inspection.

G. General requirements for maintenance service.

1.02 RELATED REQUIREMENTS

A. Section 01 1000 - Summary: Limitations on working in existing building; continued occupancy; work sequence.

B. Section 01 30 00 - Project Coordination: Submittals procedures, Electronic document submittal service.

C. Section 01 40 00 - Quality Requirements: Testing and inspection procedures.

D. Section 01 51 00 - Temporary Utilities: Temporary heating, cooling, and ventilating facilities.

E. Section 01 74 19 - Construction Waste Management and Disposal: Additional procedures for trash/waste removal, recycling, salvage, and reuse.

F. Section 01 78 00 - Close-Out Submittals: Project record documents, operation and maintenance data, warranties, and bonds.

1.03 REFERENCE STANDARDS

A. NFPA 241 - Standard for Safeguarding Construction, Alteration, and Demolition Operations; 2013.

1.04 PROJECT CONDITIONS

A. Pollution Control: Provide methods, means, and facilities to prevent contamination of soil, water, and atmosphere from discharge of noxious, toxic substances, and pollutants produced by construction operations. Comply with federal, state, and local regulations.

1.05 COORDINATION

A. See Section 01 10 00 Summary for occupancy-related requirements.

B. 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.

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

D. 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.

E. 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.

F. In finished areas except as otherwise indicated, conceal pipes, ducts, and wiring within the construction. Coordinate locations of fixtures and outlets with finish elements.

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

H. Division of the Work:

1. Document Division:
    a. Specifications are divided for convenience into title sections as set forth in the TABLE OF CONTENTS and shall not be considered an accurate segregation of the several units of labor and materials.
    b. No responsibility, either direct or implied, is assumed by the Architect for omissions or duplications by the error in arrangement of the subject matter.
    c. The Contractor will be held responsible for the complete work whether or not the parts are described in one or more Sections.
2. Item(s) Description
    a. Mention in the Specifications and/or indication on the Drawings of articles, materials, operations or methods, requires that the Contractor furnish each item so mentioned or indicated.
    b. The Contractor shall furnish all labor, equipment, incidentals and supervision necessary to complete the work in the true meaning and intent of these Specifications.
    c. All such articles, materials, operations methods, quality, qualifications or conditions shall be binding even though written descriptions may not be expressed in complete sentences.
    d. Where devices or items or parts thereof are referred to in the singular, it is intended that such reference shall apply to as many devices, items or parts as are required to properly complete the work.

PART 2 PRODUCTS - NOT USED.

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.

PART 3 EXECUTION

3.01 EXAMINATION

A. Review underside of existing metal roof deck to verify there is no conduit, piping, or other items that may be damaged by roofing fasteners.

B. Verify that existing site conditions and substrate surfaces are acceptable for subsequent work. Start of work means acceptance of existing conditions.

C. Verify that existing substrate is capable of structural support or attachment of new work being applied or attached.

D. Examine and verify specific conditions described in individual specification sections.

E. Take field measurements before confirming product orders or beginning fabrication, to minimize waste due to over-ordering or misfabrication.

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 PRE-INSTALLATION 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 seven 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 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.

3.05 ALTERATIONS

A. Drawings showing existing construction and utilities are based on field observations and existing records.
   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. 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.

C. Remove existing work as indicated and as required to accomplish new work.
   1. Remove items indicated on drawings.
   2. Relocate items indicated on drawings.
   3. 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.
   4. Where new surface finishes are not specified or indicated, patch holes and damaged surfaces to match adjacent finished surfaces as closely as possible.

D. 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.
   4. Patch as specified for patching new work.

E. 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.

F. 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.

G. 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.
   3. Patch as specified for patching new work.

H. Clean existing systems and equipment.

I. Remove demolition debris and abandoned items from alterations areas and dispose of off-site; do not burn or bury.

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

3.06 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 samples of installed work for testing when requested.
   8. Remove and replace defective and non-complying work.

D. Execute cutting and patching to complete the work, to uncover work in order to install improperly sequenced work, to remove and replace defective or non-conforming work, to remove samples of installed work for testing when requested, to provide openings in the work for penetration of mechanical and electrical work, to execute patching to complement adjacent work, and to fit products together to integrate with other work.

E. 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 specified condition.

F. Employ skilled and experienced installer to perform cutting for weather exposed and moisture resistant elements, and sight exposed surfaces.

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

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

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

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.

K. Refinish surfaces to match adjacent finish. For continuous surfaces, refinish to nearest intersection or natural break. For an assembly, refinish entire unit.

L. Make neat transitions. Patch work to match adjacent work in texture and appearance. Where new work abuts or aligns with existing, perform a smooth and even transition.

M. Patch or replace surfaces that are damaged, lifted, discolored, or showing other imperfections due to patching work. Repair substrate prior to patching finish. Finish patches to produce uniform finish and texture over entire area. When finish cannot be matched, refinish entire surface to nearest intersections.

3.07 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 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 weekly and dispose off-site; do not burn or bury.

3.08 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 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.

H. Maintenance of Existing Property:
   1. Utilities: Contractor shall verify location of all utilities on site with utilities companies. Send notices, make necessary arrangements and perform other services required in care and maintenance of existing utilities. Assume responsibility for which Owner may be liable. Provide enclosing or boxing-in, removal or relocations as necessary for protection of existing utilities equipment. Upon completion of work involved in execution of the Contract, remove all enclosures, fill in all openings and concrete, grout watertight and leave in finished condition.
   2. Unless otherwise indicated or specified, all water, gas, irrigation lines, lighting, and telephone conduits and wires, sewer lines, connections in place and other surface or subsurface structure and lines and landscaping except as specifically indicated to be removed shall be maintained by the Contractor and shall not be disturbed, disconnected or damaged by him during progress of work.
   3. Notify the Architect immediately upon discovery of any utility lines not shown on plans which interfere with construction.
   4. Should the Contractor in performance of work disturb, disconnect or damage any of the above, all expenses arising from disturbance or in replacing or repair shall be borne by the Contractor.

3.09 FINAL CLEANING

A. Execute final cleaning prior to final project assessment.
   1. Clean areas to be occupied by Owner prior to final completion before Owner occupancy.

B. Use cleaning materials that are nonhazardous.

C. Clean surfaces exposed to view; remove temporary labels, stains and foreign substances, polish transparent and glossy 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. Clean equipment and fixtures to a sanitary condition with cleaning materials appropriate to the surface and material being cleaned.

F. Replace filters of operating equipment.

G. Clean debris from roofs, gutters, downspouts, scuppers, overflow drains, area drains, drainage systems, and _____.

H. Clean site; sweep paved areas, rake clean landscaped surfaces.

I. Remove waste, surplus materials, trash/rubbish, and construction facilities from the site; dispose of in legal manner; do not burn or bury.

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

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

3.11 SUBSTANTIAL COMPLETION AND FINAL INSPECTION:

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

B. Notify Architect when work is considered ready for Substantial Completion.

C. Notify Architect when work is considered ready for Substantial Completion by submitting written certification stating:
   1. Contract Documents have been reviewed and work is completed in compliance with Contract Documents.
   2. Contractor's list of any items which have not been completed.
   3. Operation and Maintenance manuals have been completed in accordance with Section 01 78 00 and are available for use by Architect during inspection.
   4. Initial Cleaning has been completed.
   5. Manufacturer's Representative has inspected completed roof installation and issued report.

D. Within a reasonable time after receipt of such notice, Architect/Engineer will make an inspection to determine the status of completion.

E. Should it be determined that the work is not substantially complete:
   1. Architect will promptly notify the General Contractor in writing, giving general reasons for rejecting work.
   2. The General Contractor shall remedy the deficiencies in the work and send a second written notice of substantial completion to the Architect.

F. Should it be determined that the work appears substantially complete, the Architect will:
   1. Inspect work for compliance with contract documents.
   2. Prepare a Certificate of Substantial Completion on AIA form G704, accompanied by Architect's list of items to be completed or corrected.
   3. The General Contractor shall sign and submit the Certificate to Owner for their written acceptance of the responsibilities assigned to them in the Certificate.

G. When Contractor has completed the indicated items, he shall notify Architect and request final inspection.

H. Architect will re-inspect work.
   1. If the Architect finds the work is acceptable under the Contract Documents, the Architect shall request the Contractor to make close-out submittals.
   2. If the Architect finds the work still remains uncompleted, the Architect will promptly notify the General Contractor in writing, giving reasons for rejecting any re-inspected work.
      a. Cost for Architects time for any re-inspections beyond this time to re-review non-conforming work shall be borne by General Contractor at Architects standard hourly rate.

3.12 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 01 70 00

SECTION 01 74 19

CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

PART 1 - GENERAL

1.01 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.

1.02 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.

1.03 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.
ab. Piping.
ac. Supports and hangers.
ad. Valves.
ae. Sprinklers.
af. Mechanical equipment.
ag. Refrigerants.
ah. Electrical conduit.
ai. Copper wiring.
aj. Lighting fixtures.
ak. Lamps.
al. Ballasts.
am. Electrical devices.
an. Switchgear and panelboards.
ao. Transformers.
ap. Site-clearing waste.

2. Construction Waste:
   a. Masonry and CMU.
   b. Lumber.
   c. Wood sheet materials.
   d. Wood trim.
   e. Metals.
   f. Roofing.
   g. Insulation.
   h. Carpet and pad.
   i. Gypsum board.
   j. Piping.
   k. Electrical conduit.
   l. 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.

1.04 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.

1.05 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.

1.06 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.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.01 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.

3.02 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.

3.03 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.

3.04 RECYCLING DEMOLITION WASTE

A. 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.

B. Metals: Cut as required to fit into containers.

C. Piping: Reduce piping to straight lengths and store by type and size. Separate supports, hangers, valves, sprinklers, and other components by type and size.

D. Conduit: Reduce conduit to straight lengths and store by type and size.

E. 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.

3.05 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

SECTION 01 78 00

CLOSE-OUT 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 00 72 00 - General Conditions: Performance bond and labor and material payment bonds, warranty, and correction of work.

B. Section 01 30 00 - Project Coordination: .

C. Section 01 70 00 - Execution and Closeout Requirements: Contract closeout procedures.

D. Individual Product Sections: Specific requirements for operation and maintenance data.

E. Individual Product Sections: Warranties required for specific products or Work.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 REQUIRED CLOSEOUT SUBMITTALS:

A. The following items must be submitted by the Contractor to the Contracting Officer prior to issue of final payment by the Owner:
   1. Project Closeout Submittal Checklist, See Appendix 1
   2. AIA G706; Contractor's Affidavit of Payment of Debts and Claims
   3. AIA G706A;Contractor's Affidavit of Release of Liens.
   4. AIA G707; Consent of Surety to Final Payment
   5. Operations and Maintenance Manuals in accordance with Section 01 78 00.
   6. Warranties in accordance with 01 78 00.
   7. Project Record Documents in accordance with Section 01 78 00.

3.02 PROJECT RECORD DOCUMENTS

A. Maintain on site in the field office 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 (SI's, RFI's, RFP's, RFC's, etc.)
   5. Reviewed shop drawings, product data, and samples.
   6. Manufacturer's instruction for assembly, installation, and adjusting.

B. Record all revisions to work. All recorded changes shall be "clouded" or otherwise clearly identified; make reference to the document that originated the change.

C. Ensure entries are complete and accurate, enabling future reference by Owner.

D. Store record documents separate from documents used for construction.

E. Record information concurrent with construction progress, not less than weekly. Provide status update as agenda item at regular progress meetings. Provide record documents for review during progress meetings when requested.

F. Specifications: Legibly mark and record at each product section description of actual products installed, including the following:
   1. Manufacturer's name and product model of actual products installed.
   2. Product substitutions or alternates utilized and approved.
   3. Changes made by Addenda.

4. Changes made by the following:
    a. Change Orders.
    b. Supplemental Instructions (SI)
    c. Requests for Information and Responses (RFI)
    d. Construction Change Directives (CD)
    e. Changes documented by Meeting Notes or Field Reports and agreed to during Progress Meetings or Site Observations

G. Record Documents and Shop Drawings: Legibly mark each item to record actual construction on one "Record" set of drawings and Shop Drawings, including the following:
1. Changes made by Addenda
2. Measured depths of foundations in relation to finish first floor datum.
3. Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
4. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of the Work.
5. Actual Equipment locations.
6. Revisions to routing of piping and conduit.
7. Revisions to electrical circuitry.
8. Record information of any work that is described schematically in the Contract Documents
9. Field changes of dimensions and details
10. Details not on original Contract Documents
11. Changes made by the following:
    a. Change Orders
    b. Supplemental Instructions (SI)
    c. Responses to Requests for Information (RFI)
    d. Construction Change Directives (CD)
    e. Changes documented by Meeting Notes or Field Reports discussed and agreed to during Progress Meetings or Site Observations.

H. Submit Record Documents to Owner's Representative at Project Close-out.

3.03 OPERATION AND MAINTENANCE DATA

A. O&M binders shall include all final, approved submittals.

B. Submit one (1) copy of O&M binders to the A/E. A/E shall review the O&M binders to verify completion. Contractor to make any corrections to the O&M binders noted and submit to the Owner upon final approval.

C. Contents: Prepare a Table of Contents for each volume, with each product or system description identified, as follows:
1. Directory, listing names, addresses, and telephone numbers of Architect, Contractor, Subcontractors, and major equipment suppliers.
2. For each system and/or component:
    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.
    d. Typed Text: As required to supplement product data. Provide logical sequence of instructions for each procedure, incorporating manufacturer's instructions.

3.04 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. Effective dates of warranties shall be the Date of Substantial Completion (not the date of installation) and must be identified on the warranty or by signed letter modifying the warranty.

C. Warranty shall include:
   1. Product or work item, referenced to specification section.
   2. Date of beginning of warranty, bond or service maintenance contract.
   3. Duration of warranty, bond, or service maintenance contract.
   4. Contact for claim/failure
   5. Proper procedures in case of failure
   6. Instances which may affect validity of warranty or bond.

D. Verify that documents are in proper form, contain full information, and are notarized as required.

E. Co-execute submittals when required.

F. Retain warranties and bonds until time specified for submittal. Submit two original signed copies of each to Architect with Closeout Submittals. In addition to hard copies, submit electronic copy in accordance with Section 01 30 00 Project Coordination.

G. Include photocopies of each in operation and maintenance manuals, indexed separately on Table of Contents.

END OF SECTION 01 78 00

SECTION 07 31 13
ASPHALT SHINGLES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Asphalt shingle roofing

B. Flexible sheet membranes for eave protection, underlayment, and valley protection.

C. Associated metal flashings,ridge vents, roof vents, and accessories.

1.02 RELATED REQUIREMENTS

1.03 REFERENCE STANDARDS

A. ASTM D3161 - Standard Test Method for Wind-Resistance of Steep Slope Roofing Products (Fan-Induced Method); 2014.

B. ASTM D3462 - Standard Specification for Asphalt Shingles Made From Glass Felt and Surfaced with Mineral Granules; 2010a.

C. ASTM D4586/D4586M - Standard Specification for Asphalt Roof Cement, Asbestos-Free; 2007 (Reapproved 2012).

D. ASTM E108 - Standard Test Methods for Fire Tests of Roof Coverings; 2011.

E. ASTM F1667 - Standard Specification for Driven Fasteners: Nails, Spikes, and Staples; 2015.

F. NRCA (RM) - The NRCA Roofing Manual; 2017.

1.04 SUBMITTALS

A. See Section 01 30 00 - Project Coordination, for submittal procedures.

B. Product Data: Provide data indicating material characteristics.

C. Samples: Submit two samples of each shingle color indicating color range and finish texture/pattern for color verification.

D. Manufacturer's Installation Instructions: Indicate installation criteria and procedures.

E. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
   1. See Section 01 60 00 - Product Requirements, for additional provisions.
   2. Provide 200 square feet of extra shingles in unopened packages in good condition.
   3. Deliver to and unload shingles at location on Camp Dodge as directed by owner.

1.05 QUALITY ASSURANCE

A. Manufacturer Qualifications: Provide all primary roofing products, including shingles, underlayment, leak barrier, and ventilation, by a single manufactuer.

B. Installer Qualifications:
   1. All contractors must be certified by the shingle manufacturer as an approved applicator of the products specified within these contract documents. Must be a CertainTeed Credentialed Contractor in good standing to meet this requirement.
   2. All Contractors shall use a contractor or be a Contractor holding a current permit in the state of Iowa to remove asbestos, with all employees on site holding a current license in the State of Iowa for the removal of the caulking / sealant / tar type material.
      a. As part of the submittal package to the owner, copies of permits and licenses, as well as a copy of the notifications to the proper state and federal agencies will be required.
      b. After completion of the project a copy of the waste shipment report and landfill receipts will be required with all close out documents.
   3. The bidding entity will have never defaulted on, failed to complete, or requested to be relieved of the responsibilities of a contract with a public entity.

1.06 WARRANTY

A. Shingles:
   1. Material Warranty Period: 40 years from date of Substantial Completion.

2. Extended Warranty: Provide 4-Star SureStart Plus (25 years) extended non-prorated coverage for materials and labor, tear-off, and disposal (requires installer to be a CertainTeed credentialed contractor).
3. Algae Resistance Warranty: 10 years

B. Ridge Vent:
1. 5 year SureStart Protection

1.07 FIELD CONDITIONS

A. Do not install shingles or eave protection membrane when surface temperatures are below 45 degrees F.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Manufacturers:
1. CertainTeed
2. No substitutions permited.

2.02 ASPHALT FIBERGLASS SHINGLES

A. Asphalt Shingles: Asphalt-coated glass felt, mineral granule surfaced, complying with ASTM D3462;

B. Asphalt Fiberglass Shingles; Conforming to ASTM D 3018 Type I – Self-Sealing, UL Certification of ASTM D 3462, ASTM D 3161/UL997 110-mph Wind Resistance and UL Class A Fire Resistance, glass fiber mat base, ceramically colored/UV resistant mineral surface granules across entire face of shingle; algae-resistance; two piece laminate shingle.
1. CertainTeed Corporation, "Landmark".
2. Color: Cottage Red.
3. Fire Resistance: Class A, complying with ASTM E108.
4. 13-1/4" x 38-3/4"
5. Weather Exposure: 5-3/8"
6. Wind Resistance: Class F, when tested in accordance with ASTM D3161.
7. Weight: 219 lb/100 sq ft.
8. Self-sealing type.

2.03 SHEET MATERIALS

A. Underlayment
1. CertainTeed “Diamond Deck”, ASTM D 226 and ASTM D 4869 synthetic polymer-based scrim reinforced underlayment designed for use on roof decks as a water-resistant layer beneath asphalt shingles, wood shingles, and shakes, metal shingles or slate.
2. No substitutions. (required for extended warranty).

B. Ice & Water Shield
1. CertainTeed “WinterGuard”; ASTM D 1970 sheet barrier of self-adhering rubberized asphalt membrane shingle underlayment having internal reinforcement, and “split” back plastic release film.
2. No substitutions. (required for extended warranty).

2.04 ACCESSORIES

A. Roofing Nails: Standard round wire shingle type, galvanized steel or stainless steel, minimum 3/8 inch head diameter, 12 gauge, 0.109 inch nail shank diameter, 1-1/2 inch long (as required to penetrate through the roof sheathing) and complying with ASTM F1667.
1. Staples not acceptable

B. Plastic Cement: ASTM D4586/D4586M,Type I or II, asphalt roof cement.

C. Lap Cement: Fibrated cutback asphalt type, recommended for use in application of underlayment, free of toxic solvents.

D. Miscellaneous preformed neoprene boot and sleeve assemblies for penetrations through roof.

E. Ridge Vents:
   1. Certainteed, shingle over 12" Filtered Ridge Vent or approved equal.
      a. Polypropylene resin with external baffle to deflect wind and internal weather filter.
      b. 18 sq in of net free area per lineal foot.
      c. Wind driven rain resistant to 110 mph.
      d. Weep holes at 4" oc for water shedding from cap shingles.
      e. Integral ribbing and structural integrity to maintain profile for cap shingling.
      f. Black finish.

F. Static Roof Vents:
   1. Lomanco 750-ES roof louver or approved equal
      a. Field verify size and coverage with existing vent/roof penetration.
      b. Slant back style, self-flashing, bird-proof construction.
      c. Net free ventilating area: 50 sq in.
      d. Overall size 23" x 27 1/4"" x 5"
      e. 8" opening size
      f. Extended 6" flange
      g. Enhanced weather protection with raised interior duct and screen
      h. 0.025" aluminum
      i. Factory applied baked-on painted finish, bronze color.
      j. Integral flashing base

2.05 METAL FLASHINGS

A. Style "D" edge flashing:
   1. 1 1/2" face with 45 degree drip edge and return hem, 5/8" overhang, and 2 1/8" on roof. Verify dimensions with existing gutter and gutter brackets.

B. Sheet Metal: Prefinished galvanized steel, 26 ga. thick, minimum G90/Z275 hot-dipped galvanized; primed and finished one side with Kynar 500 fluoropolymer coating 1.0 mil total dry film thickness and washcoat of .3-.4 mil dry film thickness on reverse side, dark bronze color to match existing.

PART 3 EXECUTION

3.01 DEMOLITION

A. Demo existing shingles, underlayment, ridge vent, and static vents down to existing plywood sheathing.

B. Do not demo more roof area than can be made water-tight by the end of the day.

C. The existing gray roofing tar around existing PRV curb (refer to plan) contains 2% asbestos. Contractor shall provide a licensed asbestos abatement person for this section of the roofing material removal and disposal. Coordinate removal of ACM with re-roofing.

3.02 EXAMINATION

A. Verify existing conditions prior to beginning work.

B. Review condition of existing roof decking. Notify Owner and Architect of any areas of soft or deteriorated decking. Do not proceed with new roofing until deteriorated conditions have been repaired/replaced.

C. Any required replacement/repair of deteriorated existing decking shall be handled by change order during construction.

D. Verify deck surfaces are dry, free of ridges, warps, or voids.

3.03 PREPARATION

A. Follow shingle manufacturer’s recommendations for acceptable roof deck substrate preparation.

B. At areas where eave protection membrane is to be adhered to substrate, fill knot holes and surface cracks with latex filler.

C. Broom clean deck surfaces before installing underlayment or eave protection.

D. Install eave edge flashings tight with fascia boards, weather lap joints 2 inches and seal with plastic cement, and secure flange with nails spaced ____ inches on center.

3.04 INSTALLATION - ADHERED MEMBRANE

A. Install eave protection membrane at the following locations:
   1. Rake at each end of building to tie into existing.
   2. Install eave protection membrane at eave from roof edge to minimum 3 ft to inside of exterior wall line.
   3. Install eave protection membrane at valleys.
   4. Install eave protection at roof curb penetration.

B. Install eave protection membrane in accordance with manufacturer's instructions and NRCA (RM) applicable requirements.

C. Eave:
   1. Adhere protection membrane starting at roof edge. Lap membrane over edge of roof sheathing onto sub-fascia.
   2. Lap ends minimum 6 inches.
   3. Weather lap plies minimum of 4 inches.

D. Valley:
   1. Install 36 inch wide protection membrane centered on valley.
   2. Weather lap plies minimum of 6 inches.

3.05 INSTALLATION - UNDERLAYMENT

A. Install in accordance with underlayment manufacturer's written installation instructions and as required to provide listed warranty.

B. Underlayment at roof slopes greater than 4:12;
   1. Apply parallel to the eaves, with printed side facing up.
   2. Overlap all ends (vertical laps) at least 6" and “weather-lap” all sides (horizontal laps) at least 3".
   3. Offset end laps from course to course at least 3 feet.
   4. Apply flat and unwrinkled.
   5. Fastening
      a. Install with plastic 1” head cap nails. Roofing nails with standard 3/8” heads are permitted for immediate cover-up. Approved fasteners can be either pneumatically driven or hand applied.
      b. Fastener spacing is 15” On-Center (O.C.) vertically and 12” O.C. horizontally (parallel to eaves).
      c. On vertical side/end laps install 8 fasteners equally spaced at 6” O.C. centered in the lap to hold theunderlayment in place.
   6. Underlayment to lap Ice & Water Shield at valleys.

3.06 INSTALLATION - METAL FLASHING AND ACCESSORIES

A. Install flashings in accordance with manufacturer's instructions and NRCA (RM) applicable requirements.

B. Install eave Style D flashing over top of Ice and Water Shield protective membrane

C. Weather lap joints minimum 2 inches and seal weather tight with plastic cement.

D. Secure in place with nails at 16 inches on center. Conceal fastenings.

E. Items Projecting Through or Mounted on Roofing: Flash and seal weather tight with plastic cement.

3.07 INSTALLATION - SHINGLES

A. Install shingles in accordance with manufacturer's instructions manufacturer's instructions and NRCA (RM) applicable requirements.

1. Fasten strip shingles using four nails per strip, or as required by manufacturer and local building code, whichever is greater.

B. Place shingles in straight coursing pattern with 5 inch weather exposure to produce double thickness over full roof area. Verify spacing for low slope application with manufacturer.

C. At eaves, apply starter strip of shingles with tabs cut off. Project first course of shingles 1/2 inch beyond fascia boards.

D. Valleys; Extend shingles on one slope across valley and fasten, trim shingles from other slope 2 inches from valley center line to achieve closed cut valley, and concealing valley protection.
   1. Embed each shingle in a 2" wide strip of asphalt roofing cement.
   2. Cut 2" diagonally off upper corner of trimmed shigle.
   3. Do not nail within 6" of valley centerline.

E. Hips and Ridges
   1. Cap hips and ridges with individual shingles, maintaining 5 inch weather exposure, and place to avoid exposed nails.
   2. Use 2 nails to fastene each shingle.
   3. Install caps at the bottom of the hips or at either end of ridge.
   4. Apply starter piecewith bottom 5" removed.
   5. Apply full cap shingle over starter

F. At areas indicated to receive ridge vent:
   1. Verify existing roof sheathing is open approx. 1 1/2" each side of ridge
   2. Install continuous ridge vent over shingles in accordance with manufacturer's printed instructions.
   3. Install cap shingles over continuous ridge vent.

G. After installation, place one daub of plastic cement, one inch diameter under each individual shingle tab exposed to weather, to prevent lifting.

H. Complete installation to provide weather tight service.

3.08 CLEANING

A. Remove and dispose of all excess shingles, scraps, nails, and packaging from roof and site.

3.09 PROTECTION

A. Do not permit traffic over finished roof surface.

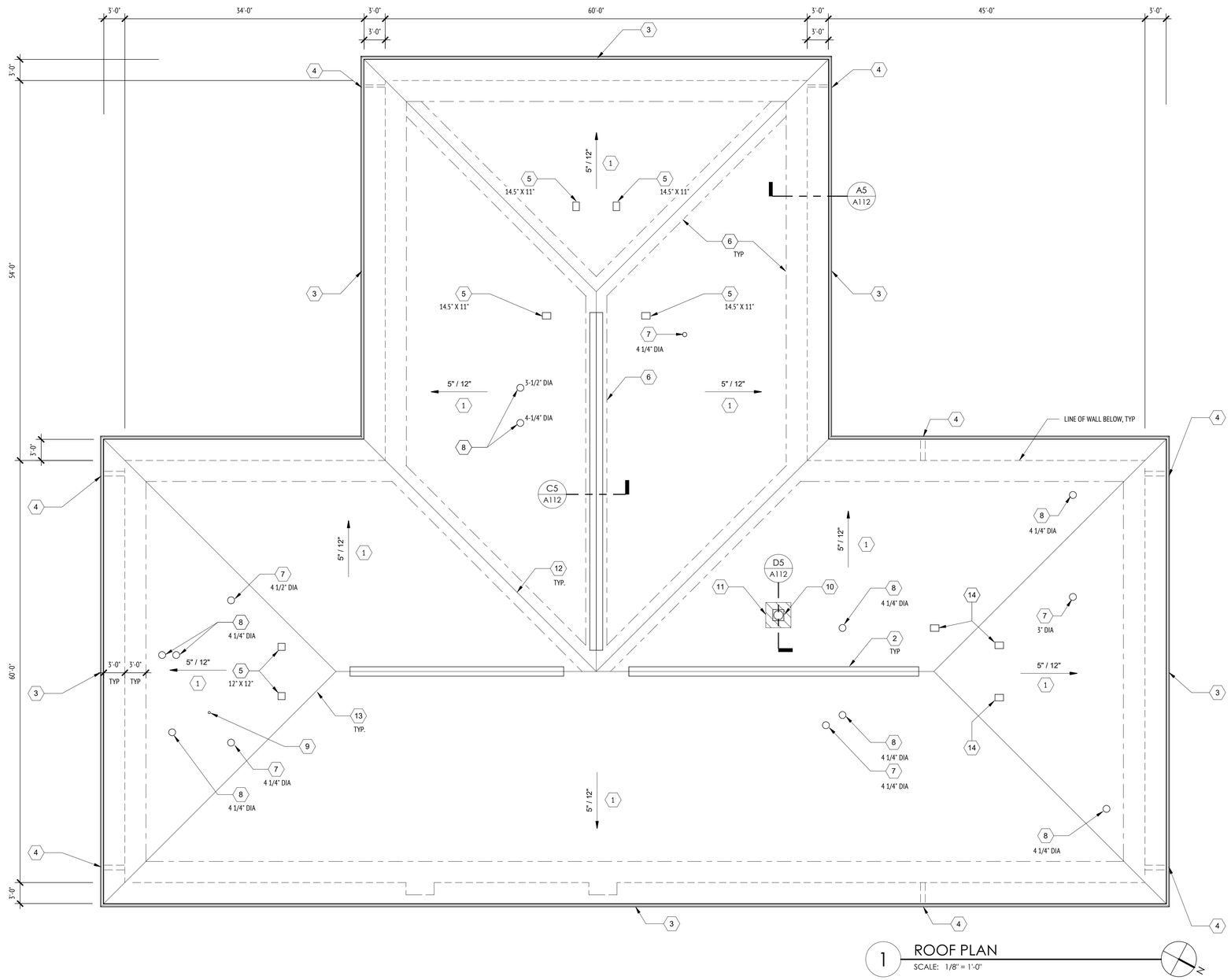
END OF SECTION 07 31 13

BUILDING B-3 REROOFING

CAMP DODGE, JOHNSTON, IOWA

PROJECT # 19083033 / CONTRACT # C142B3018

SHEET INDEX



1 ROOF PLAN
SCALE: 1/8" = 1'-0"

ROOF PLAN KEY NOTES:

1. DEMO EXISTING ASPHALT SHINGLES AND UNDERLAYMENT DOWN TO EXISTING PLYWOOD ROOF SHEATHING. INSPECT EXISTING PLYWOOD ROOF SHEATHING, AND NOTIFY OWNER AND architect OF ANY DETERIORATED CONDITIONS. PROVIDE NEW ICE/WATER SHIELD, UNDERLAYMENT AND SHINGLES TO PROVIDE MANUFACTURER'S SYSTEM WARRANTY AS SPECIFIED. REFER TO SECTION 07 3113 - ASPHALT SHINGLES.
2. REMOVE EXISTING RIDGE VENT AND REPLACE W/NEW SHINGLE OVER RIDGE VENT, REFER TO SECTION 07 3113 - ASPHALT SHINGLES
3. EXISTING PREFINISHED GUTTERS TO REMAIN
4. EXISTING PREFINISHED DOWNSPOUTS TO REMAIN
5. EXISTING STATIC ROOF VENT. REMOVE EXISTING VENT. PROVIDE NEW ROOF VENT, REFER TO SECTION 07 3113 - ASPHALT SHINGLES, AND FLASH INTO NEW SHINGLES
6. PROVIDE NEW SELF ADHERED ICE/WATER SHIELD @ EAVES, VALLEYS, AND HIPS, REFER TO SECTION 07 3113 - ASPHALT SHINGLES
7. EXISTING CAST PLUMBING VENT. PROVIDE NEW FLASHING BOOT, REFER TO DETAIL B5-A112. SIZE INDICATED IS APPROX., CONTRACTOR SHALL FIELD VERIFY.
8. EXISTING PVC CONCENTRIC VENT. PROVIDE NEW FLASHING BOOT, REFER TO DETAIL B5-A112 SIM. SIZE INDICATED IS APPROX., CONTRACTOR SHALL FIELD VERIFY.
9. EXISTING CONDUIT W/ PHOTOCELL. PROVIDE NEW FLASHING BOOT. REFER TO DETAIL B5-A112 SIMILAR.
10. EXISTING 24" X 24" PRV/CURB TO REMAIN. FLASH BASE FLANGE INTO SHINGLES. PROVIDE ADHERED FLASHING AROUND BASE OF PENETRATION.
11. THE EXISTING GRAY ROOFING TAR AT EXISTING ROOF CURB CONTAINS 2% ASBESTOS. CONTRACTOR SHALL PROVIDE A LICENSED ASBESTOS ABATEMENT PERSON FOR THIS SECTION OF ROOFING MATERIAL REMOVAL AND DISPOSAL. COORDINATE REMOVAL OF ACM WITH REROOFING.
12. INTERWEAVE SHINGLES AT VALLEY.
13. CAP SHINGLES AT HIPS.
14. NEW STATIC ROOF VENT, REFER TO SECTION 07 3113 - ASPHALT SHINGLES. CUT HOLE IN EXISTING PLYWOOD SHEATHING. LOCATE BETWEEN TRUSS MEMBERS. FLASH INTO SHINGLES.

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.

MM-DD-YEAR

MICHAEL J. KASTNER AIA, LEED AP DATE

LICENSE NUMBER: 05346 RENEWAL DATE: 6.30.2022

SHEETS COVERED BY THIS SEAL:

SHEETS COVERED ARE

ROOF PLAN NOTES

1. FIELD VERIFY ALL ROOF PENETRATIONS

ASK STUDIO

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ARCHITECTURE INTERIORS PLANNING

ARCHITECTS SCHIPER KASTNER

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BUILDING B-3 REROOFING
CAMP DODGE, JOHNSTON, IOWA

ISSUE DATE:
06.10.2021
REVISIONS:

ROOF PLAN

A111

PROJECT 20028

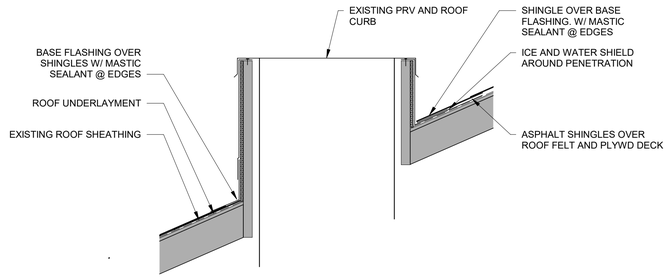
NORTH EAST CORNER

SOUTH VIEW

NORTH WEST CORNER

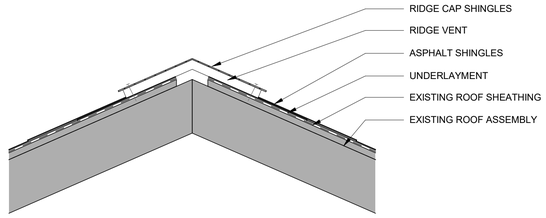
EAST VIEW

SOUTH EAST CORNER



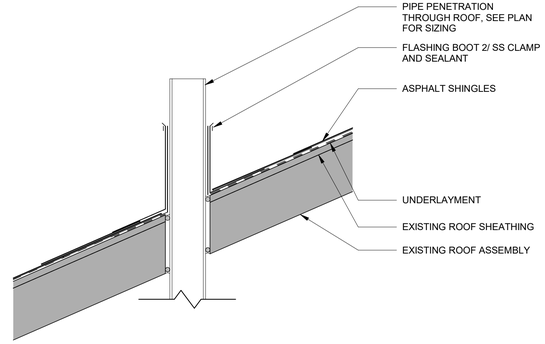
D5 SECT DETAIL - ROOF CURB FLASHING

SCALE: 1" = 1'-0"



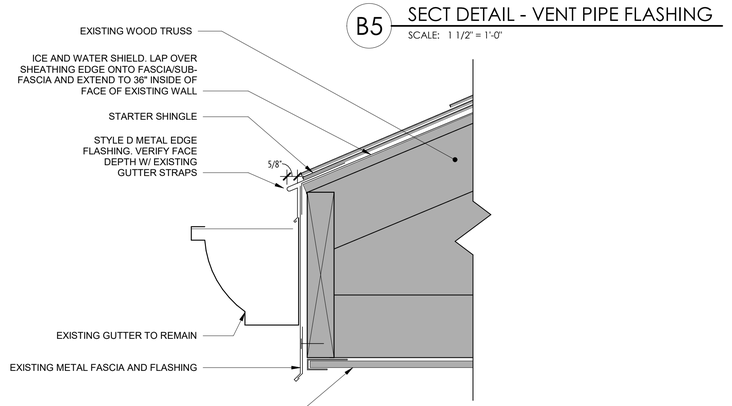
C5 SECT DETAIL - ROOF RIDGE VENT

SCALE: 1 1/2" = 1'-0"



B5 SECT DETAIL - VENT PIPE FLASHING

SCALE: 1 1/2" = 1'-0"



A5 SOFFIT AND FACSIA DETAIL

SCALE: 3" = 1'-0"

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