PROPOSAL AND CONTRACT DOCUMENTS
FOR
BALER FACILITY UPGRADES
CORDOVA, ALASKA

DRAFT – 7/26/13

Prepared by
DHI CONSULTING ENGINEERS
800 E. DIMOND BLVD. STE. 3-550
ANCHORAGE, AK 99515
907-344-1385

CLOSING DATE AND TIME: September 30, 2013

TABLE OF CONTENTS

SECTION I

ADVERTISEMENT

CITY OF CORDOVA
602 Railroad Ave.
Cordova, Alaska 99574

ADVERTISEMENT

VENDOR		DATE FOR ADVERTISEMENT
The Cordova Times		August 14, 2013
Anchorage Daily News		August 14, 2013
Plans Room, Anchorage		August 14, 2013
TYPE OF AD: ( ) Display	(**X**) Classified	( ) Public Information

INVITATION FOR PROPOSALS
FOR
CORDOVA BALER BUILDING UPGRADES

The City of Cordova is seeking proposals from general contractors for the design and construction for various upgrades to their existing solid waste baler facility located on Whitshed road. Design and construction work must conform to the project design criteria and drawings, the International Building Code and all pertinent regulatory building codes governing the design and construction of public facilities in Cordova, Alaska.

All exterior work must be substantially complete by April 30, 2014

This facility must remain in full operation during construction.

The Baler Building will include various repairs and upgrades to existing 60'x110' pre-fabricated metal building, and a 24x48 foot wood famed addition (card board room).

In General Repairs will consist of

a. Replacement of exterior metal roof, siding, and components (main building and card board room)
b. Construction of a concrete protection curb around the perimeter of the building to protect metal siding from damage (Additive Alternate).
c. Replace all exterior doors (Baler Building and Card Board Addition).
d. Extension of roof eves to 2' past face of building (Additive Alternate).
e. Providing insulation package for Baler building. (Super Saver (Base Bid), insulated metal panels (additional alternate).
f. Replace "hardened" concrete floor.
g. Addition of canopy over main steel out door (north side) with exterior lighting.
h. Demolition and construction of a new break (2 levels) inside existing structure
i. Upgrades to existing domestic water service (Baler Building).
j. Upgrade Baler pit drain system.
k. Replace interior lighting and wall receptacles and switches (Baler Building and Card Board Addition).
l. Repair and replace exterior underground water system.
m. Installation of 6" Bollard where shown on plats.

RFP documents are available beginning August 14th, 2013 from the offices of DHI Consulting Engineers.
A mandatory pre-proposal meeting: August 28, 2013 will be held at 2:00 p.m. at the project site Cordova, Alaska. Interested contractors and subcontractors are encouraged to attend. This meeting will provide the only opportunity to interact directly with the Project Manager. A site visit will follow.

Proposals are due: September 30, 2013, at 2:00 p.m.

Persons needing accommodation in order to participate should contact the City of Cordova, (907) 424-6200

The City of Cordova reserves the right to accept or reject any or all proposals, waive any and all technicalities or informalities it deems appropriate.

SECTION II

INSTRUCTIONS TO OFFERORS

INSTRUCTIONS TO OFFERORS

ARTICLE 1 – DEFINITIONS

1.1 Request for Proposals (RFP) Documents include the advertisement or RFP, instructions to offerors, other sample proposal and contract forms, proposed Design Criteria Documents (Drawings and Specifications), including any addenda issued prior to receipt of proposals and bond forms. Contract Documents proposed for the work consist of the Design-Build Contract, Design Criteria Documents (Drawings and Specifications) and all addenda issued prior to and all modifications issued after execution of the Contract.

1.2 All definitions set forth in the Agreement Between Owner and Design-Builder or other Contract Documents are applicable to the RFP Documents.

1.3 Addenda are written or graphic instruments issued by the City of Cordova prior to the execution of the Contract to modify or interpret the RFP Documents by additions, deletions, clarifications or corrections.

1.4 A Proposal is a complete and properly signed proposal to do the work or designated portion thereof for the sums stipulated therein, submitted in accordance with the RFP Documents.

1.5 The Base Bid is the sum stated in the Bid for which the Offeror proposes to perform the work described in the RFP Documents as the base, to which work may be added or from which work may be deleted for sums stated in Alternate Bids.

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

1.7 A Unit Price is an amount stated in the Bid as a price per unit of measurement for materials or services, as described in the RFP Documents or in the proposed Contract Documents.

1.8 An Offeror is a person or entity that submits a Proposal. Offeror must be a General Contractor, licensed in the State of Alaska.

1.9 A Sub-Offeror is a person or entity who submits a Bid or offer to an Offeror for materials, labor or services for a portion of the work.

ARTICLE 2 – OFFEROR'S REPRESENTATIONS

2.1 Each Offeror by making a Proposal represents that:

2.1.1 The Offeror has read and understands the RFP Documents and the Offeror's Proposal is made in accordance therewith.

2.1.2 The Offer has taken steps as may be necessary to ascertain the nature and local conditions of the work, the general and local conditions which could affect the work or costs thereof. Failure to do so will not relieve Offerors of the responsibility for estimating properly or the difficulty or

cost of successfully performing the work. The submission of a Proposal shall be an admission that the Offeror has made such examination and is satisfied as to the conditions to be encountered in performing the work and as to the requirements and accuracy of the RFP documents.

2.1.3 The City of Cordova assumes no responsibility for any understanding or representations concerning conditions made by any of its officers, agents or employees prior to the execution of the Contract, unless such understanding or representations are expressly stated in the RFP Documents or Addenda.

2.1.4 The Offeror shall include in their Proposal bid sums sufficient to cover all items required by the Contract and the conditions of the site(s), and shall rely entirely upon their own examination in making their Proposal. The submission of a Proposal shall be taken as a prima facie evidence of compliance with this paragraph upon which the Owner will rely.

2.1.5 The Proposal is based upon the materials, systems and equipment required by the exhibit drawings, specifications and other RFP Documents without exception.

ARTICLE 3 – PROPOSAL DOCUMENTS

3.1 Copies

3.1.1 Offerors may obtain complete sets of the RFP Documents from the issuing the offices of DHI Consulting Engineers, designated in the Advertisement or Request for Proposal for the sum, if any, stated therein.

3.1.2 Offeror shall use complete sets of RFP Documents in preparing Proposal; the City of Cordova does not assume any responsibility for errors or misinterpretations resulting from the use of incomplete sets of RFP Documents. If material required for bidding purposes by these documents is absent, the Offeror is required to notify DHI Consulting Engineers.

3.1.3 The City of Cordova is making copies of the RFP Documents available on the above terms does so only for the purpose of obtaining Proposals on the work and does not confer a license or grant any other use.

3.2 Interpretations or Correction of RFP Documents

3.2.1 Offerors and sub-offerors shall promptly notify the offices of DHI Consulting Engineers by telephone at (907) 344-1385, facsimile at (907) 344-1385 or by email at admn@dhialaska.com of any ambiguity, inconsistency or error which they may discover upon examination of the Bidding Documents or of the site and local conditions.

3.2.2 Offerors and sub-offerors requiring clarification or interpretation of the Bidding Documents shall make a written request which shall reach the DHI Consulting Engineers at least three (3) calendar days prior to the date for receipt of Proposals.

3.2.3 Any interpretation, correction or change of the Proposal Documents will be made by Addendum. Interpretations, corrections or changes of the RFP Documents made in any other manner will not be binding and Offers shall not rely upon such interpretations, corrections and changes.

3.3 Substitutions

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

3.3.2 No substitution will be considered prior to receipt of Proposals.

3.3.3 Substitutions will be considered after the Contract award only as specifically provided in the Contract Documents.

3.4 Addenda

3.4.1 Addenda will be mailed, submitted via facsimile or emailed, whichever is most convenient to the offices of DHI Consulting Engineers to all who are known by offices of DHI Consulting Engineers to have received a complete set of RFP Documents.

3.4.2 Copies of Addenda will be made available for inspection wherever RFP Documents are on file for that purpose.

3.4.3 No Addenda will be issued later than two (2) calendar days prior to the date for receipt of Proposals, except an Addendum withdrawing the Request for Proposals, or one which includes postponement of the date for receipt of Proposals.

3.4.4 Each Offeror shall be responsible for ascertaining prior to submitting their Proposal that they have received all Addenda issued and they shall acknowledge their receipt in their Proposal by annotating it on the Submittal Page.

ARTICLE 4 – PREPARATION AND SUBMISSION

4.1 Form and Style of Proposals

4.1.1 A Proposal shall constitute an irrevocable offer to enter into a contract with the City of Cordova on the terms of the Proposal and RFP Documents. Bid sums shall be submitted on forms provided in the RFP Documents.

4.1.2 All blanks on the Bid Form shall be filled in legibly by typewriter or manually with ink.

4.1.3 Where required on the Bid form, Offerors must quote on all items. When quotations on all items are not required, Offeror should insert the words “no bid” in the space provided for any item where no quotation is made.

4.1.4 Proposals shall specify a lump sum bid price, typed or written legibly in ink and in both words and figures for each bid item called for. In case of discrepancies between the written words and figures, the written words shall govern. In case of error in the extension of prices, the unit price will govern. Proposals may be rejected if they show any omissions, alteration of the forms, additions not called for, conditional or alternate Bids not called for, qualified bids or irregularities of any kind.

4.1.5 Any interlineations, alteration or erasure must be initiated by the signer of the Proposal.

4.1.6 All requested Alternates shall be Bid. If no change in the Base Bid is required, enter "No Change."

4.1.7 Each copy of the Proposal shall include the legal name of the Offeror and a statement that the Offeror is a sole proprietor, a partnership, a corporation, or some other legal entity. Each copy shall be signed in **blue** ink by the person or persons legally authorized to bind the Offeror to a contract. A Proposal submitted by an agent shall have a current power of attorney attached, certifying the agent's authority to bind the Offeror. The full name, address and corporate or partnership title, including status of each person signing shall be typed or printed below the signature.

4.1.8 If more than one Proposal/Bid is offered by any one party, by or in the name of their clerk, partner or other person, all such Bids will be rejected. A party who has quoted prices to a Bidder is not thereby disqualified from quoting prices to other Bidders, or from submitting a Bid directly for the work.

4.2 Bid Guarantee

4.2.1 Each Proposal shall be accompanied by a Bid Guarantee in the amount of five percent (5%) of the total Base Bid amount in the form of a certified check, or bank draft, payable to the City of Cordova, or a surety bond, pledging that the Offeror shall enter into a Contract with the City of Cordova on the terms stated in their Proposal and shall, if required, furnish bonds covering the faithful performance of the Contract and the payment of all obligations arising there under. Should the Offeror refuse to enter into such Contract or fail to furnish such bonds if required, the amount of the Bid Guarantee shall be forfeited to the City of Cordova as liquidated damages, not as a penalty. If the Offeror fails to furnish an acceptable Bid Guarantee with the Proposal, the Proposal will be considered non-responsive.

4.2.2 No Proposal shall be withdrawn for a period of forty-five (45) days subsequent to the closing of the Proposals.

4.2.3 If a surety bond is submitted, it shall be written on the form included in the RFP Documents and an attorney-in-fact who executes the bond on behalf of the surety shall affix to the bond a certified and current copy of their power of attorney.

4.2.4 The City of Cordova will have the right to retain Bid Guarantees until either (a) the Contract has been executed and bonds, if required, have been furnished, or (b) the specified time has elapsed so that Proposals may be withdrawing, or (c) all Proposals have been rejected.

4.2.5 The successful Offeror's Bid Guarantee will be retained until they have furnished the required bond(s), if required, and insurance certification(s) and entered into a Contract. The Bid Guarantee of the remaining Offerors shall be returned as soon as practicable after conditions in paragraph 4.2.4 above have been satisfied. Should an Offeror fail to enter into a Contract and furnish bond(s) and insurance certificate(s) within ten (10) days after their Proposal has been accepted, their Bid Guarantee shall be forfeited to the City of Cordova as liquidated damages and not as a penalty.

4.3 Submission of Proposals

4.3.1 All copies of the Proposal, the Bid Guarantee, if any, and any other documents required to be submitted with the Proposal shall be enclosed in a sealed envelope. The envelope shall be addressed to: **City of Cordova, 602 Railroad Ave., Cordova, Alaska 99574** and shall be identified with the Project Name, and Offeror's name and address. If the Proposal is sent by mail, the sealed envelope shall be enclosed in a separate mailing envelope with the notation "SEALED PROPOSAL ENCLOSED" on the face thereof.

4.3.2 Offerors shall include a completed bid form with their proposal.

4.3.3 Proposals shall be deposited at the designated location prior to the time and date for receipt of Proposals indicated on the Advertisement or RFP, or any extension thereof made by Addendum. Proposals received after the time and date for receipt of Proposals are late Proposals, will not be considered and will be returned unopened.

4.3.4 The Offeror shall assume full responsibility for timely delivery at the location designated for receipt of Proposals.

4.3.5 Oral, telephonic or telegraphic or faxed proposals are invalid and will not receive consideration.

4.3.6 Proposals will not be considered if the following documents are not completely filled out and submitted with the Proposal:

See documents listed on "Submittal Page".

4.4 Modification or Withdrawal of Proposals

4.4.1 A Proposal may not be modified, withdrawn or canceled by the Offeror during the stipulated time period following the time and date designated for the receipt of Proposals, and each Offeror so agrees in submitting their Proposal.

4.4.2 Prior to the time and date designated for receipt of Proposals, any Proposals submitted may be modified or withdrawn by notice to the City of Cordova at the place designated for receipt of Proposals. Such notice shall be in writing with the signature of the Offeror and delivered in person or by facsimile. If by facsimile, the written confirmation over the signature of the Offeror shall be received before the date and time set for receipt of Proposals and it shall be so worded as not to reveal the amount of the original Proposal. The modified Proposal may be sent by facsimile to 907-344-1385.

4.4.3 Withdrawn Proposals may be resubmitted up to the time designated for the receipt of Proposals, provided that they are then fully in conformance with these Instructions to Offerors.

4.4.4 Bid Guarantee, if any is required, shall be in an amount sufficient for the Bid as modified or resubmitted.

ARTICLE 5 – CONSIDERATION OF OFFERS

5.1 Method for Clarification

5.1.1 Any Offeror in doubt as to the true meaning of any part of the plans, specifications or other document may submit to the offices of DHI Consulting Engineers a written request for an interpretation thereof. The Offeror submitting the request will be responsible for its prompt delivery not less than three (3) working days prior to the date set for opening of proposals.

5.1.2 Questions, which in the opinion of the Director of DHI Consulting Engineers require a reply, will be answered by issuing an addendum to all plan holders prior to the bid opening. The Owner will not be responsible for any other explanation or interpretation of the plans, specifications or other documents made or given prior to opening the proposals.

ARTICLE 6 – SUBMISSION OF PROPOSAL

One (1) clearly marked original in **blue** ink shall be enclosed in a sealed envelope, addressed, marked and delivered to the following address:

CITY OF CORDOVA
602 Railroad Avenue
Cordova, Alaska 99574

Sealed envelope should have the following information in the LOWER LEFT HAND CORNER: "Proposal Document, Proposal Title, Time and Date of proposal opening."

6.1 Rejection of Proposals

6.1.1 The City of Cordova shall have the right to reject any or all Proposals and to reject a Proposal not accompanied by any required Bid Guarantee or by other data required by the RFP Documents, or to reject a Proposal which is in any way incomplete or irregular.

6.2 Acceptance and Award

6.2.1 This Contract, if awarded, shall be awarded to the highest ranked offeror with whom successful negotiations have been completed to the mutual agreement of the parties.

6.2.2 The City of Cordova expressly reserves the right to waive minor informalities, negotiate changes or reject any and all Proposals and not award the proposed contract, if in its best interest. "Minor Informalities" means matters of form rather than substance which are evident from the submittal, or are insignificant matters that have a negligible effect on price, quantity, quality, delivery or contractual conditions and can be waived or corrected without prejudice to other Offerors.

6.2.3 The City of Cordova reserves the right to accept or reject any or all items of any Proposal, unless the Offeror qualifies such Proposal by specific limitation.

6.2.4 The City of Cordova shall have the right to select and accept Alternates in any order or combination.

ARTICLE 7 – POST PROPOSAL INFORMATION

7.1 All proposals shall be open for public inspection after Notice of Successful Offer is issued. Offerors should not include proprietary information in proposals if such information should not be disclosed to the public.

ARTICLE 8 – PERFORMANCE BOND

8.1 Bonds shall be provided and paid for by the Offeror.

ARTICLE 9 – FORM OF AGREEMENT BETWEEN CITY OF CORDOVA AND CONTRACTOR

9.1 The Contract shall be in the form referred to within the RFP Documents.

ARTICLE 10 – SUBSTITUTION OF MATERIALS AND METHODS

10.1 Substitution of Materials

10.1.1 Materials and methods to be bid under "LUMP SUM BID" shall include only materials which are included in the Request for Proposals and Addenda thereto. If an item has been specified by means of a standard specification (government, industry, etc.) or a performance specification, any manufacturer may be bid which can perform to these specifications.

10.1.2 There will be no pre-proposal substitutions.

10.2.3 The items as described in the RFP Documents are the only ones that will be allowed in the project.

ARTICLE 11 – TYPE OF SPECIFICATIONS

11.1 Technical Provisions

11.1.1 The technical provisions of these Specifications are the abbreviated or "streamlined" type and include incomplete sentences. Omission of words or phrases such as "the Contractor shall," "in conformity therewith," "shall be," "as noted on the drawings," "according to the plans," "a," "and/or "the," are intentional. Omitted words or phrases shall be supplied by inference in the same manner as they are when a note occurs on the Drawings.

11.1.2 The Contractor shall provide all items, articles, materials, operations or methods listed, mentioned or scheduled on the Drawings and/or herein, including labor, necessary equipment and parts, for adequate performance and sound construction as intended by these documents.

11.1.3 Wherever the word "approved," "satisfactory," "directed," "submitted," "inspected," "notify" or similar words or phrases are used, it shall be assumed that the word "Project Manager" follows the verbs as the object to the clause, such as "approved by the Project Manager" or "submitted to the Project Manager."

11.1.4 Wherever "or equal" or similar phrases are used, it shall be assumed that decisions as to quality and design shall rest with the Project Manager. All equal items shall be approved in writing.

ARTICLE 12 – LOCAL BIDDER PREFERENCE

12.1 The City of Cordova code provides for a local bidder preference as follows:

Except when prohibited by State or Federal grant requirements, a local bidder who, maintains a place of business within the City of Cordova may be given consideration as low bidder. Cordova Municipality Code 5.12.200 states that a 5% price preference shall be applied for "local bidders." A copy of Cordova Municipal Code 5.12.200 is presented in section VII.

ARTICLE 13 – HIRING OF LOCAL LABOR

13.1 The Owner encourages that every contractor and subcontractor, employed to the maximum extent practical and allowed by law, qualified people who regularly reside in the project area.

ARTICLE 14 – PREPARATION OF BIDS

14.1 Follow instructions in Article 4.3.1 of these Instructions to Offerors.

14.2 To be considered responsive, all of the required documents must be included in the sealed envelope with the Sealed Competitive Proposal. These items must be included in the proposal envelope. The required documents are as follows:

14.2.1 Submittal page acknowledging receipt of all Addenda issued;

14.2.2 Bid Guarantee required by Article 4.2 of these Instructions to Proposers.

14.2.3 One copy of current license to operate as a General Contractor in Alaska;

14.2.4 Reserved;

14.2.5 Signed Bid Form (Bid Form to be in separate sealed envelope).

14.2.6 Signed Performance Bond

ARTICLE 15 – OFFEROR'S VIOLATIONS OF TAX OBLIGATIONS

15.1 No Contract shall be awarded to any individual, firm, corporation or business that is found to be delinquent in any area of taxation, lease or rental agreement with the City of Cordova which has not been remedied within ten (10) calendar days of receipt of written notice.

15.2 The Contract can be terminated for cause if it is determined that the individual, firm, corporation or business is in arrears of any taxation, lease or rental agreement that is due to the City of Cordova that is not remedied within ten (10) calendar days of notification by certified mail.

15.3 The City of Cordova reserves any right it may have to offset amounts owed by an individual, firm, corporation or business for delinquent City taxes against any amount owing to the same under a Contract between the City and the same.

ARTICLE 16 - OFFEROR'S QUALIFICATIONS

Before a bid is considered for award, the apparent low bidder may be requested to submit a statement of facts or proof in detail as to his previous experience in performing similar or comparable work, technical abilities, equipment, size, manpower and financial resources to complete and perform the work as outlined in the contract documents, plans and specifications.

ARTICLE 17 - OFFEROR'S INTERESTED IN MORE THAN ONE BID

If any one party, by or in name of his or their agent, partner or other person, offers more than one bid, all such bids will be rejected. A party who quoted prices to a bidder is not disqualified from quoting prices to other bidders or from a bid directly for the work.

ARTICLE 18 – EXECUTION OF CONTRACT

18.1 The Offeror whose Proposal is accepted shall execute the Contract and furnish the required bonding and insurance within ten (10) working days after Notice of Intent to Award of the Contract is issued. The Contract shall be considered executed by the successful Offeror when the Contract is signed by an authorized representative of the Offeror and the bond(s) and insurance certificate(s) are received by the City of Cordova. Failure or neglect of the Offeror to execute the Contract within the time specified may result in a forfeiture of the Bid Guarantee and award of the Contract to the next highest ranked Offeror.

18.2 The City of Cordova will execute the Contract within ten (10) calendar days after execution by the Offerors as set forth above. The date the Contract is executed by the City of Cordova is the Contract Date. The rights and obligations provided for in the Contract shall become effective and binding upon the parties as of the Contract Date.

ARTICLE 19 – INSURANCE REQUIREMENTS

See Insurance Requirements in Sample Agreement, AIA Document A-141 – "Standard Form of Agreement Between Owner / Design Builders, 2004" and as amended.

ARTICLE 20 – CERTIFIED PAYROLL

The Contractor shall file with the Alaska Department of Labor, Wage and Hour Administration, Labor Standards and Safety Division, 3301 Eagle Street, Suite 301, Anchorage, Alaska 99503, according to the requirements stated in the current Title 36, Public Contracts AS 36.05 & AS 36.10 Wage and Hour Administration Pamphlet No. 600.

ARTICLE 21 – STATE OF ALASKA PREVAILING WAGE SCALE

The Contractor shall comply with the provisions of the latest edition Title 36, Chapter 05 of the Alaska Statutes requiring the Contractor to pay not less than the current prevailing rate for wages.

ARTICLE 22 – CITY OF CORDOVA BUSINESS LICENSE

All businesses conducting business within the boundaries of the City of Cordova must have a current business license issued by the City. Prior to any award as a result of solicitation, the contractor may be required to provide proof that they have a current City of Cordova business license or proof that they have applied for one.

ARTICLE 23 – ALASKA AND CONTRACTOR LICENSES

All bidders must be in compliance with the State of Alaska Statutes 08.18 and 45.70.

ARTICLE 24 – PROTEST OF AWARD OF BID:

Within ten days of service of the City of Cordova determination of the apparent successful bid, a bidder who wishes to protest the determination shall lodge a protest with the City of Cordova. The protest shall be in writing on a form provided by the City of Cordova. The protest shall describe with particularity the alleged errors in the award recommendation. The City of Cordova shall conduct a review and, within three working days of receipt of the protest, issue a determination. In order to receive notice of the apparent successful bid, the Bidder must provide the City of Cordova with a facsimile number. It is the responsibility of the Bidder to follow the selection process and stay apprized of the bid or proposal due date, the date notice of apparent successful bidder is issued and the period in which protests can be filed.

ARTICLE 25 – ACCEPTANCE OF CONTRACT / AGREEMENT TERMS AND CONDITIONS

By signing the Bid Form/Proposal Submittal Form, the bidder or proposer certifies that they have examined and accept the terms and conditions of the contract or agreement contained in this solicitation. The acceptance is inclusive of, but not limited to, all CONTRACT REQUIREMENTS, TERMS AND CONDITIONS, GENERAL PROVISIONS AND SUPPLEMENTAL CONDITIONS along with any and all conditions contained in the INSTRUCTIONS TO BIDDERS/PROPOSERS associated with this solicitation. Submission of a bid or proposal in response to this solicitation, certifies that the bidder is willing to accept these terms and understands that failure to accept these terms will subject the bidder to forfeiture of the contract/agreement and loss of any bid guarantee as liquidated damages as outlined in Paragraph 4.2.1.

Bidders and proposers are encouraged to carefully examine the insurance requirements, any bonding requirements and any Defense and Indemnification clause contained in the sample contract/agreement.

ARTICLE 26

Offerors and proposed subcontractors shall be in compliance with the statutory requirements for Alaska licensing included in the certification statement in this RFP package. Non-compliance shall result in the rejection of proposal.

ARTICLE 27
Required Documents for Award of the Contract

The following documents must be executed prior to award of the contract and the initiation of work. Contractors are urged to expedite the completion of these documents. This will allow the contract award and notice to proceed to be issued expeditiously. These documents must be submitted within ten (10) working days after the date of notice of intent to award.

A. Contract Bond (Payment Bond: See Bonding Requirements below)
B. Contract Bond (Performance Bond: See Bonding Requirements below)
C. Certificate of Insurance naming City of Cordova as an "Additional Insured"
D. Proof of Current Registration if a corporation
E. Non-collusion Affidavit
F. Agreement
G. City of Cordova Business Registration
H. Executed W-9 Form

SPECIAL PROVISIONS

ARTICLE 1
Hazardous Waste Generation

Every effort to minimize or eliminate the generations of hazardous waste shall be used by the Contractor in the performance of the work of this Contract. Unless there is no substitute, no hazardous material shall be used in the performance of the work of this Contract.

ARTICLE 2
Coordination and Schedule

The Contractor shall, within ten (10) working days of the date of the Notice to Proceed, submit to the Engineer a schedule as required in Section 10.5, Control of Work, Article 5.3. The schedule shall be updated every week. An updated schedule shall be submitted with each of the Contractor's Periodic Payment Requests. Failure to provide an updated schedule will be cause to withhold partial payment.

ARTICLE 3
Site Preservation, Restoration, Cleanup and Environmental Reporting

Contractor shall be solely responsible for damage to public or private property caused by construction operations. The contractor shall take all precautions necessary to control dust. Contractor shall notify the City of any claims of damage, and shall clean and restore any property so damaged at the sole expense of the Contractor. All spills or releases of any hazardous substance shall be reported to the appropriate governmental agency as well as notice to the City. Contractors shall be responsible for all associated clean up costs and fines.

At all times during the work, keep the premises clean and orderly. Upon completion of the work, repair all damage caused by equipment and leave the Project free of rubbish and excess materials of any kind.

ARTICLE 4
Permits

The Contractor shall obtain all licenses and permits that are required to do the work. A Building Permit will be required by the City of Cordova, but there will be no charge. A permit is required from the state's Fire Marshal.

ARTICLE 5
Order of Award of Alternative Bids

Additive Alternate and/or Deductive Alternative Bids will be awarded, if any are awarded, in any order determined to be the most advantageous combination by the owner.

SECTION III

SCOPE OF WORK

SCOPE OF WORK

The City of Cordova is requesting proposals from interested general contractors through a Design-Build procurement method to design, construct, and repair to their solid waste Baler Facility located along Whitshed Road in Cordova, Alaska. The facility consist of the main Baler Building (Baler Building) which is a steel frame metal building (60'x112') of which the easterly 30' is open on three sides; and an addition (24'x48') located on and attached to south side of the main baler building,

The purpose of this work is to replace all the exterior siding girts, roofing as noted on plans, purlins provide repairs and upgrades to the interior such as upgrade all overhead lighting and domestic water; and the demolition and construction of a two story interior storage/break room along the north face of the building.

Design and construction must conform to the 2006 International Building Code and all other pertinent international, state and local codes.

As a minimum, proposals shall provide a proposed construction schedule to meet a substantial completion of April 30, 2014.

The work shall include all design, permitting, labor, materials, equipment and associated costs to include the following but not limited to:

1) The completed design by Alaska-licensed Architectural/Engineering disciplines;
2) All required permits and fees. City of Cordova permits are provided at no cost;
3) Submitting and gaining approval of all shop drawings;
4) The total cost of materials and equipment delivered to the site;
5) Repair and upgrades to the site underground utilities to include the domestic water service;
6) Construction of 8"x2' or 8"x4' concrete protection curb around Baler Building to protect metal siding;
7) Demolition and construction of completely finished and functional interior "Break Room" addition;
8) Replacement of exterior siding and girts on all four sides of the Baler Building;
9) Replace roof and purlins on the Baler Building and the metal roof of the card board addition (additive alternate);
10) Extension of the roof eves by 2' on north and south sides of building;
11) Replacement of all doors as noted on the plans;
12) Construction of a canopy over the north bay door with lighting;
13) Upgrades to the concrete floor and exterior slab;
14) Upgrades to the interior overhead lighting, electrical receptacles, and light switches;
15) Design of a filtration system to provide better drainage of fluids from the baler pit;
16) Upgrade of the 3" drain line in the baler pit;
17) Construct surface mounted water supply system;
18) Upgrade the size of the Baler pit 3" drain line.

Bases Bid Services

1. Metal Siding & Roof

   Replace roof and metal siding: The main baler building is 60'x80' with a 60'x30' canopy located at the east end of the building. The canopy was recently rebuilt and no work is required for this portion of the baler building.

   Replace the metal roof, purlins, metal siding and girts on all sides of the 60'x80' portion of the Baler Building.

2. Exterior Doors:

   Replace all exterior doors to both the Baler Building and the Card Board Addition. Man doors (new and existing shall be insulated metal. Overhead door shall be insulated roll up doors with manual operators. Add a new 36" man door on the north wall (just west of the existing overhead door).

3. Building Insulation:

   Provide a "Super-Saver" (drape type) insulation package with vapor barrier for roof and walls of the Baler Building.

4. Construct New Canopy (North Door):

   Design and construct a new canopy which extends 6' out from the face of building. Provide exterior light for the canopy area.

5. Demolition and Construction of New "Break Room":

   Demolish and remove the existing rest room and storage facility and replace with a new two level facility which will serve as a restroom/dressing room, storage room, upstairs break room and office. Details for this "Break Room" addition are shown in the plans.

6. Interior Lighting & Electrical Upgrades:

   Remove and dispose of existing overhead lighting in the Baler Building and Card Board Addition. Design and install new overhead lighting system that provides adequate illumination of the Baler Building. Replace and add weather proof wall receptacle along the perimeter walls of the Baler Building. Replace all interior wall switches.

7. "Hardened" Concrete Floor:

   Saw cut, remove and replace "Hardened" concrete floor as shown on the plans. These areas of the Baler Building take daily wear from equipment and trucks which operate in the facility. Contractor to provide reinforced concrete composite that is designed to reduce the wear to the concrete surface. Surface must be non-slip.

8. Interior Domestic Water Service:

a) Meter Pit:
Provide design to demolish existing meter pit. Provide new plumbing for above ground valves backflow prevention device and water meter to the facility.

b) Water:
Provide surface mounted water service line along all the interior walls. System to be used in the wash down of the facility. Provide 4 hose bibs on each wall and 2 hose bibs at the east end of the Baler pit.

c) Provide water service to new break room facility. May re-use existing plumbing up thru slab to the extent possible.

d) Freeze Protection:
The interior of the Baler Building will be allowed to reach temperatures below freezing (32°f). The interior surface mounted water system shall be designed such that all pipe can be fully drained.

9. Baler Pit Drain:

a) The Baler operation produces large amounts of fluid which is captured in a pit located below the Baler unit. The existing 3" drain lines plugs easily and does not allow this fluid to drain. Upgrade the existing 3" drain line to a 4" drain line. Provide filtration system that will separate the solids from the fluid such that the pit will drain freely.

b) Floor Drains – New Break Room:
Provide under slab floor drain for new break room addition.

10. Interior Drain:

Additive Alternates:

1A) Building Insulation Package:

Provide an insulated panel package for the walls of the Baler Building.

2A) Roof Insulation Package:

Provide an insulated panel package for the roof of the Baler Building.

3A) Concrete Protection Curb:

Provide a structural reinforced concrete protection curb designed to prevent damage to the exterior siding. Wall shall be 8" thick and 4 foot high, similar to the wall in the Card Board Addition. Provide adequate detailing to demonstrate how the metal siding and concrete wall will fit together to provide a weather and water tight seal.

3B) Concrete Protection Curb (2' High):

Provide a structural reinforced concrete protection curb panel around entire perimeter of building interior as part of building wall section. Wall to be 8" thick by 2' high. Purpose is to protect lower 2' of building wall.

4A) 4' High Plastic Panel:

Provide a 4' high plastic panel.

5A) Roof Eves:

Extend the roof eves of the main Baler Building out 2 feet from the face of the building.

6A) Roof – Card Board Addition:

Replace metal roof to make integral with the new Baler Building roof system.

ANTICIPATED SCHEDULE

Advertise	August 14, 2013
Pre-Proposal Conference	August 28, 2013
Bid's Due	September 30, 2013
Council Approval	October 2, 2013
Notice of Intent and Limited NTP for Submittals	October 9, 2013
Notice to Proceed	October 14, 2013
Substantial Completion	April 30, 2014

SECTION IV

FACILITY DESIGN CRITERIA

DIVISION 01 – GENERAL REQUIREMENTS

1.01 Project Coordination

This facility must remain in full operation during the full course of construction. The facility operates Monday thru Friday 8:00am to 5:00pm. Coordinate any interruption of services such as, water, sewer, electric, site access, etc. with the facility manager at least 48 hours in advance of the scheduled work. Interruption of services should be scheduled (where possible) during times when facility is not in operation. With advance coordination, the facility can be closed for a maximum of two hours during any day that facility is in operation.

During winter months, the Owner will provide snow removal of the parking lot and access drive.

Cooperate in planning and layout of the work well in advance of operations. Inform other contractors of requirements at proper time to prevent delay or revisions. Be informed of the requirements of other contractors and check own work for conflicts with the work of others. Ensure delivery of materials and performance of work on coordinated schedule with other contractors. Be responsible for proper layout of the work, and for all lines and measurements for all of the work executed under the contract documents. Verify the figures shown on the drawings before laying out the work and report any inaccuracies in writing to the Owner's Representative before commencing work. The Owner's Representative will in no case assume the responsibility for layout of the work.

Contractor shall cooperate and coordinate his work with all utilities to be installed for service to the Project.

The Contractor shall give the Owner's Representative forty-eight (48) hours advance notice of his intention to work anytime outside the usual working hours. In no case will the Contractor do any such work without first notifying the Owner's Representative to permit arrangements for proper inspection. Unless of an emergency nature, work performed in violation of this paragraph will not be paid for. The Contractor shall be responsible for the additional cost for inspection work on Sundays or recognized holidays.

1.02 Cutting and Patching

Cutting and patching is defined to include, but is not necessarily limited to, the cutting and patching of nominally completed work, and is defined to exclude integral cutting and patching during the manufacturing, fabricating, erecting, and installing process for individual units of work. Contractor shall be responsible for all cutting, fitting, and patching required to complete the work or to accommodate the coordination of work, provide for installation of other work, remove and replace defective work, remove and replace work not conforming to requirements of Contract Documents, uncover other work for access or inspection, obtain samples for testing or similar purposes, provide routine penetrations of nonstructural surfaces for installation of piping and electrical conduit.

Execute cutting, fitting, and patching to complete Work, and to fit the several parts together, to integrate with other work, uncover work to install ill-timed work, remove samples of installed

work for testing and provide openings in elements of work for penetrations of mechanical and electrical work.

Do not cut and patch work which is exposed to view in a manner resulting in a reduction of visual qualities or resulting in substantial evidence of the cut and patch work.

Execute work by methods to avoid damage to other work, and which will provide proper surfaces to receive patching and finishing. Fit work airtight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces. Refinish surfaces to match adjacent finishes.

1.03 Field Engineering

Requirements for Civil, Structural, Mechanical, Electrical, and Architectural - Provide and pay for field engineering services required for project, i.e., civil, structural, or other professional services required to execute Contractor's construction methods.

Qualifications of Surveyor, Engineer and Architects: Provide Qualified Professional Engineer, Architects and Land Surveyor as applicable with current Alaska license and acceptable to the Owner.

1.04 Submittals

Procedures - Deliver four (4) copies of each submittal to the Owner's Project Manager at 602 Railroad Avenue, Cordova, Alaska 99574. Number each submittal with the section number, dash, numerical order of the submittal, example 03300-1. Add an alpha to each re-submittal, example, 03300-1A. Transmit each item with company submittal. Identify Project, Contractor, subcontractor, and major supplier; identify pertinent Drawing sheet and detail number and specification section number, as appropriate. Provide space for Contractor and Architect/Engineer review stamps. Submit initial progress schedules and schedule of values in duplicate prior to issuance of Notice to Proceed. After review by the Architect/Engineer, revise and resubmit as required. Submit revised schedules with each application for payment, reflecting changes since previous submittal. Comply with progress schedule for submittals related to work progress. Coordinate submittal of related items. Distribute copies of reviewed submittals to Architect.

1.05 Shop Drawings, Product Data and Samples

Description - Submit shop drawings, product data, and samples as may be required, in Contract Documents to Owner's Project Manager. Individual submittals shall not include material covering more than one section of the Contract Documents. Products fabricated and/or installed prior to approval of submittals are subject to demand for removal and replacement with approved products by the contractor at no additional cost to the Owner. Shop drawing submittal can not be used for product substitution submittal.

Samples - Physical examples to illustrate materials, equipment or workmanship and to establish standards by which completed work is judged. Office samples of sufficient size and quantity to clearly illustrate: functional characteristics of product or material, with integrally related parts and attachment devices and full range of color, texture and pattern. Field samples and mock-

ups: erect at project site at location acceptable to Owner's Representative and construct each sample or mock-up complete, including work of all trades required in finished work.

Submittal Requirements - Submittal log will be provided by the Contractor. The contractor shall allow at least 7 days for review of original submittals or re-submittals except as follows: Do not mass submit submittals and all items submitted to Project Manager which are not of designated submittal log will be rejected.

Contractor Responsibilities - Review shop drawings, product data, and samples prior to submission.

Variations from Contract Documents - If the Contractor fails to mention variations from the Contract Documents, he will not be relieved of the responsibility for executing the work in accordance with the Contract Documents.

Submittals for Color Selection - The Contractor shall take particular note that color selections cannot be made for the project until such time as all items requiring color selection have been submitted. After such submittal has been made, the Project Manager will, within seven (7) days, make a complete color selection for the entire project. It will be the contractor's responsibility to review the Contract Documents completely to determine items requiring color selection obtain color samples from the manufacturer and submit to the Project Manager at the earliest possible date.

1.06 Temporary Facilities and Controls

Quality Assurance - In addition to compliance with governing regulations and rules and recommendations of utility companies, comply with specific requirements indicated and with applicable local codes and industry standards for construction work.

Temporary Facilities - Staging Area: All Contractor's storage, staging, field fabrication and field office operations shall be coordinated with the Owner's Project Manager prior to take control of the site.

Sanitary Facilities – Contractor may use toilets currently located on site. Keep all toilets clean.

Electricity - The Contractor may use existing electrical service at no additional cost. Electrical service to the existing facility must remain on during the normal operating hours of the facility. The Contractor shall provide all temporary electrical and lighting needed to complete the work. Provide power distribution as required throughout for construction operations of all trades. A temporary lighting system shall be furnished, installed, and maintained by the Contractor as part of the contract as required to satisfy minimum requirements of safety and security. When permanent electrical power and lighting systems are in operating condition they may be used for temporary power and lighting for construction purposes, provided that Contractor assumes full responsibility for the entire power and lighting systems.

Heating, Cooling and Ventilation - Furnish by approved methods by the contractor, temporary heat including fuel and power as required to protect materials and work from dampness and cold and to dry out the facility.

Water Service - Provide all water necessary for construction purposes. Furnish drinking water with suitable containers and cups for use of employees. Existing water facilities may be used when available.

Temporary Controls - Access Provisions: Provide ramps, stairs, ladders, and similar temporary access elements as reasonably required to perform the work and facilitate its inspection during installation.

Environmental Control - Provide and maintain all fences, barricades, lights, shoring and other protective structures or devices necessary for the safety of workmen, equipment, the public and property as required by state or municipal laws and regulations, and local ordinances, laws and other requirements of the municipality, state, and other authorities having jurisdiction with regard to safety precautions, dust control, and fire hazards.

Security and Protection Provisions - The types of temporary security and protection provisions required include, but not by way of limitation, fire protection, personnel security program (theft prevention), and similar provisions intended to minimize property losses, personal injuries, and claims for damages at project site throughout construction period.

Traffic - Conduct operations and the removal of debris to ensure minimum interference with the facilities operation. Do not close or obstruct other occupied facilities or access areas without required permission. Provide alternate and safe routes around closed or obstructed pedestrian and traffic ways.

Temporary Equipment - Protective Headgear: Provide for visitors use six (6) new adjustable OSHA-approved hard hats.

1.07 Project Close Out

Definitions: Close-out is defined to include general requirements near the end of contract time in preparation for final acceptance, final payment, normal termination of contract, occupancy by Owner and similar actions evidencing completion of the work. Time of Close-out is directly related to “Substantial Completion”.

Substantial Completion - When Contractor considers work substantially complete, he shall submit to the Owner’s Project Manager written notice that work, or designated portion thereof, is substantially complete, a list of items to be completed or corrected, conditional Certificate of Occupancy from governing authorities and project records and contract record drawings. Owner’s Project Manager will at the mutually agreed time make inspection to determine completion status. Should Owner’s Project Manager determine that work is not substantially complete, Owner’s Project Manager will promptly notify Contractor in writing. Contractor will remedy work deficiencies, and send second notice of substantial completion to Owner’s Project Manager. Owner’s Project Manager will re-inspect work with his cost and/or expense for such to be the Contractor's responsibility. When Owner’s Project Manager concurs that work is substantially complete, the Architect will prepare Certificate of Substantial Completion accompanied with Contractor’s list of items to be completed or corrected, as verified and amended by the Owner’s Project Manager and submit certificate to Owner and Contractor for their written acceptance of the responsibilities assigned to them in the certificate.

Final Inspection - When Contractor considers work complete, he shall submit written certification that contract documents have been reviewed, contractor has inspected work for compliance with contract documents, work has been completed in accordance with contract documents, equipment and systems have been tested and operated in presence of Owner's Project Manager and are operational and copy of substantial completion punch lists stating that each item has been completed or otherwise resolved for acceptance. Owner's Project Manager will, at the mutually agreed time, inspect the work to verify completion status. Should the Owner's Project Manager consider work incomplete or defective Owner's Project manager will promptly notify Contractor in writing of any incomplete or defective work, Contractor shall immediately remedy deficiencies, and send written certification to Owner's Project Manager that work is complete and Owner's Project Manager will re-inspect work. When Project Manger finds the work acceptable under contract documents, he will request Contractor to make closeout submittals.

Re-Inspection Fees - Should Owner's Representative and or Engineer be required to make more than one substantial and/or final inspection due to Contractor's failure to correct specified deficiencies, the Contractor shall bear all costs made necessary by such additional inspections at $175 per man-hour.

Submittals-Record Drawings: Prior to Final Completion of the Project, the Contractor and/or Subcontractors under his direction shall submit records of changes on prints to Owner's Project Manager. Evidence of Payments and Release of Liens: Contractor's Affidavit of Payment of Debt and Claims; Contractor's Affidavit of Release of Liens including the following: Consent of Contractor's Surety to Final Payment, Contractor's Release of Waiver of Liens and separate releases of Waivers of Lien for each subcontractor, supplier, and others with lien rights against Owner's property.

1.08 Cleaning

Execute cleaning during progress of the work and at completion of the work. Cleaning, repair, and restoration must be accomplished prior to substantial completion inspection to the satisfaction of and at no additional cost to the Owner. Conduct cleaning and disposal operations to comply with codes, ordinances, regulations, and antipollution laws. All debris shall be removed from the site and legally disposed of. At the completion of the project, Contractor shall be responsible for complete cleaning of these portions of the building and site which work affects. If Contractor fails to clean up at the completion of the work, the Owner may do so and the cost thereof shall be charged to the Contractor.

1.09 Project Record Documents

Maintenance of Documents and Samples - In addition to requirements in Contract Documents, maintain at the job site for Owner's use one record copy of Contract Drawings, Addenda, Change orders and other modifications to the Contract, reviewed shop drawings, product data and samples, field test records, inspection certificates, manufacturer's certificates, Request for Information (RFI), Request for Proposal (RFP), Architect's Supplemental Instructions (ASI) and Current Construction Network. Maintain record documents in a clean, dry and legible condition. Do not use record documents for construction purposes. Keep record documents and samples available for inspection by the Owner's Representative.

Recording - From the copies of Contract Documents to be furnished by Owner's Representative, the Contractor and/or Subcontractors shall record on a set of clean, new prints each and every change that is made, at time it is made, in red. This includes any changes that are made in partitions, doors, or otherwise in arrangement of construction of buildings as well as a complete record of exact manner in which electrical and mechanical work, piping, etc., are installed. All Change Orders, RFI's, and ASI's shall be incorporated. Dimensions shall be included where necessary to accurately locate piping and other items that will be concealed underground or in finished building that may later be necessary to service. Contract Drawings: Legibly mark to record actual construction, horizontal and vertical location of underground utilities and appurtenances referenced to permanent surface improvements, field changes of dimensions and detail, changes made by change order and other modifications, Details not on original contract drawings and references to related shop drawings and modifications. Keep record documents current. No progress payments will be made until record documents are verified by the Owner's Representative as being current. Do not permanently conceal any work until required information has been recorded.

Submittal - Prior to Final Completion of the Project, the Contractor and/or Subcontractors under his direction, shall submit records of changes on prints to Owner's Representative.

1.10 Warranty of Work After Final Payment

Prior to Final Payment, the Contractor shall furnish to the Owner's Representative a Warranty of Work After Final Payment in the following form:

"The Contractor shall warrant all work and materials to be in full and complete accordance with the Agreement between Owner and Contractor, and requirements appertaining thereto; that all work and materials are free from any and all defects and imperfections, and fully suitable for the use and purposes for which each and every part is intended. The Contractor also agrees that, should any defect develop or appear which the Owner's Project Manager finds was Not caused by improper use, the Contractor shall promptly, upon demand, fully correct, substitute and make good any such defective material without any cost to the Owner and will save the Owner harmless against any claim, demand, loss or damage by reason of any breach of this warranty."

The period of this warranty shall commence on the date of Substantial Completion.

The warranty shall continue to be in full force and effect for the period of one (1) year, except for those items for which a longer period of warranty is specifically stated in the Warranties for work in Technical Sections of the Specifications.

1.11 Closeout Forms

- The following forms are to be submitted by the Contractor prior to final project closeout.
- CERTIFICATION OF SUBSTANTIAL COMPLETION
- CONTRACTOR'S AFFIDAVIT OF PAYMENT OF DEBTS AND CLAIMS
- RELEASE ON CONTRACTS
- CONSENT OF SURETY COMPANY TO FINAL PAYMENT

- CONSENT OF SURETY TO REDUCTION IN OR PARTIAL RELEASE OF RETAINAGE
- CERTIFICATE OF COMPLIANCE - The Contractor shall submit a notarized Certificate of Compliance with his application for Final Payment.
- WARRANTY OF WORK AFTER FINAL PAYMENT - The Contractor shall furnish to the Owner a notarized Warranty of Work after Final Payment with his application for Final Payment.
- CLOSEOUT CHECKLIST - The closeout checklist is designed to assist the contractor and Owner's Representative in the process of completing the project.

DIVISION 02 - CIVIL SITE CONSTRUCTION

PART I - GENERAL

1.01 REQUIREMENTS INCLUDE

A. Civil Site work shown on the drawings.

1.02 REFERENCED SPECIFICATIONS

A. This contract is subject to and hereby incorporates by reference the following documents as though physically contained herein:

1. Sections of the Municipality of Anchorage Standard Specifications and Standard Details — Streets, Drainage, Utilities and Parks, 2009 Edition, as enumerated below. This document is herein referred to as M.A.S.S.

B. When conflicts exist between M.A.S.S. and the Project Specifications, the Project Specifications shall govern.

C. Where an item of Work is not addressed by the Project Specifications, but addressed by M.A.S.S., then the item of Work shall be in accordance with M.A.S.S.

D. This Specification section applies only to the civil designated Drawings.

E. Copies of M.A.S.S. can be obtained from the Municipality of Anchorage's website http://www.muni.org/departments/works/project_management/pages/MASS.aspx The following link is the PDF document: www.muni.org/Departments/works/project_management/Documents/2009%20MASS%20Revision%203%20-%20Entire%20Document.pdf

1.03 MUNICIPALITY OF ANCHORAGE STANDARD SPECIFICATIONS AND STANDARD DRAWINGS, MUNICIPALITY OF ANCHORAGE, 2003, AS AMENDED, herein after referred to as M.A.S.S.

A. Division 20 - Earthwork
Section 20.01: General
Section 20.02: Storm water Pollution Prevention Plan
Section 20.07: Removal of Concrete Sidewalk and Concrete Slab
Section 20.08: Removal of Pavement
Section 20.12: Dewatering
Section 20.14: Trench Excavation and Backfill for Service Trenches
Section 20.15: Furnish Trench Backfill
Section 20.16: Furnish Bedding Material
Section 20.21: Classified Fill and Backfill
Section 20-22 Leveling Course
Section 20.27: Disposal of Unsuitable or Surplus Material

B. Division 30 - Portland Cement Concrete
Section 30.01: General
Section 30.05: Structures and Retaining Walls

C. Division 50 – Sanitary Sewers
Section 50.01: General
Section 50.02: Install Pipe

D. Division 60
Section 60.01: General
Section 60.02: Furnish and Install Pipe
Section 60.03: Furnish and Install Valves
Section 60.06 Water Service Lines
Section 60.08 Temporary Water Service

E. Division 70 - Miscellaneous
Section 70.01: General
Section 70.12: Traffic Maintenance
Section 70.13 : Bollards

F. Division 90 – Special provisions
Section 90.01: Permits required

1.04 SUBMITTALS

A. Type II-A Classified Fill, Type II Classified Fill, and Leveling Course
1. Particle-size Analysis
2. Moisture/Density Relationship

B. Portland Concrete Cement
1. Mix Design
2. Reinforcement Certificates of Compliance
3. Certificate of Compliance for Curing Compound and Admixtures
4. Sample Test Results

C. Permits
1. City of Cordova Building Permit
2. State Fire Marshall Permit

D. Storm Water Pollution Prevention Plan

E. Excavation Work Plan

PART 2 - PRODUCTS

A. See referenced M.A.S.S. Sections for Materials.

PART 3 - EXECUTION

A. See referenced M.A.S.S. Sections for Construction.

END OF CIVIL SECTION

SECTION 024116 – STRUCTURE DEMOLITION

PART 1 – GENERAL

1.01 SUMMARY

A. Section includes but not limited to:
   1. Demolition and removal of buildings and site improvements.
   2. Disconnecting, capping or sealing and removing site utilities.
   3. Replacement of girts, purlins, metal siding and metal roof and doors.
   4. Demolition of existing overhead lighting system.
   5. Demolition of portions of “Hardened” concrete floor.
   6. Demolition of interior – storage and restrooms.

1.02 QUALITY ASSURANCE

A. Regulatory Requirements: Comply with any governing EPA notification of regulations before beginning demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.

1.03 PROJECT CONDITIONS

A. Buildings will be occupied during the work. The building has miscellaneous materials and contents to be demolished.

B. Buildings immediately adjacent to demolition area will be occupied throughout the contract. Conduct demolition so operations of occupied buildings will not be disrupted.
   1. Provide not less than 72 hours notice of activities that will affect operations of adjacent occupied buildings.
   2. Maintain access to existing walkways, exits and other facilities used by occupants of adjacent buildings. Do not close or obstruct walkways, exits or other facilities used by occupants of adjacent buildings without written permission from authorities having jurisdiction.

C. Owner assumes no responsibility for buildings and structures to be demolished.
   1. Conditions existing at time of inspection for bidding purposes will be maintained by Owner as far as practical.
   2. Before demolition, Owner will remove the contents of the existing Information Center.

D. Hazardous Materials: It is not expected that hazardous materials will be encountered in the Work.
   1. If materials suspected of containing hazardous materials are encountered, do not disturb; immediately notify Owner and Project Manager. Hazardous materials will be removed by Owner under a separate contract.

E. On-site storage or sale of removed items or materials is not permitted.

F. Arrange demolition schedule so as not to interfere with Owner's on-site operations. Coordinate with Owner's Project Manager for demolition of existing building compounds.

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION

3.01 EXAMINATION

A. Verify that utilities have been disconnected and capped before starting demolition operations.

3.02 PREPARATION

A. Existing Utilities: Locate, identify, disconnect and seal or cap off indicated utilities serving buildings and structures to be demolished.
   1. Owner will arrange to shut off indicated utilities when requested by Contractor.
   2. Arrange to shut off indicated utilities with utility companies.
   3. Do not start demolition work until utility disconnecting and sealing have been completed.

3.03 PROTECTION

A. Exiting Facilities: Protect adjacent parking and staging areas, occupied building entries and other building facilities during all operations. Maintain exits from occupied buildings.

3.04 DEMOLITION

A. Site Access and Temporary Controls: Conduct building repair and debris-removal operations to ensure minimum interference with parking, streets, walkways and other used facilities.
   1. Do not close or obstruct streets, parking or other adjacent occupied or used facilities without permission from the Owner and authorities having jurisdiction. Provide alternate routes around closed or obstructed facilities.
   2. Use water mist and other suitable methods to limit spread of dust and dirt. Comply with governing environmental-protection regulations.

B. Explosives: Use of explosives is not permitted.

3.05 CLEANING

A. Remove demolition waste materials from Project site and legally dispose of them.

B. Do not burn demolished materials.

END OF SECTION 024116

SECTION 033-00 - CAST-IN-PLACE CONCRETE

PART 1 - GENERAL

1.01 SUMMARY

A. Section includes cast-in-place concrete, including formwork, reinforcement, concrete materials, mixture design, placement procedures, and finishes, for the following:
   1. "Hardened" Concrete Floor
   2. Perimeter concrete wall.

1.02 ACTION SUBMITTALS

A. Product Data: For each type of product indicated.

B. Design Mixtures: For each concrete mixture. Submit alternate design mixtures when characteristics of materials, Project conditions, weather, test results, or other circumstances warrant adjustments.

C. Steel Reinforcement Shop Drawings: Placing drawings that detail fabrication, bending, and placement. Include bar sizes, lengths, material, grade, bar schedules, stirrup spacing, bent bar diagrams, bar arrangement, splices and laps, mechanical connections, tie spacing, hoop spacing, and supports for concrete reinforcement.

1.03 QUALITY ASSURANCE

A. Source Limitations: Obtain each type or class of cementitious material of the same brand from the same manufacturer's plant, obtain aggregate from single source, and obtain admixtures from single source from single manufacturer.

B. ACI Publications: Comply with the following unless modified by requirements in the Contract Documents:
   1. ACI 301, "Specifications for Structural Concrete."
   2. ACI 117, "Specifications for Tolerances for Concrete Construction and Materials."

PART 2 - PRODUCTS

2.01 FORM-FACING MATERIALS

A. Rough-Formed Finished Concrete: Plywood, lumber, metal, or another approved material. Provide lumber dressed on at least two edges and one side for tight fit.

B. Form-Release Agent: Commercially formulated form-release agent that will not bond with, stain, or adversely affect concrete surfaces and will not impair subsequent treatments of concrete surfaces.

C. Form Ties: Factory-fabricated, removable or snap-off metal or glass-fiber-reinforced plastic form ties designed to resist lateral pressure of fresh concrete on forms and to prevent spalling of concrete on removal.

2.02 STEEL REINFORCEMENT

A. Reinforcing Bars: ASTM A 615/A 615M, Grade 60 (Grade 420), deformed.

2.03 CONCRETE MATERIALS

A. Cementitious Material: Use the following cementitious materials, of the same type, brand, and source, throughout Project:
   1. Portland Cement: ASTM C 150, Type I/II

B. Normal-Weight Aggregates: ASTM C 33, coarse aggregate or better, graded. Provide aggregates from a single source.

C. Water: ASTM C 94/C 94M.

2.04 ADMIXTURES

D. Air-Entraining Admixture: ASTM C 260.

E. Chemical Admixtures: Provide admixtures certified by manufacturer to be compatible with other admixtures and that will not contribute water-soluble chloride ions exceeding those permitted in hardened concrete. Do not use calcium chloride or admixtures containing calcium chloride.
   1. Water-Reducing Admixture: ASTM C 494/C 494M, Type A.

2.05 CURING MATERIALS

A. Evaporation Retarder: Waterborne, monomolecular film forming, manufactured for application to fresh concrete.

2.06 CONCRETE MIXTURES FOR BUILDING ELEMENTS

A. Footings: Proportion normal-weight concrete mixture as follows:
   1. Minimum Compressive Strength: 3000 psi (20.7 MPa) at 28 days.
   2. Maximum Water-Cementitious Materials Ratio: 0.50.
   3. Slump Limit: 4 inches (plus or minus 1 inch.
   4. Air Content: 5.5 percent, plus or minus 1.5 percent at point of delivery for 1-1/2-inch nominal maximum aggregate size.

B. Foundation Walls: Proportion normal-weight concrete mixture as follows:
   1. Minimum Compressive Strength: 3000 psi (20.7 MPA) at 28 days.
   2. Maximum Water-Cementitious Materials Ratio: 0.50.
   3. Slump Limit: 4 inches, plus or minus 1 inch.
   4. Air Content: 5.5 percent, plus or minus 1.5 percent at point of delivery for 1-1/2-inch nominal maximum aggregate size.

2.07 FABRICATING REINFORCEMENT

C. Fabricate steel reinforcement according to CRSI's "Manual of Standard Practice."

2.08 CONCRETE MIXING

D. Ready-Mixed Concrete: Measure, batch, mix, and deliver concrete according to ASTM C 94/C 94M, and furnish batch ticket information.

PART 3 - EXECUTION

3.01 FORMWORK

A. Design, erect, shore, brace, and maintain formwork, according to ACI 301, to support vertical, lateral, static, and dynamic loads, and construction loads that might be applied, until structure can support such loads.

B. Construct formwork so concrete members and structures are of size, shape, alignment, elevation, and position indicated, within tolerance limits of ACI 117.

C. Construct forms tight enough to prevent loss of concrete mortar.

D. Fabricate forms for easy removal without hammering or prying against concrete surfaces. Provide crush or wrecking plates where stripping may damage cast concrete surfaces. Provide top forms for inclined surfaces steeper than 1.5 horizontal to 1 vertical.

3.02 STEEL REINFORCEMENT

E. General: Comply with CRSI's "Manual of Standard Practice" for placing reinforcement.

F. Clean reinforcement of loose rust and mill scale, earth, ice, and other foreign materials that would reduce bond to concrete.

G. Accurately position, support, and secure reinforcement against displacement. Locate and support reinforcement with bar supports to maintain minimum concrete cover. Do not tack weld crossing reinforcing bars.

3.03 CONCRETE PLACEMENT

A. Before placing concrete, verify that installation of formwork, reinforcement, and embedded items is complete and that required inspections have been performed.

B. Do not add water to concrete during delivery, at Project site, or during placement unless approved by Architect.

C. Before test sampling and placing concrete, water may be added at Project site, subject to limitations of ACI 301.

D. Deposit concrete continuously in one layer or in horizontal layers of such thickness that no new concrete will be placed on concrete that has hardened enough to cause seams or planes of weakness. If a section cannot be placed continuously, provide construction joints as indicated. Deposit concrete to avoid segregation.

E. Cold-Weather Placement: Comply with ACI 306.1 and as follows. Protect concrete work from physical damage or reduced strength that could be caused by frost, freezing actions, or low temperatures.

3.04 FINISHING FORMED SURFACES

F. Rough-Formed Finish: As-cast concrete texture imparted by form-facing material with tie holes and defects repaired and patched. Remove fins and other projections that exceed specified limits on formed-surface irregularities.

G. Related Unformed Surfaces: At tops of walls, horizontal offsets, and similar unformed surfaces adjacent to formed surfaces, strike off smooth and finish with a texture matching adjacent formed surfaces. Continue final surface treatment of formed surfaces uniformly across adjacent unformed surfaces unless otherwise indicated.

3.05 CONCRETE PROTECTING AND CURING

H. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures. Comply with ACI 306.1 for cold-weather protection and ACI 301 for hot-weather protection during curing.

I. Evaporation Retarder: Apply evaporation retarder to unformed concrete surfaces if hot, dry, or windy conditions cause moisture loss approaching 0.2 lb/sq. ft. x h (1 kg/sq. m x h) before and during finishing operations. Apply according to manufacturer's written instructions after placing, screeding, and bull floating or darbying concrete, but before float finishing.

J. Formed Surfaces: Cure formed concrete surfaces, including underside of beams, supported slabs, and other similar surfaces. If forms remain during curing period, moist cure after loosening forms. If removing forms before end of curing period, continue curing for the remainder of the curing period.

3.06 CONCRETE SURFACE REPAIRS

K. Defective Concrete: Repair and patch defective areas when approved by Architect. Remove and replace concrete that cannot be repaired and patched to Architect's approval.

L. Patching Mortar: Mix dry-pack patching mortar, consisting of one part portland cement to two and one-half parts fine aggregate passing a No. 16 sieve, using only enough water for handling and placing.

3.07 FIELD QUALITY CONTROL

A. Testing and Inspecting: Engage a qualified testing and inspecting agency to perform tests and inspections and to submit reports.

END OF SECTION 033000

SECTION 055000 – METAL FABRICATIONS

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

1. Miscellaneous steel framing and supports.
2. Structural steel door frames.
3. Miscellaneous steel trim.
4. Structural steel for canopy.

1.02 ACTION SUBMITTALS

A. Shop Drawings: Show fabrication and installation details for metal fabrications.

1. Include plans, elevations, sections, and details of metal fabrications and their connections. Show anchorage and accessory items.

PART 2 - PRODUCTS

2.01 METALS, GENERAL

A. Metal Surfaces, General: Provide materials with smooth, flat surfaces without blemishes.

2.02 FERROUS METALS

B. Steel Plates, Shapes, and Bars: ASTM A 36/A 36M.

C. Stainless-Steel Bars and Shapes: ASTM A 276, Type 304.

D. Rolled-Steel Floor Plate: ASTM A 786/A 786M, rolled from plate complying with ASTM A 36/A 36M or ASTM A 283/A 283M, Grade C or D.

E. Rolled-Stainless-Steel Floor Plate: ASTM A 793.

F. Steel Tubing: ASTM A 500, cold-formed steel tubing.

G. Steel Pipe: ASTM A 53/A 53M, standard weight (Schedule 40) unless otherwise indicated.

H. Cast Iron: Either gray iron, ASTM A 48/A 48M, or malleable iron, ASTM A 47/A 47M.

2.03 NONFERROUS METALS

I. Aluminum Extrusions: ASTM B 221 (ASTM B 221M), Alloy 6063-T6.

J. Aluminum-Alloy Rolled Tread Plate: ASTM B 632/B 632M, Alloy 6061-T6.

K. Aluminum Castings: ASTM B 26/B 26M, Alloy 443.0-F.

2.04 FASTENERS

L. General: Unless otherwise indicated, provide Type 304 stainless-steel fasteners for exterior use and zinc-plated fasteners with coating complying with ASTM B 633 or ASTM F 1941 (ASTM F 1941M), Class Fe/Zn 5, at exterior walls.

1. Provide stainless-steel fasteners for fastening aluminum.
2. Provide stainless-steel fasteners for fastening stainless steel.
3. Provide stainless-steel fasteners for fastening nickel silver.

M. Cast-in-Place Anchors in Concrete: Either threaded type or wedge type unless otherwise indicated; galvanized ferrous castings, either ASTM A 47/A 47M malleable iron or ASTM A 27/A 27M cast steel. Provide bolts, washers, and shims as needed, all hot-dip galvanized per ASTM F 2329.

2.05 MISCELLANEOUS MATERIALS

N. Low-Emitting Materials: Paints and coatings shall comply with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."

O. Galvanizing Repair Paint: High-zinc-dust-content paint complying with SSPC-Paint 20 and compatible with paints specified to be used over it.

P. Bituminous Paint: Cold-applied asphalt emulsion complying with ASTM D 1187.

2.06 FABRICATION, GENERAL

Q. Shop Assembly: Preassemble items in the shop to greatest extent possible. Use connections that maintain structural value of joined pieces.

R. Cut, drill, and punch metals cleanly and accurately. Remove burrs and ease edges. Remove sharp or rough areas on exposed surfaces.

S. Weld corners and seams continuously.

2.07 MISCELLANEOUS FRAMING AND SUPPORTS

A. General: Provide steel framing and supports not specified in other Sections as needed to complete the Work.

B. Fabricate units from steel shapes, plates, and bars of welded construction unless otherwise indicated. Fabricate to sizes, shapes, and profiles indicated and as necessary to receive adjacent construction.

2.08 STRUCTURAL-STEEL DOOR FRAMES

A. Fabricate structural-steel door frames from steel shapes fully welded together, with 5/8-by-1-1/2-inch steel channel stops. Plug-weld built-up members and continuously weld exposed joints. Reinforce frames and drill and tap as necessary to accept finish hardware.

1. Provide with integrally welded steel strap anchors for securing door frames into adjoining concrete or masonry.

B. Galvanize exterior steel frames.

2.09 MISCELLANEOUS STEEL TRIM

C. Unless otherwise indicated, fabricate units from steel shapes, plates, and bars of profiles shown with continuously welded joints and smooth exposed edges. Miter corners and use concealed field splices where possible.

D. Provide cutouts, fittings, and anchorages as needed to coordinate assembly and installation with other work.

E. Galvanize exterior miscellaneous steel trim.

PART 3 - EXECUTION

3.01 INSTALLATION, GENERAL

A. Cutting, Fitting, and Placement: Perform cutting, drilling, and fitting required for installing metal fabrications. Set metal fabrications accurately in location, alignment, and elevation; with edges and surfaces level, plumb, true, and free of rack; and measured from established lines and levels.

B. Fit exposed connections accurately together to form hairline joints. Weld connections that are not to be left as exposed joints but cannot be shop welded because of shipping size limitations. Do not weld, cut, or abrade surfaces of exterior units that have been hot-dip galvanized after fabrication and are for bolted or screwed field connections.

C. Field Welding: Comply with the following requirements:

1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
2. Obtain fusion without undercut or overlap.
3. Remove welding flux immediately.
4. At exposed connections, finish exposed welds and surfaces smooth and blended.

END OF SECTION 055000

SECTION 055100 - METAL STAIRS

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:
   1. Industrial-type stairs with steel grating treads.
   2. Steel tube railings attached to metal stairs.
   3. Steel tube handrails attached to walls adjacent to metal stairs.

1.02 PERFORMANCE REQUIREMENTS

B. Structural Performance of Stairs: Metal stairs shall withstand the effects of gravity loads and all pertinent loads as required by code.

C. Structural Performance of Railings: Railings shall withstand the effects of gravity loads and the all pertinent loads as required by code.

D. Seismic Performance: Metal stairs shall withstand the effects of earthquake motions determined according to ASCE/SEI 7.

   1. Component Importance Factor is 1.5.

1.03 ACTION SUBMITTALS

E. Product Data: For metal stairs.

F. Shop Drawings: Include plans, elevations, sections, details, and attachments to other work.

PART 2 - PRODUCTS

2.01 METALS

A. Metal Surfaces, General: Provide materials with smooth, flat surfaces unless otherwise indicated. For components exposed to view in the completed Work, provide materials without seam marks, roller marks, rolled trade names, or blemishes.

B. Steel Plates, Shapes, and Bars: ASTM A 36/A 36M.

C. Steel Tubing: ASTM A 500 (cold formed).

D. Steel Bars for Grating Treads: ASTM A 36/A 36M or steel strip, ASTM A 1011/A 1011M or ASTM A 1018/A 1018M.

E. Wire Rod for Grating Crossbars: ASTM A 510 (ASTM A 510M).

F. Cast Iron: Either gray iron, ASTM A 48/A 48M, or malleable iron, ASTM A 47/A 47M, unless otherwise indicated.

G. Woven-Wire Mesh: Intermediate-crimp, square pattern, 2-inch woven-wire mesh, made from 0.135-inch nominal diameter wire complying with ASTM A 510 (ASTM A 510M).

2.02 MISCELLANEOUS MATERIALS

H. Cast-Metal Units: Cast iron, with an integral abrasive, as-cast finish.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

a. American Safety Tread Co., Inc.
b. Balco Inc.
c. Wooster Products Inc.

I. Provide anchors for embedding units in concrete, either integral or applied to units, as standard with manufacturer.

J. Apply bituminous paint to concealed surfaces of cast-metal units set into concrete.

K. Fasteners: Provide zinc-plated fasteners with coating complying with ASTM B 633 or ASTM F 1941 (ASTM F 1941M), Class Fe/Zn 12 for exterior use, and Class Fe/Zn 5 where built into exterior walls. Select fasteners for type, grade, and class required.

2.03 FABRICATION, GENERAL

A. Provide complete stair assemblies, including metal framing, hangers, struts, railings, clips, brackets, bearing plates, and other components necessary to support and anchor stairs and platforms on supporting structure.

1. Join components by welding unless otherwise indicated.
2. Use connections that maintain structural value of joined pieces.

2.04 STEEL-FRAMED STAIRS

A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

1. Alfab, Inc.
2. American Stair, Inc.
3. Sharon Companies Ltd. (The).

B. Stair Framing:

1. Fabricate stringers of steel channels.
2. Construct platforms of steel channel headers and miscellaneous framing members as needed to comply with performance requirements.
3. If using bolts, fabricate and join so bolts are not exposed on finished surfaces.

C. Metal Bar-Grating Stairs: Comply with NAAMM MBG 531, "Metal Bar Grating Manual."

1. Fabricate treads and platforms from steel grating with 1-1/4-by-3/16-inch bearing bars at 15/16 inch o.c and crossbars at 4 inches o.c.
2. Fabricate grating treads with cast abrasive nosing and with steel angle or steel plate carrier at each end for stringer connections. Secure treads to stringers with bolts.

2.05 STAIR RAILINGS

D. Steel Tube Railings: Fabricate railings to comply with requirements indicated for design, dimensions, details, finish, and member sizes, including wall thickness of tube, post spacings, and anchorage, but not less than that needed to withstand indicated loads.

1. Rails and Posts: 1-1/2-inch-square top and bottom rails and 1-1/2-inch- square posts.
2. Picket Infill: 1/2-inch- square pickets spaced less than 4 inches clear.
3. Mesh Infill: Woven wire mesh in steel channel frames with wires horizontal and vertical.

E. Welded Connections: Fabricate railings with welded connections. Cope components at connections to provide close fit, or use fittings designed for this purpose. Weld all around at connections, including at fittings.

F. Form changes in direction of railings by bending.

G. Form curves by bending members in jigs to produce uniform curvature without buckling.

H. Close exposed ends of railing members with prefabricated end fittings.

I. Provide wall returns at ends of wall-mounted handrails.

J. Brackets, Flanges, Fittings, and Anchors: Provide wall brackets, end closures, flanges, miscellaneous fittings, and anchors for interconnecting components and for attaching to other work.

1. Connect posts to stair framing by direct welding.

K. Fillers: Provide fillers made from steel plate, or other suitably crush-resistant material, to transfer wall bracket loads through wall finishes. Size fillers to suit wall finish thicknesses.

2.06 FINISHES

L. Finish metal stairs after assembly.

M. Galvanizing: Hot-dip galvanize items as indicated to comply with ASTM A 153/A 153M for steel and iron hardware and with ASTM A 123/A 123M for other steel and iron products.

N. Apply shop primer to uncoated surfaces of metal stair components. Comply with SSPC-PA 1, "Paint Application Specification No. 1: Shop, Field, and Maintenance Painting of Steel," for shop painting.

PART 3 - EXECUTION

3.01 INSTALLATION

A. Cutting, Fitting, and Placement: Perform cutting, drilling, and fitting required for installing metal stairs. Set units accurately in location, alignment, and elevation, measured from established lines and levels and free of rack.

B. Install metal stairs by welding stair framing to steel structure or to weld plates cast into concrete unless otherwise indicated.

C. Fit exposed connections accurately together to form hairline joints. Weld connections that are not to be left as exposed joints.

D. Attach handrails to wall with wall brackets. Use type of bracket with predrilled hole for exposed bolt anchorage.

3.02 ADJUSTING AND CLEANING

E. Touchup Painting: Immediately after erection, clean field welds, bolted connections, and abraded areas of shop paint, and paint exposed areas with same material as used for shop painting to comply with SSPC-PA 1 for touching up shop-painted surfaces.

F. Galvanized Surfaces: Clean field welds, bolted connections, and abraded areas and repair galvanizing to comply with ASTM A 780.

END OF SECTION 055100

SECTION 061000 - ROUGH CARPENTRY

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

1. Framing with dimension lumber.
2. Framing with engineered wood products.
3. Shear wall panels.
4. Wood blocking and nailers.
5. Wood furring.
6. Plywood backing panels.

1.02 ACTION SUBMITTALS

A. Product Data: For each type of process and factory-fabricated product.

1. Include data for wood-preservative treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements
2. Include data for fire-retardant treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements.

1.03 INFORMATIONAL SUBMITTALS

A. Material Certificates: For dimension lumber specified to comply with minimum allowable unit stresses. Indicate species and grade selected for each use and design values approved by the ALSC Board of Review.

B. Evaluation Reports: For the following, from ICC-ES:

1. Wood-preservative-treated wood.
2. Engineered wood products.
3. Shear panels.

PART 2 - PRODUCTS

2.01 WOOD PRODUCTS, GENERAL

A. Lumber: DOC PS 20 and applicable rules of grading agencies indicated. If no grading agency is indicated, provide lumber that complies with the applicable rules of any rules-writing agency certified by the ALSC Board of Review. Provide lumber graded by an agency certified by the ALSC Board of Review to inspect and grade lumber under the rules indicated.

1. Factory mark each piece of lumber with grade stamp of grading agency.
2. Provide dressed lumber, S4S, unless otherwise indicated.

B. Maximum Moisture Content of Lumber: 19 percent.

C. Engineered Wood Products: Provide engineered wood products acceptable to authorities having jurisdiction and for which current model code research or evaluation reports exist that show compliance with building code in effect for Project.

1. Allowable Design Stresses: Provide engineered wood products with allowable design stresses, as published by manufacturer that meet or exceed those indicated. Manufacturer's published values shall be determined from empirical data or by rational engineering analysis and demonstrated by comprehensive testing performed by a qualified independent testing agency.

2.02 WOOD-PRESERVATIVE-TREATED LUMBER

D. Preservative Treatment by Pressure Process: AWPA U1; Use Category UC2 for interior construction not in contact with the ground. Use Category UC4a for items in contact with the ground.

1. Preservative Chemicals: Acceptable to authorities having jurisdiction and containing no arsenic or chromium.

2.03 DIMENSION LUMBER FRAMING

A. Non-Load-Bearing Interior Partitions: Construction or No. 2 grade.

1. Application: All interior partitions.
2. Species: As required to meet structural loading.

B. Framing Other Than Non-Load-Bearing Interior Partitions: No. 2 grade.

1. Application: Framing other than interior partitions.
2. Species: As required to meet structural loads,

2.04 ENGINEERED WOOD PRODUCTS

A. Engineered Wood Products, General: Products shall contain no urea formaldehyde.

B. Laminated-Veneer Lumber: Structural composite lumber made from wood veneers with grain primarily parallel to member lengths, evaluated and monitored according to ASTM D 5456 and manufactured with an exterior-type adhesive complying with ASTM D 2559.

1. Structural Properties: As required to meet code.

C. Wood I-Joists: Prefabricated units, I-shaped in cross section, made with solid or structural composite lumber flanges and wood-based structural panel webs, let into and bonded to

flanges. Provide units complying with material requirements of and with structural capacities established and monitored according to ASTM D 5055.

1. Web Material: Either oriented strand board or plywood, complying with DOC PS 1 or DOC PS 2, Exposure 1.
2. Structural Properties: As required to meet code.
3. Provide units complying with APA PRI-400, factory marked with APA trademark indicating nominal joist depth, joist class, span ratings, mill identification, and compliance with APA standard.

D. Rim Boards: Product designed to be used as a load-bearing member and to brace wood I-joists at bearing ends, complying with research/evaluation report for I-joists.

2.05 SHEAR WALL PANELS

A. Wood-Framed Shear Wall Panels: Prefabricated assembly consisting of wood perimeter framing, tie downs, and Exposure I, Structural I plywood or OSB sheathing.

1. Products shall contain no urea formaldehyde.

B. Allowable Design Loads: Provide products with allowable design loads, as published by manufacturer that meet or exceed those required to meet code.

2.06 MISCELLANEOUS LUMBER

C. General: Provide miscellaneous lumber indicated and lumber for support or attachment of other construction, including the following:

1. Blocking.
2. Nailers.
3. Furring.
4. Grounds.

2.07 PLYWOOD BACKING PANELS

D. Equipment Backing Panels: DOC PS 1, Exterior, AC not less than 1/2-inch nominal thickness.

2.08 FASTENERS

A. General: Provide fasteners of size and type indicated that comply with requirements specified in this article for material and manufacture.

1. Where rough carpentry is exposed to weather, in ground contact, pressure-preservative treated, or in area of high relative humidity, provide fasteners with hot-dip zinc coating complying with ASTM A 153/A 153M.

B. Power-Driven Fasteners: NES NER-272.

C. Bolts: Steel bolts complying with ASTM A 307, Grade A (ASTM F 568M, Property Class 4.6); with ASTM A 563 (ASTM A 563M) hex nuts and, where indicated, flat washers.

PART 3 - EXECUTION

3.01 INSTALLATION, GENERAL

A. Set rough carpentry to required levels and lines, with members plumb, true to line, cut, and fitted. Fit rough carpentry to other construction; scribe and cope as needed for accurate fit. Locate furring, nailers, blocking, grounds, and similar supports to comply with requirements for attaching other construction.

B. Framing Standard: Comply with AF&PA's WCD 1, "Details for Conventional Wood Frame Construction," unless otherwise indicated.

C. Framing with Engineered Wood Products: Install engineered wood products to comply with manufacturer's written instructions.

D. Install fire-retardant treated plywood backing panels with classification marking of testing agency exposed to view.

E. Shear Wall Panels: Install shear wall panels to comply with manufacturer's written instructions.

F. Metal Framing Anchors: Install metal framing anchors to comply with manufacturer's written instructions. Install fasteners through each fastener hole.

G. Do not splice structural members between supports unless otherwise indicated.

H. Comply with AWPA M4 for applying field treatment to cut surfaces of preservative-treated lumber.

I. Where wood-preservative-treated lumber is installed adjacent to metal decking, install continuous flexible flashing separator between wood and metal decking.

J. Securely attach rough carpentry work to substrate by anchoring and fastening as indicated, complying with the following:

1. NES NER-272 for power-driven fasteners.
2. Table 2304.9.1, "Fastening Schedule," in ICC's International Building Code.
3. Table R602.3(1), "Fastener Schedule for Structural Members," and Table R602.3(2), "Alternate Attachments," in ICC's International Residential Code for One- and Two-Family Dwellings.

END OF SECTION 061000

SECTION 061600 - SHEATHING

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

1. Wall sheathing.
2. Subflooring.
3. Underlayment.

B. Related Requirements:

1. Section 061000 "Rough Carpentry".

1.02 ACTION SUBMITTALS

A. Product Data: For each type of process and factory-fabricated product. Indicate component materials and dimensions and include construction and application details.

1.03 DELIVERY, STORAGE, AND HANDLING

A. Stack panels flat with spacers beneath and between each bundle to provide air circulation. Protect sheathing from weather by covering with waterproof sheeting, securely anchored. Provide for air circulation around stacks and under coverings.

PART 2 - PRODUCTS

2.01 WOOD PANEL PRODUCTS

A. Plywood: Either DOC PS 1 or DOC PS 2 unless otherwise indicated.

B. Oriented Strand Board: DOC PS 2.

C. Thickness: As needed to comply with requirements specified, but not less than thickness indicated.

D. Factory mark panels to indicate compliance with applicable standard.

2.02 FIRE-RETARDANT-TREATED PLYWOOD

E. General: Where fire-retardant-treated materials are needed, use materials complying with requirements that are acceptable to authorities having jurisdiction and with fire-test-response characteristics specified as determined by testing identical products per test method indicated by a qualified testing agency.

F. Identify fire-retardant-treated plywood with appropriate classification marking of qualified testing agency.

2.03 WALL SHEATHING

A. Plywood Wall Sheathing: Exposure 1 sheathing.

1. Span Rating: Not less than 32/16.
2. Nominal Thickness: Not less than 1/2 inch.

B. Oriented-Strand-Board Wall Sheathing: Exposure 1 sheathing.

1. Span Rating: Not less than 32/16.
2. Nominal Thickness: Not less than /2 inch.

2.04 SUBFLOORING AND UNDERLAYMENT

C. Plywood Subflooring: Exposure 1 single-floor panels or sheathing.

1. Span Rating: Not less than 40/20.
2. Nominal Thickness: Not less than 23/32 inch.

D. Oriented-Strand-Board Subflooring: Exposure 1.

1. Span Rating: Not less than 40/20.
2. Nominal Thickness: Not less than 23/32 inch.

E. Underlayment, General: Provide underlayment in nominal thicknesses indicated or, if not indicated, not less than 1/4 inch over smooth subfloors and not less than 3/8 inch over board or uneven subfloors.

F. Plywood Underlayment for Resilient Flooring: DOC PS 1, Exterior A-C with fully sanded face.

2.05 FASTENERS

G. General: Provide fasteners of size and type appropriate for material and as recommended by the manufacturer.

1. For roof and wall sheathing, provide fasteners with hot-dip zinc coating complying with ASTM A 153/A 153M.

PART 3 - EXECUTION

3.01 INSTALLATION, GENERAL

A. Do not use materials with defects that impair quality of sheathing or pieces that are too small to use with minimum number of joints or optimum joint arrangement. Arrange joints so that pieces do not span between fewer than three support members.

B. Cut panels at penetrations, edges, and other obstructions of work; fit tightly against abutting construction unless otherwise indicated.

C. Securely attach to substrate by fastening as indicated, complying with the following:

1. NES NER-272 for power-driven fasteners.
2. Table 2304.9.1, "Fastening Schedule," in ICC's "International Building Code."

D. Use common wire nails unless otherwise indicated. Select fasteners of size that will not fully penetrate members where opposite side will be exposed to view or will receive finish materials. Make tight connections. Install fasteners without splitting wood.

E. Do not bridge building expansion joints; cut and space edges of panels to match spacing of structural support elements.

F. Coordinate sheathing installation with installation of materials installed over sheathing so sheathing is not exposed to precipitation or left exposed at end of the workday when rain is forecast.

3.02 WOOD STRUCTURAL PANEL INSTALLATION

G. General: Comply with applicable recommendations in APA Form No. E30, "Engineered Wood Construction Guide," for types of structural-use panels and applications indicated.

END OF SECTION 061600

SECTION 064116 - PLASTIC-LAMINATE-FACED ARCHITECTURAL CABINETS

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

1. Plastic-laminate-faced architectural cabinets.
2. Wood furring, blocking, shims, and hanging strips for installing plastic-laminate-faced architectural cabinets unless concealed within other construction before cabinet installation.

1.02 ACTION SUBMITTALS

A. Product Data: For each type of product including panel products, high-pressure decorative laminate and cabinet hardware and accessories.

1.03 INFORMATIONAL SUBMITTALS

A. Woodwork Quality Standard Compliance Certificates: AWI Quality Certification Program certificates.

PART 2 - PRODUCTS

2.01 PLASTIC-LAMINATE-FACED ARCHITECTURAL CABINETS

A. Quality Standard: Unless otherwise indicated, comply with the "Architectural Woodwork Standards" for grades of architectural plastic-laminate cabinets indicated for construction, finishes, installation, and other requirements.

1. Provide labels and certificates from AWI certification program indicating that woodwork, including installation, complies with requirements of grades specified.

B. Grade: Economy.

C. Regional Materials: Plastic-laminate cabinets shall be manufactured within 500 miles of Project site.

D. Certified Wood: Plastic-laminate cabinets shall be made from wood products certified as "FSC Pure" according to FSC STD-01-001, "FSC Principles and Criteria for Forest Stewardship," and FSC STD-40-004, "FSC Standard for Chain of Custody Certification."

E. Type of Construction: Face frame.

F. Cabinet, Door, and Drawer Front Interface Style: Flush overlay.

G. High-Pressure Decorative Laminate: NEMA LD 3, grades as indicated or if not indicated, as required by woodwork quality standard.

2.02 WOOD MATERIALS

A. Wood Products: Provide materials that comply with requirements of referenced quality standard for each type of woodwork and quality grade specified unless otherwise indicated.

1. Wood Moisture Content: 5 to 10 percent.

2.03 CABINET HARDWARE AND ACCESSORIES

B. General: Provide cabinet hardware and accessory materials associated with architectural cabinets "Door Hardware (Descriptive Specification)."

C. Frameless Concealed Hinges (European Type): BHMA A156.9, B01602, 100 degrees of opening.

D. Wire Pulls: Back mounted, solid metal, 4 inches long, 5/16 inch in diameter.

E. Catches: Magnetic catches, BHMA A156.9, B0314.

F. Adjustable Shelf Standards and Supports: BHMA A156.9, B04071; with shelf rests, B04081.

G. Shelf Rests: BHMA A156.9, B04013; metal.

H. Drawer Slides: BHMA A156.9.

1. Grade 1 and Grade 2: Side mounted and extending under bottom edge of drawer; full-extension with polymer rollers.

I. Exposed Hardware Finishes: For exposed hardware, provide finish that complies with BHMA A156.18 for BHMA finish number indicated.
1. Satin Stainless Steel: BHMA 630.

PART 3 - EXECUTION

3.01 PREPARATION

A. Before installation, condition cabinets to average prevailing humidity conditions in installation areas.

3.02 INSTALLATION

B. Grade: Install cabinets to comply with same grade as item to be installed.

C. Install cabinets level, plumb, true, and straight. Shim as required with concealed shims. Install level and plumb to a tolerance of 1/8 inch in 96 inches.

D. Scribe and cut cabinets to fit adjoining work, refinish cut surfaces, and repair damaged finish at cuts.

E. Anchor cabinets to anchors or blocking built in or directly attached to substrates. Secure with countersunk, concealed fasteners and blind nailing. Use fine finishing nails or finishing screws for exposed fastening, countersunk and filled flush with woodwork.

F. Cabinets: Install without distortion so doors and drawers fit openings properly and are accurately aligned. Adjust hardware to center doors and drawers in openings and to provide unencumbered operation. Complete installation of hardware and accessory items as indicated.

END OF SECTION 064116

SECTION 066400 - PLASTIC PANELING

PART 1 - GENERAL

1.01 SUMMARY

A. Section includes plastic sheet paneling.

B. Related Requirements:

1. Section 061000 "Rough Carpentry" for wood furring for installing plastic paneling.

1.02 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Samples: For plastic paneling and trim accessories, in manufacturer's standard sizes.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

A. Source Limitations: Obtain plastic paneling and trim accessories from single manufacturer.

2.02 PLASTIC SHEET PANELING

B. Glass-Fiber-Reinforced Plastic Paneling: Gelcoat-finished, glass-fiber-reinforced plastic panels complying with ASTM D 5319.

1. Manufacturers: Subject to compliance with requirements, provide products by the following or approved equal:

a. Crane Composites, Inc.

2. Surface-Burning Characteristics: As follows when tested by a qualified testing agency according to ASTM E 84. Identify products with appropriate markings of applicable testing agency.

a. Flame-Spread Index: 25 or less.
b. Smoke-Developed Index: 450 or less.

2.03 ACCESSORIES

A. Trim Accessories: Manufacturer's standard one-piece/vinyl extrusions designed to retain and cover edges of panels. Provide division bars, inside corners, outside corners, and caps as needed to conceal edges.

B. Sealant: Mildew-resistant, single-component, neutral-curing or acid-curing silicone sealant recommended by plastic paneling manufacturer and complying with requirements in Section 079200 "Joint Sealants."

PART 3 - EXECUTION

3.01 INSTALLATION

A. Install plastic paneling according to manufacturer's written instructions.

B. Install panels in a full spread of adhesive.

C. Install trim accessories with adhesive.

D. Remove excess sealant and smears as paneling is installed. Clean with solvent recommended by sealant manufacturer and then wipe with clean dry cloths until no residue remains.

END OF SECTION 066400

SECTION 072100 - THERMAL INSULATION

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:
   1. Glass-fiber blanket insulation.
   2. Spray polyurethane foam insulation.
   3. Vapor retarders.

1.02 ACTION SUBMITTALS

A. Product Data: For each type of product indicated.

1.03 INFORMATIONAL SUBMITTALS

A. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency, for each product.

PART 2 - PRODUCTS

2.01 GLASS-FIBER BLANKET INSULATION

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

   1. CertainTeed Corporation.
   2. Johns Manville.
   3. Owens Corning.

B. Unfaced, Glass-Fiber Blanket Insulation: ASTM C 665, Type I; with maximum flame-spread and smoke-developed indexes of 25 and 50, respectively, per ASTM E 84; passing ASTM E 136 for combustion characteristics.

2.02 SPRAY POLYURETHANE FOAM INSULATION

C. Closed-Cell Polyurethane Foam Insulation: ASTM C 1029, Type II, with maximum flame-spread and smoke-developed indexes of 75 and 450, respectively, per ASTM E 84.

   1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

      a. BASF Corporation.
      b. Dow Chemical Company (The).
      c. ERSystems, Inc.

2. Minimum density of 1.5 lb/cu. ft., thermal resistivity of 6.2 deg F x h x sq. ft./Btu x in. at 75 deg F.

2.03 VAPOR RETARDERS

D. Polyethylene Vapor Retarders: ASTM D 4397, 6 mils thick, with maximum permeance rating of 0.13 perm.

E. Reinforced-Polyethylene Vapor Retarders: Two outer layers of polyethylene film laminated to an inner reinforcing layer consisting of either nylon cord or polyester scrim and weighing not less than 25 lb/1000 sq. ft., with maximum permeance rating of 0.0507 perm.

1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:

a. Raven Industries Inc.; DURA-SKRIM 6WW.
b. Reef Industries, Inc.; Griffolyn T-65.

F. Vapor-Retarder Tape: Pressure-sensitive tape of type recommended by vapor-retarder manufacturer for sealing joints and penetrations in vapor retarder.

PART 3 - EXECUTION

3.01 INSTALLATION OF INSULATION FOR FRAMED CONSTRUCTION

A. Apply insulation units to substrates by method indicated, complying with manufacturer's written instructions. If no specific method is indicated, bond units to substrate with adhesive or use mechanical anchorage to provide permanent placement and support of units.

B. Glass-Fiber or Mineral-Wool Blanket Insulation: Install in cavities formed by framing members per manufacturer's recommendations.

C. Miscellaneous Voids: Install insulation in miscellaneous voids and cavity spaces where required to prevent gaps in insulation.

3.02 INSTALLATION OF INSULATION IN CEILINGS FOR SOUND ATTENUATION

D. Install glass-fiber blankets for sound attenuation above ceilings; install blanket insulation over entire ceiling area. Fill ceiling joist cavity full.

3.03 INSTALLATION OF VAPOR RETARDERS

E. Place vapor retarders on warm side of construction. Extend vapor retarders to extremities of areas to protect from vapor transmission. Secure vapor retarders in place with adhesives or other anchorage system. Extend vapor retarders to cover miscellaneous voids in insulated substrates, including those filled with loose-fiber insulation.

F. Seal vertical joints in vapor retarders over framing by lapping no fewer than two studs.

END OF SECTION 072100

SECTION 074113.23 - INSULATED METAL ROOF PANELS - ALTERNATE

PART 1 - GENERAL

1.01 SUMMARY

A. Section includes insulated metal roof panels.

1.02 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Shop Drawings: Include fabrication and installation layouts of metal panels; details of edge conditions, joints, panel profiles, corners, anchorages, attachment system, trim, flashings, closures, and accessories; and special details.

C. Samples: For each type of metal panel indicated.

1.03 INFORMATIONAL SUBMITTALS

A. Product test reports.

B. Warranties: Samples of special warranties.

1.04 QUALITY ASSURANCE

A. Installer Qualifications: An entity that employs installers and supervisors who are trained and approved by manufacturer.

1.05 WARRANTY

A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of metal panel systems that fail in materials or workmanship within specified warranty period.

1. Warranty Period: Two years from date of Substantial Completion.

B. Special Warranty on Panel Finishes: Manufacturer's standard form in which manufacturer agrees to repair finish or replace metal panels that show evidence of deterioration of factory-applied finishes within specified warranty period.

1. Finish Warranty Period: 20 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.01 PERFORMANCE REQUIREMENTS

A. Structural Performance: Provide metal panel systems capable of withstanding the effects of all pertinent loads, as required by code based on testing according to ASTM E 72:

B. Air Infiltration: Air leakage of not more than 0.06 cfm/sq. ft. when tested according to ASTM E 1680 at the following test-pressure difference:

1. Test-Pressure Difference: 1.57 lbf/sq. ft.

C. Water Penetration under Static Pressure: No water penetration when tested according to ASTM E 1646 at the following test-pressure difference:

1. Test-Pressure Difference: 2.86 lbf/sq. ft.

D. Wind-Uplift Resistance: Provide metal roof panel assemblies that comply with UL 580 for wind-uplift-resistance class indicated.

1. Uplift Rating: UL 90.

E. FM Global Listing: Provide metal roof panels and component materials that comply with requirements in FM Global 4471 as part of a panel roofing system and that are listed in FM Global's "Approval Guide" for Class 1 or noncombustible construction, as applicable. Identify materials with FM Global markings.

1. Fire/Windstorm Classification: Class 1A-90.

F. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes by preventing buckling, opening of joints, overstressing of components, failure of joint sealants, failure of connections, and other detrimental effects. Base calculations on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.

1. Temperature Change (Range): 120 deg F, ambient; 180 deg F, material surfaces.

2.02 FOAMED-INSULATION-CORE METAL ROOF PANELS

G. General: Provide factory-formed and -assembled metal roof panels fabricated from two sheets of metal with insulation core foamed in place during fabrication with joints between panels designed to form weathertight seals. Include accessories required for weathertight installation.

1. Panel Performance:

a. Flatwise Tensile Strength: 30 psi (200 kPa) when tested according to ASTM C 297/C 297M.

b. Humid Aging: Volume increase not greater than 6.0 percent and no delamination or metal corrosion when tested for seven days at 140 deg F (60 deg C) and 100 percent relative humidity according to ASTM D 2126.
c. Heat Aging: Volume increase not greater than 2.0 percent and no delamination, surface blistering, or permanent bowing when tested for seven days at 200 deg F (93 deg C) according to ASTM D 2126.
d. Cold Aging: Volume decrease not more than 1.0 percent and no delamination, surface blistering, or permanent bowing when tested for seven days at minus 20 deg F (29 deg C) according to ASTM D 2126.
e. Fatigue: No evidence of delamination, core cracking, or permanent bowing when tested to a 20-lbf/sq. ft. (958-kPa) positive and negative wind load and with deflection of L/180 for 2 million cycles.
f. Autoclave: No delamination when exposed to 2-psi (13.8-kPa) pressure at a temperature of 212 deg F (100 deg C) for 2-1/2 hours.
g. Fire-Test-Response Characteristics: Class A according to ASTM E 108.

2. Insulation Core: Modified isocyanurate or polyurethane foam using a non-CFC blowing agent, with maximum flame-spread and smoke-developed indexes of 25 and 450, respectively.

a. Closed-Cell Content: 90 percent when tested according to ASTM D 6226.
b. Density: 2.0 to 2.6 lb/cu. ft. (32 to 42 kg/cu. m) when tested according to ASTM D 1622.
c. Compressive Strength: Minimum 20 psi (140 kPa) when tested according to ASTM D 1621.
d. Shear Strength: 26 psi (179 kPa) when tested according to ASTM C 273.

H. Standing-Seam-Profile, Foamed-Insulation-Core Metal Roof Panels: Formed with vertical tongue-and-groove ribs at panel edges and intermediate stiffening ribs symmetrically spaced between ribs; designed for sequential installation by interlocking tongue-and-groove panel edges and mechanically attaching panels to supports using concealed clips located between panels and engaging edges of adjacent panels, and mechanically seaming panels together.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

a. Butler Manufacturing; a BlueScope Steel company.
b. IPS - Insulated Panel Systems; an NCI company.
c. Metl-Span.

2. Metallic-Coated Steel Sheet: Facings of zinc-coated (galvanized) steel sheet complying with ASTM A 653/A 653M, G90 (Z275) coating designation, or aluminum-zinc alloy-coated steel sheet complying with ASTM A 792/A 792M, Class AZ50 (Class AZM150) coating designation; structural quality. Prepainted by the coil-coating process to comply with ASTM A 755/A 755M.

a. Nominal Thickness: 0.022 inch.
b. Exterior Finish: Three-coat fluoropolymer.

1) Color: As selected from manufacturer's full range.

c. Interior Finish:

1) Color: As selected from manufacturer's full range.

3. Joint Type: As standard with manufacturer.
4. Panel Coverage: 36 inches.
5. Panel Thickness: As required to meet R-value designated.
6. Thermal-Resistance Value (R-Value): R-38 according to ASTM C 1363.

2.03 MISCELLANEOUS MATERIALS

I. Miscellaneous Metal Subframing and Furring: ASTM C 645, cold-formed, metallic-coated steel sheet, ASTM A 653/A 653M, G90 (Z275 hot-dip galvanized) coating designation or ASTM A 792/A 792M, Class AZ50 (Class AZM150) coating designation unless otherwise indicated. Provide manufacturer's standard sections as required for support and alignment of metal panel system.

J. Panel Accessories: Provide components required for a complete, weathertight panel system including trim, copings, fasciae, mullions, sills, corner units, clips, flashings, sealants, gaskets, fillers, closure strips, and similar items. Match material and finish of metal panels unless otherwise indicated.

1. Closures: Provide closures at eaves and ridges, fabricated of same metal as metal panels.
2. Backing Plates: Provide metal backing plates at panel end splices, fabricated from material recommended by manufacturer.
3. Closure Strips: Closed-cell, expanded, cellular, rubber or crosslinked, polyolefin-foam or closed-cell laminated polyethylene; minimum 1-inch- thick, flexible closure strips; cut or premolded to match metal panel profile. Provide closure strips where indicated or necessary to ensure weathertight construction.

K. Flashing and Trim: Provide flashing and trim formed from same material as exterior facings of metal panels as required to seal against weather and to provide finished appearance. Locations include, but are not limited to, eaves, rakes, corners, bases, framed openings, ridges, fasciae, and fillers. Finish flashing and trim with same finish system as adjacent metal panels.

L. Panel Fasteners: Self-tapping screws designed to withstand design loads. Provide exposed fasteners with heads matching color of metal panels by means of plastic caps or factory-applied coating. Provide EPDM, PVC, or neoprene sealing washers for exposed fasteners.

M. Panel Sealants: Provide sealant types recommended by manufacturer that are compatible with panel materials, are nonstaining, and do not damage panel finish.

1. Sealant Tape: Pressure-sensitive, 100 percent solids, gray polyisobutylene compound sealant tape with release-paper backing. Provide permanently elastic, nonsag, nontoxic, nonstaining tape 1/2 inch wide and 1/8 inch thick.
2. Joint Sealant: ASTM C 920; elastomeric polyurethane or silicone sealant; of type, grade, class, and use classifications required to seal joints in metal panels and remain weathertight; and as recommended in writing by metal panel manufacturer.
3. Butyl-Rubber-Based, Solvent-Release Sealant: ASTM C 1311.

2.04 FABRICATION

N. General: Fabricate and finish metal panels and accessories at the factory, by manufacturer's standard procedures and processes, as necessary to fulfill indicated performance requirements demonstrated by laboratory testing. Comply with indicated profiles and with dimensional and structural requirements.

O. Provide panel profile, including major ribs and intermediate stiffening ribs, if any, for full length of panel.

P. Fabricate metal panel joints with factory-installed captive gaskets or separator strips that provide a weathertight seal and prevent metal-to-metal contact, and that minimize noise from movements.

Q. Sheet Metal Flashing and Trim: Fabricate flashing and trim to comply with manufacturer's recommendations and recommendations in SMACNA's "Architectural Sheet Metal Manual" that apply to design, dimensions, metal, and other characteristics of item indicated.

1.02 FINISHES

A. Exterior Facings and Accessories:
1. Three-Coat Fluoropolymer: AAMA 621. Fluoropolymer finish containing not less than 70 percent PVDF resin by weight in both color coat and clear topcoat. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.

B. Interior Facings:
1. Acrylic or Polyester Finish: Manufacturer's standard white or light-colored acrylic or polyester finish.

PART 3 - EXECUTION

3.01 METAL PANEL INSTALLATION

A. Standing-Seam, Foamed-Insulation-Core Metal Roof Panels: Fasten insulated metal roof panels to supports with concealed clips at each standing-seam joint at location, spacing, and with fasteners recommended in writing by manufacturer.

1. Install clips to supports with self-tapping fasteners.
2. Seamed Joint: Crimp standing seams with manufacturer-approved, motorized seamer tool so cleat, insulated metal roof panel, and factory-applied side-lap sealant are completely engaged.

B. Accessory Installation: Install accessories with positive anchorage to building and weathertight mounting, and provide for thermal expansion. Coordinate installation with flashings and other components.

C. Flashing and Trim: Comply with performance requirements, manufacturer's written installation instructions, and SMACNA's "Architectural Sheet Metal Manual." Provide concealed fasteners where possible, and set units true to line and level. Install work with laps, joints, and seams that are permanently watertight and weather resistant.

3.02 CLEANING

D. Remove temporary protective coverings and strippable films, if any, as metal panels are installed, unless otherwise indicated in manufacturer's written installation instructions. On completion of metal panel installation, clean finished surfaces as recommended by metal panel manufacturer. Maintain in a clean condition during construction.

END OF SECTION 074113.23

SECTION 074213.13 - FORMED METAL WALL PANELS

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

1. Exposed-fastener, lap-seam metal wall panels.

1.02 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Shop Drawings: Include fabrication and installation layouts of metal panels; details of edge conditions, joints, panel profiles, corners, anchorages, attachment system, trim, flashings, closures, and accessories; and special details.

C. Samples: For each type of metal panel indicated.

1.03 INFORMATIONAL SUBMITTALS

A. Product test reports.

B. Warranties: Samples of special warranties.

1.04 WARRANTY

A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of metal panel systems that fail in materials or workmanship within specified warranty period.

1. Warranty Period: Two years from date of Substantial Completion.

B. Special Warranty on Panel Finishes: Manufacturer's standard form in which manufacturer agrees to repair finish or replace metal panels that show evidence of deterioration of factory-applied finishes within specified warranty period.

1. Finish Warranty Period: 20 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.01 PERFORMANCE REQUIREMENTS

A. Structural Performance: Provide metal panel systems capable of withstanding the effects of all pertinent loads as required by code, based on testing according to ASTM E 1592:

B. Air Infiltration: Air leakage of not more than 0.06 cfm/sq. ft. when tested according to ASTM E 283 at the following test-pressure difference:

1. Test-Pressure Difference: 1.57 lbf/sq. ft.

C. Water Penetration under Static Pressure: No water penetration when tested according to ASTM E 331 at the following test-pressure difference:

1. Test-Pressure Difference: 2.86 lbf/sq. ft.

D. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes by preventing buckling, opening of joints, overstressing of components, failure of joint sealants, failure of connections, and other detrimental effects. Base calculations on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.

1. Temperature Change (Range): 120 deg F, ambient; 180 deg F, material surfaces.

E. Fire-Resistance Ratings: Comply with ASTM E 119; testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.

1. Indicate design designations from UL's "Fire Resistance Directory" or from the listings of another qualified testing agency.

2.02 EXPOSED-FASTENER, LAP-SEAM METAL WALL PANELS

F. General: Provide factory-formed metal panels designed to be field assembled by lapping side edges of adjacent panels and mechanically attaching panels to supports using exposed fasteners in side laps. Include accessories required for weathertight installation.

1. Metallic-Coated Steel Sheet: Zinc-coated (galvanized) steel sheet complying with ASTM A 653/A 653M, G90 (Z275) coating designation, or aluminum-zinc alloy-coated steel sheet complying with ASTM A 792/A 792M, Class AZ50 (Class AZM150) coating designation; structural quality. Prepainted by the coil-coating process to comply with ASTM A 755/A 755M.

a. Nominal Thickness: 0.022 inch.
b. Exterior Finish: Three-coat fluoropolymer.
c. Color: As selected from manufacturer’s standard range.

G. Box-Rib-Profile, Exposed-Fastener Metal Wall Panels: Formed with raised, box-shaped ribs, evenly spaced across panel width, and with rib/recess sides angled 60 degrees or more.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

   a. AEP Span; a BlueScope Steel company.
   b. Alcoa Inc.
   c. Metal Sales Manufacturing Corporation.

2. Metallic-Coated Steel Sheet: Zinc-coated (galvanized) steel sheet complying with ASTM A 653/A 653M, G90 (Z275) coating designation, or aluminum-zinc alloy-coated steel sheet complying with ASTM A 792/A 792M, Class AZ50 (Class AZM150) coating designation; structural quality. Prepainted by the coil-coating process to comply with ASTM A 755/A 755M.

   a. Nominal Thickness: 0.022 inch.
   b. Exterior Finish: Three-coat fluoropolymer.
   c. Color: As selected from manufacturer's standard range.

3. Rib Spacing: 4.0 inches o.c.
4. Panel Coverage: 36 inches.
5. Panel Height: 1.5 inches.

2.03 MISCELLANEOUS MATERIALS

H. Miscellaneous Metal Subframing and Furring: ASTM C 645, cold-formed, metallic-coated steel sheet, ASTM A 653/A 653M, G90 (Z275 hot-dip galvanized) coating designation or ASTM A 792/A 792M, Class AZ50 (Class AZM150) aluminum-zinc-alloy coating designation unless otherwise indicated. Provide manufacturer's standard sections as required for support and alignment of metal panel system.

I. Panel Accessories: Provide components required for a complete, weathertight panel system including trim, copings, fasciae, mullions, sills, corner units, clips, flashings, sealants, gaskets, fillers, closure strips, and similar items. Match material and finish of metal panels unless otherwise indicated.

1. Closures: Provide closures at eaves and rakes, fabricated of same metal as metal panels.
2. Backing Plates: Provide metal backing plates at panel end splices, fabricated from material recommended by manufacturer.
3. Closure Strips: Closed-cell, expanded, cellular, rubber or crosslinked, polyolefin-foam or closed-cell laminated polyethylene; minimum 1-inch- thick, flexible closure strips; cut or premolded to match metal panel profile. Provide closure strips where indicated or necessary to ensure weathertight construction.

J. Flashing and Trim: Provide flashing and trim formed from same material as metal panels as required to seal against weather and to provide finished appearance. Locations include, but are not limited to, bases, drips, sills, jambs, corners, endwalls, framed openings, rakes, fasciae, parapet caps, soffits, reveals, and fillers. Finish flashing and trim with same finish system as adjacent metal panels.

K. Panel Fasteners: Self-tapping screws designed to withstand design loads. Provide exposed fasteners with heads matching color of metal panels by means of plastic caps or factory-applied coating. Provide EPDM or PVC sealing washers for exposed fasteners.

L. Panel Sealants: Provide sealant type recommended by manufacturer that are compatible with panel materials, are nonstaining, and do not damage panel finish.

1. Sealant Tape: Pressure-sensitive, 100 percent solids, gray polyisobutylene compound sealant tape with release-paper backing; 1/2 inch wide and 1/8 inch thick.
2. Joint Sealant: ASTM C 920; as recommended in writing by metal panel manufacturer.
3. Butyl-Rubber-Based, Solvent-Release Sealant: ASTM C 1311.

2.04 FABRICATION

M. General: Fabricate and finish metal panels and accessories at the factory, by manufacturer's standard procedures and processes, as necessary to fulfill indicated performance requirements demonstrated by laboratory testing. Comply with indicated profiles and with dimensional and structural requirements.

N. On-Site Fabrication: Subject to compliance with requirements of this Section, metal panels may be fabricated on-site using UL-certified, portable roll-forming equipment if panels are of same profile and warranted by manufacturer to be equal to factory-formed panels. Fabricate according to equipment manufacturer's written instructions and to comply with details shown.

2.05 FINISHES

O. Panels and Accessories:
1. Three-Coat Fluoropolymer: AAMA 621. Fluoropolymer finish containing not less than 70 percent PVDF resin by weight in both color coat and clear topcoat.

PART 3 - EXECUTION

3.01 PREPARATION

A. Miscellaneous Supports: Install subframing, furring, and other miscellaneous panel support members and anchorages according to ASTM C 754 and metal panel manufacturer's written recommendations.

3.02 METAL PANEL INSTALLATION

B. Lap-Seam Metal Panels: Fasten metal panels to supports with fasteners at each lapped joint at location and spacing recommended by manufacturer.

1. Lap ribbed or fluted sheets one full rib. Apply panels and associated items true to line for neat and weathertight enclosure.
2. Provide metal-backed washers under heads of exposed fasteners bearing on weather side of metal panels.
3. Locate and space exposed fasteners in uniform vertical and horizontal alignment. Use proper tools to obtain controlled uniform compression for positive seal without rupture of washer.
4. Install screw fasteners with power tools having controlled torque adjusted to compress washer tightly without damage to washer, screw threads, or panels. Install screws in predrilled holes.
5. Flash and seal panels with weather closures at perimeter of all openings.

C. Watertight Installation:

1. Apply a continuous ribbon of sealant or tape to seal lapped joints of metal panels, using sealant or tape as recommend by manufacturer on side laps of nesting-type panels; and elsewhere as needed to make panels watertight.
2. Provide sealant or tape between panels and protruding equipment, vents, and accessories.
3. At panel splices, nest panels with minimum 6-inch end lap, sealed with sealant and fastened together by interlocking clamping plates.

D. Accessory Installation: Install accessories with positive anchorage to building and weathertight mounting, and provide for thermal expansion. Coordinate installation with flashings and other components.

E. Flashing and Trim: Comply with performance requirements, manufacturer's written installation instructions, and SMACNA's "Architectural Sheet Metal Manual." Provide concealed fasteners where possible, and set units true to line and level as indicated. Install work with laps, joints, and seams that are permanently watertight.

3.03 CLEANING

F. Remove temporary protective coverings and strippable films, if any, as metal panels are installed, unless otherwise indicated in manufacturer's written installation instructions. On completion of metal panel installation, clean finished surfaces as recommended by metal panel manufacturer. Maintain in a clean condition during construction.

END OF SECTION 074213.13

SECTION 074213.19 - INSULATED METAL WALL PANELS -ALTERNATE

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

1. Foamed-insulation-core metal wall panels.

1.02 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Shop Drawings: Include fabrication and installation layouts of metal panels; details of edge conditions, joints, panel profiles, corners, anchorages, attachment system, trim, flashings, closures, and accessories; and special details.

C. Samples: For each type of metal panel indicated.

1.03 INFORMATIONAL SUBMITTALS

A. Product test reports.

B. Warranties: Samples of special warranties.

1.04 WARRANTY

A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of metal panel systems that fail in materials or workmanship within specified warranty period.

1. Warranty Period: Two years from date of Substantial Completion.

B. Special Warranty on Panel Finishes: Manufacturer's standard form in which manufacturer agrees to repair finish or replace metal panels that show evidence of deterioration of factory-applied finishes within specified warranty period.

1. Finish Warranty Period: 20 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.01 PERFORMANCE REQUIREMENTS

A. Structural Performance: Provide metal panel systems capable of withstanding the effects of all pertinent loads required by code and based on testing according to ASTM E 72:

B. Air Infiltration: Air leakage of not more than 0.06 cfm/sq. ft. when tested according to ASTM E 283 at the following test-pressure difference:

1. Test-Pressure Difference: 1.57 lbf/sq. ft.

C. Water Penetration under Static Pressure: No water penetration when tested according to ASTM E 331 at the following test-pressure difference:

1. Test-Pressure Difference: 2.86 lbf/sq. ft.

D. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes by preventing buckling, opening of joints, overstressing of components, failure of joint sealants, failure of connections, and other detrimental effects. Base calculations on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.

1. Temperature Change (Range): 120 deg F, ambient; 180 deg F, material surfaces.

E. Fire-Test-Response Characteristics: Provide metal wall panels and system components with the following fire-test-response characteristics, as determined by testing identical panels and system components per test method indicated below by UL or another testing and inspecting agency acceptable to authorities having jurisdiction. Identify products with appropriate markings of applicable testing agency.

1. Fire-Resistance Characteristics: Provide materials and construction tested for fire resistance per ASTM E 119.
2. Intermediate-Scale Multistory Fire Test: Tested mockup, representative of completed multistory wall assembly of which wall panel is a part, complies with NFPA 285 for test method and required fire-test-response characteristics of exterior non-load-bearing wall panel assemblies.
3. Radiant Heat Exposure: No ignition when tested according to NFPA 268.
4. Potential Heat: Acceptable level when tested according to NFPA 259.
5. Surface-Burning Characteristics: Provide wall panels with a flame-spread index of 25 or less and a smoke-developed index of 450 or less, per ASTM E 84.

2.02 FOAMED-INSULATION-CORE METAL WALL PANELS

F. General: Provide factory-formed and -assembled metal wall panels fabricated from two metal facing sheets and insulation core foamed in place during fabrication, and with joints between panels designed to form weathertight seals. Include accessories required for weathertight installation.

1. Panel Performance:

   a. Flatwise Tensile Strength: 30 psi when tested according to ASTM C 297/C 297M.
   b. Humid Aging: Volume increase not greater than 6.0 percent and no delamination or metal corrosion when tested for seven days at 140 deg F (60 deg C) and 100 percent relative humidity according to ASTM D 2126.
   c. Heat Aging: Volume increase not greater than 2.0 percent and no delamination, surface blistering, or permanent bowing when tested for seven days at 200 deg F according to ASTM D 2126.
   d. Cold Aging: Volume decrease not more than 1.0 percent and no delamination, surface blistering, or permanent bowing when tested for seven days at minus 20 deg F according to ASTM D 2126.
   e. Fatigue: No evidence of delamination, core cracking, or permanent bowing when tested to a 20-lbf/sq. ft. positive and negative wind load and with deflection of L/180 for 2 million cycles.
   f. Autoclave: No delamination when exposed to 2-psi pressure at a temperature of 212 deg F for 2-1/2 hours.

2. Insulation Core: Modified isocyanurate or polyurethane foam using a non-CFC blowing agent, with maximum flame-spread and smoke-developed indexes of 25 and 450, respectively.

   a. Closed-Cell Content: 90 percent when tested according to ASTM D 6226.
   b. Density: 2.0 to 2.6 lb/cu. ft. when tested according to ASTM D 1622.
   c. Compressive Strength: Minimum 20 psi when tested according to ASTM D 1621.
   d. Shear Strength: 26 psi when tested according to ASTM C 273/C 273M.

G. Exposed-Fastener, Foamed-Insulation-Core Metal Wall Panels: Formed with a raised, trapezoidal major rib at panel edge and two intermediate stiffening ribs symmetrically spaced between major rib and panel edge; designed for lapping side edges of adjacent panels and mechanically attaching to supports using exposed fasteners in side laps.

1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:

   a. IPS - Insulated Panel Systems, an NCI Company; RWP Wall Panel.

2. Metallic-Coated Steel Sheet: Facings of zinc-coated (galvanized) steel sheet complying with ASTM A 653/A 653M, G90 (Z275) coating designation, or aluminum-zinc alloy-coated steel sheet complying with ASTM A 792/A 792M, Class AZ50 (Class AZM150) coating designation; structural quality. Prepainted by the coil-coating process to comply with ASTM A 755/A 755M.

   a. Nominal Thickness: 0.022 inch.
   b. Exterior Finish: Three-coat fluoropolymer.

      1) Color: As selected from manufacturer's standard.

   c. Interior Finish: Siliconized polyester.

1) Color: White.

3. Backer Board: On back side of exterior facing.
4. Snap-on Batten: Same material, finish, and color as exterior facings of wall panels.
5. Panel Coverage: 36 inches nominal.
6. Panel Thickness: As required to meet R-value designation.
7. Thermal-Resistance Value (R-Value): R-21 according to ASTM C 1363.

2.03 MISCELLANEOUS MATERIALS

H. Miscellaneous Metal Subframing and Furring: ASTM C 645, cold-formed, metallic-coated steel sheet, ASTM A 653/A 653M, G90 (Z275 hot-dip galvanized) coating designation or ASTM A 792/A 792M,Class AZ50 (Class AZM150) aluminum-zinc-alloy coating designation unless otherwise indicated. Provide manufacturer's standard sections as required for support and alignment of metal panel system.

I. Panel Accessories: Provide components required for a complete, weathertight panel system including trim, copings, fasciae, mullions, sills, corner units, clips, flashings, sealants, gaskets, fillers, closure strips, and similar items. Match material and finish of metal panels unless otherwise indicated.

1. Closures: Provide closures at eaves and rakes, fabricated of same metal as metal panels.
2. Backing Plates: Provide metal backing plates at panel end splices, fabricated from material recommended by manufacturer.
3. Closure Strips: Closed-cell, expanded, cellular, rubber or crosslinked, polyolefin-foam or closed-cell laminated polyethylene; minimum 1-inch- thick, flexible closure strips; cut or premolded to match metal panel profile. Provide closure strips where indicated or necessary to ensure weathertight construction.

J. Backer Board: Hardboard complying with ANSI A135.4, Class 1 tempered, 1/8 inch thick unless otherwise indicated.

K. Flashing and Trim: Provide flashing and trim formed from same material as metal panelsas required to seal against weather and to provide finished appearance. Locations include, but are not limited to, bases, drips, sills, jambs, corners, endwalls, framed openings, rakes, fasciae, parapet caps, soffits, reveals, and fillers. Finish flashing and trim with same finish system as adjacent metal panels.

L. Panel Fasteners: Self-tapping screws designed to withstand design loads. Provide exposed fasteners with heads matching color of metal panels by means of plastic caps or factory-applied coating. Provide EPDM or PVC sealing washers for exposed fasteners.

M. Panel Sealants: Provide sealant type recommended by manufacturer that are compatible with panel materials, are nonstaining, and do not damage panel finish.

1. Sealant Tape: Pressure-sensitive, 100 percent solids, gray polyisobutylene compound sealant tape with release-paper backing; 1/2 inch wide and 1/8 inch thick.
2. Joint Sealant: ASTM C 920; as recommended in writing by metal panel manufacturer.

3. Butyl-Rubber-Based, Solvent-Release Sealant: ASTM C 1311.

2.04 FABRICATION

N. General: Fabricate and finish metal panels and accessories at the factory, by manufacturer's standard procedures and processes, as necessary to fulfill indicated performance requirements demonstrated by laboratory testing. Comply with indicated profiles and with dimensional and structural requirements.

O. Provide panel profile, including major ribs and intermediate stiffening ribs, if any, for full length of panel.

P. Fabricate metal panel joints with factory-installed captive gaskets or separator strips that provide a weathertight seal and prevent metal-to-metal contact, and that minimize noise from movements.

Q. Sheet Metal Flashing and Trim: Fabricate flashing and trim to comply with manufacturer's recommendations and recommendations in SMACNA's "Architectural Sheet Metal Manual" that apply to design, dimensions, metal, and other characteristics of item indicated.

2.05 FINISHES

R. Panels and Accessories:
1. Three-Coat Fluoropolymer: AAMA 621. Fluoropolymer finish containing not less than 70 percent PVDF resin by weight in both color coat and clear topcoat. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.
2. Siliconized Polyester: Epoxy primer and silicone-modified, polyester-enamel topcoat; with a dry film thickness of not less than 0.2 mil for primer and 0.8 mil for topcoat.
3. Concealed Finish: Apply pretreatment and manufacturer's standard white or light-colored acrylic or polyester backer finish consisting of prime coat and wash coat with a minimum total dry film thickness of 0.5 mil.

PART 3 - EXECUTION

3.01 PREPARATION

A. Miscellaneous Supports: Install subframing, furring, and other miscellaneous panel support members and anchorages according to ASTM C 754 and metal panel manufacturer's written recommendations.

3.02 INSULATED METAL WALL PANEL INSTALLATION

B. General: Apply continuous ribbon of sealant to panel joint on concealed side of insulated metal wall panels as vapor seal; apply sealant to panel joint on exposed side of panels for weather seal.

1. Fasten foamed-insulation-core metal wall panels to supports with fasteners at each lapped joint at location and spacing and with fasteners recommended by manufacturer.
2. Apply panels and associated items true to line for neat and weathertight enclosure. Avoid "panel creep" or application not true to line.
3. Provide metal-backed washers under heads of exposed fasteners on weather side of insulated metal wall panels.
4. Locate and space exposed fasteners in uniform vertical and horizontal alignment. Use proper tools to obtain controlled uniform compression for positive seal without rupture of washer.
5. Provide sealant tape at lapped joints of insulated metal wall panels and between panels and protruding equipment, vents, and accessories.
6. Apply a continuous ribbon of sealant tape to panel side laps and elsewhere as needed to make panels weathertight.
7. Apply snap-on battens to exposed-fastener, insulated-core metal wall panel seams to conceal fasteners.

C. Foamed-Insulation-Core Metal Wall Panels: Fasten metal wall panels to supports with concealed clips at each joint at location and spacing and with fasteners recommended by manufacturer. Fully engage tongue and groove of adjacent panels.

1. Install clips to supports with self-tapping fasteners.

D. Accessory Installation: Install accessories with positive anchorage to building and weathertight mounting, and provide for thermal expansion. Coordinate installation with flashings and other components.

E. Flashing and Trim: Comply with performance requirements, manufacturer's written installation instructions, and SMACNA's "Architectural Sheet Metal Manual." Provide concealed fasteners where possible, and set units true to line and level. Install work with laps, joints, and seams that are permanently watertight.

3.03 CLEANING

F. Remove temporary protective coverings and strippable films, if any, as metal panels are installed, unless otherwise indicated in manufacturer's written installation instructions. On completion of metal panel installation, clean finished surfaces as recommended by metal panel manufacturer. Maintain in a clean condition during construction.

END OF SECTION 074213.19

SECTION 076100 - SHEET METAL ROOFING

PART 1 - GENERAL

1.01 SUMMARY

A. Section includes custom-fabricated, standing-seam sheet metal roofing.

1.02 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Shop Drawings: For sheet metal roofing.

1. Show installation layouts, expansion joint locations, fixed points, and keyed details. Distinguish between shop- and field-assembled work.
2. Include pattern of seams and details of termination points, expansion joints, direction of expansion, roof penetrations, edge conditions, special conditions, and connections to adjoining work.

C. Samples: For each exposed product and for each color and texture specified.

1.03 INFORMATIONAL SUBMITTALS

A. Product test reports.

B. Sample warranties.

1.04 WARRANTY

A. Special Warranty: Warranty in which Installer agrees to repair or replace components of sheet metal roofing that fail in materials or workmanship within specified warranty period.

1. Warranty Period: Two years from date of Substantial Completion.

B. Special Warranty on Finishes: Manufacturer agrees to repair finish or replace sheet metal roofing that shows evidence of deterioration of factory-applied finishes within specified warranty period.

1. Finish Warranty Period: 20 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.01 PERFORMANCE REQUIREMENTS

A. General Performance: Sheet metal roofing system including, but not limited to, metal roof panels, cleats, anchors and fasteners, sheet metal flashing integral with sheet metal roofing, fascia panels, trim, underlayment, and accessories, shall comply with requirements without failure due to defective manufacture, fabrication, or installation, or due to other defects in construction. Sheet metal roofing shall remain watertight.

B. Sheet Metal Roofing Standard: Comply with SMACNA's "Architectural Sheet Metal Manual" unless more stringent requirements are specified or indicated on Drawings.

C. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes.

1. Temperature Change: 120 deg F, ambient; 180 deg F, material surfaces.

2.02 ROOFING SHEET METALS

D. General: Protect mechanical and other finishes on exposed surfaces from damage by applying strippable, temporary protective film before shipping.

E. Metallic-Coated Steel Sheet: Provide zinc-coated (galvanized) steel sheet according to ASTM A 653/A 653M, G90 (Z275) coating designation; with smooth, flat surface; prepainted by coil-coating process to comply with ASTM A 755/A 755M.

1. Thickness: Nominal 0.022 inch unless otherwise indicated.

2. Exposed Coil-Coated Finish:
   a. Three-Coat Fluoropolymer: AAMA 621. Fluoropolymer finish containing not less than 70 percent PVDF resin by weight in both color coat and clear topcoat. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.

3. Color: As selected from manufacturer’s standard colors.

2.03 MISCELLANEOUS MATERIALS

F. General: Provide materials and types of fasteners, solder, protective coatings, sealants, and other miscellaneous items as required for complete roofing system and as recommended by primary sheet metal manufacturer unless otherwise indicated.

G. Fasteners: Wood screws, annular-threaded nails, self-tapping screws, self-locking rivets and bolts, and other suitable fasteners designed to withstand design loads.

1. General:

a. Exposed Fasteners: Heads matching color of sheet metal roofing using plastic caps or factory-applied coating. Provide metal-backed EPDM or PVC sealing washers under heads of exposed fasteners bearing on weather side of roofing.
b. Fasteners for Flashing and Trim: Blind fasteners or self-drilling screws, gasketed; with hex-washer head.
c. Blind Fasteners: High-strength aluminum or stainless-steel rivets suitable for metal being fastened.

2. Fasteners for Zinc-Coated (Galvanized) Steel Sheet: Series 300 stainless steel or hot-dip galvanized steel according to ASTM A 153/A 153M or ASTM F 2329.

H. Solder:

1. For Zinc-Coated (Galvanized) Steel: ASTM B 32, Grade Sn50, 50 percent tin and 50 percent lead or Grade Sn60, 60 percent tin and 40 percent lead.

I. Sealant Tape: Pressure-sensitive, 100 percent solids, polyisobutylene compound sealant tape with release-paper backing. Provide permanently elastic, nonsag, nontoxic, nonstaining tape 1/2 inch wide and 1/8 inch thick.

J. Elastomeric Sealant: ASTM C 920, elastomeric polyurethane polymer sealant; of type, grade, class, and use classifications required to seal joints in sheet metal roofing and remain watertight.

K. Butyl Sealant: ASTM C 1311, single-component, solvent-release butyl rubber sealant; polyisobutylene plasticized; heavy bodied for hooked-type expansion joints with limited movement.

L. Bituminous Coating: Cold-applied asphalt emulsion according to ASTM D 1187.

2.04 ACCESSORIES

M. Sheet Metal Accessories: Provide components required for complete sheet metal roofing assembly including trim, copings, fasciae, corner units, clips, flashings, sealants, gaskets, fillers, metal closures, closure strips, and similar items. Match material and finish of sheet metal roofing unless otherwise indicated.

1. Cleats: Intermittent and continuous attachment devices for mechanically seaming into joints and formed from the following materials and thicknesses unless otherwise indicated:

a. Metallic-Coated Steel Roofing: 0.0250-inch- thick stainless steel.

2. Expansion-Type Cleats: Cleats of a design that allows longitudinal movement of roof panels without stressing panel seams; of same material as other cleats.
3. Backing Plates: Plates at roofing splices, fabricated from material recommended by SMACNA.

4. Closure Strips: Closed-cell, expanded, cellular, rubber or crosslinked, polyolefin foam or closed-cell laminated polyethylene; minimum 1-inch- thick, flexible-closure strips; cut or premolded to match sheet metal roofing profile. Provide closure strips where necessary to ensure weathertight construction.
5. Flashing and Trim: Formed from same material and with same finish as sheet metal roofing, minimum 0.018 inch thick.

2.05 FABRICATION

A. General: Custom fabricate sheet metal roofing to comply with details shown and recommendations in SMACNA's "Architectural Sheet Metal Manual" that apply to design, dimensions (panel width and seam height), geometry, metal thickness, and other characteristics of installation. Fabricate sheet metal roofing and accessories in shop to greatest extent possible.
   1. Standing-Seam Roofing: Form standing-seam panels with finished seam height of 1-1/2 inches.

B. Form exposed sheet metal work to fit substrates with little oil canning; free of buckling and tool marks; true to line, levels, and slopes; and with exposed edges folded back to form hems.

   1. Form and fabricate sheets, seams, strips, cleats, valleys, ridges, edge treatments, integral flashings, and other components of metal roofing to profiles, patterns, and drainage arrangements indicated on Drawings and as required for leakproof construction.

C. Sheet Metal Accessories: Custom fabricate flashings and trim to comply with recommendations in SMACNA's "Architectural Sheet Metal Manual" that apply to design, dimensions, metal, and other characteristics of item required. Obtain field measurements for accurate fit before shop fabrication.

PART 3 - EXECUTION

3.01 INSTALLATION, GENERAL

A. General: Install sheet metal roofing to comply with details shown and recommendations in SMACNA's "Architectural Sheet Metal Manual" that apply to installation characteristics required unless otherwise indicated on Drawings. Install fasteners, solder, protective coatings, separators, sealants, and other miscellaneous items as required for complete roofing system and as recommended by fabricator for sheet metal roofing.

   1. Install sheet metal roofing true to line, levels, and slopes. Provide uniform, neat seams with minimum exposure of solder, welds, and sealant.
   2. Anchor sheet metal roofing and other components of the Work securely in place, with provisions for thermal and structural movement.
   3. Field cutting of sheet metal roofing by torch is not permitted.
   4. Provide metal closures at peaks rake edges rake walls eaves and each side of ridge and hip caps.

5. Flash and seal sheet metal roofing with closure strips at eaves, rakes, and perimeter of all openings. Fasten with self-tapping screws.
6. Locate and space fastenings in uniform vertical and horizontal alignment. Predrill panels for fasteners.
7. Install ridge caps as sheet metal roofing work proceeds.
8. Locate roofing splices over, but not attached to, structural supports. Stagger roofing splices and end laps to avoid four-panel lap splice condition. Install backing plates at roofing splices.
9. Lap metal flashing over sheet metal roofing to direct moisture to run over and off roofing.

B. Thermal Movement: Rigidly fasten metal roof panels to structure at only one location for each panel. Allow remainder of panel to move freely for thermal expansion and contraction.

1. Point of Fixity: Fasten each panel along single line of fixing .
2. Avoid attaching accessories through roof panels in manner that inhibits thermal movement.

C. Fasteners: Use fastener sizes that penetrate substrate not less than recommended by fastener manufacturer to achieve maximum pull-out resistance.

D. Metal Protection: Where dissimilar metals contact each other, or where metal contacts pressure-treated wood or other corrosive substrates, protect against galvanic action or corrosion by painting contact surfaces with bituminous coating, by applying self-adhering sheet underlayment to each contact surface, or by other permanent separation as recommended by sheet metal manufacturer or SMACNA.

1. Coat concealed side of stainless-steel sheet metal roofing with bituminous coating where roofing contacts wood, ferrous metal, or cementitious construction.

E. Conceal fasteners and expansion provisions where possible in exposed work and locate to minimize possibility of leakage. Cover and seal fasteners and anchors as required for a tight installation.

3.02 ACCESSORY INSTALLATION

F. General: Install accessories with positive anchorage to building and weathertight mounting, and provide for thermal expansion. Coordinate installation with flashings and other components.

1. Install components required for complete sheet metal roofing assembly including trim, copings, seam covers, flashings, sealants, gaskets, fillers, metal closures, closure strips, and similar items.
2. Install accessories integral to sheet metal roofing that are specified in Section 076200 "Sheet Metal Flashing and Trim" to comply with that Section's requirements.

G. Flashing and Trim: Comply with performance requirements, manufacturer's written installation instructions, and SMACNA's "Architectural Sheet Metal Manual." Provide

concealed fasteners where possible, and install units true to line, levels, and slopes. Install work with laps, joints, and seams that are permanently watertight and weather resistant.

3.03 CLEANING AND PROTECTION

H. Clean exposed metal surfaces of substances that interfere with uniform oxidation and weathering.

I. Clean and neutralize flux materials. Clean off excess solder.

J. Clean off excess sealants.

K. Remove temporary protective coverings and strippable films as sheet metal roofing is installed unless otherwise indicated in manufacturer's written installation instructions.

END OF SECTION 076100

SECTION 081113 - HOLLOW METAL DOORS AND FRAMES

PART 1 - GENERAL

1.01 SUMMARY

A. Section includes hollow-metal work.

1.02 ACTION SUBMITTALS

A. Product Data: For each type of product. Include construction details, material descriptions, core descriptions, and finishes.

B. Submit shop drawings complete including dimensions, gauges, tolerances, moldings, anchorages, reinforcement and manufacturer's specifications.

C. Finish Hardware Supplier: Furnish templates, template reference number or physical hardware or both, to the steel door and frame supplier in order to cut, reinforce or otherwise prepare the doors and frames to receive the finish hardware items.

D. Schedule: Provide a schedule of hollow-metal work prepared by or under the supervision of supplier, using same reference numbers for details and openings as those on Drawings. Coordinate with final Door Hardware Schedule.

1.03 INFORMATIONAL SUBMITTALS

A. Product Test Reports: For each type of hollow-metal door and frame assembly, for tests performed by a qualified testing agency.

1.04 QUALITY ASSURANCE

A. Provide standard steel doors and frames manufactured by a single firm specializing in the production of this type of work.

B. Provide doors and frames complying with the Steel Door Institute (SDI) ANSI/SDI A250.8 – 2003 (R-2008). Recommended Specifications for Standard Steel Doors and Frames, and as herein specified.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

1. Amweld International, LLC.

2. Ceco Door Products; an Assa Abloy Group company.

3. Curries Company; an Assa Abloy Group company.

2.02 REGULATORY REQUIREMENTS

B. Fire-Rated Assemblies: Complying with NFPA 80 and listed and labeled by a qualified testing agency acceptable to authorities having jurisdiction for fire-protection ratings according to NFPA 252 or UL 10C.

2.03 INTERIOR DOORS AND FRAMES

C. Construct interior doors and frames to comply with the standards indicated for materials, fabrication, hardware locations, hardware reinforcement, tolerances, and clearances, and as specified.

D. Extra-Heavy-Duty Doors and Frames: SDI A250.8, Level 3.

1. Physical Performance: Level A according to SDI A250.4.
2. Doors:
   a. Type: As indicated in the Door and Frame Schedule.
   b. Thickness: 1-3/4 inches.
   c. Face: Uncoated, cold-rolled steel sheet, minimum thickness of 0.053 inch (1.3 mm).
   d. Edge Construction: Model 1, Full Flush.
   e. Core: Manufacturer's standard kraft-paper honeycomb, polystyrene, polyurethane, polyisocyanurate, mineral-board, or vertical steel-stiffener core at manufacturer's discretion.
3. Frames:
   a. Materials: Uncoated, steel sheet, minimum thickness of 0.053 inch.
   b. Construction: Full profile welded.
4. Exposed Finish: Prime.

2.04 EXTERIOR HOLLOW-METAL DOORS AND FRAMES

E. Construct exterior doors and frames to comply with the standards indicated for materials, fabrication, hardware locations, hardware reinforcement, tolerances, and clearances, and as specified.

F. Commercial Laminated Doors and Frames: NAAMM-HMMA 867..

1. Physical Performance: Level A according to SDI A250.4.
2. Doors:
   a. Type: As indicated in the Door and Frame Schedule.
   b. Thickness: 1-3/4 inches
   c. Face: Metallic-coated steel sheet, minimum thickness of 0.053 inch, with minimum G60 (Z180) or A60 (ZF180) coating.
   d. Edge Construction: Continuously welded with no visible seam.
   e. Core: [Polyisocyanurate.

1) Thermal-Rated Doors: Provide doors fabricated with thermal-resistance value (R-value) of not less than 10 when tested according to ASTM C 1363.

3. Frames:
   a. Materials: Metallic-coated steel sheet, minimum thickness of 0.053 inch, with minimum G60 (Z180) or A60 (ZF180) coating.
   b. Construction: Full profile welded.
4. Exposed Finish: Prime.

2.05 STEEL FINISHES

G. Prime Finish: Clean, pretreat, and apply manufacturer's standard primer.

PART 3 - EXECUTION

3.01 INSTALLATION

A. General: Install hollow-metal work plumb, rigid, properly aligned, and securely fastened in place. Comply with manufacturer's written instructions.

B. Hollow-Metal Frames: Comply with SDI A250.11 or NAAMM-HMMA 840 as required by standards specified.

C. Hollow-Metal Doors: Fit hollow-metal doors accurately in frames.

END OF SECTION 081113

SECTION 083613 - SECTIONAL DOORS

PART 1 - GENERAL

1.01 SUMMARY

A. Section includes manually operated sectional doors.

1.02 PERFORMANCE REQUIREMENTS

A. General Performance: Sectional doors shall meet performance requirements specified without failure due to defective manufacture, fabrication, installation, or other defects in construction and without requiring temporary installation of reinforcing components.

B. Structural Performance: Exterior sectional doors shall withstand the effects of gravity loads, and the following loads and stresses within limits and under conditions indicated according to ASCE/SEI 7.

1. Wind Loads: As required by code.

C. Air Infiltration: Maximum rate not more than indicated when tested according to ASTM E 283.

1. Air Infiltration: Maximum rate of 0.08 cfm/sq. ft. at 15 and 25 mph.

D. Windborne-Debris-Impact-Resistance Performance: Provide sectional doors that pass large-missile-impact and cyclic-pressure tests when tested according to ASTM E 1886 and ASTM E 1996.

E. Seismic Performance: Sectional doors shall withstand the effects of earthquake motions determined according to ASCE/SEI 7.

1.03 ACTION SUBMITTALS

A. Product Data: For each type and size of sectional door and accessory.

B. Shop Drawings: For each installation and for special components not dimensioned or detailed in manufacturer's product data. Include plans, elevations, sections, details, and attachments to other work.

C. Delegated-Design Submittal: For sectional doors indicated to comply with performance requirements and design criteria, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

1.04 INFORMATIONAL SUBMITTALS

A. Seismic Qualification Certificates: For sectional doors**,** accessories, and components, from manufacturer.

B. Warranties: Sample of special warranties.

1.05 CLOSEOUT SUBMITTALS

A. Maintenance data.

1.06 WARRANTY

A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of sectional doors that fail in materials or workmanship within specified warranty period.

1. Warranty Period: Five years from date of Substantial Completion.

B. Special Finish Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components that show evidence of deterioration of factory-applied finishes within specified warranty period.

1. Warranty Period: 10 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.01 STEEL DOOR SECTIONS

A. Exterior Section Faces and Frames: Fabricate from manufacturer's standard zinc-coated (galvanized), cold-rolled, steel sheet.

1. Roll horizontal meeting edges to a continuous, interlocking, keyed, rabbeted, shiplap, or tongue-in-groove weathertight seal, with a reinforcing flange return.
2. For insulated doors, provide sections with continuous thermal-break construction, separating the exterior and interior faces of door.

B. Section Ends and Intermediate Stiles: Enclose open ends of sections with channel end stiles formed from galvanized-steel sheet welded to door section. Provide intermediate stiles formed from galvanized-steel sheet, cut to door section profile, and welded in place. Space stiles not more than 48 inches apart.

C. Reinforce bottom section with a continuous channel or angle conforming to bottom-section profile and allowing installation of astragal.

D. Reinforce sections with continuous horizontal and diagonal reinforcement, as required to stiffen door and for wind loading. Provide galvanized-steel bars, struts, trusses, or strip steel, formed to depth and bolted or welded in place.

E. Provide reinforcement for hardware attachment.

F. Thermal Insulation: Insulate interior of steel sections with door manufacturer's standard insulation, with maximum flame-spread and smoke-developed indexes of 75 and 450, respectively, according to ASTM E 84. Enclose insulation completely within steel sections that incorporate the following interior facing material, with no exposed insulation:

1. Interior Facing Material: Zinc-coated (galvanized), cold-rolled, commercial steel (CS) sheet.

2.02 TRACKS, SUPPORTS, AND ACCESSORIES

G. Tracks: Manufacturer's standard, galvanized-steel track system of configuration indicated, sized for door size and weight, designed for lift type indicated and clearances shown on Drawings. Provide complete track assembly including brackets, bracing, and reinforcement for rigid support of ball-bearing roller guides for required door type and size. Slot vertical sections of track spaced 2 inches apart for door-drop safety device. Slope tracks at proper angle from vertical or design tracks to ensure tight closure at jambs when door unit is closed.

H. Track Reinforcement and Supports: Galvanized-steel track reinforcement and support members. Secure, reinforce, and support tracks as required for door size and weight to provide strength and rigidity without sag, sway, and vibration during opening and closing of doors.

I. Weatherseals: Replaceable, adjustable, continuous, compressible weather-stripping gaskets of flexible vinyl, rubber, or neoprene fitted to bottom and top of sectional door unless otherwise indicated.

2.03 HARDWARE

A. General: Provide heavy-duty, corrosion-resistant hardware, with hot-dip galvanized, stainless-steel, or other corrosion-resistant fasteners, to suit door type.

B. Hinges: Heavy-duty, galvanized-steel hinges at each end stile and at each intermediate stile, according to manufacturer's written recommendations for door size. Attach hinges to door sections through stiles and rails.

C. Rollers: Heavy-duty rollers with steel ball-bearings in case-hardened steel races, mounted with varying projections to suit slope of track. Provide 3-inch- diameter roller tires for 3-inch-wide track and 2-inch- diameter roller tires for 2-inch- wide track.

D. Push/Pull Handles: For push-up or emergency-operated doors, provide galvanized-steel lifting handles on each side of door.

2.04 LOCKING DEVICES

E. Slide Bolt: Fabricate with side-locking bolts to engage through slots in tracks for locking by padlock, located on single-jamb side, operable from inside only.

F. Locking Device Assembly: Fabricate with cylinder lock, spring-loaded deadbolt, operating handle, cam plate, and adjustable locking bars to engage through slots in tracks.

1. Lock Cylinders: Provide cylinders standard with manufacturer and keyed to building keying system.
2. Keys: Three for each cylinder.

2.05 COUNTERBALANCE MECHANISM

A. Torsion Spring: Counterbalance mechanism consisting of adjustable-tension torsion springs mounted on torsion shaft made of steel tube or solid steel. Provide springs designed for number of operation cycles indicated.

B. Cable Drums and Shaft for Doors: Cast-aluminum or gray-iron casting cable drums mounted on torsion shaft and grooved to receive door-lifting cables as door is raised. Mount counterbalance mechanism with manufacturer's standard ball-bearing brackets at each end of torsion shaft.

C. Cables: Galvanized-steel lifting cables.

D. Cable Safety Device: Include, on each side-edge of door, a device designed to automatically stop door if either lifting cable breaks.

E. Bracket: Provide anchor support bracket as required to connect stationary end of spring to the wall and to level the shaft and prevent sag.

F. Provide a spring bumper at each horizontal track to cushion door at end of opening operation.

2.06 MANUAL DOOR OPERATORS

G. Equip door with manufacturer's recommended manual door operator unless another type of door operator is indicated.

H. Chain-Hoist Operator: Consisting of endless steel hand chain, chain-pocket wheel and guard, and gear-reduction unit with a maximum 25-lbf force for door operation. Provide alloy-steel hand chain with chain holder secured to operator guide.

2.07 DOOR ASSEMBLY

I. Steel Sectional Door: Sectional door formed with hinged sections.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
   a. Overhead Door Corporation.

J. Operation Cycles: Not less than 50,000.

K. Installed R-Value: 17.5 deg F x h x sq. ft./Btu.

L. Steel Sections: Zinc-coated (galvanized) steel sheet, formed into sections 2 inches thick.

1. Exterior-Face Surface: Grooved.
2. Interior Facing Material: Zinc-coated (galvanized) steel sheet.

M. Track Configuration: High-lift track.

N. Weatherseals: Fitted to bottom and top and around entire perimeter of door. Provide combination bottom weatherseal and sensor edge.

O. Manual Door Operator: Chain-hoist operator.

P. Door Finish:
1. Factory Prime Finish: Manufacturer's standard color.
2. Finish of Interior Facing Material: Match finish of exterior section face.

PART 3 - EXECUTION

3.01 INSTALLATION

A. Install sectional doors and operating equipment complete with necessary hardware, anchors, inserts, hangers, and equipment supports; according to manufacturer's written instructions and as specified.

B. Tracks: Provide sway bracing, diagonal bracing, and reinforcement as required for rigid installation of track and door-operating equipment. Repair galvanized coating on tracks according to ASTM A 780.

C. Adjust hardware and moving parts to function smoothly so that doors operate easily, free of warp, twist, or distortion. Adjust doors and seals to provide weathertight fit around entire perimeter.

END OF SECTION 083613

SECTION 085313 - VINYL WINDOWS

PART 1 - GENERAL

1.01 SUMMARY

A. Section includes vinyl-framed windows.

1.02 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Shop Drawings: Include plans, elevations, sections, hardware, accessories, insect screens, operational clearances, and details of installation, including anchor, flashing, and sealant installation.

1.03 INFORMATIONAL SUBMITTALS

A. Product test reports.

B. Sample warranties.

1.04 WARRANTY

A. Manufacturer's Warranty: Manufacturer agrees to repair or replace vinyl windows that fail in materials or workmanship within specified warranty period.

1. Warranty Period:

a. Window: 10 years from date of Substantial Completion.
b. Glazing Units: 10 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

1. CertainTeed Corporation.
2. Milgard Windows, Inc.
3. Pella Corporation.

2.02 VINYL WINDOWS

B. Frames and Sashes: Impact-resistant, UV-stabilized PVC complying with AAMA/WDMA/CSA 101/I.S.2/A440.

1. Finish: Integral color, white.
2. Gypsum Board Returns: Provide at interior face of frame.

C. Glass: Clear annealed glass, ASTM C 1036, Type 1, Class 1, q3.

1. Kind: Fully tempered where required by code.

D. Glazing System: Manufacturer's standard factory-glazing system that produces weathertight seal.

E. Hardware, General: Manufacturer's standard corrosion-resistant material sized to accommodate sash weight and dimensions.

1. Exposed Hardware Color and Finish: As selected from manufacturer's full range.

F. Fasteners: Noncorrosive and compatible with window members, trim, hardware, anchors, and other components.

1. Exposed Fasteners: Do not use exposed fasteners to the greatest extent possible. For application of hardware, use fasteners that match finish hardware being fastened.

2.03 FABRICATION

G. Fabricate vinyl windows in sizes indicated. Include a complete system for assembling components and anchoring windows.

H. Glaze vinyl windows in the factory.

I. Weather strip each operable sash to provide weathertight installation.

J. Provide mullions and cover plates, compatible with window units, complete with anchors for support to structure and installation of window units. Allow for erection tolerances and provide for movement of window units due to thermal expansion and building deflections. Provide mullions and cover plates capable of withstanding design wind loads of window units. Provide manufacturer's standard finish to match window units.

K. Mount hardware through double walls of vinyl extrusions or provide corrosion-resistant reinforcement.

L. Complete fabrication, assembly, finishing, hardware application, and other work in the factory to greatest extent possible. Disassemble components only as necessary for shipment and installation. Allow for scribing, trimming, and fitting at Project site.

PART 3 - EXECUTION

3.01 INSTALLATION

A. Comply with manufacturer's written instructions for installing windows, hardware, accessories, and other components. For installation procedures and requirements not addressed in manufacturer's written instructions, comply with installation requirements in ASTM E 2112.

B. Install windows level, plumb, square, true to line, without distortion, anchored securely in place to structural support, and in proper relation to wall flashing and other adjacent construction to produce weathertight construction.

C. Clean exposed surfaces immediately after installing windows. Remove excess sealants, glazing materials, dirt, and other substances.

D. Remove and replace sashes if glass has been broken, chipped, cracked, abraded, or damaged during construction period.

END OF SECTION 085313

SECTION 087100 - DOOR HARDWARE

PART 1 - GENERAL

1.01 SUMMARY

A. Section includes:

1. Mechanical door hardware for the following:

a. Swinging doors.

B. Products furnished, but not installed, under this Section include the products listed below. Coordinating and scheduling the purchase and delivery of these products remain requirements of this Section.
1. Permanent lock cores to be installed by Owner.

1.02 ACTION SUBMITTALS

A. Product Data: For each type of product indicated.

B. Samples: For each exposed product and for each color and texture specified.

1.03 QUALITY ASSURANCE

A. Installer Qualifications: Supplier of products and an employer of workers trained and approved by product manufacturers and an Architectural Hardware Consultant who is available during the course of the Work to consult with Contractor, Architect, and Owner about door hardware and keying.

B. Architectural Hardware Consultant Qualifications: A person who is experienced in providing consulting services for door hardware installations that are comparable in material, design, and extent to that indicated for this Project and who is currently certified by DHI as follows:

1. For door hardware, an Architectural Hardware Consultant (AHC).

C. Means of Egress Doors: Latches do not require more than 15 lbf to release the latch. Locks do not require use of a key, tool, or special knowledge for operation.

D. Accessibility Requirements: For door hardware on doors in an accessible route, comply with the U.S. Architectural & Transportation Barriers Compliance Board's ADA-ABA Accessibility Guidelines ICC/ANSI A117.1.

1.04 WARRANTY

A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of door hardware that fail in materials or workmanship within specified warranty period.

1. Warranty Period: Three years from date of Substantial Completion, unless otherwise indicated.

PART 2 - PRODUCTS

2.01 SCHEDULED DOOR HARDWARE

A. Provide door hardware for each door as scheduled in Part 3 "Door Hardware Schedule" Article to comply with requirements in this Section.

1. Door Hardware Sets: Provide quantity, item, size, finish or color indicated, and products equivalent in function and comparable in quality to named products.

2.02 HINGES

B. Hinges: BHMA A156.1. Provide template-produced hinges for hinges installed on hollow-metal doors and hollow-metal frames.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
   a. Hager Companies.
   b. Lawrence Hardware Inc.
   c. McKinney Products Company; an ASSA ABLOY Group company.
   d. Stanley Commercial Hardware; Div. of The Stanley Works.

2.03 SELF-CLOSING HINGES AND PIVOTS

C. Self-Closing Hinges and Pivots: BHMA A156.17.

D. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
   a. Hager Companies.
   b. Lawrence Hardware Inc.
   c. McKinney Products Company; an ASSA ABLOY Group company.
   d. Stanley Commercial Hardware; Div. of The Stanley Works.

2.04 MECHANICAL LOCKS AND LATCHES

E. Strikes: Provide manufacturer's standard strike for each lock bolt or latchbolt complying with requirements indicated for applicable lock or latch and with strike box and curved lip extended to protect frame; finished to match lock or latch.

1. Flat-Lip Strikes: For locks with three-piece antifriction latchbolts, as recommended by manufacturer.

F. Bored Locks: BHMA A156.2; Grade 1; Series 4000.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
   a. Best Access Systems; Div. of Stanley Security Solutions, Inc.
   b. Corbin Russwin Architectural Hardware; n ASSA ABLOY Group Company.
   c. Schlage Commercial Lock Division; an Ingersoll-Rand company.

2.05 AUXILIARY LOCKS

G. Bored Auxiliary Locks: BHMA A156.5: Grade 1; with strike that suits frame.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
   a. Best Access Systems; Div. of Stanley Security Solutions, Inc.
   b. Schlage Commercial Lock Division; an Ingersoll-Rand company.
   c. Yale Security Inc.; an ASSA ABLOY Group company.

2.06 LOCK CYLINDERS

H. Lock Cylinders: Tumbler type, constructed from brass or bronze, stainless steel, or nickel silver.

1. Manufacturer: Same manufacturer as for locking devices.
2. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
   a. Best Access Systems; Div. of Stanley Security Solutions, Inc.
   b. Corbin Russwin Architectural Hardware; an ASSA ABLOY Group company.
   c. Schlage Commercial Lock Division; an Ingersoll-Rand company.

I. Construction Master Keys: Provide cylinders with feature that permits voiding of construction keys without cylinder removal. Provide 3 construction master keys.

J. Construction Cores: Provide construction cores that are replaceable by permanent cores. Provide 3 construction master keys.

2.07 KEYING

K. Keying System: Factory registered, complying with guidelines in BHMA A156.28, Appendix A. Incorporate decisions made in keying conference.
1. Master Key System: Change keys and a master key operate cylinders.
2. Keyed Alike: Key all cylinders to same change key.

L. Keys: Brass.

1. Stamping: Permanently inscribe each key with a visual key control number and include the following notation:

a. Notation: "DO NOT DUPLICATE."

2. Quantity: In addition to one extra key blank for each lock, provide the following:

a. Cylinder Change Keys: Three.
b. Master Keys: Three.

2.08 OPERATING TRIM

M. Operating Trim: BHMA A156.6; aluminum, unless otherwise indicated.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
a. Hager Companies.
b. Rockwood Manufacturing Company.
c. Trimco.

2.09 SURFACE CLOSERS

N. Surface Closers: BHMA A156.4; rack-and-pinion hydraulic type with adjustable sweep and latch speeds controlled by key-operated valves and forged-steel main arm. Comply with manufacturer's written recommendations for size of door closers depending on size of door, exposure to weather, and anticipated frequency of use. Provide factory-sized closers, adjustable to meet field conditions and requirements for opening force.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
a. Corbin Russwin Architectural Hardware; an ASSA ABLOY Group company.
b. LCN Closers; an Ingersoll-Rand company.
c. SARGENT Manufacturing Company; an ASSA ABLOY Group company.

2.10 MECHANICAL STOPS AND HOLDERS

O. Wall- and Floor-Mounted Stops: BHMA A156.16; aluminum base metal.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
   a. Architectural Builders Hardware Mfg., Inc.
   b. Hager Companies.
   c. Stanley Commercial Hardware; Div. of The Stanley Works.

2.11 DOOR GASKETING

P. Door Gasketing: BHMA A156.22; air leakage not to exceed 0.50 cfm per foot of crack length for gasketing other than for smoke control, as tested according to ASTM E 283; with resilient or flexible seal strips that are easily replaceable and readily available from stocks maintained by manufacturer.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
   a. Pemko Manufacturing Co.; an ASSA ABLOY Group company.
   b. Reese Enterprises, Inc.
   c. Zero International.

2.12 THRESHOLDS

Q. Thresholds: BHMA A156.21; fabricated to full width of opening indicated.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
   a. Pemko Manufacturing Co.; an ASSA ABLOY Group company.
   b. Reese Enterprises, Inc.
   c. Zero International.

2.13 FABRICATION

R. Fasteners: Provide door hardware manufactured to comply with published templates prepared for machine, wood, and sheet metal screws. Provide screws that comply with commercially recognized industry standards for application intended, except aluminum fasteners are not permitted. Provide Phillips flat-head screws with finished heads to match surface of door hardware, unless otherwise indicated.

1. Concealed Fasteners: For door hardware units that are exposed when door is closed, except for units already specified with concealed fasteners. Do not use through bolts

for installation where bolt head or nut on opposite face is exposed unless it is the only means of securely attaching the door hardware. Where through bolts are used on hollow door and frame construction, provide sleeves for each through bolt.

2.14 FINISHES

A. Provide finishes complying with BHMA A156.18 as indicated in door hardware schedule.

B. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

PART 3 - EXECUTION

3.01 INSTALLATION

A. Steel Doors and Frames: For surface applied door hardware, drill and tap doors and frames according to ANSI/SDI A250.6.

B. Mounting Heights: Mount door hardware units at heights to comply with the following unless otherwise indicated or required to comply with governing regulations.

1. Standard Steel Doors and Frames: ANSI/SDI A250.8.

C. Install each door hardware item to comply with manufacturer's written instructions.

D. Hinges: Install types and in quantities indicated in door hardware schedule but not fewer than the number recommended by manufacturer.

E. Lock Cylinders: Install construction cores to secure building and areas during construction period.

1. Replace construction cores with permanent cores as directed by Owner.
2. Furnish permanent cores to Owner for installation.

F. Key Control System: Tag keys and place them on markers and hooks in key control system cabinet, as determined by final keying schedule.

G. Thresholds: Set thresholds for exterior doors and other doors indicated in full bed of sealant.

H. Stops: Provide floor stops for doors unless wall or other type stops are indicated in door hardware schedule. Do not mount floor stops where they will impede traffic.

I. Perimeter Gasketing: Apply to head and jamb, forming seal between door and frame.

J. Door Bottoms: Apply to bottom of door, forming seal with threshold when door is closed.

K. Adjustment: Adjust and check each operating item of door hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate

as intended. Adjust door control devices to compensate for final operation of heating and ventilating equipment and to comply with referenced accessibility requirements.

3.02 DOOR HARDWARE SCHEDULE

Hardware Groups

HW #1	Single General – Non-Locking (Locker Room/Break Room) 1-1/2 pair Butts 1 each Latchset 1 each Closer 1 each Stop 1 each Kick Plate
HW #2	Single General –Locking (Shower/Toilet and Office) 1-1/2 pair Butts 1 each Lockset 1 each Stop
HW #3	Pair (Storage Room) 3 pair Butts 1 each Lockset 2 each Stops/Holders 2 each Surface Bolts 1 each Kick Plate

END OF SECTION 087100

SECTION 088000 - GLAZING

PART 1 - GENERAL

1.01 SUMMARY

A. Section includes glazing for the following products and applications, including those specified in other Sections where glazing requirements are specified by reference to this Section:

1. Windows.

1.02 ACTION SUBMITTALS

A. Product Data: For each glass product and glazing material indicated.

PART 2 - PRODUCTS

2.01 GLASS PRODUCTS, GENERAL

A. Strength: Where fully tempered glass is required, provide Kind FT heat-treated float glass.

B. Thermal and Optical Performance Properties: Provide glass with performance properties specified, as indicated in manufacturer's published test data, based on procedures indicated below:
1. Visible Reflectance: Center-of-glazing values, according to NFRC 300.

2.02 GLASS PRODUCTS

C. Float Glass: ASTM C 1036, Type I, Quality-Q3, Class I (clear) unless otherwise indicated.

2.03 GLAZING SEALANTS

A. General:

1. Compatibility: Provide glazing sealants that are compatible with one another and with other materials they will contact, including glass products, seals of insulating-glass units, and glazing channel substrates, under conditions of service and application, as demonstrated by sealant manufacturer based on testing and field experience.
2. Suitability: Comply with sealant and glass manufacturers' written instructions for selecting glazing sealants suitable for applications indicated and for conditions existing at time of installation.

PART 3 - EXECUTION

3.01 GLAZING, GENERAL

A. Comply with combined written instructions of manufacturers of glass, sealants, gaskets, and other glazing materials, unless more stringent requirements are indicated, including those in referenced glazing publications.

B. Adjust glazing channel dimensions as required by Project conditions during installation to provide necessary bite on glass, minimum edge and face clearances, and adequate sealant thicknesses, with reasonable tolerances.

C. Protect glass edges from damage during handling and installation. Remove damaged glass from Project site and legally dispose of off Project site. Damaged glass is glass with edge damage or other imperfections that, when installed, could weaken glass and impair performance and appearance.

D. Apply primers to joint surfaces where required for adhesion of sealants, as determined by preconstruction testing.

E. Install setting blocks in sill rabbets, sized and located to comply with referenced glazing publications, unless otherwise required by glass manufacturer. Set blocks in thin course of compatible sealant suitable for heel bead.

F. Do not exceed edge pressures stipulated by glass manufacturers for installing glass lites.

G. Provide spacers for glass lites where length plus width is larger than 50 inches (1270 mm).

H. Provide edge blocking where indicated or needed to prevent glass lites from moving sideways in glazing channel, as recommended in writing by glass manufacturer and according to requirements in referenced glazing publications.

3.02 CLEANING AND PROTECTION

I. Protect exterior glass from damage immediately after installation by attaching crossed streamers to framing held away from glass. Do not apply markers to glass surface. Remove nonpermanent labels and clean surfaces.

J. Protect glass from contact with contaminating substances resulting from construction operations. If, despite such protection, contaminating substances do come into contact with glass, remove substances immediately as recommended in writing by glass manufacturer.

K. Examine glass surfaces adjacent to or below exterior concrete and other masonry surfaces at frequent intervals during construction, but not less than once a month, for buildup of dirt, scum, alkaline deposits, or stains; remove as recommended in writing by glass manufacturer.

L. Remove and replace glass that is broken, chipped, cracked, or abraded or that is damaged from natural causes, accidents, and vandalism, during construction period.

END OF SECTION 088000

SECTION 092900 - GYPSUM BOARD

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

1. Interior gypsum board.
2. Texture finishes.

1.02 ACTION SUBMITTALS

A. Product Data: For each type of product.

1.03 DELIVERY, STORAGE AND HANDLING

A. Store materials inside under cover and keep them dry and protected against weather, condensation, direct sunlight, construction traffic, and other potential causes of damage. Stack panels flat and supported on risers on a flat platform to prevent sagging.

PART 2 - PRODUCTS

2.01 GYPSUM BOARD, GENERAL

A. Size: Provide maximum lengths and widths available that will minimize joints in each area and that correspond with support system indicated.

2.02 INTERIOR GYPSUM BOARD

B. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
1. CertainTeed Corp.
2. Georgia-Pacific Gypsum LLC.
3. National Gypsum Company.

C. Gypsum Wallboard: ASTM C 1396/C 1396M.

1. Thickness: 1/2 inch.
2. Long Edges: Tapered.

D. Gypsum Board, Type X: ASTM C 1396/C 1396M.

1. Thickness: 5/8 inch .
2. Long Edges: Tapered.

E. Gypsum Ceiling Board: ASTM C 1396/C 1396M.

1. Thickness: 1/2 inch.
2. Long Edges: Tapered.

F. Moisture- and Mold-Resistant Gypsum Board: ASTM C 1396/C 1396M. With moisture- and mold-resistant core and paper surfaces – install in all wet areas.

PART 3 - EXECUTION

3.01 APPLYING AND FINISHING PANELS, GENERAL

A. Comply with ASTM C 840.

B. Install ceiling panels across framing to minimize the number of abutting end joints and to avoid abutting end joints in central area of each ceiling.

C. Install panels with face side out.

D. Locate edge and end joints over supports, except in ceiling applications where intermediate supports or gypsum board back-blocking is provided behind end joints.

E. Cover both faces of support framing with gypsum panels in concealed spaces (above ceilings, etc.), except in chases braced internally.

F. Wood Framing: Install gypsum panels over wood framing, with floating internal corner construction. Do not attach gypsum panels across the flat grain of wide-dimension lumber, including floor joists and headers. Float gypsum panels over these members or provide control joints to counteract wood shrinkage.

G. Install sound attenuation blankets before installing gypsum panels unless blankets are readily installed after panels have been installed on one side.

3.02 APPLYING INTERIOR GYPSUM BOARD

H. Install interior gypsum board in the following locations:

1. Wallboard Type: Vertical surfaces unless otherwise indicated.
2. Ceiling Type: Ceiling surfaces.
3. Moisture- and Mold-Resistant Type: All wet environments. Toilet Rooms/locker rooms, behind sinks.

3.03 PROTECTION

I. Protect adjacent surfaces from drywall compound and promptly remove from floors and other non-drywall surfaces. Repair surfaces stained, marred, or otherwise damaged during drywall application.

END OF SECTION 092900

SECTION 096500 – RESILIENT FLOORING

PART 1 – GENERAL

1.01 SECTION INCLUDES

A. Provide resilient flooring and matting as shown.

1.02 SUBMITTALS

A. Make submittals in conformance with Division 1.

PART 2 – PRODUCTS

2.01 MATERIALS

A. Colors and Patterns: As selected from manufacturer's standard colors.

B. Rubber Stair Treads and Riser:
1. Roppe (or equal)

C. Sheet Vinyl Flooring (SV):
1. Equivalent in physical characteristics and performance to Armstrong-Medintech.

D. Walk-Off Matt (WOM)
1. Lee, Step Up or equal.

E. Adhesives: Waterproof, stabilized type as recommended by the flooring manufacturer to suit material and substrate conditions.

F. Primer: As recommended by resilient flooring manufacturer.

G. Edgings/Divider Strip
1. Extruded or molded vinyl or rubber.

PART 3 – EXECUTION

3.01 INSTALLATION

A. General
1. Adhesive: Apply to substrate with correctly notched steel trowels; allow adhesive to become tacky before applying resilient flooring.
2. Extend resilient flooring into closets and offsets, and under movable equipment of the rooms and spaces shown or scheduled to receive resilient flooring. Extend unexposed edges of flooring under set-on bases and equivalent trim work. Scribe, cut, and fit exposed edges of flooring and base adjoining other work accurately and neatly with tight joints.

3. Maintain overall continuity of color and pattern with pieces of flooring installed in these covers. Tightly cement edges to perimeter of floor around covers and to covers.
4. Tightly cement flooring to sub-base without open cracks, voids, raising and puckering at joints, telegraphing of adhesive spreader marks, or other surface imperfections. Hand roll flooring at perimeter of each covered area to assure adhesion.

B. Sheet Vinyl: Install in conformance with manufacturer's recommendations.

C. Walk-Off Matt: Install in conformance with manufacturer's recommendations with strips in lengths as long as practicable.

3.02 CLEANING AND PROTECTION

A. Remove any excess adhesive or other surface blemishes, using neutral type cleaners as recommended by flooring manufacturer. Before attaching heavy Kraft paper or other covering clean or remove floor surfaces. Immediately repair damage protective floor covering. Do not remove until inspection, cleaning, and polishing has been completed.

B. Finishing: After completion of the project and just prior to final inspection of work, thoroughly clean floors and accessories.

C. Apply polish and buff, with type of polish, number of coats, and buffing procedures in compliance with flooring manufacturer's instructions.

END OF SECTION 096500

SECTION 096513 - RESILIENT BASE AND ACCESSORIES

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

1. Resilient base.

1.02 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Samples: For each exposed product and for each color and texture specified, not less than 3 inches long.

PART 2 - PRODUCTS

2.01RESILIENT BASE

A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

1. Burke Mercer Flooring Products, Division of Burke Industries Inc.
2. Flexco.
3. Roppe Corporation, USA.

B. Product Standard: ASTM F 1861, Type TS (rubber, vulcanized thermoset), Group I (solid, homogeneous).

1. Style and Location:
   a. Style B, Cove: Provide in areas with resilient flooring.

C. Thickness: 0.125 inch.

D. Height: 4 inches.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Examine substrates, with Installer present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work.

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

3.02 PREPARATION

C. Prepare substrates according to manufacturer's written instructions to ensure adhesion of resilient products.

3.03 RESILIENT BASE INSTALLATION

D. Comply with manufacturer's written instructions for installing resilient base.

END OF SECTION 096513

SECTION 096516 - RESILIENT SHEET FLOORING

PART 1 - GENERAL

1.01 SUMMARY

A. Section includes vinyl sheet flooring.

1.02 ACTION SUBMITTALS

A. Product Data: For each type of product.

PART 2 - PRODUCTS

2.01 VINYL SHEET FLOORING WITH BACKING

A. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
   1. Armstrong World Industries, Inc
   2. Congoleum Corporation
   3. Mannington Mills, Inc

B. Product Standard: ASTM F 1303.

   1. Type (Binder Content): Type I, minimum binder content of 90 percent.
   2. Wear-Layer Thickness: Grade 1.
   3. Overall Thickness: As standard with manufacturer.
   4. Interlayer Material: Foamed plastic.
   5. Backing Class: Class A (fibrous).

C. Wearing Surface: Embossed.

D. Sheet Width: As standard with manufacturer.

E. Seamless-Installation Method: Heat welded.

F. Colors and Patterns: As selected by Architect from full range of manufacturer's standard colors.

2.02 INSTALLATION MATERIALS

G. Trowelable Leveling and Patching Compounds: Latex-modified, portland cement based or blended hydraulic-cement-based formulation provided or approved by resilient sheet flooring manufacturer for applications indicated.

H. Adhesives: Water-resistant type recommended by flooring and adhesive manufacturers to suit resilient sheet flooring and substrate conditions indicated.

I. Seamless-Installation Accessories:

1. Heat-Welding Bead: Manufacturer's solid-strand product for heat welding seams.

a. Color: Match flooring.

J. Integral-Flash-Cove-Base Accessories:

1. Cove Strip: 1-inch radius provided or approved by resilient sheet flooring manufacturer.
2. Cap Strip: Square metal, vinyl, or rubber cap provided or approved by resilient sheet flooring manufacturer.
3. Corners: Metal inside and outside corners and end stops provided or approved by resilient sheet flooring manufacturer.

K. Floor Polish: Provide protective, liquid floor-polish products recommended by resilient sheet flooring manufacturer.

PART 3 - EXECUTION

3.01 PREPARATION

A. Prepare substrates according to resilient sheet flooring manufacturer's written instructions to ensure adhesion of resilient sheet flooring.

B. Concrete Substrates: Prepare according to ASTM F 710.

1. Verify that substrates are dry and free of curing compounds, sealers, and hardeners.
2. Remove substrate coatings and other substances that are incompatible with adhesives and that contain soap, wax, oil, or silicone, using mechanical methods recommended by resilient sheet flooring manufacturer. Do not use solvents.
3. Alkalinity and Adhesion Testing: Perform tests recommended by resilient sheet flooring manufacturer. Proceed with installation only after substrate alkalinity falls within range on pH scale recommended by manufacturer in writing, but not less than 5 or more than 9 > pH.
4. Moisture Testing: Proceed with installation only after substrates pass testing according to resilient sheet flooring manufacturer's written recommendations, but not less stringent than the following:

a. Perform anhydrous calcium chloride test according to ASTM F 1869. Proceed with installation only after substrates have maximum moisture-vapor-emission rate of 3 lb of water/1000 sq. ft. in 24 hours.
b. Perform relative humidity test using in situ probes according to ASTM F 2170. Proceed with installation only after substrates have a maximum 75 percent relative humidity level.

C. Fill cracks, holes, and depressions in substrates with trowelable leveling and patching compound; remove bumps and ridges to produce a uniform and smooth substrate.

D. Do not install resilient sheet flooring until it is the same temperature as the space where it is to be installed.

E. Immediately before installation, sweep and vacuum clean substrates to be covered by resilient sheet flooring.

3.02 RESILIENT SHEET FLOORING INSTALLATION

F. Comply with manufacturer's written instructions for installing resilient sheet flooring.

G. Seamless Installation:

1. Heat-Welded Seams: Comply with ASTM F 1516. Rout joints and heat weld with welding bead to permanently fuse sections into a seamless flooring. Prepare, weld, and finish seams to produce surfaces flush with adjoining flooring surfaces.

H. Integral-Flash-Cove Base: Cove resilient sheet flooring 6 inches up vertical surfaces. Support flooring at horizontal and vertical junction with cove strip. Butt at top against cap strip.

1. Install metal corners at inside and outside corners.

3.03 CLEANING AND PROTECTION

I. Comply with manufacturer's written instructions for cleaning and protecting resilient sheet flooring.

J. Floor Polish: Remove soil, adhesive, and blemishes from flooring surfaces before applying liquid floor polish.

1. Apply two coat(s).

K. Cover resilient sheet flooring until Substantial Completion.

END OF SECTION 096516

SECTION 097200 – WALL COVERING

PART 1 – GENERAL

1.01 SUMMARY

A. This section includes wall covering for the toilet room wainscot.

1.02 SUBMITTALS

A. Submit in accordance with Division 1.

PART 2 – PRODUCTS

2.01 MANUFACTURERS

A. Construction Specialties, Inc. or equal.

2.02 MATERIALS

A. Vinyl/Acrylic: Rigid sheet should be high impact Acrovyn with pebblette grain texture, nominal .40" thickness.

B. Provide color matching.

PART 3 - EXECUTION

3.01 CLEANING

A. General: Immediately upon completion of installation, clean wall covering and accessories in accordance with manufacturer's recommended cleaning method.

B. Remove surplus materials, rubbish and debris resulting from installation as work progresses and upon completion of work.

3.02 PROTECTION

A. Protect installed materials to prevent damage by other trades. Use materials that may be easily removed without leaving residue or permanent stains.

END OF SECTION 097200

SECTION 099100 - PAINTING AND FINISHING

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes all labor and material necessary and incidental to the execution of all painting and finishing indicated on the drawings and specified herein.

B. It is the intent of this Section to provide finish for all new materials, factory primed and/or unfinished, unless specifically stated as not requiring finish. Omission of specific surfaces form Schedule of Finishes or Finish Schedule is NOT to be interpreted to mean the finish is not required.

C. Painting is required on new mechanical and electrical equipment including ducts, piping and conduit exposed to public view, etc.

D. No finish required on items having complete factory finish, or copper, aluminum, stainless steel, bronze, or brass, unless specifically called for on Schedule of Finishes.

1.2 SUBMITTALS

A. Product Data
1. Submit complete materials listing and manufacturer's printed information showing conformance to this Specification.
2. Submit full line of paint and stain colors from proposed manufacturer.

B. Samples
1. Submit samples of selected paint colors prepared on substrate representative of actual work.
2. For all natural finished or stained wood surfaces, submit finish samples with all coats on specified species of wood.
3. Minimum sample size: 6" x 6".
4. Approved samples are the final criteria for evaluating color and appearance of completed work and one set of approved samples shall be kept on the job.

1.3 QUALITY ASSURANCE

A. Regulatory Requirements
1. Interior wall finish must be in compliance with IBC Chapter 8 for applicable occupancy group in (sprinklered) (non-sprinklered) building.

B. Hazardous Materials Restrictions
1. Paints and painting practices shall comply with all applicable state and local laws enacted to insure compliance with Federal Clean Air Standards.
2. Paints containing lead in excess of 0.06 percent by weight of the total nonvolatile content (calculated as lead metal) shall not be used.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Use first line materials of the following manufacturers, and as further listed below:
   1. Benjamin Moore
   2. ICI
   3. Sherwin Williams
   4. Parker Paint
   5. PPG

B. Use products of the same manufacturer for succeeding coats of particular applications.

2.2 MATERIALS

A. Materials shall conform to the respective specifications listed for use in "Part 3 - Execution" and/or a first-line proprietary paint material with similar intended usage and color to that specified.

B. Assume a maximum of two (2) field colors.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify that surfaces are ready to receive work as instructed by the product manufacturer.

3.2 PREPARATION

A. General
   1. Prepare surfaces to receive paint; thoroughly clean off grime, grease, dirt, loose material, and other substances that may interfere with proper adhesion of paint. Paint Dry surfaces only.
   2. Fill dents, cracks, hollow places, open joints and other irregularities with an approved filler suitable for the purpose, and after setting, sand to a smooth, hard finish.
   3. Prime surfaces not more than 8 hours after cleaning.

B. Specific Surface Preparation
   1. Concrete, Stucco and Masonry Surfaces
      a. Surfaces shall be allowed to dry at least 30 days before painting, except concrete slab on grade that shall be allowed to cure 90 days before painting. Glaze, efflorescence, laitance, dirt, asphalt, surface deposits of free iron and other foreign matter shall be removed prior to painting.
      b. Remove oil and grease with a solution of tri-sodium phosphate; rinse well and allow to dry. Remove stains caused by weathering of corroding metals with a solution of sodium metabolical after thoroughly wetting with water. Allow to dry.

c. Plaster surfaces: Fill hairline cracks, small holes, and imperfections with latex patching plaster. Make smooth and flush with adjacent surfaces. Wash and neutralize high alkali surfaces.

2. Ferrous Surfaces
   a. Ferrous surfaces that have not been shop-coated shall be solvent-cleaned. Surfaces that contain loose rust, loose mills scale, and other foreign substances shall be cleaned mechanically with power tools according to SSPC SP 3 or by sandblasting according to SSPC SP 7.
   b. Shop-coated ferrous surfaces shall be protected from corrosion by treating and touching up corroded areas immediately upon detection.

3. Galvanized and Nonferrous Surfaces
   a. Galvanized, aluminum and aluminum-alloy, lead, copper, and other nonferrous surfaces to be painted shall be solvent-cleaned in accordance with SSPC SP 1 and treated with a vinyl-type wash coat meeting the requirements of SSPC Paint 27.
   b. Copper surfaces scheduled for a natural oxidized finish: Remove contamination by applying oxidizing solution of copper acetate and ammonium chloride in acetic acid. Rub on repeatedly for required effect. Once attained, rinse surfaces with clear water and allow to dry.
4. Gypsum Board Surfaces
   a. Gypsum board surfaces shall be dry and shall have all loose dirt and dust removed by brushing with a soft brush, rubbing with a dry cloth, or vacuum-cleaning prior to application of the first-coat material.
   b. Fill minor defects with filler compound. Spot prime defects after repair.
5. Wood Surfaces
   a. Surfaces shall be checked to insure that finishing nails have been properly set, and all holes and surface imperfections shall be primed.
   b. Sand woodwork to remove roughness, loose edges, slivers, or splinters and brush to remove dust. Wash off grease or dirt with an approved cleaner.
   c. Clean knots, pitch streaks, or visible sap spots of residue and treat with two coats of Formula W2-578 Knot Sealer (Western Pine Association). Allow at least two hours between coats.
   d. Back prime all exterior wood trim and board siding. See paragraph 3.07, F, 5 for materials.
   e. Prime millwork on all sides before installation.
   f. Treat surfaces of open-grained woods and with paste filler. Thin paste filler to brushing consistency with turpentine and apply in two coats, with stiff, short-bristled brushes. Allow filler to dry for one hour, then rub surfaces across grain until surplus filler is removed.
   g. After the primer or paste filler has dried, fill nail holes and other indentations with putty, flush with the adjacent surfaces.
   h. Putty or wood filler used shall be compatible with subsequent coatings.
   i. Sand wood surfaces smooth with No. 00 sandpaper and remove dust.
   j. Interior wood surfaces to receive stain shall be sanded or shall be stained to the required shade and lightly sanded.

6. Impervious surfaces: Remove mildew by scrubbing with solution of tri-sodium phosphate and bleach. Rinse with clean water and allow surface to dry.
7. Asphalt, creosote, or bituminous surfaces scheduled for paint finish: Remove foreign particles to permit adhesion of finishing materials. Apply compatible sealer or primer.
8. Pipe Covering and Insulation: Clean surfaces of pipe, duct, and equipment insulation, such as canvas jackets and troweled on magnesia insulation, of loose, foreign, and objectionable material prior to priming or sealing.

3.3 ITEMS NOT TO BE PAINTED

The following items are not to be field painted unless specifically scheduled:

A. Items with factory-finish paint, such as light fixtures, toilet partitions, factory-finished wall and roof panels, vinyl wall coverings, and acoustical ceilings.

B. Concealed areas such as pipe chases and areas above finish ceilings.

C. Finished metals such as hardware trim, anodized aluminum, stainless steel, and bronze.

D. The wearing surfaces of moving equipment.

E. Equipment data plates, manufacturer's permanent maintenance labels, and fire door and jamb labels.

F. Galvanized building structural frame.

G. Galvanized sheet metal ducts inside building in other than offices, classrooms, or corridors.

3.4 CLEANING

A. As work proceeds, promptly remove excess paint where spilled, splashed, or spattered.

B. During progress of work maintain premises free of unnecessary accumulation of tools, equipment, surplus materials and debris.

C. Cloths, cotton waste and other debris that might constitute a fire hazard shall be placed in closed metal containers and removed at the end of each day.

D. Upon completion of the work, staging, scaffolding and containers shall be removed from the site or destroyed in an acceptable manner.

E. Paint and other deposits on adjacent surfaces shall be removed and the entire job left clean and acceptable.

3.5 SCHEDULE OF FINISHES

A. Applies to new work, patched work and damage to existing work resulting from this Contract.

B. Minimum number of coats are scheduled. Apply additional finish coats as necessary to provide uniform appearing coverage and/or as tests may require.

C. It is not the intent of this Schedule to state in detail each surface to receive finish. It is intended only as a general guide. Omission of any surface from this list shall not relieve Contractor from responsibility of providing finish.

D. Product identifications listed are Federal Specification numbers.

E. Interior Surfaces – Previously painted existing surfaces and new construction
1. On metal surfaces: (hand rails, door frames and metal doors)
   One coat Alkyd Wall Primer-Sealer, TT-E-545
   One coat Alkyd Gloss Enamel, TT-E-506
2. On gypsum drywall:
   One coat Sealer, TT-P-650
   One coat Latex Primer-Sealer, TT-P-650
   Two coats Latex, semi-gloss, TT-P-1511
3. On metal surfaces: (Other than listed above)
   One coat Latex Undercoat, TT-P-29
   Two coats Latex, semi-gloss, TT-P-1511
4. All galvanized surfaces:
   As listed above for metal surfaces, over:
   One coat Zinc Dust, Zinc-Oxide Primer
5. All new CMU:
   As listed above, over:
   One coat Block filler, TT-F-1098
6. Concrete Floors
   Two coats Rubber-Base Paint, TT-P-91

F. Exterior Surfaces – Previously painted existing surfaces and new construction
1. Concrete and plaster
   Two coats TT-P-19
2. CMU
   Same as "a" above and:
   One coat Block filler, TT-F-1098
3. Ferrous metal surfaces
   One coat Alkyd Metal Primer, TT-P-645
   Two coats Gloss Enamel, TT-E-489
4. Galvanized Metal
   One coat Zinc Dust Zinc-Oxide Primer
   Two coats Gloss Enamel, TT-E-489
5. Wood
   a. At opaque finish
      One coat, latex base primer, TT-P-1984, front and back
      Two coats, exterior acrylic latex, TT-P-19

END OF SECTION 099100

SECTION 101400 – SIGNAGE

PART 1 – GENERAL

1.01 SUMMARY

A. Section includes signage for accessible toilet.

PART 2 – PRODUCTS

2.01 INTERIOR SIGNS

A. General:
1. Letter size shall be 1 inch Helvetica medium, upper case, unless noted otherwise.
2. Each sign will have a room number, raised Braille letters and some signs with the HCP symbol as listed. Each word or symbol will be on a separate line. Edges to be beveled.
3. Mounting: 1/16" (minimum 2- additional tapes for signs 4" and under). Vinyl foam tape as provided by sign manufacturer.

B. Engraved signs: (Interior)
1. Lettering engraved through face to expose white core color. 1/8" sign material to be scratch resistant, non-static, fire retardant, washable two-color 3 ply melamine laminate with non-glare surface.

C. Specifics: The text per sign will be developed with the user; quantities are approximate.
1. Provide the following:
a. 1 SIGN: Size 6 inches by 8 inches with 4 inch handicap symbol and 1-1/4 inch with text "Toilet".

PART 3 – EXECUTION

3.01 INSTALLATION

A. Install in conformance with applicable codes.

END OF SECTION 101400

SECTION 102800 - TOILET, BATH, AND LAUNDRY ACCESSORIES

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:
   1. Private-use bathroom accessories.
   2. Underlavatory guards.
   3. Custodial accessories.

1.02 ACTION SUBMITTALS

A. Product Data: For each type of product indicated. Include the following:

   1. Construction details and dimensions.
   2. Anchoring and mounting requirements, including requirements for cutouts in other work and substrate preparation.
   3. Material and finish descriptions.
   4. Features that will be included for Project.
   5. Manufacturer's warranty.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Stainless Steel: ASTM A 666, Type 304, 0.031-inch minimum nominal thickness unless otherwise indicated.

B. Brass: ASTM B 19, flat products; ASTM B 16/B 16M, rods, shapes, forgings, and flat products with finished edges; or ASTM B 30, castings.

C. Steel Sheet: ASTM A 1008/A 1008M, Designation CS (cold rolled, commercial steel), 0.036-inch minimum nominal thickness.

D. Galvanized-Steel Sheet: ASTM A 653/A 653M, with G60 hot-dip zinc coating.

E. Galvanized-Steel Mounting Devices: ASTM A 153/A 153M, hot-dip galvanized after fabrication.

F. Fasteners: Screws, bolts, and other devices of same material as accessory unit and tamper-and-theft resistant where exposed, and of galvanized steel where concealed.

G. Chrome Plating: ASTM B 456, Service Condition Number SC 2 (moderate service).

H. Mirrors: ASTM C 1503, Mirror Glazing Quality, clear-glass mirrors, nominal 6.0 mm thick.

2.02 PRIVATE - USE WASHROOM ACCESSORIES

I. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

J. Basis-of-Design Product: Subject to compliance with requirements, provide product indicated on Drawings or comparable product by one of the following:
1. Bobrick Washroom Equipment, Inc.
2. Bradley Corporation.

K. Toilet Tissue (Roll) Dispenser:

1. Basis-of-Design Product: Bobrick.
2. Description: Roll-in-reserve dispenser with hinged front secured with tumbler lockset.
3. Mounting: Surface mounted.

L. Combination Towel (Roll) Dispenser/Waste Receptacle:

1. Basis-of-Design Product: Bobrick
2. Description: Combination unit for dispensing preset length of roll paper towels, with removable waste receptacle.
3. Mounting: Surface.

M. Liquid-Soap Dispenser:

1. Basis-of-Design Product: Bobrick.
2. Description: Designed for dispensing soap in liquid or lotion form.
3. Mounting: Vertically oriented, surface mounted.

N. Grab Bar:

1. Basis-of-Design Product: Bobrick.
2. Mounting: Flanges with concealed fasteners.

O. Mirror Unit:

1. Basis-of-Design Product: Bobrick.
2. Frame: Stainless-steel channel.
   a. Corners: Manufacturer's standard.
3. Size: 24” x 36”.

P. Shower Curtain Rod:

1. Basis-of-Design Product: Bobrick.
2. Description: 1-1/4” OD; fabricated from nominal.

Q. Shower Curtain:

1. Basis-of-Design Product: Bobrick
2. Size: Minimum 36 inches by 72 inches high.
3. Material: 0.008-inch- thick vinyl, with integral antibacterial agent.

R. Folding Shower Seat:

1. Basis-of-Design Product: Bobrick.
2. Configuration: L-shaped seat, designed for wheelchair access.
3. Seat: Phenolic or polymeric composite of slat-type or one-piece construction in ivory color.

S. Robe Hook:

1. Basis-of-Design Product: Bobrick.
2. Description: Single.
3. Material and Finish: Stainless steel, No. 4 finish (satin).

T. Towel Pin:

1. Basis-of-Design Product: Bobrick.
2. Description: Projecting minimum of 3 inches surface.

2.03 UNDERLAVATORY GUARDS

U. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

1. Truebro by IPS Corporation

V. Underlavatory Guard:

1. Basis-of-Design Product: Truebro by IPS Corporation.
2. Description: Insulating pipe covering for supply and drain piping assemblies that prevent direct contact with and burns from piping; allow service access without removing coverings.
3. Material and Finish: Antimicrobial, molded plastic, white.

2.04 CUSTODIAL ACCESSORIES

W. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

X. Basis-of-Design Product:
1. Bobrick Washroom Equipment, Inc.

Y. Mop and Broom Holder:

1. Basis-of-Design Product: Bobrick Washroom Equipment, Inc.
2. Description: Unit with shelf, hooks, holders, and rod suspended beneath shelf.
3. Length: 34 inches.
4. Hooks: Four.
5. Mop/Broom Holders: Three, spring-loaded, rubber hat, cam type.

PART 3 - EXECUTION

3.01 INSTALLATION

A. Install accessories according to manufacturers' written instructions, using fasteners appropriate to substrate indicated and recommended by unit manufacturer. Install units level, plumb, and firmly anchored in locations and at heights indicated.

END OF SECTION 102800

SECTION 104416 - FIRE EXTINGUISHERS

PART 1 - GENERAL

1.01 SUMMARY

A. Section includes portable, hand-carried fire extinguishers and mounting brackets for fire extinguishers.

1.02 ACTION SUBMITTALS

A. Product Data: For each type of product indicated. Include rating and classification, material descriptions, dimensions of individual components and profiles, and finishes for fire extinguisher and mounting brackets.

PART 2 - PRODUCTS

2.01 PORTABLE, HAND-CARRIED FIRE EXTINGUISHERS

A. Fire Extinguishers: Type, size, and capacity with mounting bracket indicated.
1. Basis-of-Design Product: Subject to compliance with requirements, provide comparable product by one of the following:
a. J. L. Industries, Inc.; a division of Activar Construction Products Group.
b. Larsen's Manufacturing Company.

B. Multipurpose Dry-Chemical Type in Steel Container: UL-rated 4-A:60-B:C, 10-lb nominal capacity, with monoammonium phosphate-based dry chemical in enameled-steel container.

2.02 MOUNTING BRACKETS

C. Mounting Brackets: Manufacturer's standard galvanized steel, designed to secure fire extinguisher to wall or structure, of sizes required for types and capacities of fire extinguishers indicated, with plated or red baked-enamel finish.
1. Basis-of-Design Product: Subject to compliance with requirements, provide comparable product by one of the following:
a. J. L. Industries, Inc.; a division of Activar Construction Products Group.
b. Larsen's Manufacturing Company.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Examine fire extinguishers for proper charging and tagging.

3.02 INSTALLATION

B. General: Install fire extinguishers and mounting brackets in compliance with requirements of authorities having jurisdiction.

END OF SECTION 104416

SECTION 105113 - METAL LOCKERS

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

1. Welded athletic lockers.
2. Locker benches.

1.02 ACTION SUBMITTALS

A. Product Data: For each type of metal locker.

1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for each type of metal locker **and bench**.

PART 2 - PRODUCTS

2.01 WELDED ATHLETIC LOCKERS

A. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
1. DeBourgh Mfg. Co; All-American P.E.

B. Basis-of-Design Product: Subject to compliance with requirements, provide DeBourgh Mfg. Co. All-American P.E. or comparable product by one of the following:

1. List Industries, Inc.
2. Lyon Workspace Products, LLC
3. Penco Products, Inc.

C. Locks: Built-in combination locks.

2.02 LOCKER BENCHES

D. Provide bench units with overall assembly height of 17-1/2 inches.

E. Bench Tops: Manufacturer's standard one-piece units, with rounded corners and edges.

F. Fixed Pedestals: Manufacturer's standard supports.

1. Tubular Steel: 1-1/2-inch- diameter steel tubing threaded on both ends.

G. Materials:

1. Steel Tube

PART 3 - EXECUTION

3.01 INSTALLATION

A. General: Install lockers level, plumb, and true; shim as required, using concealed shims.

B. Fixed Locker Benches: Provide no fewer than two pedestals for each bench. Securely fasten tops of pedestals to undersides of bench tops, and anchor bases to floor.

END OF SECTION 105113

DIVISION 15 - MECHANICAL

1.01. DESIGN CRITERIA

1. CODES AND STANDARDS: The design and construction shall comply with all current codes, ordinances and standards that are applicable in the area having jurisdiction. In addition to the governing codes and standards, the work shall comply with good standards of design and construction that are generally in use in the area. See general requirements at the beginning of this document for additional requirements. Secure and anchor all fixtures and equipment to resist seismic displacement, clearly show all means of anchoring equipment on plans.

2. CALCULATIONS: Provide calculations for the sizing of all plumbing, heating and ventilation equipment selections. Calculations shall cite code requirements where applicable and shall also include all assumptions.

3. EQUIPMENT SUBMITTALS: Provide submittals on all equipment, fixtures and piping materials. See general requirements at the beginning of this document for additional requirements.

4. OPERATING AND MAINTENANCE MANUALS: Provide operating and maintenance manual information for all equipment and fixtures. See general requirements at the beginning of this document for additional requirements.

5. SYSTEM CRITERIA

a. PLUMBING: The plumbing system in the Baler Building shall be designed for seasonal use during summer months, and shall be 100% drainable. The break room addition shall be heated year around.

Dee to drain and pit upgrades.

b. HEATING: The heating system for the new break room addition shall be sized to provide a minimum of 80 degrees F indoors with outdoor temperature at 0 degrees F. The heating system sizing shall take into consideration normal infiltration and makeup air. Each room shall be equipped with a separate dedicated heating device with its own dedicated thermostat. The second level shall be considered a separate room / zone. Thermostats shall be wall mounted on interior walls; they may be line voltage or low voltage and shall be calibrated in degrees F with a minimum range of 40 F to 85 F. The heating system shall be capable of being turned off without damage to the system.

c. BREAK ROOM ADDITION VENTILATION: Toilet room exhaust fan shall be ceiling mounted and exhaust a minimum of 2 CFM/Sq. Ft. of floor area. Toilet exhaust fan shall be wall switch controlled separately from room lights. Duct exhaust directly to outside sidewall through wall cap with back-draft damper in wall cap. Ventilation for other spaces shall be by means of operable doors and windows.

2.01 EQUIPMENT

1. GENERAL: All equipment, fixtures, systems and components shall be recognized brand names that are readily available in Alaska. All plumbing fixtures shall be white, porcelain, commercial grade and compliant with ADA requirements.

2. PLUMBING: Fixtures and equipment shall be selected as follows:

   a. Lavatory: Wall hung, complete with faucet and all trim and mounting hardware including tailpiece, P-trap, quarter-turn stop valves, braded stainless steel supply tubes. Faucet shall be single handle mixing type with ½ GPM water conserving aerator. Provide wall blocking for secure and substantial anchoring of lavatory.

   b. Water Closet: Floor mounted, flush tank, elongated bowel with white open front seat and lid. Provide with ultra low water consumption and high flushability rating. Maximum water consumption 1.5 gallon per flush and minimum MaP flushability rating of 800, three inch minimum flapper flush valve. Water closet shall be capable of operating according to manufacturers' recommendations on the water pressure provided by the water system delivery pressure being provided.

   c. Water Heater: Water heater may be either instantaneous electric, or electric storage type. Size heater for minimum of 120 degree delivery water temperature at lavatory. Minimum storage type heater size shall be 6 gallons. Locate water heater under lavatory. Provide storage type unit with T&P relief piped to code approved location, do not pipe to floor of space inside building.

   d. Add Pitsepation Permit: Under slab drain for the Baler pit shall be upgraded to 4" diameter.

   e. Domestic Water Piping: Domestic water piping material may be Type L copper, PEX or PVC (cold), CPVC (hot). If plastic piping is used, provide blocking at point of entry through wall and anchor wall penetration with copper or brass drop ear elbow and provide copper nipple through wall to stop valves. Water supply shall be through wall only, no floor penetrations are allowed. Provide insulation on hot water piping as required for ADA.

   f. Waste Piping: Waste and vent piping may be copper DWV, ABS DWV or PVC DWV.

3.01 INSTALLATION

1. Install all systems and equipment in accordance with applicable codes, manufactures installation instructions and accepted industry standards of practice.

2. All equipment shall be installed with adequate clearance and access for maintenance and service activities.

3. Prepare framed and glazed operating instructions and permanently install framed documents adjacent to the individual items of equipment as follows:
    a. Detailed winterization instructions for the domestic water and waste systems; including winterization of waste system piping, water heater, fixture traps, waste holding tank, and water piping.

END OF MECHANICAL DESIGN CRITERIA

DIVISION 16 - ELECTRICAL

1.01 Code and Standards

The design and construction shall comply with the most recently adopted editions of the following guides and standards, and local codes and ordinances ADA Accessibility Guidelines for Building Facilities.

- National Electrical Code (NEC), 2011
- International Building Code (IBC), 2009
- International Fire Code (IFC), 2009
- NFPA 70E Standard for Electrical Safety in the Workplace
- NFPA 101 Life Safety Code
- National Electrical Safety Code (NESC)
- Illuminating Engineering Society of North America (IESNA) Lighting Handbook, 9th Edition

1.02 Electrical Service and Distribution

1.1 Replace existing electrical service sized to accommodate all new and existing loads.

1.03 Lighting and Branch Wiring

- Provide lighting and general-purpose receptacles throughout all spaces as required.
- Provide dedicated circuits and connections for appliances and other special outlets as necessary.
- Light switches and convenience receptacle shall be surface mounted along the interior perimeter of the building.
- GFCI type receptacles shall be provided at all locations.

1.04 Branch Wiring

- All branch wiring shall be in conduit with insulated copper conductors or MC cable.
- Feeder and branch circuit conductors shall be 600 volt rated with 90 degrees C insulation or better. Minimum conductor size shall be No. 12 AWG solid copper.
- All feeder and branch circuits shall be provided with an insulated green ground wire sized per NEC.

1.05 Lighting Equipment

- Provide new lighting for the main Baler building, new break room addition and exterior canopy. This may include fluorescent, halogen, and LED sources as appropriate. Lighting intensities shall be per I.E.S. recommendations. Specifically, room lighting shall be designed to meet the following horizontal luminance criteria:

Office	35fc
Entry	25fc
Toilet	10fc
Storage	35fc
Card Board Room	50fc
Main Baler Building	50fc
Exterior Canopy	50fc

- Architectural/designer style (industrial), dual-head, wall mounted emergency lights shall be provided along entire egress path and exterior discharge area. Each luminaire shall contain an automatic power failure device, test switch operable from the outside of the

fixture, pilot light visible from outside the fixture and fully automatic solid-state charger in a self-contained power pack. Battery pack shall supply 90 minutes of back-up power to both emergency lamps.

- Separate switches shall be provided for the toilet exhaust fan and lights. Emergency lighting shall provide an average level of 1.0 fc at the floor level along the egress.
- Provide LED type exit signs with green letters and battery backup to denote egress per IBC requirements.
- Provide one wall mounted light at each exterior to illuminate exterior entry.

1.06 Other Electrical Services

General Construction Items (Electrical)

- Provide General Construction Items (Electrical) including, but not necessarily limited to, all connections, fittings, boxes and associated wall switches and receptacles needed by this and other sections of this RFP as required for a complete and usable system.

1.07 Provide electrical connections to all mechanical equipment, including pumps, ventilation fans, owner furnished equipment and heating units.

END OF ELECTRICAL DESIGN CRITERIA

SECTION V

PHOTOGRAPHS

Access Gate

Baler Building from Access Gate

Access from Building- Looking West

Baler Building

Plate 1

North Site Area - Looking East

North Parking Area - Looking West

East Site Area - Looking Northwest

East Site Area - Looking Southeast

South Site Area - Looking East

West Site Area - Looking South

West Site Area - Looking North

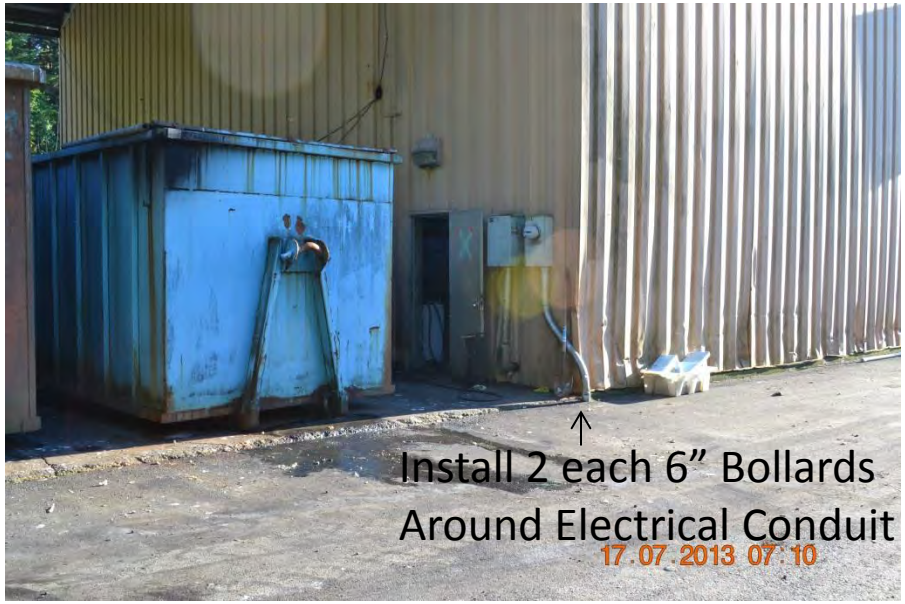
Plate 3

Baler - North Face - East End

Baler - North Face - West End

East Face - Card Board Room

Baler Building - East Face



East Face - Electrical Service
(N.E. Corner of Building)

South Face – Card Board Addition

South Face

South Face – (East End)

Plate 6

Baler - West Face (North End)

West Face (South End)

West Face of Building

↙ Provide new overhead lighting for main building ↘

Northwest Ceiling - Baler Building

Northeast Ceiling - Baler Building

Southwest Ceiling - Baler Building

Southeast Ceiling - Baler Building

Northwest Face - Interior

West Face - Interior

Southeast Face - Interior

East Face - Interior

Northeast Wall - Interior

Southwest Wall - Interior

← North Wall – Card
Board Addition

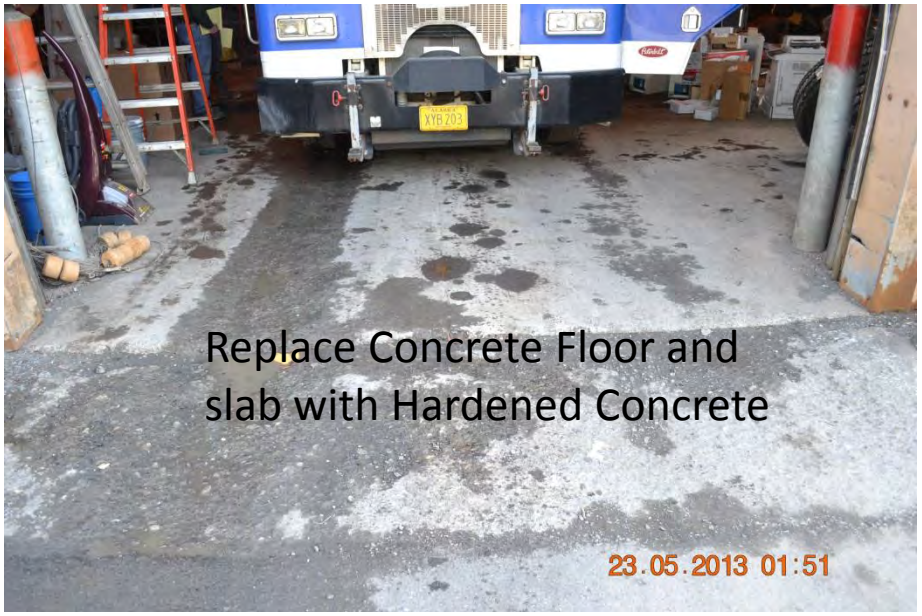
← South Wall - Baler Building
Replace Metal Siding & Purlins

Water – Meter Pit
To Be Demolished

East End - Pit Under Baler Machine

Bailer Pit – Main Building

Replaced Floor with Hardened Concrete
North Entry – Main Building



Main Entry – North Face

Existing Office /Storage
North Wall

Electrical Panel
Northeast Wall

SECTION VI

DESIGN CRITERIA DRAWINGS

DESIGN CRITERIA DRAWINGS UNDER SEPARATE COVER

SECTION VII

SUBMITTAL AND BID FORMS

Proposal Submittal Page
Design-Build of the
Baler Facility Upgrades
Cordova, Alaska

By signing below, the Proposer hereby certifies to the following:

1) The individual signing below, or the firm associated or corporation of which they are a member, has not, either directly or indirectly, entered into any agreement, participated in any collusion or otherwise taken into action in restraint of a free competitive process in connection with this solicitation.
2) The individual signed below is authorized by the firm association or corporation to bind such association or corporation to a legal contract.
3) The individual signing below, or the firm association or corporation of which they are a member, is not debarred or suspended from doing business with the City of Cordova.

Company Name	Date
Mailing Address	Signature (Blue Ink)
City, State and Zip Code	Printed (or typed) Name
Contact Person (printed or typed)	Title (printed or typed)
Phone Number	E-mail Address (optional)
Facsimile Number	

It is the responsibility of the Bidder to see that their bid is received at or before the date and time established for opening.

To be considered responsive, Bidders should include the following with their Bid:
- ✓ Originally signed submittal page (acknowledging Addenda if applicable)
- ✓ Bid Form in separately sealed envelope
- ✓ Performance Bond
- ✓ Labor and Material Payment Bond
- ✓ Professional License
- ✓ Certificate of Insurance
- ✓ Any other items requested within the “Instructions to Offerors” and “Specifications/Scope of Work”.

City of Cordova
Addendum Acknowledgement

Project: Baler Facility Upgrades

The bidder acknowledges receipt of the following addenda and certifies that their contents have been considered in the preparation of this Bid. If there are no addendum please state NONE above your name.

Addendum Number _____ Dated _____ Initials _____

Addendum Number _____ Dated _____ Initials _____

Addendum Number _____ Dated _____ Initials _____

Addendum Number _____ Dated _____ Initials _____

Addendum Number _____ Dated _____ Initials _____

Addendum Number _____ Dated _____ Initials _____

Addendum Number _____ Dated _____ Initials _____

Addendum Number _____ Dated _____ Initials _____

_____ _____
Company Name Authorizing Name

_____ _____
Date Title

_____
Signature

BID FORM
BALER FACILITY UPGRADES
CORDOVA, ALASKA

Provide all personnel, material, supplies, equipment, transportation and all other items as may be required to complete the services identified within the Scope of Work.

Line Item	Description with Price in Words	Bid Price
001	**BID PRICE** Base Bid (Section 111)_____ _____ _____ *(price written in words)*	**$**
Alternate No. 1	**Insulated Metal Wall Paneling**	**$**
Alternate No. 2	**Insulated Metal Roof Paneling**	**$**
Alternate No. 3A	**Provide 4' High Concrete Protection Curb**	**$**
Alternate No. 3B	**Provide 2' High Concrete Protection Curb**	
Alternate No. 4	**Provide 4' High Plastic Panel – Interior Perimeter**	
Alternate No. 5	**Provide 2' Extension to Roof Eves**	
Alternate No. 6	**Roof - Card Board Room**	
	TOTAL	**$**

_____ _____
Company Name Date

_____ _____
Printed (or typed) Name Signature (in **blue** ink)

_____
Title (printed or typed)

City of Cordova
Bid Bond

KNOW ALL MEN BY THERE PRESENTS, that we

(Insert full name and address or legal title of Contractor)

as Principal, hereinafter called the Principal, and

(Insert full name and address or legal title of Surety)

a corporation duly organized under the laws of the State of Alaska as surety, hereinafter called the Surety, are held and firmly bound unto

City of Cordova
602 Railroad Avenue
Cordova, Alaska 99574

as Obligee, hereinafter called the Obligee, in the sum of

Dollars ($),

For the payment of which sum well and truly to be made, the said Principal and the Surety, bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severely, firmly by these presents.

Whereas, the Principal has submitted a bid for

Project: Baler Facility Upgrade

NOW, THEREFORE, if the Obligee shall accept the bid of the Principal and the Principal shall enter into a Contract with Obligee in accordance with terms of such bid, and give such bond or bonds as may be specified in the bidding or Contract Documents with good and sufficient surety for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof, or in the event of the failure of the Principal to enter such Contract and give such bond or bonds, if the Principal shall pay to the Obligee the difference not to exceed the penalty hereof between the amount specified in said bid and such larger amount for which the Obligee may in good faith contract with another party to perform the Work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect.

Signed and sealed this _ day or _____, 2013

_____ _____

(Witness) (Principal) (Seal)

_____

(Title)

_____ _____

(Witness) (Principal) (Seal)

_____

(Title

City of Cordova
Performance Bond

Project: Baler Facility Upgrades

KNOW ALL MEN BY THESE PRESENTS: that

(Here insert full name and address or legal title of contractor)

as Principal, hereinafter called Contractor, and ,

(Here insert full name and address or legal title Surety)

as Surety, hereinafter called Surety, are held and firmly bound unto

City of Cordova
602 Railroad Avenue
Cordova, AK 99574

as Obligee, hereinafter called Owner, in the amount of

Dollars ($)

for the payment whereof Contractor and Surety bind themselves, their heirs, executor, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS,

Contractor has by written agreement dated _____, 20_____, entered into a contract with Owner for

Project: Baler Facility Upgrade

in accordance with Drawings and Specifications prepared by

DHI Consulting Engineers
800 E. Dimond Blvd. Ste. 3-550
Anchorage, AK 99515

which contract is by reference made a part hereof, and is hereinafter referred to as the Contract.

City of Cordova
Performance Bond

Project: Baler Facility Upgrades

Now, therefore the condition of this obligation is such that, if Contractor shall promptly and faithfully perform said Contract, then this obligation shall be null and void; otherwise it shall remain in full force and effect.

The Surety hereby waives notice of any alteration or extension of time made by the Owner.

Whenever Contractor shall be, and declared by Owner to be in default under the Contract, the Owner having performed Owner's obligations thereunder, the Surety may promptly remedy the default, or shall promptly comply with one of the following:

1. Complete the Contract in accordance with its terms and conditions, or
2. Obtain a bid or bids for completing the Contract in accordance with its terms and conditions, and upon determination by Surety of the lowest responsible bidder, or, if the Owner elects, upon determination by the bidder, arrange for contract between such bidder and Owner, and make available as Work progresses (even though there should be a default or a succession of defaults under the contract or contracts of completion arranged under this paragraph) sufficient funds to pay the cost of completion less the balance of the contract price; but not exceeding, including other costs and damages for which the Surety may be liable hereunder, the amount set forth in the first paragraph hereof. The term "balance of the contract price," as used in this paragraph, shall mean the total amount payable by Owner to contractor under the Contract and any amendments thereto, less the amount properly paid by Owner to Contractor.

Any suit under this bond must be instituted before the expiration of two (2) years from the date on which final payment under the Contract falls due.

No right of action shall accrue on this bond to or for the use of any person or corporation other than the Owner named herein or the heirs, executors, administrators or successors of the Owner.

Signed and Sealed this _____ day of _____, 20_____

_____	_____
(Witness)	(Principal) (Seal)
	_____
	(Title)
_____	_____
(Witness)	(Principal) (Seal)
	_____
	(Title)

SECTION VIII

SAMPLE FORMS

AGREEMENT FORM

Reference AIA Document A-141 – "Standard Form of Agreement Between Owner / Design Builders, 2004"**.**

Delete all references to Insurance and Bonds in AIA Document A-141, Article 8.1.9 Exhibit C "Insurance and Bonds" and replace with the following:

It is specifically agreed between the parties executing this Agreement that it is not intended by any of the provisions of the Agreement to create in the public or any member thereof a third party benefit hereunder, or to authorize anyone not a party to this Agreement to maintain a suit for personal injuries or property damage pursuant to the terms or provisions of this Agreement.

It is highly recommended that the Design-Builders confer with their respective insurance companies or brokers to determine if their insurance program complies with the City of Cordova insurance requirements.

The Design-Builder shall procure and maintain the following insurances:

A. Minimum Scope of Insurance. Coverage shall be at least as broad as:

1. Insurance services office form number CG0001 (latest edition) covering Commercial General Liability.
2. Insurance services office form number CA 0001 (latest edition) covering Automobile Liability, symbol 1 "any auto".
3. Worker's Compensation insurance as required by the State of Alaska and Employer's Liability Insurance.
4. Property insurance against direct loss of physical damage, including earthquake, to the building(s) or structure(s) under construction. Other property to be insured is all personal property of the City including but not limited to tools and equipment of the city utilized in the project to which this Agreement applies.

Installation Floater – Full Agreement value, per occurrence, for each building(s) or structure(s) which is being constructed or repaired under the terms of this Agreement.

B. Minimum Limits of Insurance

Design-Builders shall maintain limits no less than:

1. $2,000,000 combined single limit per occurrence for bodily injury, property damage, personal injury and advertising injury. The general aggregate limit shall be $2,000,000. The general aggregate limits shall apply separately to each project.

   If the general liability insurance is written on a claim made form, the Contractor shall provide insurance for a period of two years after the final payment of this Agreement. The policy(s) shall evidence a retroactive date, no later than the beginning of this Agreement.

2. Auto Liability:

$1,000,000 combined single limit per accident for bodily injury and property damage.

3. Worker's Compensation and Employer's Liability:

Worker's Compensation shall be statutory as required by the State of Alaska. Employer's liability shall be endorsed to the following minimum limits:

Bodily Injury by Accident	$1,000,000 each accident
Bodily Injury by Disease	$1,000,000 each employee
Bodily Injury by Disease	$1,000,000 policy limit

4. Property Insurance:

a. The City, its officers, officials, employees, volunteers and all subcontractors are to be covered as additional insured as respects the building(s) or structure(s) to which this Agreement applies. The coverage shall contain no special limitation on the scope of protection afforded to the City, its officers, officials, employees and volunteers.

b. The Design-Builder's insurance coverage shall be primary insurance as respects the City, its officers, officials, employees and volunteers. Any insurance or self-insurance maintained by the City, its officers, officials, employees and volunteers shall be excess of the Design-Builder's insurance and shall not contribute to it.

c. The property insurance shall include, but not be limited to, debris removal including demolition occasioned by enforcement of any applicable legal requirements and shall cover reasonable compensation for architect's/ engineer's services and expensed required as a result of loss.

d. The policy shall not contain any limitation, restriction, exclusion or condition restricting the City from occupying the building prior to Agreement.

5. Excess Liability:

In order to meet the required minimum limits of insurance, it is permissible for the Design-Builder to combine an excess liability or umbrella policy with the general liability, auto liability and employer's liability. In the instance where the Design-Builder purchases an excess liability umbrella policy, the occurrence limit and the aggregate limit may be of the same amount.

C. Deductibles and Self-Insured Retention

Prior to work commencing, any deductible or self-insured retention must be declared and approved by the City. The Design-Builder may be requested to demonstrate how the deductible or self-insured retention will be funded in the event of a claim. At the option of the City, the

Design-Builder shall reduce or eliminate such deductibles or self-insured retention as respects the City, its officers, officials, employees and volunteers; or the Design-Builder shall procure a bond guaranteeing payment of losses and related investigations, claims administration and defense expenses.

D. Other Insurance Provisions

The policies are to contain, or be endorsed to contain, the following provisions:

1. General Liability, Automobile Liability

a. The City, its Administrators, officers, officials, employees and volunteers are to be covered as additional insured as respects: liability arising out of activities performed by or on behalf of the Design-Builder; products and completed operations of the Design-Builders premises owned, occupied or used by the Design-Builder or automobiles owned, leased, hired or borrowed by the Design-Builder. The coverage shall contain no special limitation on the scope of protection afforded to the City, its Administrator, officers, officials, employees and volunteers.

b. The Design-Builder's insurance coverage shall be primary insurance as respects the City, its Administrator, officers, officials, employees and volunteers shall be excess of the Design-Builder's insurance and shall not contribute to it.

c. The Design-Builder's insurance shall apply separately to each insured against whom claim is made or suit is brought, except with respect to the limits of the insurer's liability.

2. Worker's Compensation and Employer's Liability

The insurer shall agree to waive all rights of subrogation against the City, its Administrator, officers, officials, employees and volunteers for losses arising from work performed by the Design-Builder or any subcontractor for the City.

3. All Insurance

Each insurance policy required by this Agreement shall be endorsed to state that coverage shall not be suspended, voided, canceled by either party, reduced in coverage or in limits except after 30 days prior written notice for non payment of premium or fraud on the part of the Design-Builder or 60 days prior written notice for any other reason by certified mail, return receipt requested, has been given to the City. Such notice shall be mailed by the Contractor to the attention of the City's Capital Director.

E. Acceptability of Insurers

Insurance is to be placed with insurers with a Best's rating of no less than A-:VII.

F. Verification of Coverage

Contractor shall furnish the Borough with certificates of insurance and with certified copies of all endorsements effecting coverage required by this clause. The certificates and endorsements for each insurance policy are to be signed by a person authorized by that insurer to bind coverage on its behalf. The certificates are to be on forms acceptable to the City. All certificates are to be received and approved by the City before work commences. The City reserves the right to require complete, certified copies of all required insurance policies at any time.

G. Subcontractors

Contractor shall include all subcontractors as insured under its policies or shall furnish separate certificates and endorsements for each subcontractor. All coverage for subcontractors shall be subject to all requirements stated herein.

H. Lapse in Coverage

A lapse in insurance coverage is a material breach of this agreement which shall result in immediate termination of this agreement, pursuant to the appropriate Section within the Contract.

CITY OF CORDOVA
602 Railroad Avenue
Cordova, Alaska 99574

FIELD MEMO

Project Name _____ Project Number _____

Date _____

REFERENCE: (Drawing or Specification) _____

DESCRIPTION:

_____

_____

_____

_____

_____

_____

Source _____ Date _____

RESPONSE:

_____

_____

_____

_____

RESPONSE NEEDED BY: _____ ACTION REQUIRED BY: _____

RESOLUTION: Notification must be given in accordance with the contract documents, if any architect/ engineer response/description causes any change to contract documents.

CONSENT OF
SURETY COMPANY
TO FINAL PAYMENT

☐ OWNER
☐ ARCHITECT
☐ CONTRACTOR
☐ SURETY
☐ OTHER

PROJECT:
(name, address)

TO: (Owner)

ARCHITECT'S PROJECT NO:
CONTRACT FOR:

CONTRACTOR:

CONTRACT DATE:

In accordance with the provisions of the Contract between the Owner and the Contractor as indicated above, the (here insert name and address of Surety Company)

, SURETY COMPANY,

On bond of (here insert name and address of Contractor)

, CONTRACTOR,

Hereby approves the final payment to the Contractor, and agrees that final payment to the Contractor shall not relieve the Surety Company of any of its obligations to (here insert name and address of Owner)

, OWNER

As set forth in the said Surety Company's bond.

IN WITNESS WHEREOF,
The Surety Company has hereunto set its hand this _____ day of _____ 2013.

_____
Surety Company

_____
Signature of Authorized Representative

Attest: _____
(Seal)

_____
Title

CONTRACTOR'S RELEASE AND AFFIDAVIT OF PAYMENTS OF DEBTS AND CLAIMS

The undersigned, being first duly sworn deposes and says:

1. That pursuant to this contract for project _____ between the undersigned and the City of Cordova dated _____ the undersigned hereby certified that, except as listed below, he has paid in full or has otherwise satisfied all obligations for materials and equipment furnished for all work, labor, and services performed and for all known indebtedness and claims for which the Contractor or the City of Cordova is or may become liable in connection with performance under this contract. The Contractor warrants that he has made diligent search and inquiry to determine the existence of any such claim, debt or liability and that all such obligations, whether liquidated, unliquidated or disputed, have been satisfied.

2. The Contractor further certifies he did not extend any loan, gratuity or gift of money of any form whatsoever to any employee or agent of the City of Cordova that he did not rent or purchase any equipment or materials from any employee of the City, nor to the best of his knowledge, from any agent of any employee of the City, and that he has not made any promise to an employee or agent of the Borough to do or undertake any such action after completion of the subject contract.

3. Pursuant to the above-described contract and in consideration of the final payment in the amount of $_____, the undersigned Contractor hereby remise, release and discharge the City of Cordova, its officers, agents and employees of and from any and all further claim, debt, charge, demand, liability or other obligation whatsoever under or arising from aid contract, whether known or unknown and whether or not ascertainable at the time of the execution of this instrument except specified claims in stated amounts or in estimated amounts where the amounts are not susceptible of exact statement by the Contractor as follows:

_____

_____

The Contractor, in connection with the claims which are not released as set forth above, certifies that he has or agrees that he will comply with all the provisions of the said contract, including without limitation those provisions relating to notification of the contracting officer and relating to the prosecution of claims.

4. The Contractor shall indemnify, defend and hold and save the City of Cordova, its elected and appointed officers, agents and employees, harmless from any and all claims, demands, suits or liability of any nature, kind or character, including costs, expenses and attorney fees. The Contractor shall be responsible under this clause for any and all legal actions or claims of any character resulting form injuries, death, economic loss, damages, violation of statues, ordinances, constitutions or other laws, rules or regulations, contractual claims, or any other kind of loss, tangible or sustained by any person, or property arising from Contractor's or Contractor's Officers, agents, employees, partners, attorneys, suppliers and subcontractor's performance or failure to perform this Agreement in any way whatsoever. This defense and indemnification responsibility includes claims alleging acts or omissions by the City of Cordova or its agents which are said to have contributed to the losses, failure, violations or damage. However, the Contractor shall not be responsible for any damages or claim arising from the sole negligence or willful misconduct of the City of Cordova, its agents or employees.

If any portion of this clause is voided by law or court of competent jurisdiction, the remainder of the clause should remain enforceable.

IN WITNESS WHEREOF, this release and affidavit has been executed this _____ day of

_____, 2013.

_____
Contractor's Signature

_____
Title

SUBSCRIBED AND SWORN to before me this _____ day of _____ 2013.

_____
NOTARY PUBLIC

My commission expires: _____

(NOTE: In case of a corporation, the attached Certificate of Authority must be completed by a corporate officer other than the one who signs above.)

CERTIFICATE OF AUTHORITY

I, _____, certify that I am the _____

_____ (official title) of the corporation named as Contractor in the foregoing release and affidavit; that _____ who signed said release and affidavit on behalf of the Contractor was then _____ (official title) of said corporation; that said release and affidavit was duly signed for and in behalf of said corporation by authority of its governing body and is within the scope of its corporate powers.

_____
(Signature)

_____
Notary Public for the State of _____

My commission expires: _____

City of Cordova
Labor and Material Payment Bond

Project: Baler Facility Upgrades

Know all men by these presents that:

(Insert full name and address or legal title of Contractor)

as Principal, hereinafter called Principal, and,

(Here insert full name and address or legal title of Surety)

as Surety, hereinafter called Surety, are held and firmly bound unto

City of Cordova
602 Railroad Avenue
Cordova, Alaska 99574

as Obligee, hereinafter called Owner, for the use and benefit of claimants as herein below defined, in the amount of

Dollars ($_____),
(Here insert a sum equal to the contract amount)

for the payment whereof Principal and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these present.

WHEREAS,

Principal has by written agreement dated _____, 20_____, entered into a contract with Owner for

Project: Baler Facility Upgrades

in accordance with Drawings and Specifications prepared by

DHI Consulting Engineers
800 E. Dimond Blvd. Ste. 3-550
Anchorage, AK 99515

which contract is be reference made a part hereof, and is hereinafter referred to as the Contract.

City of Cordova
Labor and Material Payment Bond

Project: Baler Facility Upgrades

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that, if Principal shall promptly make payment to all claimants as hereinafter defined, for all labor and material used or reasonably required for use in the performance of the Contract, then this obligation shall be void; otherwise it shall remain in full force and effect, subject, however, to the following conditions:

1. A claimant is defined as one having a direct contract with the Principal or with a Subcontractor of the Principal for labor, material, or both, used or reasonably required for use in the performance of the Contract, labor and material being construed to include that part of water, gas, power, light, heat, oil, gasoline, telephone service or rental of equipment directly applicable to the Contract.

2. The above named Principal and Surety hereby jointly and severally agree with the Owner that every claimant as herein defined, who has not been paid in full before the expirations of a period of ninety (90) days after the date on which the last of such claimant's work or labor was done or performed or materials were furnished by such claimant, may sue on this bond for the use of such claimant, prosecute the suit to final judgment for such sum or sums as may be justly due claimant, and have execution thereon. The Owner shall not be liable for the payment of any costs or expenses of any such suit.

3. No suit or action shall be commenced hereunder by any claimant:

a) Unless claimant, other than one having a direct contract with the Principal, shall have given written notice to any two of the following: the Principal, the Owner, or the Surety above named, within ninety (90) days after such claimant did or performed the last of the work or labor, or furnished the last of the materials for which said claim is made, stating with substantial accuracy the amount claimed and the name of the party to whom the materials are furnished, or for whom the work or labor was done or performed. Such notice shall be served by mailing the same by registered mail or certified mail, postage prepaid, in an envelope addressed to the Principal, Owner or Surety, at any place where an office is regularly maintained for the transaction of business. Or served in any manner in which legal process may be served in the state in which aforesaid project is located, save that such service need not be made by a public officer.

b) After the expiration of one (1) year following the date on which Principal ceased Work on said Contract, it being understood, however, that if any limitation embodied in this bond is prohibited by any law controlling the construction hereof such limitation shall be deemed to be amended so as to be equal to the minimum period of limitation permitted by such law.

c) Other than in a state court of competent jurisdiction in and for the county of other political subdivision of the state in which the Project, or any part thereof is situated, or in the United States District Court for the district in which the Project, or any part thereof, is situated, and not elsewhere.

4. The amount of this bond shall be reduced by and to the extent of any payment of payments made in good faith hereunder, inclusive of the payment by Surety or mechanic's liens which may be filed of record against said improvement, whether or not claim for the amount of such lien be presented under and against the bond

Signed and Sealed this _____, day of _____, 2013

_____	_____
(Witness)	(Principal) (Seal)
	_____
	(Title)
_____	_____
(Witness)	(Surety) (Seal)
	_____
	(Title)

City of Cordova
Contractor Certificate of Substantial Completion

Project: Baler Facility Upgrades

CONTRACTOR: _____. This is to certify that I, _____, am a duly authorized official of the said CONTRACTOR working in the capacity of_____, and in my official capacity representing said CONTRACTOR do hereby certify as follows:

1. The work of the subject Contract above has been performed, and materials used and installed in accordance with and in conformity to, the Contract Drawings, Contract Specifications, Municipality of Anchorage Standard Specifications and Details.
2. The Contract work is now substantially complete in all parts and requirements.
3. I understand that neither the determination by the Engineer--Architect that the work is substantially complete nor the acceptance thereof by the Owner shall operate as a bar to claim against the Contractor under the terms of the guarantee provisions of the Contract Documents.
4. The work to which this Certificate applies has been properly inspected and that work is hereby declared to be substantially complete in accordance with the Contract Documents.
5. The date of Substantial Completion is the date upon which all guarantees and warranties begin.
6. The Owner accepts the Project or specified area as described under "REMARKS," of the Project as substantially complete and will assume full possession of the Project or specified area of the Project at _____(time) on _____day,_____, 2013.

CONTRACTOR	CITY OF CORDOVA, OWNER
_____	_____
(Signature)	Capital Facilities Director
_____	_____
(Title)	Date
_____	
Date	

REMARKS:_____

_____

City of Cordova
Contract Release Page 1 of 2

Project: Baler Facility Upgrades

The undersigned, _____
for itself, its successors in interest, assigns trustees, administrators, subcontractors, suppliers, and laborers do hereby release and forever discharge the CITY OF CORDOVA, ALASKA a municipal corporation, from all actions, causes of actions, suits, controversies, claims, damages and demands of every kind and nature, mature or to mature in the future, for and by reason of any matter, thing or claim arising out of the following Contract:

Project: Baler Facility Upgrades

The undersigned also intends hereby to discharge the City of Cordova from all liability for any and all damages or injuries presently undiscovered or unanticipated. The undersigned's intention hereby is to waive any right it may subsequently have to set aside this release under the doctrine of Witt v. Watkins, 579 P.2d 1065 (Alaska 1978).

The undersigned further agrees to defend, indemnify and hold harmless the City of Cordova against any claims, liens, or causes of action arising under or by virtue of this Contract, including, but not limited to, any claim that the undersigned, any successor in interest, assignee, trustee, administrator, subcontractor, supplier or laborer of the undersigned or any other person might make or claim that he could possibly make against the City of Cordova.

The undersigned certifies that he has not assigned any amounts payable under this Contract to anyone.

The undersigned hereby acknowledges receipt of the amount of $_____
as full of final payment in consideration for all services, materials and labors rendered in connection with this Contract.

The undersigned hereby declares that the terms of this RELEASE have been completely read and are fully understood, and said terms are voluntarily accepted for the purpose of making a full and final release of any and all claims, disputed or otherwise, arising under or by virtue of this Contract.

City of Cordova
Contract Release Page 2 of 2

Project: Baler Facility Upgrades

IN WITNESS WHEREOF, I have hereunto set my hand and seal this _____day of _____, 20_____.

_____
COMPANY

_____
SIGNATURE

_____
TITLE

STATE OF ALASKA)
)ss.
THIRD JUDICIAL DISTRICT)

THIS IS TO CERTIFY that on this _____ day of _____, 20_____, before me, Notary Public in and for the State of Alaska, personally appeared _____of _____, known to me to be its _____and acknowledged to me that he has read this foregoing RELEASE and knew contents thereof to be true and correct to the best of his knowledge and belief, and that he signed the same freely and voluntarily for the uses and purposes therein mentioned, and that he was duly authorized to execute the foregoing document according to the Bylaws or by Resolutions of said corporation.

WITNESS my hand and notarial seal this _____ day of _____, 20_____.

_____
Notary Public in and for Alaska
My Commission expires: _____

City of Cordova
Non-Collusion Affidavit

Project: Baler Facility Upgrades

(to be executed prior to award)

UNITED STATES OF AMERICA)
)SS.
STATE OF ALASKA)

I, _____, of _____, being duly sworn, do depose and state:

I, or the firm, association of corporation of which I am a member, a bidder on the Contract to be awarded, by the City of Cordova, Alaska, for the construction of that certain construction project designated as:

Project: Baler Facility Upgrades

Located at Cordova, in the State of Alaska, have not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with such Contract.

_____
Signature

Subscribed and sworn to this _____ day of _____, 2013.

_____
Notary Public

My Commission Expires:_____

City of Cordova
Corporate Acknowledgement

Project: Baler Facility Upgrades

(To be filled in when Contract is executed in behalf of Corporation)

UNITED STATES OF AMERICA)
)SS.
STATE OF ALASKA)

The foregoing instrument was acknowledged before me this ___ day of _____, 20_____.

_____ _____
(Name of Officer) (Title of Officer)

_____
(Name of Corporation)

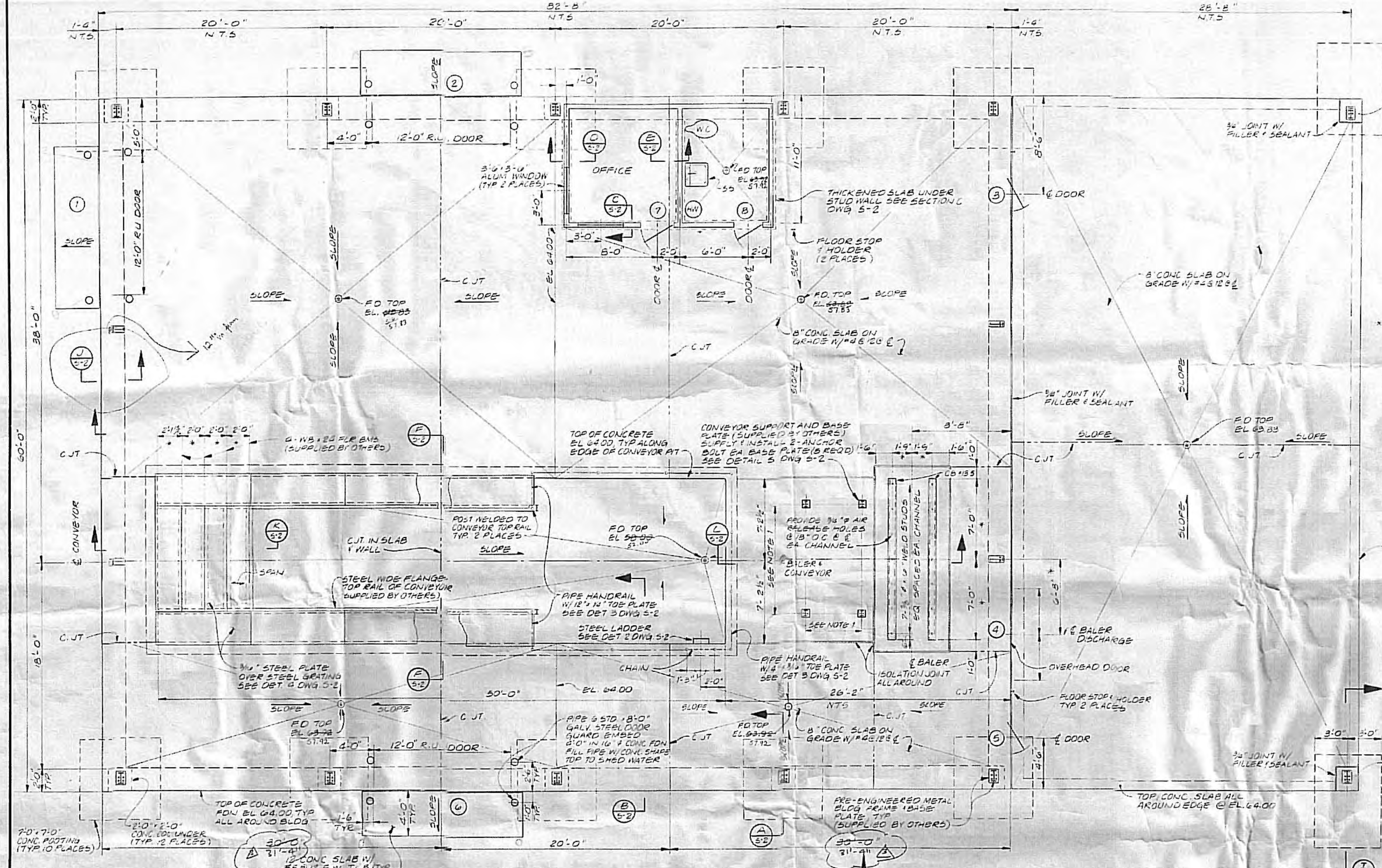
_____ Corporation, on behalf of said Corporation.
(State of Incorporation)

_____
Notary Public

My Commission Expires: _____

SECTION IX

R.W. BECK DESIGN PLANS (PARTIAL SET) OF EXISTING FACILITY



PRE-ENGINEERED METAL BUILDING FOUNDATION PLAN

SCALE: 1/4" = 1'-0"

GRAPHIC SCALE:

1/4" = 1'-0"

NOTES

1. SEE REFERENCE DRAWINGS FOR ANCHOR BOLT PLAN OF CONVEYOR

(3) 2. Contractor shall Furnish + Install Pemko Brush Weatherstrip # 18A-125 on Bottom of Doors 3+5

* CONTRACTOR VERIFY DIMENSION W/ EQUIP SUPPLIER

LOWER ALL Elevations 6 feet

DOOR SCHEDULE

NO.	SIZE			THRESHOLD	REMARKS
	WIDTH	HEIGHT	THICK.		
1	12'-0"	16'-0"	—	—	MOTOR OPERATED OPERATOR INSIDE RIGHT
2	12'-0"	16'-0"	—	—	MOTOR OPERATED, OPERATOR INSIDE RIGHT
3	3'-0"	7'-0"	1 3/4"	NO	
4	5'-6"	4'-0"	1 3/4"	—	
5	3'-0"	7'-0"	1 3/4"	NO	
6	12'-0"	16'-0"	—	—	CHAIN OPERATED, OPERATOR INSIDE RIGHT
7	3'-0"	7'-0"	1 3/4"	YES	
8	3'-0"	7'-0"	1 3/4"	YES	

Doors 1–6: SUPPLIED BY OTHERS

Doors 7–8: THIS CONTRACT

STATE OF ALASKA — 49TH — LOWELL W. WARREN No. CE 4807 — REGISTERED PROFESSIONAL ENGINEER

DRAWING REVISION RECORD

REV.	DATE	BY	CK'D	APPROVALS	DESCRIPTION
3	3/6/85				Addendum 1&2 - issued for construction
2	1/29/85				REISSUED FOR BIDS
1	10/2/84				REISSUED FOR BIDS
0	4/5/84				ISSUED FOR BIDS

R. W. BECK and ASSOCIATES
ENGINEERS AND CONSULTANTS
Seattle, Washington — Denver, Colorado
General offices: Tower Building, Seattle, Washington 98101

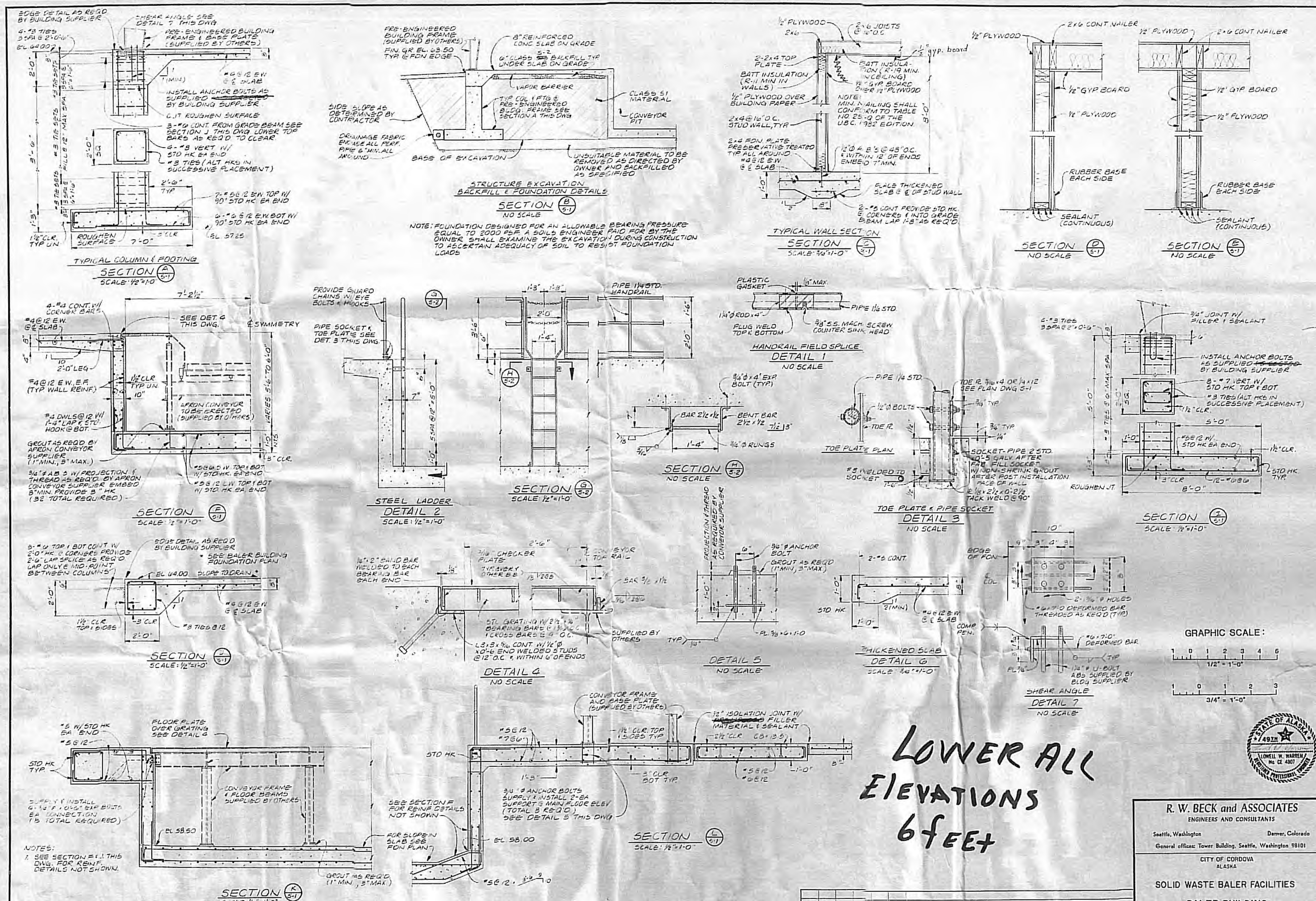
CITY OF CORDOVA
ALASKA

SOLID WASTE BALER FACILITIES

BALER BUILDING PLAN

Des. DJC | Elec. Rev. GTG | Date 4-5-84 | W/O UU-1537-XG3-AB

743-S-1.2



R. W. BECK and ASSOCIATES
ENGINEERS AND CONSULTANTS

Seattle, Washington — Denver, Colorado

General offices: Tower Building, Seattle, Washington 98101

CITY OF CORDOVA
ALASKA

SOLID WASTE BALER FACILITIES

BALER BUILDING
SECTIONS AND DETAILS

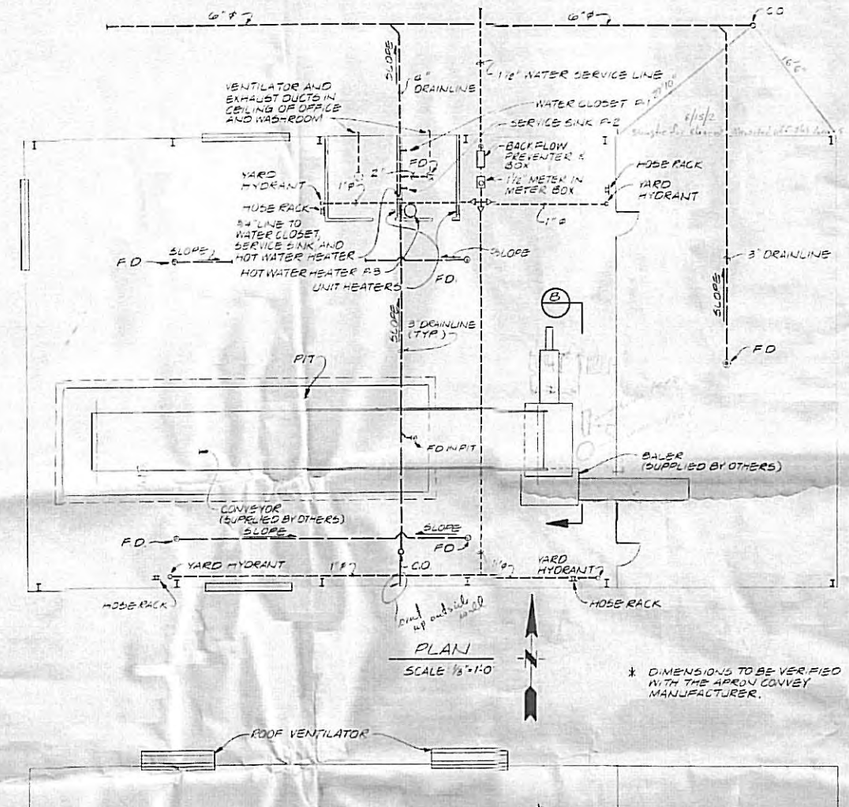
REV.	DATE	BY	CK'D.	APPROVALS	DESCRIPTION
2	11/1/85				REISSUED FOR BIDS
1	4/2/84				REISSUED FOR BIDS
0	4/5/84				ISSUED FOR BIDS

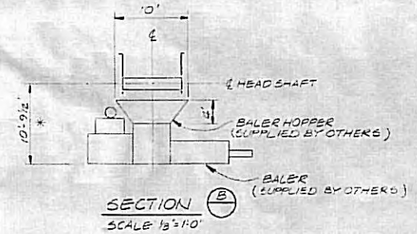
W/O UU-1537-XG3-AB

Date 4-5-84

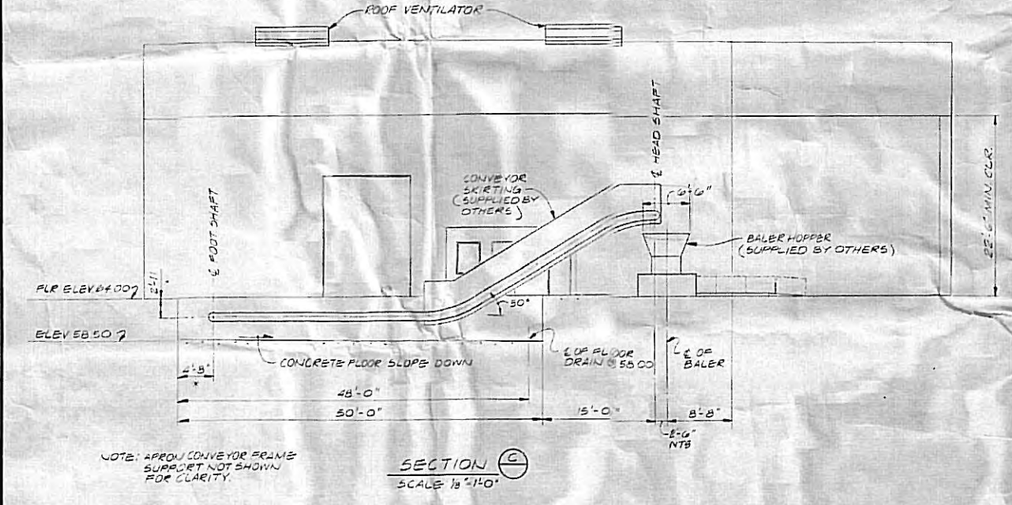
743-S-2. 2

LOWER ALL ELEVATIONS 6 FEET



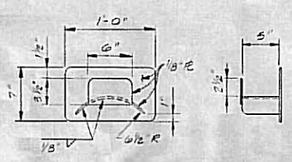


SECTION (B)
SCALE: 1/8"=1'-0"



NOTE: APRON CONVEYOR FRAME SUPPORT NOT SHOWN FOR CLARITY.

SECTION (C)
SCALE: 1/8"=1'-0"



HOSE RACK DETAIL
NO SCALE

NOTES FOR HOSE RACK ONLY
1. ROUND ALL CORNERS AT 1" RADIUS
2. GRIND ALL EDGES SMOOTH
3. GALVANIZE UNIT AFTER FABRICATION
4. MOUNT RACK APPROX. 2'-6" ABOVE FLOOR
5. ATTACH WITH 2-1/4" ø BOLTS

GRAPHIC SCALE:

5 0 5 10 15 20
1/8" = 1'-0"

1 0 1 2 3 4 5
1/2" = 1'-0"

STATE OF ALASKA
49TH
LLOWELL W. WARREN
No. CE 4807

REV.	DATE	BY	CKD.	APPROVALS	DESCRIPTION
2	[illegible]				REISSUED FOR BIDS
1	4/2/84				REISSUED FOR BIDS
0	4/2/84				ISSUED FOR BIDS

DRAWING REVISION RECORD

R. W. BECK and ASSOCIATES
ENGINEERS AND CONSULTANTS
Seattle, Washington Denver, Colorado
General offices: Tower Building, Seattle, Washington 98101

CITY OF CORDOVA
ALASKA

SOLID WASTE BALER FACILITIES

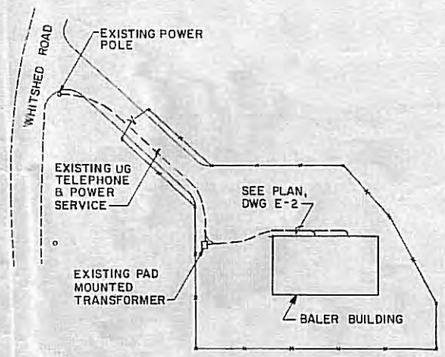
BALER BUILDING
PLAN AND DETAILS

Des. LEL	Civil	Des. GTG	W/O UU-1537-XG3-AB
Dwn. LEL	Mech.	Dwn. DJC	743-M-1. 2
Ckd. RLC	Appd.	Date 4-5-84	

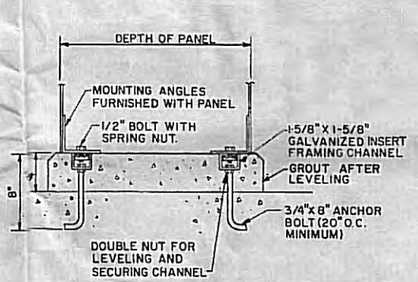
PLAN AND DIAGRAM SYMBOLS

PLAN	ONE LINE DIAGRAM	CONTROL DIAGRAM	DESCRIPTION
(M)	(5)	(MTR)	MOTOR, NUMBER INSIDE CIRCLE INDICATES HORSEPOWER. MOTOR NUMBER SHOWN EXTERNAL.
OUTLINE	(5)	(GEN)	GENERATOR, NUMBER INSIDE CIRCLE INDICATES KILOWATTS
HTR	5		HEATER, NUMBER INDICATES KILOWATTS
OUTLINE	10 KVAR		CAPACITOR, NUMBER INDICATES KILOVARS
FIELD STATION		LOS	PUSHBUTTON: LOS-LOCKOUT STOP, SP-STOP
		ST	PUSHBUTTON: LETTER ADJACENT INDICATES: O-OPEN, C-CLOSE, F-FAST, S-SLOW, R-RAISE, L-LOWER, T-TEST, FWD-FORWARD, REV-REVERSE, ST-START
		A B C	SELECTOR SWITCH, SWITCHBOARD TYPE. DASHED ARROW INDICATES SPRING RETURN OF SWITCH WHERE SHOWN.
		O H A	SELECTOR SWITCH, HAND-OFF-AUTO, HDOT TYPE. HAND POSITION SHOWN. VARIATIONS INCLUDE COMBINATIONS OF PUSHBUTTON OPERATIONS LISTED ABOVE OR AS NOTED.
(SV)		(SV)	SV - SOLENOID VALVE
(FS)	FIELD CONTROL DEVICE	(FS)	NC / NO — SWITCH: AF-AIR FLOW, FLS-FLOW, FS-FLOAT SWITCH
(PS)			NC / NO — PS-PRESSURE SWITCH
(TS)		TS	NC / NO — TS-TEMPERATURE SWITCH, T-THERMOSTAT
(LS)			NC — CS-CENTRIFUGAL SWITCH, LS-LIMIT SWITCH
			NO — TqS-TORQUE SWITCH
		CR1 TR2 OFF 5 SEC	OPERATING COIL, LETTER INDICATES: CR-CONTROL RELAY, TR-TIME DELAY RELAY, (OFF-OFF DELAY, ON-ON DELAY) UV-UNDERVOLTAGE RELAY, CC-CLOSING COIL TM-TIMER, TC-TRIP COIL. (NUMBER IDENTIFIES UNIT)
	1	(M)	MOTOR CONTROLLER, NUMBER INDICATES NEMA SIZE (SEE NOTE 3)
	1	(C)	GENERAL USE CONTACTOR, NUMBER INDICATES NEMA SIZE. (SEE NOTE 3)
		CR1	NORMALLY OPEN CONTACT, DESIGNATION IDENTIFIES OPERATING COIL. TCE-TIMED CLOSING ON ENERGIZATION, TOD-TIMED OPENING ON DE-ENERGIZATION.
		TR2 TOE	NORMALLY CLOSED CONTACT, DESIGNATION IDENTIFIES OPERATING COIL. TOE-TIMED OPENING ON ENERGIZATION; TCD-TIMED CLOSING ON DE-ENERGIZATION.
			MATING CONTACTS (DRAWOUT EQUIPMENT)
			THERMAL OVERLOAD HEATER
	LINE	LINE	DISCONNECT SWITCH
$M			MANUAL MOTOR STARTER
$^a			TOGGLE SWITCH, LOWER CASE LETTER IDENTIFIES SWITCH (TYP)
$^b_2			TWO POLE SWITCH
$^b_3			THREE WAY SWITCH
$^c_P			SWITCH WITH INDICATING LAMP
			FUSE WITH BLOWN-FUSE INDICATING DEVICE. DRAWOUT TYPE
			CARTRIDGE FUSE AND FUSEHOLDER
	HF 70/3		CIRCUIT BREAKER (RATING AND NUMBER OF POLES AS INDICATED). FOR MOTOR CIRCUIT PROTECTORS DESIGNATE "MCP" AND CURRENT SETTING/RATING.
		(R)	INDICATING LIGHT, LETTER INDICATES: R-RED, G-GREEN, A-AMBER, B-BLUE, W-WHITE AND Y-YELLOW
			COMMERCIAL TELEPHONE
(PE)		(PE)	PHOTOELECTRIC CONTROL

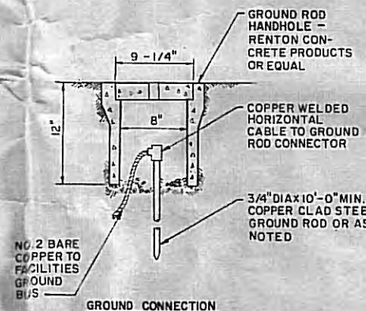
PLAN	ONE LINE DIAGRAM	CONTROL DIAGRAM	DESCRIPTION
OUTLINE			TRANSFORMER (RATING AS SHOWN)
			CURRENT TRANSFORMER (RATING AS SHOWN)
			POTENTIAL TRANSFORMER (RATING AS SHOWN)
			RECTIFIER DRY
			TERMINAL FOR EXTERNAL CONNECTIONS
			GROUND CONNECTION
			CONDUCTORS NOT CONNECTED
			CONDUCTORS CONNECTED
			WIRE TAPED FOR FUTURE CONNECTION
			MECHANICAL CONNECTION
			MECHANICAL CONNECTION WITH INTERLOCK
		RES	RESISTOR
		RES	RESISTOR, SLIDE WIRE OR ADJUSTABLE
			BATTERY
			POTENTIOMETER
		A	METER, LETTER INDICATES: F-FREQUENCY METER, A-AMMETER, H-HOURMETER, OC-OPERATIONS COUNTER, PF-POWER FACTOR METER, T-TACHOMETER, V-VOLTMETER, W-WATTMETER, WH-WATTHOUR METER
		AS	AS - AMMETER SELECTOR SWITCH VS - VOLTAGE SELECTOR SWITCH
	+120 A B3c		LIGHTING FIXTURE WALL MOUNTED. LETTER INSIDE CIRCLE INDICATES FIXTURE TYPE, CAPITAL LETTER INDICATES PANEL, NUMBER INDICATES CIRCUIT, LOWER CASE LETTER IDENTIFIES SWITCH, ELEVATION IS TO BOTTOM OF FIXTURE.
	+200 B B4o		LIGHTING FIXTURE, CEILING MOUNTED OR SUSPENDED. ELEVATION IS TO BOTTOM OF FIXTURE.
	D B2		LIGHTING FIXTURE, POLE MOUNTED. LETTER DESIGNATES FIXTURE TYPE
	C B5b		LIGHTING FIXTURE, FLUORESCENT. (APPROX. TO SCALE)
	G6		LIGHTING FIXTURE, FLOOD. (ARROW SHOWS DIRECTION OF LIGHT BEAM)
	A5		SINGLE RECEPTACLE, GROUNDING TYPE, LETTER AND NUMBER IDENTIFIES CIRCUIT.
	A1		DUPLEX RECEPTACLE, GROUNDING TYPE, LETTER AND NUMBER IDENTIFIES CIRCUIT.
	30		RECEPTACLE, 3 PHASE. USE NOTED ON DRAWING. NUMBER INDICATES AMPACITY.
	A9		RECEPTACLE, 1 PHASE, USE NOTED ON DRAWING.
	J		JUNCTION FITTING OR BOX (ALTERNATIVE SYMBOLS)
			FIELD CABINET OR PANEL. LIGHTING OR POWER PANELBOARD (OR APPROX TO SIZE)
			HORN
			CABLE TRAY OR CONDUIT RACK
	G		GROUND CABLE OR BUS
	MH or HH		MANHOLE OR HANDHOLE (SITE PLANS)
			EXISTING BUILDING OR EQUIPMENT
			EQUIPMENT OR STRUCTURE ABOVE CUTTING PLANE
			EXPOSED CONDUIT
			CONCEALED CONDUIT, FLOOR OR WALL
			CONCEALED CONDUIT, CEILING
			CONDUIT BANK, BURIED IN SLAB
			CONDUIT BENT DOWN OR AWAY
			CONDUIT BENT UP OR TOWARD AND CUT BY VIEWING PLANE OR TERMINATED IN PANEL.



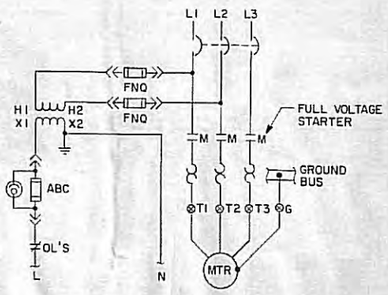
SITE PLAN
SCALE: 1"=60'



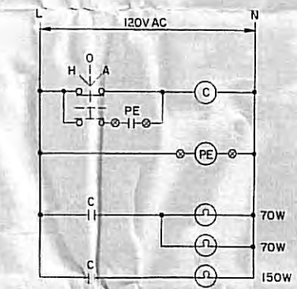
TYPICAL FREE STANDING PANEL FOUNDATION
DETAIL 1
NO SCALE



GROUND CONNECTION
DETAIL 2
NO SCALE



TYPICAL 3 PHASE MOTOR DIAGRAM
DETAIL 3



EXTERIOR LIGHTING CONTROL DIAGRAM
DETAIL 4

NOTES:

1. ALL CONTACTS ARE SHOWN IN THE DE-ENERGIZED (SHELF) POSITION. BI-STABLE RELAYS ARE SHOWN IN THE RESET POSITION.
2. ALL ABBREVIATIONS PER ANSIZ32.13 AND ISAS5.1.
3. SEE SPECIFICATIONS AND SCHEDULES FOR COMPONENT REQUIREMENTS FOR MOTOR CONTROLLERS AND FOR CONTACTORS.
4. HEIGHTS ADJACENT TO SYMBOLS (+4.0) ARE REFERENCED TO FINISHED GRADE.

ABBREVIATIONS

CND	CONDUIT
GRD	GROUND
WP	WEATHER PROOF

GRAPHIC SCALE
60 0 60 120 180
1" = 60'

STATE OF ALASKA — 49TH — R. W. Lowell Shelton, Jr. No. EE-4903 — REGISTERED PROFESSIONAL ENGINEER

REV.	DATE	BY	CKD.	APPROVALS	DESCRIPTION
2	11/23/83				REISSUED FOR BIDS
1	10/28/83				REISSUED FOR BIDS
0	4/5/83				ISSUED FOR BIDS

DRAWING REVISION RECORD

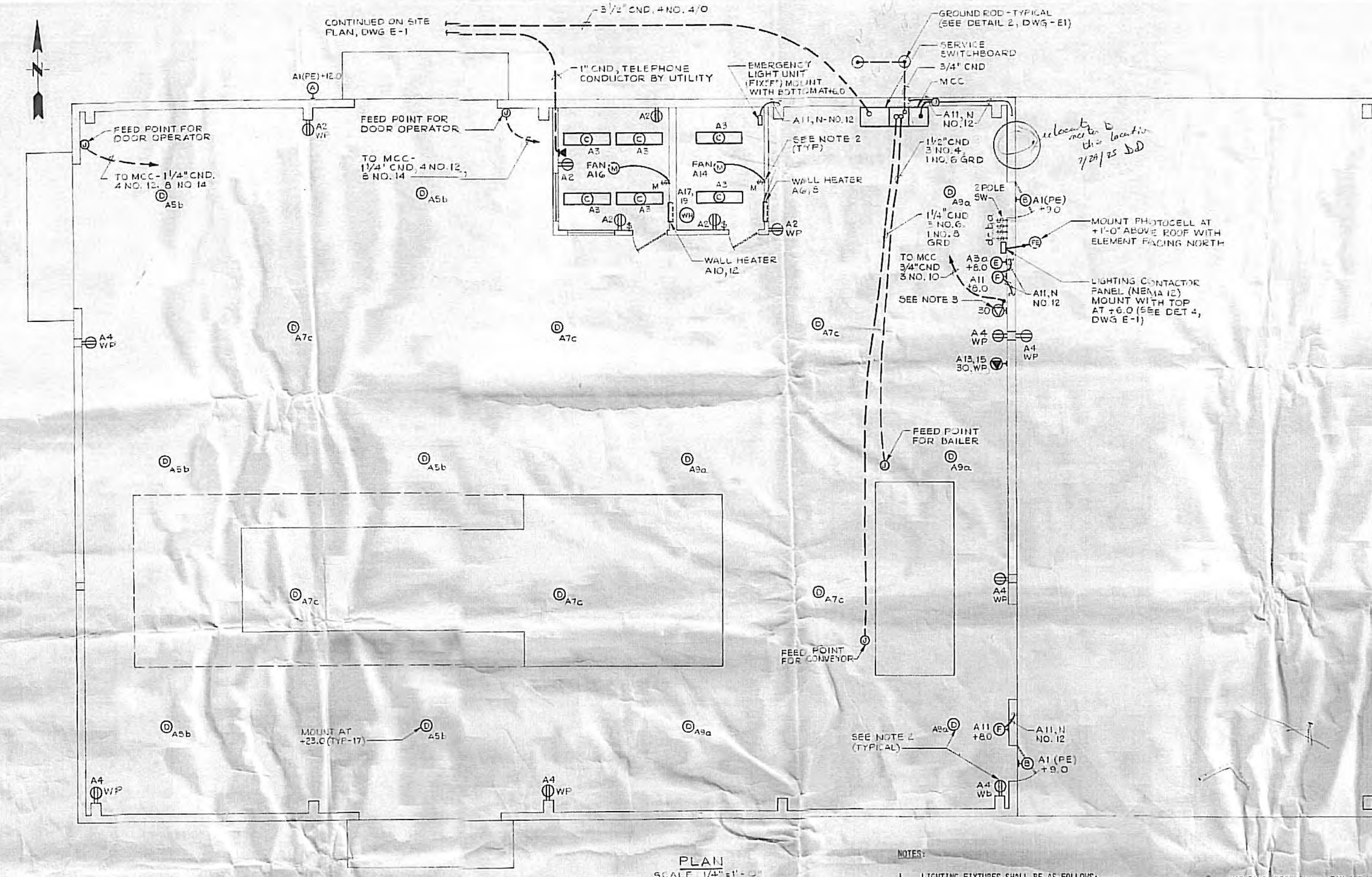
R. W. BECK and ASSOCIATES
ENGINEERS AND CONSULTANTS
Seattle, Washington — Denver, Colorado
General offices: Tower Building, Seattle, Washington 98101

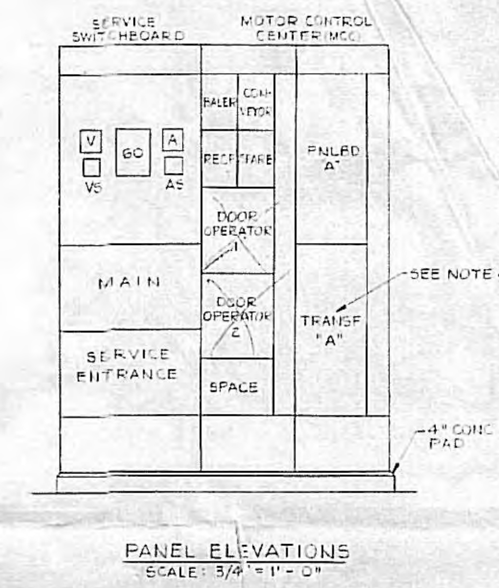
CITY OF CORDOVA
ALASKA

SOLID WASTE BALER FACILITIES

STANDARD SYMBOLS AND DETAILS

Des. GTG	Chkd Rev. RLC	Issue Rev.	W/O UU-1537-X03-AB
Des. REG	Unchk Rev. LWJ	Issue Rev. DJC	743-E-1.2
Ckd. EES	Appd.	Date 4/5/84	





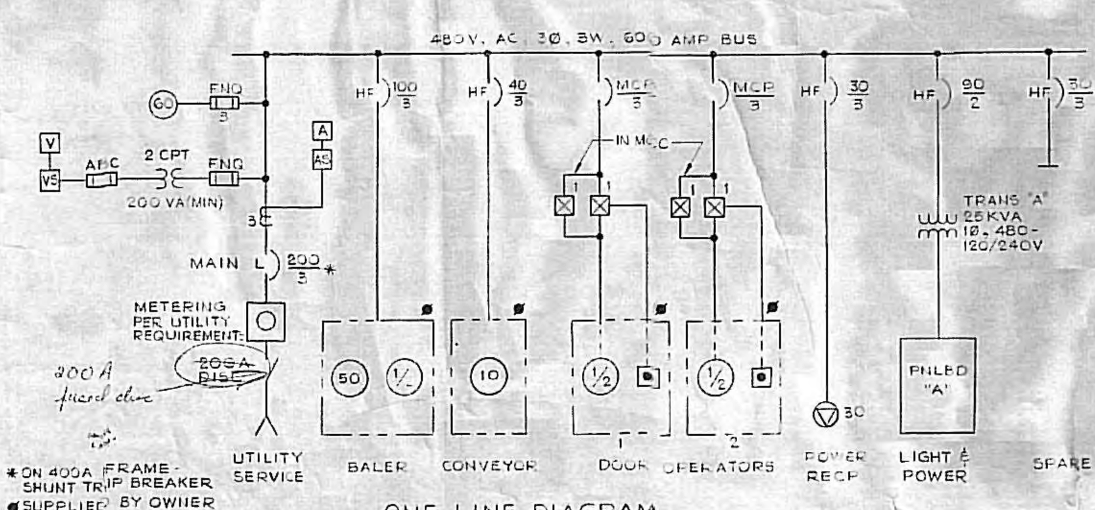
PANEL ELEVATIONS
SCALE: 3/4"=1'-0"

PANELBOARD "A"

120/240V AC, 1Ø, 3W, 225 AMP BUS
ACB'S 1P, 20A UNLESS OTHERWISE NOTED

125A

DIRECTORY			DIRECTORY
LTG - EXTERIOR	1	2	RECEPTACLES (GFI BKR)
LTG - OFFICE & WASHROOM	3	4	RECEPTACLES (GFI BKR)
LTG - WORK AREA	5	6	WASHROOM HEATER (2P)
LTG - WORK AREA	7	8	
LTG - WORK AREA	9	10	OFFICE HEATER (2P)
EMERGENCY LIGHTS	11	12	
POWER RECEPTACLE (2P, 30A)	13	14	WASHROOM EXHAUST FAN
	15	16	OFFICE EXHAUST FAN
WATER HEATER (2P)	17	18	SPARE
	19	20	SPACE
SPARE	21	22	SPACE
SPACE	23	24	SPACE
SPACE	25	26	SPACE
SPACE	27	28	SPACE
SPACE	29	30	SPACE



ONE LINE DIAGRAM

NOTES:

1. LIGHTING FIXTURES SHALL BE AS FOLLOWS:

   "A" - HOLOPHANE WALLPACK II, 1489-120-WG, WALL MOUNT HPS WITH 150W LAMP

   "B" - HOLOPHANE WALLPACK II, 1437-120-WG, WALL MOUNT HPS WITH 70W LAMP

   "C" - HOLOPHANE PRISMAWRAP, 7100-4-120, SURFACE MOUNT FLUORESCENT WITH TWO 40W LAMPS

   "D" - HOLOPHANE LOBAY II, 2039-120, PENDANT MOUNT HPS WITH 250W LAMP

   "E" - KEENE P621016-B8349, WALL MOUNT INCANDESCENT WITH 200W LAMP

   "F" - HOLOPHANE AUTOMATIC EMERGENCY LIGHT UNIT WITH REMOTE LAMP HEADS, E1-12-RL AND TWO ABMG, WALLMOUNT.

2. LIGHTING, RECEPTACLE, FAN AND HEATER CONDUCTORS AND CONDUIT NOT SHOWN SHALL BE FURNISHED AND INSTALLED AS REQUIRED. LIGHTING AND POWER CIRCUITS SHALL BE RUN IN SEPARATE CONDUITS.

3. THE POWER RECEPTACLE SHALL BE CROUSE-HINDS ARE-3412 (30A) WITH MATCHING PLUG APJ3475.

4. NAMEPLATES ON SERVICE SWITCHBOARD AND MCC SHALL BE ENGRAVED AS SHOWN, WITH ALL NAMES SPELLED OUT. SPACES AND SPARES SHALL HAVE BLANK NAMEPLATES.

GRAPHIC SCALE:
3/4" = 1'-0"
1/4" = 1'-0"

REV.	DATE	BY	CK'D.	APPROVALS	DESCRIPTION
2	8/85				REISSUED FOR BIDS
1	10/2/84				REISSUED FOR BIDS
0	4/5/84				ISSUED FOR BIDS

DRAWING REVISION RECORD

R. W. BECK and ASSOCIATES
ENGINEERS AND CONSULTANTS
Seattle, Washington — Denver, Colorado
General offices: Tower Building, Seattle, Washington 98101

CITY OF CORDOVA
ALASKA

SOLID WASTE BALER FACILITIES

PLAN AND ONE LINE DIAGRAM

Des. GTG | Civil Rev. KLC | Elec. Rev. | W/O UU-1537-XG3-AB
Dwn. CN | Mech. Rev. LWL | Struc. Rev. DJC
Ckd. EES | Appd. | Date 4/5/84

743-E-2.2

SECTION X

ARMCO STEEL BUILDING PLANS (Partial Set)