ADDENDUM NUMBER ONE

June 8, 2018

To all contract bidders of record for the work titled:

Idaho Transportation Department
District #1

Sheep Creek Brine Making Facility
Sheep Creek Site
Desmet, Idaho
Benewah County

Architect's Project Number: 18054
ITD Project Number: 18-105

Please notify everyone concerned (subcontractors and suppliers) as to the issuance and contents of this Addendum prior to the date of bid opening. This Addendum is a part of the contract documents and modifies them as follows:

GENERAL

I. Pre-Bid Meeting: A copy of the pre-bid sign-in sheet and questions and answers from the meeting are included in this addendum.

II. BID DATE REVISION: June 13, 2018 @ 3:00 PM (MST - Boise)

ARCHITECTURAL

I. DRAWINGS:
   A. SHEET G1.0:
      1. CLARIFICATION: refer to Floor Plan on Sheet G1.0 for locations of tank ports, as noted in the specifications.
      2. Refer to Floor Plan, exterior concrete stair at GL’s B and 3 and ADD the following:
         i. Perimeter stem wall to be 6" thick w/ #4 rebar @ 18" o.c. each way. Hook vertical rebar into footing below.
         ii. Provide 8” x 16” continuous footing (24” minimum depth) with (2) continuous #4 rebar.
         iii. Stairs to receive #4 rebar at nosing (radius edge) and at 12” o.c. along run. Depth of concrete along run of stairs to be 6” minimum.
3. Refer to Floor Plan, interior concrete stair at GL's B and 3 and **ADD** the following:
   i. Perimeter stem wall to be 6" thick w/ #4 rebar @ 18" o.c. each way. Hook vertical rebar into slab below.
   ii. Stairs to receive #4 rebar at nosing (radius edge) and at 12" o.c. along run. Depth of concrete along run of stairs to be 6" minimum.

4. **CLARIFICATION:** Contractor to provide concrete pads for Pump P-2 and exhaust fan plenum EF-1. Refer to M4.1 for locations.
   i. Pump P-2: see Detail 7/M5.0. Approximate size of concrete pad to be 2'-0" x 4'-0" (verify with product cut sheet at time of construction).
   ii. Exhaust Fan EF-1: see Detail 8/M5.0. Approximate size of concrete pad to be 3'-0" x 5'-0" (verify with product cut sheet at time of construction).

B. SHEET A2.0:
   1. **ADD** the following to Details 1, 2, 3, and 4, and Sections A and B:
      i. Over the entire roof provide standing seam metal roof system (see Section 074116) over 1/2" CDX Plywood over ice and snow shield underlayment over polyiso insulation. Attach plywood with SIP screws through polyiso insulation into metal decking.
   2. **ADD** the following to Details 1, 2, and 3: fascia installation to be per roofing manufacturer’s recommendations.
   3. **REVISE:** do NOT paint galvanized metal decking as originally noted on the drawings. The decking is galvanized and is not to be painted.

C. SHEET A3.0 – ROOM FINISH SCHEDULE:
   1. **ADD** to General Finish Schedule Note ‘A’ **DO NOT PAINT METAL DECKING**.

II. SPECIFICATIONS:
   A. SECTION 000110 – TABLE OF CONTENTS
      1. **REVISE** 083330 to be “Overhead Doors”. (NOT “coiling”).

   B. SECTION 004100 – BID PROPOSAL FORM
      1. **REVISED BID FORM (SEE ATTACHMENTS)**.

   C. SECTION 061000 – ROUGH CARPENTRY
      1. **ADD** 2.3-B: Sloped Roof Sheathing: CDX, 1/2 inches thick; Span Rating: 40/20; 48 x 96 inch sized sheets, square edges

   D. SECTION 074113 – FORMED METAL ROOF PANELS
      1. **DELETE** Section 074113 (Formed Metal Roof Panels) in its entirety.

   E. SECTION 074116 – STANDING SEAM METAL ROOF PANELS
      1. **REPLACE** Section 074113 (Formed Metal Roof Panels) with Section 074116 (Standing Seam Metal Roof Panel) attached to this addendum.

   F. SECTION 083330 – OVERHEAD DOORS
      1. **ADD** attached Section 083330 (Overhead Doors) in its entirety.
G. SECTION 099000 - PAINTING

1. ADD: Sherwin Williams Macropoxy 646 (B58W610), or equal, to be used for interior coating throughout (exposed steel joists, CMU, doors, frames, railings, etc.). Provide compatible primer respectively for each substrate. Prep surfaces per manufacturer’s recommendations for each respective substrate. Verify that shop primer on steel joists is compatible with painting substrate.

2. REVISE: do NOT paint galvanized metal decking.

STRUCTURAL

I. DRAWINGS:
A. SHEET S1.1 – METAL DECKING NOTES:

1. REVISE: Metal decking finish to be G90 Galvanized at ALL locations.

B. SHEET S2.0 – FOUNDATION PLAN:

1. CLARIFICATION: refer to location between Office and Brine Bay where vinyl window is being installed. This location to receive CMU down to the floor (under window).

2. CLARIFICATION: refer to M4.0 and EF-1 location at northeast corner of building. There is a 14” underground duct that needs to route through the foundation wall at this location. Step footing down at this location to allow duct penetration and clearances as noted in 9/S1.3. See Detail 7/S1.3 for “Stepped Footing” detail.

C. SHEET S5.0:

1. Refer to Detail 5/S5.0:
   i. REVISE 6x4 bent plate to be 7.5x4 LLV.
   ii. ADD continuous metal closures at top of wall to contain insulation, as shown in details 1, 2, and 3 on A2.0.

2. Refer to Detail 6/S5.0:
   i. ADD 6x4 bent plate (16 ga) to be installed on top of deck.

3. CLARIFICATION: the bent plate (16 ga) around perimeter of roof is for fastening of roofing fascia and gutters.

MECHANICAL

I. DRAWINGS:
A. SHEET M3.0:

1. REVISE Sheet Note ‘1’ to read as follows: ITEMS INSIDE THIS BOUNDARY ARE SUPPLIED PER SECTION 119010 (STORAGE TANKS) AND SECTION 119020 (BRINE MAKER) AND TO BE INSTALLED BY THE CONTRACTOR.

B. SHEET M4.2:
1. **REVISE/ADD:** see attached *Drawing MSK-001* for revised sewer line routing and cleanouts.

**PRE-BID MEETING QUESTIONS AND ANSWERS:**

A. QUESTION: Please clarify Bid Date and time.  
RESPONSE: Bid Time Has Changed: June 13, 2018 at 3:00 PM (MST)

B. QUESTION: How should the bid envelope be addressed?  
RESPONSE: The bid envelope should be addressed to:  

**IDAHO TRANSPORTATION DEPARTMENT**  
**3311 STATE STREET**  
**BOISE, IDAHO 83707**  
**ATTENTION: TONY PIRC**  
**BID PROPOSAL: SHEEP CREEK BRINE FACILITY**

C. QUESTION: Will there be any Owner furnished, Contractor installed equipment?  
RESPONSE: The propane tank to be provided and installed by ITD’s vendor. The storage tanks and brine maker are to be provided and installed by the Contractor.

D. QUESTION: Does the General Contractor cover the costs of the building permit?  
RESPONSE: No. ITD will pay for the building permit, but General Contractor will pay for and obtain all other permits.

E. QUESTION: Will an A/E Budget be posted?  
RESPONSE: A/E Budget: $600,000

F. QUESTION: Will there be access to water on site?  
RESPONSE: ITD will provide a water truck as needed.

G. QUESTION: Will a geotech soils report be provided?  
RESPONSE: No. Structural foundation was designed per code minimum 1,500 psi soil pressure.

H. QUESTION: Does the General Contractor include costs for compaction and concrete testing?  
RESPONSE: No. ITD will pay for materials testing costs, but the General Contractor is responsible for testing coordination with designated testing firm.

I. QUESTION: Will alternate manufacturers be considered for the Brine Equipment?  
RESPONSE: Substitution requests are permitted, showing they meet the same requirements that are specified.

J. QUESTION: Is the General Contractor responsible for material costs associated with Brine Equipment Start Up?  
RESPONSE: No. ITD will provide the materials (salt and water supply from well) for Brine Equipment start up. The manufacturer’s rep for the brine maker will train ITD on how to use the equipment.
End of Addendum One
IDaho transportation department
sheep creek brine facility
bid proposal form

TO: Idaho Transportation Department
    P.O. Box 83720
    Boise, Idaho 83720
    Attn: Tony Pire – Bid Proposal/Sheep Creek Brine Facility

Bidding Contractor:

In compliance with your Invitation for Bid for the construction of (ITD Project No.18105, Sheep Creek Brine Facility), having examined the bidding and contract documents and the site of the proposed work, and being familiar with all of the conditions surrounding the construction of the proposed project, including the availability of materials and labor, the Bidder hereby proposes to furnish all labor, materials and supplies, and to provide the service and insurance in accordance with the Bidding Requirements and Contract Documents, within the time set forth therein, and at the price(s) stated below. These prices are to cover all expenses incurred in performing the work required under the Contract Documents.

Bidder hereby agrees to commence work under this contract on a date to be specified in a written "Notice to Proceed" by the Construction Manager and to substantially complete the Work within 120 consecutive calendar days thereafter.

Scope of Work:

The complete work of furnishing and installing Sheep Creek Brine Facility per plans and specifications.

Provide safety barricades/fencing around work area.

General Provisions:

Bidder shall assign and provide to the site, a designated, full-time, competent supervisor over all of the bidder’s activities; supervisor shall have knowledge of the trade work and be of capacity to make decisions on the behalf of the Bidder.

The successful bidder shall coordinate with the Owner’s staff as the work progresses with respect to any changes in scope of work, material selections, methods, scheduling and quality.

The “Scope of Work” description above is intended to describe the general scope of the work included in this Bid Package. Incidental work related to the general scope outlined above, not specifically described, is deemed to be included. It is the intent the bidder for this work will provide all resources necessary for complete functioning systems and installations.

It is the responsibility of the bidder to review all of the plans and specifications and include all work described in this Bid Package related to this work that is referenced in all bid documents. Bidder should be familiar with the scope of all other bid packages. The Bidder shall ask any questions and bring to the Construction Manager’s attention, any discrepancies in the bid documents prior to submitting this bid proposal.
It is the responsibility of the bidder to clean up and remove refuse related to their work on a daily basis unless specifically noted otherwise or directed otherwise in the field.

OSHA safety regulations will be strictly enforced. All workers on site will adhere to OSHA required PPE and be easily identifiable with minimum Hi-Vis Class 2 safety vests worn at all times.

Any and all concerns and questions through to bidding phase will be addressed to the Construction Manager. Do not request clarifications from the Architect, Engineer or the Owner. All questions shall be emailed to Roy Jackson at: rjackson@pettrainc.net

Bidder warrants that bid has been prepared and that any contract resulting from acceptance of this bid is subject to Subparagraph 4.1.8.1 of the Supplementary Instructions to Bidders.

BASE PROPOSAL

Bidder understands that the Owner reserves the right to reject any or all bids and to waive any informality in the bidding.

The bidder agrees that this bid shall be good and may not be withdrawn for a period of 45 calendar days after the scheduled closing time for receiving bids.

The bid security attached in the amount of 5% of the bid amount is to become the property of the Owner in the event the contract and bond are not executed within the time set forth, as liquidated damages for the deal and additional expense to the Owner caused thereby.

Upon receipt of written notice of the acceptance of this bid, Bidder will execute the formal contract attached within 10 days and deliver a Surety Bond or Bonds as required by Article 7 of the Instructions to Bidders as modified by the Supplementary Instructions to Bidders.

Pursuant to Section 67-2310, Idaho Code, commonly known as the naming law, the names and addresses of the entities who will perform the plumbing, heating and air conditioning and electrical work, subject to approval of Owner and Architect, if Undersigned is awarded the Contract, are as follows:

Plumbing (PWCLB Category 15400)
(Name)
(Address)
Idaho Public Works Contractors License No.
Idaho Plumbing Contractors License No.

Heating, Ventilating & Air Conditioning (HVAC) (PWCLB Category 15700)
(Name)
(Address)
Idaho Public Works Contractors License No.
Idaho HVAC Contractors License No.

Electrical (PWCLB Category 16000)
(Name)
(Address)
Idaho Public Works Contractors License No.
Idaho Electrical Contractors License No.

ITD District 3 Shop Maintenance Building,
Bid Package #1 Hazardous Material Abatement & Selective Demolition Page 3 of 3
FAILURE TO NAME A PROPERLY LICENSED CONTRACTOR IN EACH OF THE ABOVE CATEGORIES WILL RENDER THE BID UNRESPONSIVE AND VOID. If a bidder determines plumbing, heating/air conditioning and/or electrical work is not required to be done by a licensed contractor, bidder should complete the line referencing that work with "Not applicable" and provide an explanation.

Should the listing of subcontractors change due to selection of alternates or other similar circumstances, attach explanation.

Respectfully submitted,

Acknowledgment Addenda

Bidder agrees to perform all of the base proposal work described in the specifications and shown on the plans for the sum of:

Base Bid Amount: _____________________________________________________________

($) ____________________________

Alternate #1
Exterior Concrete Slab: _______________________________________________________

($) ____________________________

Alternate #2
Specialty Floor Coating: ____________________________________________________

($) ____________________________

Alternate #3
Epoxy Wall Coating: _______________________________________________________

($) ____________________________
The undersigned notifies that he/she is, of this date, duly licensed as an Idaho Public Works Contractor and further that he/she possesses Idaho Public Works Contractor’s License No.__________________, and is domiciled in the State of__________________.

Company Name: __________________________________________________________

Business Address: ________________________________________________________

By:__________________________________________ Title:________________________
_________________________________________________ (Authorized Signature)

Dated this________day of________, 2018

Phone: ___________________________ email:_________________________ Fax:________

(Seal - if bid is by corporation)

Have you remembered to initial and include all pages of this Bid Package, to include your bid security (bid bond or a certified or a cashier’s check), Contractor’s Affidavit Concerning Alcohol and Drug-Free Workplace and a signed copy of the Bidder’s Acknowledgment Statement in with your bid? If these are not included, your bid will be considered non-responsive.

END OF BID PROPOSAL
# Sheep Creek Brine Facility
## Idaho Department of Transportation
### Meeting Sign In

**Subject:** Pre-Bid Conference  
**DATE:** June 4, 2018

<table>
<thead>
<tr>
<th>Name /Email</th>
<th>Company/Phone Number</th>
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| BRAD WEAVER  
[bbrad_weaver]pwcinc.com | Petra | 208-601-5414 |
| Tony Pirs  
tony.pirs@itd.idaho.gov | ITD | (208) 334 - 0256 |
| Christian Trocco  
[christian_trocco]nnacincc.com | NNAC | 208 635 5400 |
| SEAN DORING  
[seandoing]kmcinc.com | KACI | 509 432 3935 |
| STEPHEN WILLIAMS  
[stephen.williams]contractor.com | TNS | 208 935 7555 |
| Will Welch  
[will@cmwcc-inc.com] | WM Welch Corp | 208-773-5226 |
| Ron Isbell  
[ron@cmwcc-inc.com] | JML Construction | 208-762-3611 |
| Richard J. Barnes  
rjbruns2017@gmail.com | RJ Contractors, Moscow, ID |  |
| Dan Williams  
dan@83840@hotspring.com | Accelerated  
| Rob Sawyer  
[robsawyer]covenantengineer.com | Covenant Engineering | 208-792-1904 |
| Ben Luscnin  
brcardioconsulting.com | Castellow Korn Architects | 208-746-0183 |
SEWER CLEANOUTS

SHEET NOTES

8 SEWER CLEANOUT, REFER TO DETAIL 2, SHEET M4.2

SCALE: NONE

SEWER CLEANOUT

STAMP CONCRETE WITH LABEL "WARNING: PRESSURE SEWER LINE"

CLEANOUT PLUG

FINISHED GRADE

18 SQUARE CONCRETE PAD, TROWEL SMOOTH AND EDGE

18 BEND

WASTE LINE, LENGTH TO SUIT BURIAL DEPTH

GIVE OR 1/8 BEND IF CLEANOUT OCCURS AT END OF LINE

FLOW DIRECTION

SEWAGE ECM CLEANOUT, REFER TO DETAIL 2, SHEET M4.2
SECTION 074116 – STANDING SEAM METAL ROOF PANELS

PART 1 - GENERAL

1.1 SUMMARY
A. Section includes standing-seam metal roof panels.
A. Section includes polyisocyanurate rigid insulation.

1.2 PREINSTALLATION MEETINGS
A. Preinstallation Conference: Conduct conference at Project Site.

1.3 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.

1.4 INFORMATIONAL SUBMITTALS
A. Product test reports.
B. Warranties: Sample of special warranties.

1.5 CLOSEOUT SUBMITTALS
A. Maintenance data.

1.6 QUALITY ASSURANCE
A. Installer Qualifications: An entity that employs installers and supervisors who are trained and approved by manufacturer.
B. UL-Certified, Portable Roll-Forming Equipment: UL-certified, portable roll-forming equipment capable of producing metal panels warranted by manufacturer to be the same as factory-formed products. Maintain UL certification of portable roll-forming equipment for duration of work.
1.7 WARRANTY

A. Installer’s Warranty: Installer’s standard form in which installer agrees to repair or replace components of metal panel systems that fail in workmanship within specified warranty period.

1. Warranty Period: 5 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.

C. Special Weathertightness Warranty: Manufacturer’s standard form in which manufacturer agrees to repair or replace standing-seam metal roof panel assemblies that fail to remain weathertight, including leaks, within specified warranty period.

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

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Energy Performance: Provide roof panels that are listed on the EPA/DOE's ENERGY STAR "Roof Product List" for low slope roof products.

B. Energy Performance: Provide roof panels according to one of the following when tested according to CRRC-1:

1. Three-year, aged solar reflectance of not less than 0.55 and emissivity of not less than 0.75.
2. Three-year, aged Solar Reflectance Index of not less than 64 when calculated according to ASTM E 1980.

C. Structural Performance: Provide metal panel systems capable of withstanding the effects of the following loads, based on testing according to ASTM E 1592:

1. Wind Loads: As indicated on Drawings.
2. Other Design Loads: As indicated on the Drawings.
3. Deflection Limits: For wind loads, no greater than 1/240 of the span.

D. 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:


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

F. Hydrostatic-Head Resistance: No water penetration when tested according to ASTM E 2140.

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

1. Uplift Rating: UL 90.

H. 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.

I. 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.

2.2 STANDING-SEAM METAL ROOF PANELS

A. General: Provide factory-formed metal roof panels designed to be installed by lapping and interconnecting raised side edges of adjacent panels with joint type indicated and mechanically attaching panels to supports using concealed clips in side laps. Include clips, cleats, pressure plates, and accessories required for weathertight installation.

1. Steel Panel Systems: Unless more stringent requirements are indicated, comply with ASTM E 1514.
2. Aluminum Panel Systems: Unless more stringent requirements are indicated, comply with ASTM E 1637.

B. Vertical-Rib, Seamed-Joint, Standing-Seam Metal Roof Panels: Formed with vertical ribs at panel edges and intermediate stiffening ribs symmetrically spaced between ribs; designed for sequential installation by mechanically attaching panels to supports using concealed clips located under one side of panels, engaging opposite edge of adjacent panels, and mechanically seaming panels together.

1. Basis-of-Design Product: Subject to compliance with requirements, provide Metal Sales Magna-Loc or comparable product by one of the following:
   a. Advanced Architectural Products.
   b. AEP Span; a BlueScope Steel company.
   c. Architectural Building Components.
   d. Architectural Metal Systems; a Nucor company.
   e. ATAS International, Inc.
g. CENTRIA Architectural Systems.

h. Dimensional Metals, Inc.

i. Englert, Inc.

j. Fabral.

k. Firestone Metal Products, LLC.

l. Flexospan Steel Buildings, Inc.

m. Garland Company, Inc. (The)

n. IMETCO.

o. MBCI; a division of NCI Building Systems, L.P.

p. McElroy Metal, Inc.

q. Merchant & Evans.

r. Metal-Fab Manufacturing, LLC.

s. Morin; a Kingspan Group company.

t. Petersen Aluminum Corporation.

u. Ryerson, Inc.

v. Ultra Seam, Inc.

w. Union Corrugating Company.

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

a. Nominal Thickness: 24 gauge

b. Exterior Finish: equal or better than Basis of Design product specified.

c. Color: As selected by Architect from manufacturer’s standard range.

3. Clips: concealed at each standing seam location to accommodate thermal movement. Provide spacing and fasteners as recommended by panel manufacturer.


5. Panel Height: 2 inches.

2.3 POLYISOCYANURATE BOARD INSULATION

A. Manufactured from glass-fiber reinforced polyisocyanurate foam:

1. Comply with FS HH-I-1972/1, Type 1, Class 2 requirements.

2. Facings: Aluminum foil or non-asphaltic facers laminated to each side of the boards.

3. Aged R-values (per inch):
   a. 6.0+ at 40 degrees F.
   b. Provide 6” of insulation.

4. Manufacturers: Provide products complying with requirements of the contract documents and made by one of the following:
   a. Celeotex Corporation.
   b. Apache Products Company.
5. Insulation must be fully compatible and acceptable for use by the single ply membrane roofing manufacturer.

2.4 UNDERLAYMENT MATERIALS

A. Self-Adhering, High-Temperature Underlayment: Provide self-adhering, cold-applied, sheet underlayment, a minimum of 30 mils thick, specifically designed to withstand high metal temperatures beneath metal roofing. Provide primer when recommended by underlayment manufacturer.

2. Low-Temperature Flexibility: Passes after testing at minus 20 deg F; ASTM D 1970.
3. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
   a. Carlisle Residential, a division of Carlisle Construction Materials; WIP 300HT.
   b. Grace Construction Products, a unit of W. R. Grace & Co.; Grace Ice and Water Shield HT.
   c. Henry Company; Blueskin PE200 HT.
   d. Kirsch Building Products, LLC; Sharkskin Ultra SA.
   e. Metal-Fab Manufacturing, LLC; MetShield.
   f. Owens Corning; WeatherLock Specialty Tile and Metal Underlayment.

B. Slip Sheet: Manufacturer’s recommended slip sheet, of type required for application.

2.5 MISCELLANEOUS MATERIALS

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

B. 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.
C. 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, eaves, rakes, corners, bases, framed openings, ridges, fasciae, and fillers. Finish flashing and trim with same finish system as adjacent metal panels.

D. Gutters and Downspouts: Formed from same material as roof panels according to SMACNA’s “Architectural Sheet Metal Manual.” Finish to match roof fascia and rake trim.

E. Panel Fasteners: Self-tapping screws designed to withstand design loads.

F. 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 (13 mm) wide and 1/8 inch (3 mm) thick.
   2. Joint Sealant: ASTM C 920; as recommended in writing by metal panel manufacturer.

2.6 FABRICATION

A. 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.

B. 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.

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

D. 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.

E. 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.

2.7 FINISHES
A. Panels and Accessories:
   1. Exposed Finish: equal or better than Basis of Design product specified.
   2. Concealed Finish: White or light-colored acrylic or polyester backer finish.

PART 3 - EXECUTION

3.1 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.

3.2 UNDERLAYMENT INSTALLATION

A. Self-Adhering Sheet Underlayment: Apply primer if required by manufacturer. Comply with temperature restrictions of underlayment manufacturer for installation. Apply over entire roof and wrap fascia, wrinkle free, in shingle fashion to shed water, and with end laps of not less than 6 inches (152 mm) staggered 24 inches (610 mm) between courses. Overlap side edges not less than 3-1/2 inches (90 mm). Roll laps with roller. Cover underlayment within 14 days.

   1. Apply over the entire roof surface and fascias.

B. Slip Sheet: Apply slip sheet over underlayment before installing metal roof panels.

C. Flashings: Install flashings to cover underlayment to comply with requirements specified in Section 076200 "Sheet Metal Flashing and Trim."

3.3 METAL PANEL INSTALLATION

A. Standing-Seam Metal Roof Panel Installation: Fasten 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. Install pressure plates at locations indicated in manufacturer’s written installation instructions.
   3. Snap Joint: Nest standing seams and fasten together by interlocking and completely engaging factory-applied sealant.
   4. Seamed Joint: Crimp standing seams with manufacturer-approved, motorized seamer tool so clip, metal roof panel, and factory-applied sealant are completely engaged.
   5. Watertight Installation:

      a. Apply a continuous ribbon of sealant or tape to seal joints of metal panels, using sealant or tape as recommend in writing by manufacturer as needed to make panels watertight.
b. Provide sealant or tape between panels and protruding equipment, vents, and accessories.

c. At panel splices, nest panels with minimum 6-inch (152-mm) end lap, sealed with sealant and fastened together by interlocking clamping plates.

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 as indicated. Install work with laps, joints, and seams that will be permanently watertight and weather resistant.

3.4 BOARD INSULATION INSTALLATION

A. All boards must be mechanically attached by 3-inch FM-approved plate and screw. Boards must be fastened sufficiently to conform to the substrate surface geometry.
   1. Only install quantity of insulation which can be covered with membrane within the working day or before start of unacceptable weather and collection of dirt and debris.
   2. Butt joints tightly, gaps between insulation and adjacent construction shall not exceed ¼ inch.
   3. Trim insulation or provide pre-shaped units at drains to provide positive slope for 24 inches around drain.
   4. Shape insulation or provide preformed units to provide crickets, saddles and tapered areas as indicated or required to provide drainage.

B. Install insulation in one or more layers with end joints staggered.

3.5 CLEANING AND PROTECTION

A. 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 074116
SECTION 083330 - OVERHEAD DOORS

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes:

1. Doors with insulated steel-framed steel panels.

B. Related Sections:

1. Section 087100, Door Hardware: for lock cylinders and keying.
2. DIV 26, Conductors and Cables: for electrical service and connections for powered operators, and accessories.
3. DIV 26, Enclosed Switches and Circuit Breakers: for disconnect switches and circuit breakers for powered operators.

1.2 DEFINITIONS

A. Operation Cycle: One complete cycle of a door begins with the door in the closed position. The door is then moved to the open position and back to the closed position.

1.3 PERFORMANCE REQUIREMENTS

A. Structural Performance: Provide sectional overhead doors capable of withstanding the effects of gravity loads and the following loads and stresses without evidencing permanent deformation of door components:

1. Wind Load: Uniform pressure (velocity pressure) of 70 lb./sq. ft. (960 Pa), acting inward and outward. Doors to meet or exceed ANSI A216.1 and NAGDM #102.

B. Operation-Cycle Requirements: Design sectional overhead door components and operator to operate for not less than 100,000 cycles.

1.4 SUBMITTALS

A. Product Data: For each type and size of sectional overhead door and accessory. Include details of construction relative to materials, dimensions of individual components, profiles, and finishes. Provide roughing-in diagrams, operating instructions, and maintenance information. Include the following:

1. Setting drawings, templates, and installation instructions for built-in or embedded anchor devices.
2. Summary of forces and loads on walls and jambs.
3. Motors: Show nameplate data and ratings; characteristics; mounting arrangements; size and location of winding termination lugs, conduit entry, and grounding lug; and coatings.

B. Shop Drawings: For special components and installations not dimensioned or detailed in manufacturer’s data sheets.
1. Wiring Diagrams: Detail wiring for power, signal, and control systems. Differentiate between manufacturer-installed and field-installed wiring and between components provided by door manufacturer and those provided by others.

C. Samples for Initial Selection: Manufacturer's samples showing the full range of colors and textures available for units with factory-applied finishes.

D. Installer Certificates: Signed by manufacturer certifying that installers comply with specified requirements.

E. Manufacturers’ Certificates: Signed by manufacturers certifying that they comply with requirements specified in "Quality Assurance" Article. On request, submit evidence of manufacturing experience.

1.5 QUALITY ASSURANCE

A. Installer Qualifications: Engage an experienced installer who is an authorized representative of the sectional overhead door manufacturers for both installation and maintenance of units required for this Project.

B. Manufacturer Qualifications: Engage a firm experienced in manufacturing sectional overhead doors similar to those indicated for this Project and with a record of successful in-service performance.

C. Product Options: Drawings indicate size, profiles, and dimensional requirements of sectional overhead doors and accessories and are based on the specific system indicated. Other manufacturers' systems with equal performance and dimensional characteristics may be considered. Refer to Division 1 Section "Substitutions."

D. Listing and Labeling: Provide electrically operated fixtures specified in this Section that are listed and labeled.

1. The Terms "Listed" and "Labeled": As defined in NFPA 70, Article 100.

PART 2 - PRODUCTS

2.1 STEEL SECTIONAL DOOR MANUFACTURERS

A. Subject to compliance with project requirements, manufacturers offering Steel Sectional Door Products which may be incorporated in the Work include the following:

1. Overhead Door Corporation, Farmer’s Branch, TX (800) 972-1730.
2. Raynor Garage Doors, Dixon, IL (800) 472-9667.
4. Windsor Door; A United Dominion Company, Little Rock, AR (800) 946-3767.

2.2 SECTIONAL DOORS - STEEL SECTIONS

A. Construct door sections from galvanized, structural-quality carbon-steel sheets complying with ASTM A 653 (ASTM A 653M), commercial quality, with a minimum yield strength of 33,000 psi (225 MPa) and a minimum G60 (Z180) zinc coating.
   1. Exterior Steel Sheet Thickness: 20 ga.
   2. Exterior Section Face: Flat.
   3. Interior Steel Thickness: 20 ga.
   4. Interior Section Face: Flat.

B. Fabricate door panels from a single sheet to provide sections 24 inches high and nominally 2 inches (or 3 inches) deep. Roll horizontal meeting edges to a continuous, interlocking, keyed, rabbeted, shiplap, or tongue-in-groove weathertight seal, with a reinforcing flange return.
   1. Provide insulated door sections with continuous thermal-break construction, separating faces of door.
   2. Doors shall have minimum R-17 insulation rating.
   3. Refer to Drawings for panel and glazing layout.

C. Enclose open section with not less than 0.064-inch galvanized steel channel end stiles welded in place. Provide not less than 0.064-inch galvanized intermediate stiles, cut to door section profile, spaced at not more than 48 inches o.c., and welded in place.

D. Reinforce bottom section with a continuous channel or angle complying with bottom section profile and allowing installation of astragal.

E. 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.

F. Provide reinforcement for hardware attachment.

G. Insulation: Manufacturer's standard rigid cellular polystyrene or polyurethane-foam-type thermal insulation, foamed in place to completely fill inner core of section, pressure bonded to face sheets to prevent delamination under wind load and with maximum flame-spread and smoke-developed indices of 75 and 450, respectively, according to ASTM E 84. Enclose insulation completely, with no exposed insulation material evident.

H. Fabricate sections so finished door assembly is rigid and aligned, with tight hairline joints, and free of warp, twist, and deformation.

I. Finish galvanized steel door sections as follows:
   1. General: Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
   2. Surface Preparation: Clean galvanized surfaces with nonpetroleum solvent so surfaces are free of oil and surface contaminants.
   3. Pretreat zinc-coated steel, after cleaning, with a conversion coating of type suited to organic coating applied over it.
4. Apply manufacturer's standard primer and finish coats to interior and exterior door faces after forming, according to coating manufacturer's written instructions for application, thermosetting, and minimum dry film thickness.
   a. Color: As selected by Architect from manufacturer standard selections.

2.3 SECTIONAL DOORS - TRACKS, SUPPORTS, AND ACCESSORIES

A. Tracks: Provide manufacturer's standard, galvanized steel track system, sized for door size and weight, designed for lift type indicated and clearances shown, and complying with ASTM A 653 (ASTM A 653M), for minimum G60 (Z180) zinc coating. 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 at 2 inches (50 mm) o.c. for door-drop safety device. Slope tracks at proper angle from vertical or otherwise design to ensure tight closure at jambs when door unit is closed. Weld or bolt to track supports.

B. Weatherseals: Provide replaceable, adjustable, continuous, compressible weather-stripping gaskets of flexible vinyl, rubber, or neoprene fitted to bottom and at top of overhead door.
   1. Provide motor-operated doors with combination bottom weatherseal and sensor edge.
   2. In addition, provide continuous flexible seals at door jambs for a weathertight installation.

C. Lift type/style: “High Lift”, accommodating project conditions. Refer to Drawings. Coordinate installation thoroughly with other work of the project prior to manufacturing and installation.

2.4 SECTIONAL DOORS - 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: Provide heavy-duty galvanized steel hinges, of not less than 0.0747-inch-thick uncoated steel, at each end stile and at each intermediate stile, per manufacturer's written recommendations for door size. Attach hinges to door sections through stiles and rails with bolts and lock nuts or lock washers and nuts. Use rivets or self-tapping fasteners where access to nuts is not possible. Provide double-end hinges, where required, for doors exceeding 16 feet in width, unless otherwise recommended by door manufacturer.

C. Rollers: Provide heavy-duty rollers, with steel ball bearings in case-hardened steel races, mounted with varying projections to suit slope of track. Extend roller shaft through both hinges where double hinges are required. Provide 3-inch-diameter roller tires for 3-inch track, 2-inch-diameter roller tires for 2-inch track, and as follows:
   1. Case-hardened steel tires.

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

E. Fabricate locking device assembly with lock, spring-loaded dead bolt, operating handle, cam plate, and adjustable locking bar to engage through slots in tracks.
   1. Locking Bars: Full-disc Cremone type, both jamb sides, operable from inside only.
   2. Lock cylinder is specified in another Division 8 Section.
F. Chain Lock Keeper: Suitable for padlock.

G. Where door unit is power operated, provide safety interlock switch to disengage power supply when door is locked.

2.5 SECTIONAL DOORS - COUNTERBALANCING MECHANISM

A. Torsion Spring: Operation by torsion-spring counterbalance mechanism consisting of adjustable-tension torsion springs, fabricated from oil-tempered-steel wire mounted on a cross-header tube or steel shaft. Connect to door with galvanized aircraft-type lift cables with cable safety factor of at least 5 to 1. Provide springs calibrated for 100,000 cycles minimum.

B. Cable Drums: Provide cast-aluminum or gray-iron casting cable drums grooved to receive cable. Mount counterbalance mechanism with manufacturer's standard ball-bearing brackets at each end of shaft. Provide 1 additional midpoint bracket for shafts up to 16 feet long and 2 additional brackets at one-third points to support shafts more than 16 feet long, unless closer spacing is recommended by door manufacturer.

C. Cable Safety Device: Include a spring-loaded, steel or bronze cam mounted to bottom door roller assembly on each side, designed to automatically stop door if either cable breaks.

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

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

2.6 SECTIONAL DOORS - ELECTRIC DOOR OPERATORS

A. General: Provide electric door operator assembly of size and capacity recommended and provided by door manufacturer for door and operational life specified, complete with electric motor and factory-prewired motor controls, starter, gear-reduction unit, solenoid-operated brake, clutch, remote-control stations, control devices, integral gearing for locking door, and accessories required for proper operation.

B. Comply with NFPA 70.

C. Disconnect Device: Provide hand-operated disconnect or mechanism for automatically engaging sprocket-chain operator and releasing brake for emergency manual operation while disconnecting motor, without affecting timing of limit switch. Mount disconnect and operator so they are accessible from floor level. Include interlock device to automatically prevent motor from operating when emergency operator is engaged.

D. Design operator so motor may be removed without disturbing limit-switch adjustment and without affecting emergency auxiliary operator.

E. Provide control equipment complying with NEMA ICS 1, NEMA ICS 2, and NEMA ICS 6, with NFPA 70 Class 2 control circuit, maximum 24-V, ac or dc.
F. Door-Operator Type: Provide unit consisting of electric motor and the following:

G. Electric Motors: Provide high-starting torque, instantly reversible, continuous-duty, Class A insulated, electric motors, complying with NEMA MG 1, with overload protection, sized to start, accelerate, and operate door in either direction, from any position, at not less than 2/3 fps and not more than 1 fps, without exceeding nameplate ratings or considering service factor. Electrical motor to be 1-1/2 HP., 240v, single phase.
   1. Type: Polyphase, medium-induction type.
   2. Service Factor: According to NEMA MG 1, unless otherwise indicated.
   3. Coordinate wiring requirements and electrical characteristics of motors with building electrical system.
   4. Provide open dripproof-type motor, and controller with NEMA ICS 6, Type 1 enclosure.

H. Remote-Control Station: Provide momentary-contact, 3-button control station with push-button controls labeled "Open," "Close," and "Stop."
   1. Provide interior units, full-guarded, surface-mounted, heavy-duty type, with general-purpose NEMA ICS 6, Type 1 enclosure.

I. Obstruction Detection Device: Provide each motorized door with indicated external automatic safety sensor able to protect full width of door opening. Activation of sensor immediately stops and reverses downward door travel.
   1. Sensor Edge: Provide each motorized door with an automatic safety sensor edge, located within astragal or weather stripping mounted to bottom bar. Contact with sensor immediately stops and reverses downward door travel. Connect to control circuit using manufacturer's standard take-up reel or self-coiling cable.
      a. Provide electrically actuated automatic bottom bar.

J. Limit Switches: Provide adjustable switches, interlocked with motor controls and set to automatically stop door at fully opened and fully closed positions.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine wall and overhead areas, including opening framing and blocking, with Installer present, for compliance with requirements for installation tolerances, clearances, and other conditions affecting performance of Work of this Section.
   1. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. General: Install door, track, and operating equipment complete with necessary hardware, jamb and head mold strips, anchors, inserts, hangers, and equipment supports according to Shop Drawings, manufacturer's written instructions, and as specified.
B. Fasten vertical track assembly to framing at not less than 24 inches o.c. Hang horizontal track from structural overhead framing with angle or channel hangers welded and bolt fastened in place. Provide sway bracing, diagonal bracing, and reinforcement as required for rigid installation of track and door-operating equipment.

3.3 ADJUSTING

A. Lubricate bearings and sliding parts; adjust doors to operate easily, free from warp, twist, or distortion and fitting weathertight for entire perimeter.

END OF SECTION 083330
SECTION 099600 – HIGH PERFORMANCE FLOOR COATING

(ALTERNATE NO. 2)

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. High Performance Floor Coating for Concrete Floors

B. Product Data: For each type of product.

PART 2 - PRODUCTS

A. Product: specification forthcoming from Idaho Transportation Department. To be provided after bid award and prior to start of construction.

PART 3 - BID ALLOWANCE

A. Include the following allowance cost in bid proposal: $9,000.
   1. This allowance includes material cost, receiving, handling, and installation.
   2. Contractor to determine overhead and profit in addition to this allowance.

B. ADJUSTMENT OF ALLOWANCES AFTER BID AWARD
   1. Allowance Adjustment: To adjust allowance amounts, prepare a Change Order proposal based on the difference (add or deduct) between purchase amount and the allowance. Proposal to include documentation of all direct costs associated to the specified allowance.

END OF SECTION 099600