Addendum No. 1
March 21, 2018

Project: Burgess Hall, Renovations
University of South Dakota
Vermillion, South Dakota
OSE# R0618--28X

Architect: Architecture Incorporated

Letting: Wednesday, March 28, 2018
3:00 PM CST
Office of the State Engineer
Joe Foss Building
523 East Capitol
Pierre, South Dakota 57501

Scope of this Addendum:

To all bidders and all others to whom drawings and specifications have been issued by Architecture Incorporated.

Acknowledge receipt of this addendum by listing its number and date in the bidders Form of Proposal. Failure to do so may subject bidder to disqualification. This Addendum forms a part of the Contract Documents. It modifies them as follows:

GENERAL ITEMS:

1) DRAWING 4.10 – FIRST FLOOR PLAN

a) At Restroom 136 patch, clean and seal a 1'-0" x 1'-0"section of existing floor tile outside the second toilet partition from the east.

2) DRAWINGS 4.10 & 4.11 – FLOOR PLANS

a) At Restrooms 136, 236 and 336 paint two additional cabinet unit heaters (per room) as shown on attached Supplemental Drawing SD1, dated 03-21-18.

3) DRAWING 4.30 – DOOR SCHEDULE

a) Elevations 5 & 6: Provide and install Glazed Aluminum Curtain Wall in lieu of Aluminum-Framed Entrances and Storefronts.
b) Door 110: Omit reference to 1/4" Safety Glass.
c) Door 116: Omit reference to 1/4" Safety Glass. Provide and install fire-rated and safety-rated glazing per Specification Section 088000 – GLAZING.
d) Door 216: Provide and install fire-rated and safety-rated glazing per Specification Section 088000 – GLAZING.
e) Door 310: Omit reference to 1/4" Safety Glass.

f) Door 316: Omit reference to 1/4" Safety Glass. Provide and install fire-rated and safety-rated glazing per Specification Section 088000 – GLAZING.
g) Door S102-1: Omit reference to 1/4" Fire Glass. Provide and install fire-rated and safety-rated glazing per Specification Section 088000 – GLAZING.
h) Door S102-2: Omit reference to 1/4" Fire Glass. Provide and install fire-rated and safety-rated glazing per Specification Section 088000 – GLAZING.
i) Door S201: Omit reference to 1/4" Fire Glass. Provide and install fire-rated and safety-rated glazing per Specification Section 088000 – GLAZING.
j) Door S202: Omit reference to 1/4" Fire Glass. Provide and install fire-rated and safety-rated glazing per Specification Section 088000 – GLAZING.

4) DRAWING 5.20 – BUILDING SECTIONS

a) Details 1-6: Provide and install Glazed Aluminum Curtain Wall in lieu of Aluminum-Framed Entrances and Storefronts. See attached revised Drawing Sheet 5.20.
b) Details 8, 9,10A, 10B: Provide and install .040" prefinished break metal trim to match aluminum framing as a jamb and head extension per attached revised Drawing Sheet 5.20. The metal trim shall have a hemmed return leg and shall be attached to the existing wall with 3M VHB double-sided foam tape.
c) Detail15: The existing plywood soffit at the window head shall be painted. See attached revised Drawing Sheet 5.20.

5) GENERAL

a) Minutes from the Pre-Bid Conference held on March 19, 2018 are attached to the end of this addendum.

6) SPECIFICATION SECTION – 011000 – SUMMARY

a) Page 011000-2, 1.5 Type of Contract, D. Notice to Proceed: Clarification: Notice to Proceed shall be issued as specified on or near April 11, 2018. Upon Notice to Proceed, the Contractor shall be allowed access to the site to verify existing conditions and perform other work required to process shop drawings and order long lead time items as long as they are accompanied by a USD Project Manager. Construction start date is May 7, 2018 at which time occupants will have vacated the building.

7) SPECIFICATION SECTION – 081416 – FLUSH WOOD DOORS

a) Page 081416-2, 1.5 Quality Assurance, B. Vendor Qualifications: Omit this item, certification for chain-of-custody by an FSC-accredited certification body is not required.

8) SPECIFICATION SECTION – 084113 – ALUMINUM FRAMED ENTRANCES AND STOREFRONTS

a) Page 084113-3, 2.1 Performance Requirements, C. Structural Loads : Structural Loads shall be as follows:

(i) Wind Loads:
1. Basic Wind Speed = 120 MPH
2. Rick Category Type III (ASCE 7-10)
3. Wind Importance Factor = 1.0
4. Internal Pressure Coefficient = 0.18
5. Building Design Pressure (Endzone Windward Plus Leeward) = 44 PSF

9) SPECIFICATION SECTION – 084413 – GLAZED ALUMINUM CURTAIN WALLS

a) Add the attached Specification Section to the Project Manual.

10) SPECIFICATION SECTION – 099123 – INTERIOR PAINTING

a) Page 099123-7, 3.6 Interior Painting Schedule, B. Doors and Frames (Interior/Exterior)

(i) Existing hollow metal door frames: Clean using methods recommended in writing by the paint manufacturer and provide and install Topcoat.

(ii) Existing hollow metal doors: Clean using methods recommended in writing by the paint manufacturer and provide and install Intermediate Coat and Topcoat.

MECHANICAL ITEMS:

No Items

ELECTRICAL ITEMS:

1) SPECIFICATION SECTION – Interior Lighting 26 5100

a) Page 5: See 3.3 Installation E. Suspended Ceiling Mounted Luminaires: 6. Add the following: For areas where ceilings are being replaced.

2) DRAWING 9.10 First Floor Electrical Plan –

a) First Floor Plan – Type A & AE light fixtures in Corridor 199 to be clipped to the ceiling grid.
b) Existing light switch on north wall in Reception 134 shall now be a new dimmer switch for new light fixture type F4 in this room. Provide conduit, wiring, and dimmer switch as needed.

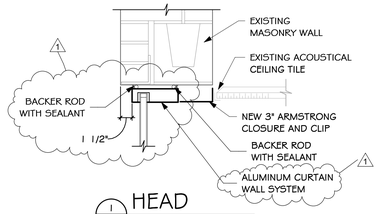
3) DRAWING 9.12 2nd & 3rd Floor Electrical Plan –

a) Second Floor Plan – Type A & AE light fixtures in Corridor 299 to be clipped to the ceiling grid.
b) Third Floor Plan – Type A & AE light fixtures in Corridor 399 to be clipped to the ceiling grid.

END OF ADDENDUM

GENERAL NOTES - BUILDING SECTIONS

a. GENERAL CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS AT THE JOB SITE. REPORT DISCREPANCIES TO THE ARCHITECT.



1 / 5.20 HEAD
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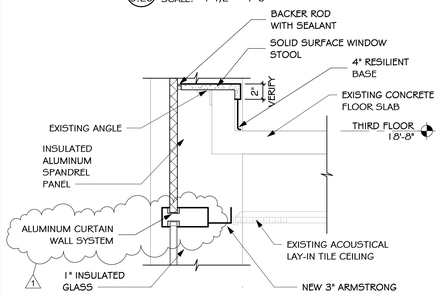

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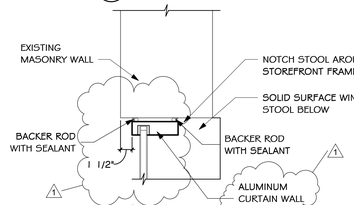

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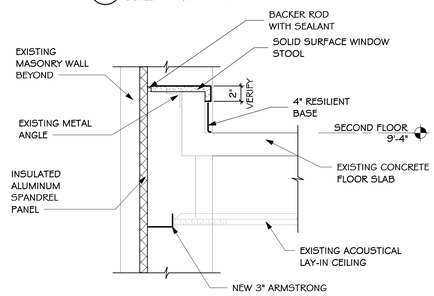

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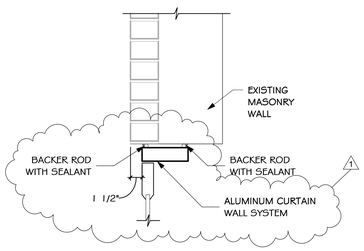

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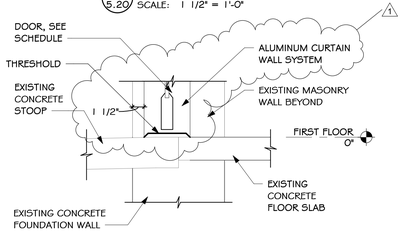

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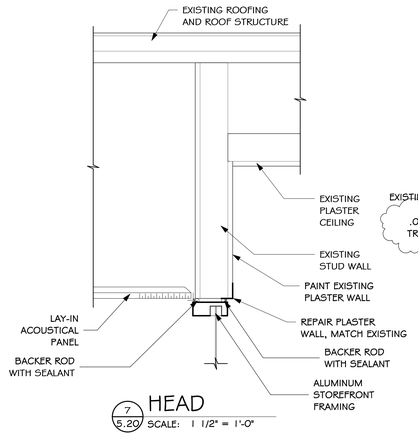

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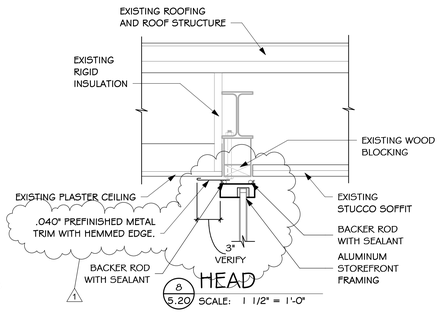

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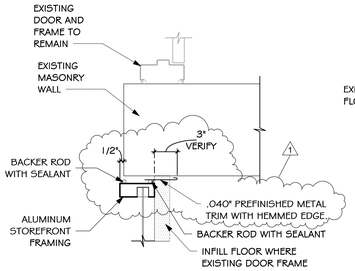

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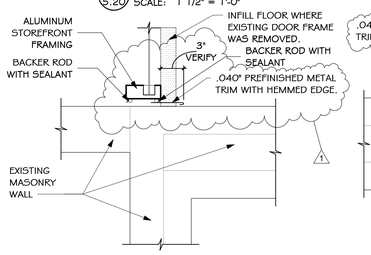

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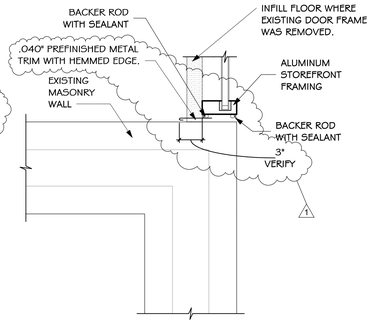

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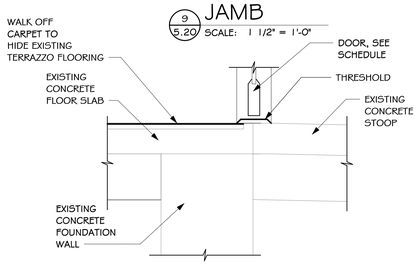

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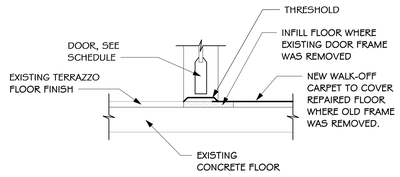

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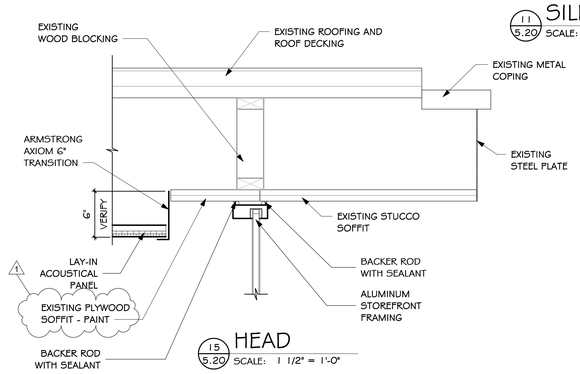

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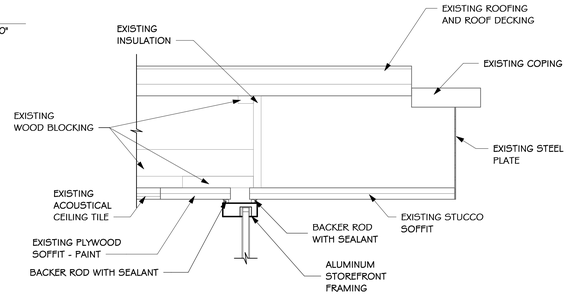

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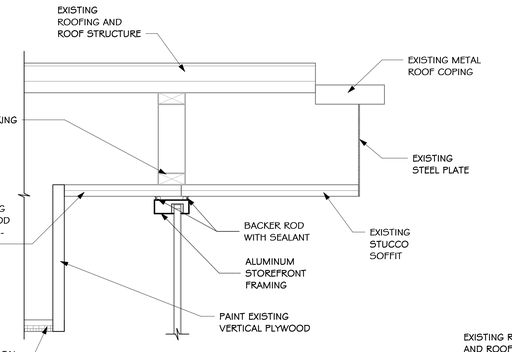

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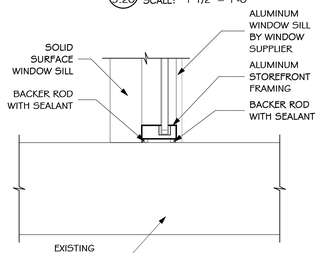

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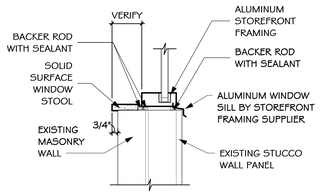

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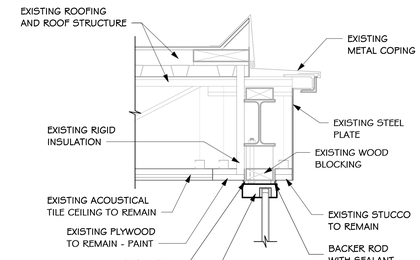

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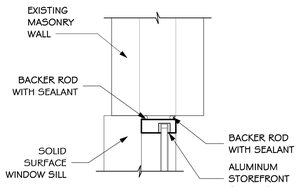

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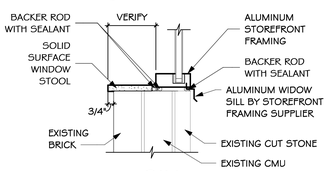

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Architecture Incorporated

415 South Main Avenue
P.O. Box 2140
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State of South Dakota
REG. NO. 6183
SARAH JOHNSTON ALDINGER
2/28/18
Registered Architect

project
BURGESS HALL, RENOVATIONS USD

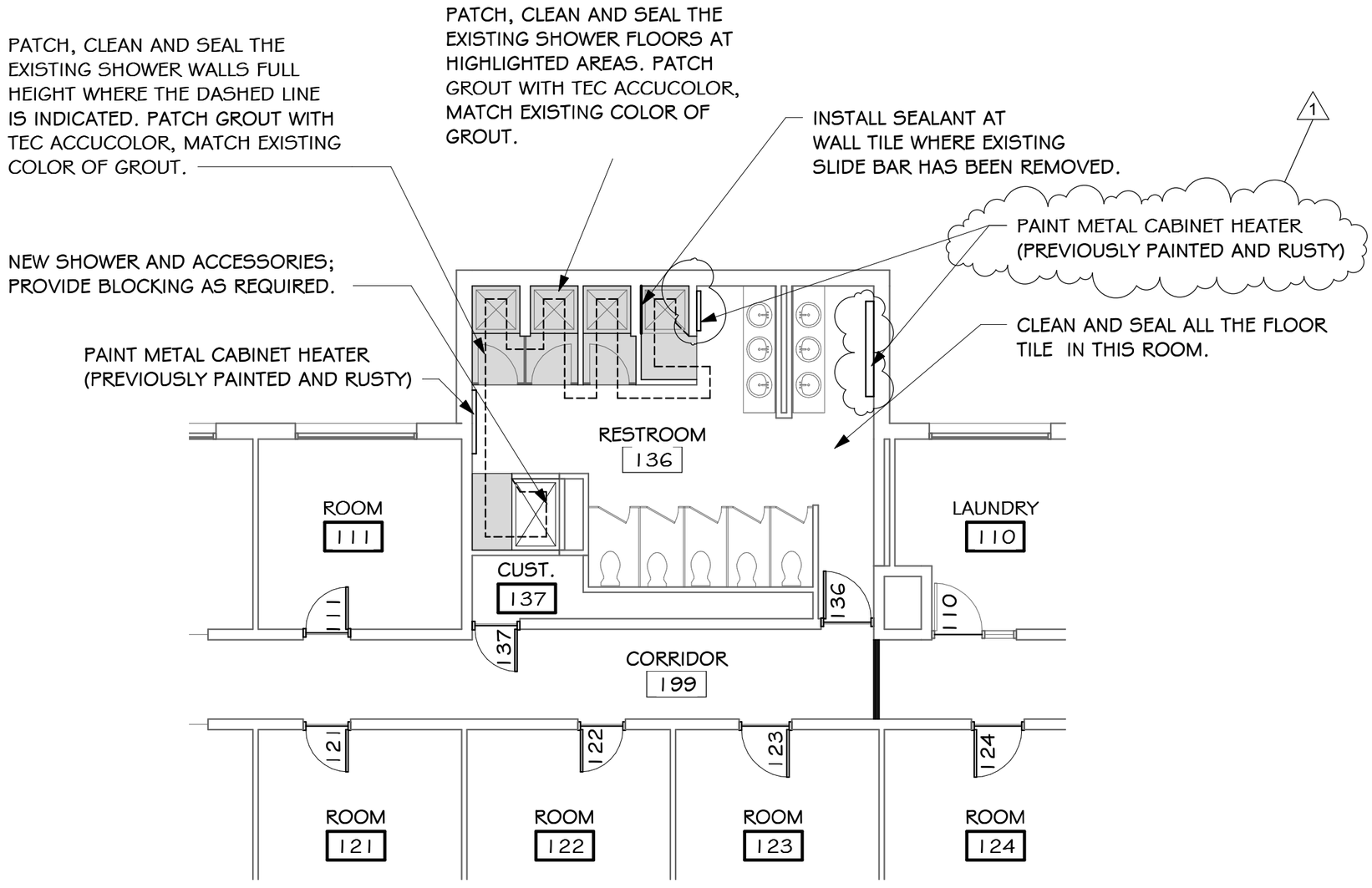
sheet contents
BUILDING SECTIONS

number 0131.2774.18
date FEBRUARY 28, 2018
revision
drawn RAG checked SJA

NO.	DATE	DESCRIPTION
1	03/21/18	Addendum #1

5.20

3/21/2018 4:53:53 PM



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DRAWING SD1

OSE #R0618--28X

project BURGESS HALL, RENOVATIONS USD

number 0131.2774.18 drawn SJA checked SJA

date 03-21-18 revision

Architecture Incorporated

March 19, 2018
1:00 p.m.

Burgess Hall, Renovations University of South Dakota
OSE # R0618—28X
Architecture Incorporated Project Number: 0131.2774.18

Pre-Bid Conference Minutes:
Attendees: See attached

Discussion:

1. The Office of the State Engineer, Owner, Architect and Engineers reviewed the items on the attached agenda.

2. As stated on the agenda, USD parking restriction apply. Parking permits are available for purchase.

3. The Owner shall provide a staging area and will work with the selected Contractor to determine a location. The area will need to be coordinated with other work that will be concurrently performed on campus.

4. Upon Notice to Proceed, the Contractor shall be allowed access to the site to verify existing conditions and perform other work required to process shop drawings and order long lead time items as long as they are accompanied by a USD Project Manager. Construction start date is May 7, 2018 at which time occupants will have vacated the building.

5. The following questions were addressed:
   a. Existing light fixtures shall not be salvaged.
   b. The Owner shall move equipment and furniture out of the spaces within the scope of work, including the pool tables.

Respectfully submitted,

Sarah Aldinger, AIA LEED AP

Burgess Hall, Renovations
University of South Dakota
Vermillion, SD
OSE# R0618—28X

PRE-BID MEETING AGENDA—March 19, 2018 at 1:00 PM

1) Introductions
   Sandy Wolfswinkel – USD
   Brian Limoges -- USD
   Sarah Aldinger, AIA, LEED AP BD+C – Architecture Incorporated
   Sara Norstrom, EIT – West Plains Engineering
   Wade Myrabo, PE – West Plains Engineering
   Brent Morford – OSE

2) Sign-in Sheet

3) Scope of Work
   - Entrance framing and window replacement
   - Door and hardware replacement
   - Interior finish renovations
     - Carpet
     - Tile cleaning, grout patching and sealing at restrooms
     - Lay-in ceiling
     - Mechanical work: Faucet and trim replacement, diffuser & sprinkler coordination with new ceilings, shower enclosure replacement.
     - Electrical work: lighting replacement, device coordination with new ceilings.

4) Delivery of Bids:
   - Sealed bids will be received by the Office of the State Engineer, Joe Foss Building, 523 East Capitol Avenue, Pierre, SD until Wednesday, March 28, 2018 at 3PM CT.
   - Bid Modifications can be emailed to OSE: refer to the upper right-hand corner of the "Modification to Bid Form" for email address for bid modifications.

5) Bidder's Checklist:
   - All Blanks on the Bid Form are filled in.
   - Receipt of all Addenda is noted on the Bid Form.
   - Bid Form is signed by an officer of the corporation or, if not a corporation, a proprietor or partner.
   - For bids of $50,000 or higher, a bid bond or security is submitted with the bid.
   - If an out of state contractor, a fully executed "Non-Resident Bidder Affidavit" is submitted with the bid.
   - The bid, bid bond or security, and "Non-Resident Bidder Affidavit" are placed in a sealed envelope labeled in accordance with Paragraph 2 of the "Instructions to Bidders".

6) Project Schedule:
   - Upon Notice to Proceed the Contractor shall be allowed access to the site to verify existing conditions and perform other work required to process shop drawings and order long lead time items.
   - Construction Start – May 7, 2018

- Substantial Completion – July 13, 2018.
- Liquidated Damages - $200.00 per calendar day

7) Addenda:
   - None posted currently
   - First addenda to be issued March 21, 2018.
     - Three story aluminum framed entrance to be curtain wall
   - Last addenda, if required, scheduled to be issued March 26, 2018.

8) Owner Comments
   - Contractor to coordinate with USD and University Police Dept. for keys and access to the site.
   - Staging area
   - USD parking restrictions apply.
   - No smoking on campus.
   - Contractor employees shall dress appropriately and use appropriate language.

9) Review of the work site/existing conditions:

10) Questions and Answers

UNIVERSITY OF SOUTH DAKOTA

Architecture Incorporated

PRE-BID MEETING SIGN-IN

PROJECT NAME	Burgess Hall, Renovations University of South Dakota OSE # R0618—28X

DATE OF MEETING	March 19, 2018 1:00 p.m.		

	NAME	COMPANY NAME & PROJ. ROLE	PHONE & CELL	E-MAIL
	First Last	Company Name Project Role	P xxx.xxx.xxxx C xxx.xxx.xxxx	best.contact@company.com
1	Sarah Aldinger	Architecture Incorporated	605-339-1711	sarahaldinger@architectureinc.com
2	BRIAN LIMOGES	USD	605-231-2358	Brian.Limoges@usd.edu
3	MIKE JULIUS	THOMPSON ELEC.	712-252-9221	MJULIUS@TEC-CORP.COM
4	Sara Norstrom	West Plains Eng.	6053623753	sara.norstrom@westplainsengineering.com
5	Wade Myrabo	" "	" "	wade.myrabo@westplainsengineering.com
6	Ashley Hartnett	Housing Director	605-658-6266	ashley.hartnett@usd.edu
7	Tony Stangl	Ronning	201-7660	tony.stangl@ronningcompanies.com
8	Lowell Rock	Lowell Rock Const	677-9998	lowellrock@gmail.com
9	Kevin Barker	Welsh Const	665-3258	barker@kevinwelsh.com
10	Don Walker	Muth Electric	605, 996-3983	dwalker@muthelectric.com
11	Ryan Jervik	Prairie Sons		
12	Bill Cuny	Prairie Sons	605-222-0643	BCuny@prairiesons.com
13				
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SECTION 084413 - GLAZED ALUMINUM CURTAIN WALLS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes:

1. Conventionally glazed aluminum curtain walls installed as [**stick**] assemblies.

B. Related sections include the following:

1. Division 8 Section "Glazing."
2. Division 8 Section “Aluminum Entrances and Storefronts” for coordinating finishes between fenestration units.

1.3 PERFORMANCE REQUIREMENTS

A. General Performance: Comply with performance requirements specified, as determined by testing of manufacturer's [**thermally-broken**] glazed aluminum curtain walls representing those indicated for this Project without failure due to defective manufacture, fabrication, installation, or other defects in construction.

1. Glazed aluminum curtain walls shall withstand movements of supporting structure including, but not limited to, story drift, twist, column shortening, long-term creep, and deflection from uniformly distributed and concentrated live loads.
2. Failure also includes the following:

a. Thermal stresses transferring to building structure.
b. Glass breakage.
c. Noise or vibration created by wind and thermal and structural movements.
d. Loosening or weakening of fasteners, attachments, and other components.

B. Delegated Design: Design glazed aluminum curtain walls, including comprehensive engineering analysis by a qualified professional engineer, using performance requirements and design criteria indicated.

C. Structural Loads:

1. Wind Loads:
   a. Basic Wind Speed = 120 MPH
   b. Rick Category Type III (ASCE 7-10)
   c. Wind Importance Factor = 1.0
   d. Internal Pressure Coefficient = 0.18
   e. Building Design Pressure (Endzone Windward Plus Leeward) = 44 PSF

2. Structural-Test Performance: Test according to ASTM E 330 as follows:

3. When tested at positive and negative wind-load design pressures, assemblies do not evidence deflection exceeding specified limits.
4. When tested at [**150**] percent of positive and negative wind-load design pressures, assemblies, including anchorage, do not evidence material failures, structural distress, and permanent deformation of main framing members exceeding [**0.2**] percent of span.
5. Test Durations: As required by design wind velocity, but not less than [**10**] seconds.

D. Deflection of Framing Members: At design wind pressure, as follows:

1. Deflection Normal to Wall Plane: Limited to [**edge of glass in a direction perpendicular to glass plane not exceeding L/175 of the glass edge length for each individual glazing lite**] [**1/175 of clear span for spans up to 13 feet 6 inches (4.1 m) and to 1/240 of clear span plus 1/4 inch (6.35 mm) for spans greater than 13 feet 6 inches (4.1 m)**] or an amount that restricts edge deflection of individual glazing lites to 3/4 inch (19 mm), whichever is less.

2. Deflection Parallel to Glazing Plane: Limited to [**L/360 of clear span or 1/8 inch (3.2 mm), whichever is smaller**] [**amount not exceeding that which reduces glazing bite to less than 75 percent of design dimension and that which reduces edge clearance between framing members and glazing or other fixed components to less than 1/8 inch (3.2 mm)**].

E. Story Drift: Accommodate design displacement of adjacent stories indicated.

1. Test Performance: Meeting criteria for passing based on building occupancy type when tested according to AAMA 501.4 at design displacement [**and 1.5 times the design displacement**].

F. Water Penetration under Static Pressure: No evidence of water penetration through fixed glazing and framing areas when tested according to ASTM E 331 at a minimum static-air-pressure differential of 20 percent of positive wind-load design pressure, but not less than [**15.0 lbf/sq. ft.**].

G. Water Penetration under Dynamic Pressure: No evidence of water penetration through fixed glazing and framing areas when tested according to AAMA 501.1 at dynamic pressure equal to 20 percent of positive wind-load design pressure, but not less than [**15.0 lbf/sq. ft.**].

1. Maximum Water Leakage: [**According to AAMA 501.1**] [**No uncontrolled water penetrating assemblies or water appearing on assemblies' normally exposed interior surfaces from sources other than condensation**]. Water leakage does not include water controlled by flashing and gutters that is drained to exterior.

H. Thermal Movements: Allow for thermal movements resulting from the following maximum change (range) in ambient and surface temperatures:

1. Temperature Change (Range): 120 deg F (67 deg C), ambient; 180 deg F (100 deg C), material surfaces.
2. Test Interior Ambient-Air Temperature: [**75 deg F (24 deg C)**].
3. Test Performance: No buckling; stress on glass; sealant failure; excess stress on framing, anchors, and fasteners; or reduction of performance when tested according to AAMA 501.5.

I. Energy Performance: Glazed aluminum curtain walls shall have certified and labeled energy performance ratings in accordance with NFRC.

1. Thermal Transmittance (U-factor): Fixed glazing and framing areas shall have U-factor of not more than [**0.32 Btu/sq. ft. x h x deg F**] as determined according to NFRC 100.

2. Air Infiltration: Maximum air leakage through fixed glazing and framing areas of [**0.060 cfm/sq. ft.**] of fixed wall area as determined according to ASTM E 283 at a minimum static-air-pressure differential of [**6.24 lbf/sq. ft. (300 Pa)**].

3. Condensation Resistance:

   a. Fixed glazing areas shall have a certified condensation resistance rating of no less than [**72**] as determined according to AAMA 1503.

   b. Framing shall have a certified condensation resistance rating of no less than [**80**] as determined according to AAMA 1503.

1.4 ACTION SUBMITTALS

A. Product Data: For each type of product indicated. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes.

B. Shop Drawings: For glazed aluminum curtain walls. Include plans, elevations, sections, full-size details, and attachments to other work.

1. Include details of provisions for assembly expansion and contraction and for draining moisture occurring within the assembly to the exterior.

2. Include full-size isometric details of each vertical-to-horizontal intersection of glazed aluminum curtain walls, showing the following:

   a. Joinery, including concealed welds.
   b. Anchorage.
   c. Expansion provisions.
   d. Glazing.
   e. Flashing and drainage.

1.5 INFORMATIONAL SUBMITTALS

A. Qualification Data: For qualified Installer.

B. Welding certificates.

C. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified preconstruction testing agency, for glazed aluminum curtain walls, indicating compliance with performance requirements.

D. Warranties: Sample of special warranties.

1.6 CLOSEOUT SUBMITTALS

A. Maintenance Data: For glazed aluminum curtain walls to include in maintenance manuals.

1.7 QUALITY ASSURANCE

A. Installer Qualifications: Manufacturer's authorized representative who is trained and approved for installation of units required for this Project.

B. Product Options: Information on Drawings and in Specifications establishes requirements for aesthetic effects and performance characteristics of assemblies. Aesthetic effects are indicated by dimensions, arrangements, alignment, and profiles of components and assemblies as they relate to sightlines, to one another, and to adjoining construction.

1. Do not revise intended aesthetic effects, as judged solely by Architect, except with Architect's approval. If revisions are proposed, submit comprehensive explanatory data to Architect for review.

C. Welding Qualifications: Qualify procedures and personnel according to the following:

1. AWS D1.1/D1.1M, "Structural Welding Code - Steel."
2. AWS D1.2/D1.2M, "Structural Welding Code - Aluminum."

1.8 PROJECT CONDITIONS

A. Field Measurements: Verify actual locations of structural supports for glazed aluminum curtain walls by field measurements before fabrication and indicate measurements on Shop Drawings.

1.9 WARRANTY

A. Special Assembly Warranty: Standard form in which [**manufacturer**] agrees to repair or replace components of glazed aluminum curtain walls that do not comply with requirements or that fail in materials or workmanship within specified warranty period.

1. Failures include, but are not limited to, the following:

a. Structural failures including, but not limited to, excessive deflection.
b. Noise or vibration created by wind and thermal and structural movements.
c. Deterioration of metals, [**metal finishes,**] and other materials beyond normal weathering.
d. Water penetration through fixed glazing and framing areas.

2. Warranty Period: [**Five**] years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Glazed Aluminum Curtain Walls: 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. CMI Architectural.
2. EFCO Corporation.
3. Kawneer North America; an Alcoa company.
4. Manko.
5. Tubelite.
6. United States Aluminum.
7. Vistawall Architectural Products; The Vistawall Group; a Bluescope Steel company.

8. YKK AP America Inc.

B. Basis-of-Design Product: Tubelite, Inc's [**400TU Ultra Thermal**] high-performance glazed aluminum curtain wall system utilizing 1-inch thick insulated glass.

C. Source Limitations: Obtain all components of aluminum-framed entrance and storefront systems, including framing, and accessories, from single manufacturer.

2.2 MATERIALS

A. Aluminum: Alloy and temper recommended by manufacturer for type of use and finish indicated.

1. Sheet and Plate: ASTM B 209 (ASTM B 209M).
2. Extruded Bars, Rods, Profiles, and Tubes: ASTM B 221 (ASTM B 221M).
3. Extruded Structural Pipe and Tubes: ASTM B 429.
4. Structural Profiles: ASTM B 308/B 308M.
5. Welding Rods and Bare Electrodes: AWS A5.10/A5.10M.

B. Steel Reinforcement: Manufacturer's standard zinc-rich, corrosion-resistant primer complying with SSPC-PS Guide No. 12.00; applied immediately after surface preparation and pretreatment. Select surface preparation methods according to recommendations in SSPC-SP COM and prepare surfaces according to applicable SSPC standard.

1. Structural Shapes, Plates, and Bars: ASTM A 36/A 36M.
2. Cold-Rolled Sheet and Strip: ASTM A 1008/A 1008M.
3. Hot-Rolled Sheet and Strip: ASTM A 1011/A 1011M.

2.3 FRAMING

A. Framing Members: Manufacturer's standard extruded- or formed-aluminum framing members of thickness required and reinforced as required to support imposed loads.

1. Construction: [**Thermally broken**]; using dual polyamide struts integrated into the tongue assembly.
2. Glazing System: Retained mechanically with gaskets on four sides.
3. Glazing Plane: [**Front**].
4. Pressure Plates: [**Aluminum**].
5. Framing Member Depth: [**6 inches**], unless indicated otherwise on Drawings.
6. Sightline: [**2-1/2 inches**].
7. Finish: [**Clear anodized finish**].

B. Brackets and Reinforcements: Manufacturer's standard high-strength aluminum with nonstaining, nonferrous shims for aligning system components.

C. Fasteners and Accessories: Manufacturer's standard corrosion-resistant, nonstaining, nonbleeding fasteners and accessories compatible with adjacent materials.

1. Use self-locking devices where fasteners are subject to loosening or turning out from thermal and structural movements, wind loads, or vibration.
2. Reinforce members as required to receive fastener threads.
3. Use exposed fasteners with countersunk Phillips screw heads [**, finished to match framing system**] [**, fabricated from 300 series stainless steel**].

D. Anchors: Three-way adjustable anchors with minimum adjustment of [**1 inch (25.4 mm)**] that accommodate fabrication and installation tolerances in material and finish compatible with adjoining materials and recommended by manufacturer.

1. Concrete and Masonry Inserts: Hot-dip galvanized cast-iron, malleable-iron, or steel inserts complying with ASTM A 123/A 123M or ASTM A 153/A 153M requirements.

E. Concealed Flashing: [**Manufacturer's standard corrosion-resistant, nonstaining, nonbleeding flashing compatible with adjacent materials**] [**Dead-soft, 0.018-inch- (0.457-mm-) thick stainless steel, ASTM A 240/A 240M of type recommended by manufacturer**].

F. Framing Sealants: Manufacturer's standard sealants.

2.4 GLAZING

A. Glazing: Comply with Division 08 Section "Glazing."

B. Glazing Gaskets: [**Manufacturer's standard sealed-corner pressure-glazing system of black, resilient elastomeric glazing gaskets, setting blocks, and shims or spacers.**] [**Comply with Division 08 Section "Glazing."**]

2.5 OPERABLE UNITS

A. Doors: Comply with Division 08 Section “Aluminum-Framed Entrances and Storefronts”.

2.6 ACCESSORY MATERIALS

A. Bituminous Paint: Cold-applied asphalt-mastic paint complying with SSPC-Paint 12 requirements except containing no asbestos, formulated for 30-mil (0.762-mm) thickness per coat.

2.7 FABRICATION

A. Form or extrude aluminum shapes before finishing.

B. Weld in concealed locations to greatest extent possible to minimize distortion or discoloration of finish. Remove weld spatter and welding oxides from exposed surfaces by descaling or grinding.

C. Ensure joints and corners are flush, hairline and weatherproof, accurately fitted and secured.

1. Prepare framework to receive anchors and hardware.
2. Conceal fasteners and attachments from view.
3. Reinforce framework as required for imposed loads.

D. Fabricate components that, when assembled, have the following characteristics:

1. Profiles that are sharp, straight, and free of defects or deformations.
2. Accurately fitted joints with ends coped or mitered.
3. Physical and thermal isolation of glazing from framing members.
4. Accommodations for thermal and mechanical movements of glazing and framing to maintain required glazing edge clearances.

5. Provisions for field replacement of glazing from [**interior for vision glass] [exterior for spandrel glazing or metal panels**].
6. Fasteners, anchors, and connection devices that are concealed from view to greatest extent possible.

E. Fabricate components that, when assembled, have the following characteristics:

1. Internal guttering system or other means to drain water passing joints, condensation occurring within framing members, and moisture migrating within glazed aluminum curtain wall to exterior.
2. Pressure-equalized system or double barrier design with primary air and vapor barrier at interior side of glazed aluminum curtain wall and secondary seal weeped and vented to exterior.

F. Curtain-Wall Framing: Fabricate components for assembly using [**shear-block system**].

G. After fabrication, clearly mark components to identify their locations in Project according to Shop Drawings.

H. Movement: Allow for movement between curtain wall and adjacent construction, without damage to components or deterioration of seals.

I. Perimeter Clearance: Minimize space between framing members and adjacent construction while allowing expected movement.

J. Air and Vapor Seal: Maintain continuous air barrier and moisture vapor retarder throughout assembly, primarily in line with inside pane of glazing and heel bead of glazing compound.

2.8 ALUMINUM FINISHES

A. Clear Anodic Finish: AAMA 611, [**AA-M12C22A41, Class I, 0.018 mm**] or thicker.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. General:

1. Comply with manufacturer's written instructions.
2. Do not install damaged components.
3. Fit joints to produce hairline joints free of burrs and distortion.
4. Rigidly secure nonmovement joints.
5. Install anchors with separators and isolators to prevent metal corrosion and electrolytic deterioration and to prevent impeding movement of moving joints.
6. Weld components in concealed locations to minimize distortion or discoloration of finish. Protect glazing surfaces from welding.

7. Seal joints watertight unless otherwise indicated.

B. Metal Protection:

1. Where aluminum will contact dissimilar metals, protect against galvanic action by painting contact surfaces with primer or by applying sealant or tape or installing nonconductive spacers as recommended by manufacturer for this purpose.
2. Where aluminum will contact concrete or masonry, protect against corrosion by painting contact surfaces with bituminous paint.

C. Install components to drain water passing joints, condensation occurring within framing members, and moisture migrating within glazed aluminum curtain wall to exterior.

D. Install components plumb and true in alignment with established lines and grades.

E. Install glazing as specified in Division 08 Section "Glazing."

3.3 ERECTION TOLERANCES

A. Erection Tolerances: Install glazed aluminum curtain walls to comply with the following maximum tolerances:

1. Plumb: 1/8 inch in 10 feet (3.2 mm in 3 m); 1/4 inch in 40 feet (6 mm in 12 m).
2. Level: 1/8 inch in 20 feet (3.2 mm in 6 m); 1/4 inch in 40 feet (6 mm in 12 m).
3. Alignment:

a. Where surfaces abut in line or are separated by reveal or protruding element up to 1/2 inch (12.7 mm) wide, limit offset from true alignment to 1/16 inch (1.6 mm).
b. Where surfaces are separated by reveal or protruding element from 1/2 to 1 inch (12.7 to 25.4 mm) wide, limit offset from true alignment to 1/8 inch (3.2 mm).
c. Where surfaces are separated by reveal or protruding element of 1 inch (25.4 mm) wide or more, limit offset from true alignment to 1/4 inch (6 mm).

4. Location: Limit variation from plane to 1/8 inch in 12 feet (3.2 mm in 3.7 m); 1/2 inch (12.7 mm) over total length.

3.4 CLEANING AND PROTECTION

A. Comply with AAMA 609 and 610 for methods, equipment, and materials to clean finished aluminum after installation and for subsequent periodic maintenance.
B. Wash down surfaces with a solution of mild detergent in warm water, applied with soft, clean wiping cloths. Take care to remove dirt from corners, and wipe surfaces clean.
C. Remove excess sealant from glass and aluminum by method acceptable to sealant and finish manufacturer.
D. Protect installed products from damage during subsequent construction. Protect anodized finishes from prolonged exposure to alkaline, such as lime in masonry mortar, or acidic and other corrosive materials.

END OF SECTION 084413